



City of  
**Los Banos**

2030 General Plan | September 2007

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Draft Environmental Impact Report | *Public Review Draft*

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Prepared for  
The City of Los Banos

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# Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the potential impacts of the proposed City of Los Banos 2030 General Plan.<sup>1</sup> The proposed Plan was developed in response to policy direction provided by the City Council and the Planning Commission as well as community concerns identified through an extensive public participation and outreach program, including newsletters, community workshops and public meetings. The City of Los Banos is the “lead agency” for this EIR, as defined by the California Environmental Quality Act (CEQA). As the lead agency, the City is required to evaluate the potential effects of the Plan in an EIR.

An EIR is intended to inform decision-makers and the general public of the potential significant environmental impacts of a proposed project. The EIR also identifies mitigation measures to minimize significant impacts and evaluates reasonable alternatives to the proposed project that may reduce or avoid one or more significant environmental effects. These alternatives must include a “No Project” alternative that represents the result of not implementing the project and a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives but would avoid or substantially lessen any of the significant effects of the project.<sup>2</sup> Based on the alternatives analysis, an environmentally superior alternative is identified.

This EIR is a program EIR that examines the potential effects resulting from implementing designated land uses and policies in the proposed General Plan. The impact assessment evaluates the General Plan as a whole and identifies the broad, regional effects that may occur with its implementation. As a programmatic document, this EIR does not assess site-specific impacts. Any future development project made possible by the General Plan will be subject to individual, site-specific environmental review, as required by State law.

## **E.1 PROPOSED PROJECT**

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The proposed Los Banos General Plan Update is intended to respond directly and comprehensively to changes experienced in Los Banos since the preparation of the current General Plan elements and to the growth projected for the City in coming decades. The proposed General Plan, which establish a planning framework and policies to 2030, will replace the City’s existing General Plan.

The City of Los Banos is situated within the western portion of Merced County, in the northern part of the San Joaquin Valley. The City is conveniently located in the center of California, near

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<sup>1</sup> Throughout this document, the term “proposed Los Banos 2030 General Plan” is used interchangeably with “General Plan,” “proposed Plan” or the “proposed project.”

<sup>2</sup> CEQA Guidelines 15126.6(a)

the junction of California State Route (SR)-152 and Interstate 5, approximately 120 miles southeast of San Francisco, 83 miles northeast of Monterey and 72 miles northwest of Fresno.

The proposed General Plan includes updates of the following elements: Land Use, Circulation, Open Space, Conservation, Safety, and Noise. It also includes two optional elements that address local concerns: Public Facilities and Utilities and Economic Development. The Housing Element was adopted in 2004 and is not subject to analysis in this EIR because no amendments to this element are proposed as part of this General Plan update. All elements have equal weight, and no one element supersedes another.

### **Key initiatives of the Proposed General Plan**

Based on the planning objectives that were set forth, seven key initiatives emerged as the General Plan took shape. These initiatives are large-scale themes that address the planning objectives. The maps and policies in the General Plan are structured around these key initiatives.

*Providing for balanced and sustainable growth.* The proposed Plan offers proposals to create and maintain a cohesive development pattern amidst the agriculture landscape, with clearly defined urban edges. An urban growth boundary (UGB) is created to protect Los Banos's surrounding lands from sprawl, reduce the cost of extending costly infrastructure, and enhance the visual character of the City's edge. Land use policies are enacted to reduce incompatible land uses and ensure developments pay for their share of infrastructure, public facilities, and any environmental costs they might impose.

*Creating new jobs to develop the local economy.* City officials and residents alike recognize that if Los Banos is to continue as a desirable community, being simply a bedroom community to the Bay Area is not an option. The proposed Plan strives for more local jobs and an improved jobs/housing ratio. Land has been set aside in employment parks in various parts of the city, and economic development initiatives have been proposed to help make Los Banos a desirable place to work and live.

*Integrating neighborhoods and neighborhood centers.* Another central idea in this proposed General Plan is the concept of neighborhoods. Neighborhoods are the essential building blocks of good cities. Quality neighborhoods typically mean a quality urban environment. Balanced neighborhoods include a mix of residential opportunities and include activities and facilities that are used on a frequent basis – such as schools, stores and parks. Land uses are designated to ensure balanced neighborhood development with a mix of uses and housing types, provision of parks and schools, and easy access to commercial activity centers.

*Creating a network of parks and open space.* In addition to neighborhood and community parks, the proposed General Plan provides for an interconnected network of pathways and trails. This system is envisioned to connect neighborhoods to one another and also to create a pedestrian or bikeway linkage between parks, schools, neighborhood commercial centers, downtown, and employment centers.

*Creating a safe, efficient, and attractive circulation system.* The proposed Plan establishes a comprehensive set of principles and policies to enhance the existing system and promote a well-

integrated and coordinated transit network and safe and convenient pedestrian and bicycle circulation. Also, the proposed Plan provides for a system of plantings, trees, and other amenities to enhance the visual character of city streets.

*Providing ample retail and shopping opportunities.* Quality communities are often gauged by the quality of retail outlets. With this in mind, combined with the jobs and sales tax revenue that commercial properties produce, the proposed General Plan proposes a mix of retail sites. These are intended to serve both local residents and a regional population and are to be accessible by both automobiles and pedestrians, depending on type and location.

*Planning for environmental justice.* The proposed General Plan calls for the equitable distribution of community facilities and services to meet the needs of all segments of the population and provide services for special needs that increase and enhance the community's quality of life while avoiding over-concentration in any one area.

These themes and the policies proposed to implement them are described in greater detail in Section 2 of this EIR.

### **Estimated Buildout of the Proposed General Plan**

Full development under the proposed General Plan is referred to as “buildout.” Although the proposed General Plan applies until the 2030 planning horizon, the Plan is not intended to specify or anticipate when buildout will actually occur; nor does the designation of a site for a certain use necessarily mean the site will be built or redeveloped with that use until 2030. Refer to the Land Use Element for more detailed analysis of General Plan buildout. Table ES-1 shows the buildout acreage of the General Plan Land Use Diagram.

#### *Buildout Population*

Los Banos contained 34,220 people in 2006 according to an estimate from the City. Using a 3.0 percent annual population growth rate (the rate projected by the county), the total population will be 69,560 in 2030. However, over the last 50 years, annual growth rates have ranged from 1.2 to 5.9 percent, with 1990-2000 experiencing the most significant growth. The State Department of Finance estimated a population growth rate of 4.6 percent over the last five years. For purposes of the proposed 2030 General Plan, a moderate growth rate of around 4.2 percent is adopted based on historic and future expectations of local and regional housing demand and economic growth. The basic idea is to expand opportunities for residents to live and work in the community.

As shown in Table ES-2, the proposed General Plan will accommodate more than 90,000 residents at buildout, an increase of about 160 percent over the 2006 population. Most of these residents will live in new residential neighborhoods surrounding the core of the City. This represents an expected annual population increase of 4.1 percent over the next 24 years, about 3,000 more residents than provided for in the current General Plan.

**Table ES-1: Los Banos General Plan Land Use Acreage at Plan Buildout**

<i>Land Use</i>	<i>Current Development Projects<sup>1</sup></i>	<i>Additional Acreages with General Plan Buildout</i>	<i>Total Acreages with General Plan Buildout</i>	<i>Percent of Total</i>
Residential	2,081	2,202	4,282	25
Low Density Residential	1,800	1,885	3,685	21
Medium Density Residential	281	307	588	3
High Density Residential	-	10	10	0
Mixed Use	57	121	177	1
Mixed Use	1	5	6	0
Neighborhood Commercial	55	116	171	1
Commercial/Office Professional	253	2,358	2,611	15
Commercial	200	568	768	4
Office Professional	35	480	515	3
Employment Park	-	819	819	5
Industrial	18	491	509	3
Others	470	9,964	10,434	60
Agriculture/Rural	-	7,837	7,837	45
Parks, Trails and Open Space	229	1,004	1,233	7
Civic/Institutional	241	234	475	3
SR-152 Bypass	-	889	889	5
<b>Total</b>	<b>2,860</b>	<b>14,640</b>	<b>17,500</b>	<b>100</b>

Due to rounding, sub-columns may not equal total counts.

<sup>1</sup> Current Development Projects refers to those proposed projects that were undeveloped but approved or under review at the time of the NOP.

Source: City of Los Banos; Dyett & Bhatia, 2007.

### Residential development

Approximately 10,170 households currently exist in the Los Banos Planning Area. The proposed General Plan is designed to incorporate some flexibility by providing slightly more land for residential units than projected. Based on average buildout densities for new residential uses, the proposed Plan accommodates about 17,000 new households at an average household size of 3.3 persons per household through infill development as well as new development. In total, proposed General Plan buildout will result in approximately 27,200 households in Los Banos.

**Table ES-2: Population, Households, and Housing Units at Plan Buildout**

	<i>Existing (2006)</i>	<i>Additional</i>	<i>Buildout (2030)</i>	<i>Annual Percent Growth</i>
Population	34,220	56,200	90,400	4.1
Households	10,170	17,000	27,200	4.2
Housing Units	10,710	17,900	28,600	4.2

Population at buildout was calculated assuming 3.3 persons per household. All numbers are rounded to the nearest tenth.

For projected buildout, households equals 95 percent of all housing units (5 percent vacancy)

Source: Merced County employment data for 2000; Existing Population from City of Los Banos; all others Dyett & Bhatia, 2006.

### Buildout Employment

The General Plan at full buildout will accommodate an additional 41,900 jobs. This employment growth would require a 10.2 percent per year growth rate, which may not be achievable. Based on historical trends, a more probable job growth rate is 6.3 percent as reflected by the Plan’s economic development initiatives. At this rate, complete buildout of employment-related land should be reached around 2055. In other words, the General Plan provides for more employment-related land than is needed for employment at 2030. This gives the City more flexibility and a longer horizon when planning for economic development.

The assumptions for these estimates of buildout employment are presented in Table ES-3. They include a building intensity (FAR) multiplier used to calculate the potential commercial and industrial space in square feet that would be added, and a square-feet-per-job multiplier to derive the future employment estimate.

**Table ES-3: Employment Assumptions**

<i>Land Use Category</i>	<i>Gross Acreage</i>	<i>Building Intensity<sup>1</sup> (FAR)</i>	<i>Potential Buildup Space<sup>2</sup> (Sq ft)</i>	<i>Employment Intensity<sup>3</sup> (Sq ft per Job)</i>
Neighborhood Commercial	171	0.30	1,966,600	500
Commercial	768	0.25	7,356,700	500
Office/Professional	515	0.30	3,741,500	400
Employment Park	819	0.35	5,085,700	750
Industrial	509	0.30	4,989,100	750
Downtown Mixed Use	6	1.00	243,200	500

<sup>1</sup> A building FAR or Floor Area Ratio, calculates the total floor area of buildings on a certain location to the size of the land of that location. <sup>2</sup> Calculated on a “net” basis, after deducting land needed for rights-of-way and easements. <sup>3</sup> This factor calculates the number of jobs a certain type of land use will accommodate. For example, Office/Professional land use is expected to create 1 job per 400 square feet.

Source: Dyett & Bhatia, 2007.

Details on additional employment by land use category are presented in ES-4. Jobs from commercial and neighborhood center development compose 44 percent of additional employment for the plan. Office uses account for 22 percent, Downtown mixed use account for 1 percent, while Employment Park and industrial land uses account for the remaining 32 percent.

**Table ES-4: Additional Private Sector Employment**

<i>Land Use Category</i>	<i>Total New Jobs</i>	<i>Percent of Total</i>
Neighborhood Commercial	3,900	9
Commercial	14,700	35
Office/Professional	9,400	22
Employment Park	6,800	16
Industrial	6,600	16
Downtown Mixed Use	500	1
<b>Total</b>	<b>41,900</b>	<b>100</b>

Source: Dyett & Bhatia, 2007.

## **E.2 ALTERNATIVES TO THE PROPOSED GENERAL PLAN**

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The following alternatives are described and evaluated in this EIR:

### **Alternative A: Housing Focus**

Alternative A, based on Sketch Plan A, proposes new growth that is similar in character to recent development in Los Banos. This alternative has larger neighborhood units consisting of low density single-family houses. Approximately 90 percent of the new housing units would be in the Very Low and Low Density categories. A mix of higher density housing and neighborhood supporting commercial uses are centered on new elementary and middle school sites. Alternative A has fewer schools and neighborhood centers than the existing General Plan, and fewer schools and fewer centers than Alternative B; as a result the neighborhoods and schools are larger in size than Alternative B.

A second main component in Alternative A is the inclusion of parks, trails and open space in the neighborhood centers. Parks, trails, and open space are proposed along the creek corridors and along the full length of the abandoned rail right-of-way. Community and neighborhood parks are provided to balance out the current deficiency in acreage per thousand residents and bring the ratio to 6.2 by 2030. In general, these centers would be distributed along proposed arterials and evenly dispersed throughout the northward and southward extensions of the existing community. Additional arterials are proposed to connect the community to Pacheco Boulevard and Mercey Springs Road, which will connect to the SR-152 Bypass. Additional arterials are shown to carry traffic inside of the proposed bypass and connect through the south part of the new development.

New commercial and office development would be directed along the Pacheco Boulevard and SR-165 corridors. Employment centers are shown on the current airport site and on the western edge of town along the SR-152 corridor. This use is expected to support the need for significant new job growth in Los Banos during the next 25 years.

The changes that make Alternative A different from the original Sketch Plan consist of proposals made by developers to the GPAC that generally accommodate additional housing and some additional complementary commercial, civic and recreational uses. As compared to the proposed General Plan, the major differences are that Alternative A does not provide a Business Opportunity Area and thus both retains more agricultural land and provides for significantly fewer jobs, and the developer proposals that contribute to Alternative A result in development north of the proposed SR-152 Bypass.

### **Alternative B: Greenbelt Constrained**

Alternative B is almost identical to Sketch Plan B presented earlier in the planning process. Environmental constraints were considered in the development of Alternatives A and B as well as the proposed General Plan, but Alternative B adheres to these constraints more consistently:

#### *Sensitive Eco-Regions*

The City lies at the edge of the larger San Joaquin eco-region, with portions of the two key open space areas, the Grasslands Ecological Area and the Pacific Flyway, neighboring to the east.

Alternative B attempts to preserve these valuable eco-regions by minimizing development to the east and limiting development north of the SR-152 Bypass.

### *Agricultural Land*

The City is surrounded by agricultural lands, with prime farmland surrounding the city on all sides. The Alternative B attempts to preserve these valuable farmlands by limiting development north of the SR-152 Bypass and south of the City.

Alternative B proposes new growth that is higher in density than recent developments in Los Banos. This alternative has smaller neighborhood units with a mix of low density single-family houses and medium density apartment complexes and multiple-unit homes. Alternative B focuses more higher density housing around neighborhood centers near parks, elementary and middle schools. The schools in this plan are smaller in size and therefore support smaller neighborhood units.

Similar to Alternative A, parks, trails, and open space are proposed along the creek corridors and along the abandoned rail right-of-way. Parks are provided to balance out the current deficiency in acreage per thousand residents and bring the ratio to 7.2 by 2030.

New commercial and office development would be planned along the western edge of the existing downtown along the abandoned rail corridor. This is done to capitalize on the existing infrastructure improvements made along this corridor and to support mixed use development in downtown. An employment center is shown on the current airport site centered on the creek corridor.

A University Village is proposed as the western gateway of the community near the future site of the UC campus near the SR-152 Bypass and West Pacheco Boulevard interchange. This use is intended to support the campus community by providing an area where high density housing and office space can be combined with service retail common around college campuses.

Proposed development in Alternative B is ringed with a greenbelt that would accommodate recreational use and contain growth throughout the life of the plan, much like an urban growth boundary. This greenbelt is not included in either Alternative A or the proposed General Plan. In contrast, both Alternative A and the proposed General Plan permit more acres of farmland conversion, in the case of the General Plan to accommodate desired employment and business growth using the Business Opportunity Area, and in the case of Alternative A to accommodate proposals for more housing and greater accessibility to the proposed Bypass.

### **No Project Alternative**

Consideration of the No Project Alternative is required by CEQA in all EIRs and represents the continuation of the current City of Los Banos 1999 General Plan land use designations. In the absence of the proposed General Plan, the existing General Plan and Zoning Ordinance would continue to guide development in the Planning Area. There are many differences between the proposed General Plan and the No Project Alternative. As compared to the proposed General Plan, the No Project Alternative:

- Uses a different Planning Area,
- Does not recognize the current policy location of the proposed SR-152 Bypass,
- Provides no Business Opportunity Area,
- Does not create neighborhood centers focused on school and park combinations,
- Suggests a larger role for industrial development,
- Shows a different proposed location for the college, and
- Indicates a large recreational park area on the outskirts of the City instead of a green space network inside the City.

Table ES-5 provides a detailed comparison of buildout and existing (2006) conditions for the proposed General Plan, Alternative A, Alternative B, and the No Project Alternative.

**Table ES-5: Proposed General Plan and Alternatives: Comparison of Buildout**

Scenario	<u>Households</u>			<u>Population</u>			<u>Jobs</u>		
	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>
Proposed General Plan	10,170	27,200	17,060	34,220	90,400	56,200	4,540	46,500	41,900
Alternative A	10,170	30,500	20,300	34,220	101,200	67,000	4,540	31,400	26,900
Alternative B	10,170	26,600	16,500	34,220	88,600	54,400	4,540	24,600	20,100
No Project	10,170	26,200	16,100	34,220	87,200	53,000	4,540	40,600	36,000

Rounded to nearest hundred.

Source: Dyett & Bhatia, 2007.

### **E.3 AREAS OF CONTROVERSY**

Although there are no areas of controversy, several impacts classified as significant and unavoidable have been identified in the issue areas of biological resources, agricultural land conversion, and air quality. Further, other potentially significant effects will require mitigation (see Table ES-6). Impacts in the issue areas of wildfire hazards, hazardous materials, and water resources require mitigation to ensure that protective measures are in place to reduce or avoid potentially significant impacts.

#### **Agricultural Land Conversion**

Approximately 2,960 acres of Prime Farmland soils would be converted to urban uses as a result of full buildout of the proposed General Plan. Substantial amounts of Farmland of Statewide Importance and Unique Farmland soils would also be converted. All told, 198 of these converted

acres are in Williamson Act contracts (agricultural preserves). Though the proposed General Plan provides policies to minimize the extent of growth/sprawl associated with future development, and though the City of Los Banos is designated a regional growth center for the Valley under the County's General Plan, this agricultural land conversion is considered a significant and unavoidable impact.

### **Special Status Species and Habitats**

With buildout of the proposed General Plan, the resulting agricultural land conversion will also impact known special status species in the Planning Area because it will cause the conversion of or encroachment on their habitats. While the proposed Plan specifically avoids physical encroachment on the Grasslands Ecological Area (GEA) to the east, the additional noise, light, glare, stormwater runoff, and general human activity associated with population growth elsewhere in Los Banos has the potential to reduce the suitability and attractiveness of nearby wildlife environments for habitat uses. While the construction of the proposed SR-152 Bypass, outside the scope of this EIR, poses perhaps a more significant impact on potential wildlife corridors in the region, nonetheless the substantial agricultural land conversion and resulting impact on species and habitats constitute a significant and unavoidable impact.

### **Air Quality and Emissions**

Buildout of the proposed General Plan will result in an unavoidable and significant increase in emissions associated with vehicle miles traveled (VMT) and electricity use, directly related to population growth. Any plan designed to accommodate population growth as this plan is designed to do would result in this unavoidable significant impact.

The proposed General Plan is being offered despite these significant impacts because the City is in need of an updated land use plan that can thoughtfully and creatively accommodate projected population growth, as well as provide for jobs and economic development over the next 23 years. The current General Plan is no longer practical for Los Banos because stronger growth management is necessary and the current Plan neither provides for a balance of jobs and housing nor offers adequate, concrete policies to control the character of new neighborhoods, promote walkability, and minimize the impacts of growth. The proposed General Plan is consistent with the Merced County General Plan "Urban Centered Concept" in which urban development is directed toward designated existing urban centers in order to avoid the urbanization of rural agricultural land. The proposed General Plan overall seeks to achieve this goal through growth management tools and policies that give high priority to density, connectivity, jobs-housing balance, and preserving prime agricultural land and ecological areas. The significant impacts related to the proposed General Plan would not be considerably different under any other likely growth scenario for Los Banos that accommodates planned approved residential and non-residential development proposed for the city.

#### **E.4 SUMMARY OF IMPACTS AND ENVIRONMENTALLY-SUPERIOR ALTERNATIVE**

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Table ES-6 presents the summary of the proposed General Plan impacts identified in the EIR and the proposed General Plan policies and mitigation measures that reduce these impacts. Detailed discussions of the impacts and proposed policies that would reduce impacts are in Chapter 3. The significance of each impact with implementation of the proposed General Plan policies is also shown in Table ES-6. The level of significance is determined by comparing the impact to the significance criteria described in Chapter 3.

Based on the comparative analysis in Chapter 4 of this Draft EIR, and setting aside the No Project alternative (as provided by CEQA), Alternative B would be the next most environmentally superior alternative. This conclusion was based on the reduction of agricultural land conversion, fewer vehicle miles traveled, and greater protection for habitats and wildlife corridors. Alternative B also provides an extensive greenway buffer system that the proposed General Plan and Alternative A do not offer, thus reducing the likelihood and severity of indirect impacts of development on biological resources. Furthermore, Alternative B proposes fewer jobs and people overall than all but the No Project Alternative, which should result in the least vehicles, vehicle miles traveled, as well as the least electricity use and resulting GHG emissions.

However, there are tradeoffs associated with Alternative B. The development potential of Alternative B does not meet the City's long term economic development needs, a factor that inspired the creation of the Business Opportunity Area for the proposed General Plan. Fewer jobs in Alternative B also means that this alternative is less likely to achieve efficiencies that are possible with a jobs-housing balance, wherein people may live and work in the same city, or closer to their jobs.

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<b>Land Use and Agriculture</b>		
<p>3.1-1. Buildout of the proposed General Plan would convert substantial amounts of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.</p>	<p>LU-I-1 Delineate an Urban Growth Boundary in the General Plan Land Use Diagram that is an area within which urban development will occur.</p> <p>LU-I-3 Seek LAFCO approval of a Sphere of Influence (SOI) line corresponding with the General Plan designation for the proposed SOI.</p> <p>POSR-I-31 Work with the County and with the Grasslands Water District to preserve agricultural uses outside the Urban Growth Boundary.</p> <p>POSR-I-32 Require developers of residential developments adjoining agricultural land provide, fund and maintain a sufficient physical buffer to ensure that agricultural practices will not be adversely affected.</p> <p>POSR-I-33 Require property developers adjacent to sites where agricultural uses are being conducted to inform subsequent buyers of potential continued agricultural production and the lawful use of agricultural chemicals, including pesticides and fertilizers.</p> <p>POSR-I-34 Require anti-vandalism designs (appropriate fencing or other landscape features) to ensure that new development has conditions that minimize increased vandalism of adjacent agricultural activities outside the Urban Growth Boundary.</p> <p>POSR-I-35 Retain water rights in all annexed areas so that agricultural production can continue on annexed land until the time of development. These rights will then be made available to meet urban water demands, or where feasible, be exchanged for ground water recharge opportunities as part of a comprehensive water recharge program.</p>	<p>SU</p>
<b>Transportation</b>		
<p>3.2-1. Implementation of the proposed General Plan would generate increased traffic congestion</p>	<p>C-I-13 Require traffic impact studies for all proposed new developments that will generate significant amounts of traffic (100 or more peak hour trips).</p>	<p>LTS</p>

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
but not unacceptable LOS Standards on State Highways.	C-I-14 Establish a Transportation Performance Monitoring (TPM) program for the southern part of the Westside subarea to monitor and control traffic arising from new development.	
3.2-2. Implementation of the proposed General Plan would generate increased traffic congestion but not unacceptable LOS Standards on local roadways.	<p>C-I-11 Develop and manage the roadway system to obtain LOS D or better for two hour peak periods (a.m. and p.m.) on all major roadways and intersections in Los Banos. Exceptions to LOS D policy may be allowed by the City Council in areas, such as Downtown, where allowing a lower LOS would result in clear public benefits.</p> <p>C-I-12 Develop and manage residential streets (i.e., streets with direct driveway access to homes) to limit average daily vehicle traffic volumes to 2,500 or less and 85th percentile speeds to 25 miles per hour or less.</p> <p>C-I-15 Establish and implement additional programs to maintain adequate peak hour level of service at intersections and along roadway segments as circumstances warrant, including the following actions:</p> <p>Collect and analyze traffic volume data on a regular basis and monitor current intersection and roadway segment levels of service on a regular basis. Use this information to update and refine the City's travel forecasting model so that estimates of future conditions are more strongly based upon local travel behavior and trends.</p> <p>Consider, on a case by case basis, how to shift travel demand away from the peak period, especially in those situations where peak traffic problems result from a few major generators (e.g. the Business Opportunity Area on the Westside).</p> <p>Perform routine, ongoing evaluation of the efficiency of the urban street traffic control system, with emphasis on traffic signal timing, phasing and coordination to optimize traffic flow along arterial corridors. Use traffic control systems to balance arterial street utilization (e.g., timing and phasing for turn movements, peak period and off-peak signal timing plans).</p> <p>Policies listed under Impact 3.2-1 also help to reduce this impact and thus are incorporated here by reference.</p>	LTS

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<p>3.2-3. Implementation of the proposed General Plan would increase traffic affecting high intersection operations during a.m. and p.m. peak hours.</p>	<p>C-I-4 Provide for greater street connectivity by: Incorporating in subdivision regulations requirements for a minimum number of access points to existing local or collector streets for each development (e.g. at least two access points for every 10 acres of development); Encouraging traffic circles and roundabouts over signals where feasible; Requiring the bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets; and Requiring new residential communities on undeveloped land planned for urban uses to provide stubs for future connections to the edge of the property line. Where stubs exist on adjacent properties, new streets within the development should connect to these stubs.</p> <p>Policy C-I-15 listed under Impact 3.2-2 also helps to reduce this impact and thus is incorporated here by reference.</p>	<p>LTS</p>
<p>3.2-4. Implementation of the proposed General Plan would result in greater demand for transit service.</p>	<p>C-I-5 Develop a multi-modal transit system map integrating bicycle, public transportation, pedestrian and vehicle linkages within the city to ensure circulation gaps are being met.</p> <p>C-I-18 Work with Merced County Transit to situate transit stops and hubs at locations that are convenient for transit users, and promote increased transit ridership through the provision of shelters, benches, bike racks on buses, and other amenities.</p> <p>C-I-19 Ensure that new development is designed to make transit a viable choice for residents. Design options include: Have neighborhood focal points with sheltered bus stops; Locate medium-high density development whenever feasible near streets served by transit; and Link neighborhoods to bus stops by continuous sidewalks or pedestrian paths.</p> <p>C-I-20 Coordinate with Caltrans and Merced County Transit to identify and implement Park and Ride sites with convenient access to public transit.</p>	<p>LTS</p>
<p>3.2-5. Implementation of the proposed General Plan will result in improved pedestrian and bicycle circulation.</p>	<p>C-I-4 Provide for greater street connectivity by requiring the bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets.</p> <p>C-I-21 Support implementation of the Los Banos Commuter Bikeway Program in coordination with the</p>	<p>BEN</p>

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
County's Regional Bikeway Plan.	
C-I-22 Establish bicycle lanes, bike routes and bike paths consistent with the General Plan.	
C-I-23 Increase bicycle safety by: Sweeping and repairing bicycle lanes and paths on a regular basis; Ensuring that bikeways are delineated and signed in accordance with Caltrans' standards, and lighting is provided, where needed; Providing bicycle paths or lanes on bridges and overpasses; Ensuring that all new and improved streets have bicycle-safe drainage grates and are free of hazards such as uneven pavement and gravel; Provide adequate signage and markings warning vehicular traffic of the existence of merging or crossing bicycle traffic where bike routes and paths make transitions into or across roadways; and Work with the Los Banos Unified School District to promote classes on bicycle safety in the schools.	
C-I-24 Give bikes equal treatment in terms of provisions for safety and comfort on arterials and collectors as motor vehicles.	
C-I-25 Amend the Zoning Ordinance to require bicycle facilities at large commercial and industrial employer sites.	
C-I-26 Develop a series of continuous walkways within new office parks, commercial districts, and residential neighborhoods so they connect to one another.	
C-I-27 Provide for pedestrian-friendly zones in conjunction with the development, redevelopment, and design of mixed-use neighborhood core areas, the Downtown area, schools, parks, and other high use areas by: Providing intersection "bump outs" to reduce walking distances across streets in the Downtown and other high use areas; Providing pedestrian facilities at all signalized intersections; Providing landscaping that encourages pedestrian use; and Constructing adequately lit and safe access through subdivision sites.	
C-I-28 Establish specific standards for pedestrian facilities to be accessible to physically disabled persons, and ensure that roadway improvement projects address mobility or accessibility for bicyclists or pedestrians.	

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
3.2-6. Implementation of the proposed General Plan will increase the demand for general aviation services and facilities.	C-I-36 Initiate development feasibility and site planning for a new Airport location outside the urban area, with access to the State highway system, at a location that will minimize environmental impacts.	LTS
	C-I-37 Work with the County to ensure future development around the new Airport is compatible with Airport operations.	
3.2-7. Implementation of the proposed General Plan will consolidate truck operations onto specified truck routes and increase volumes on these routes.	C-I-39 Provide appropriate truck routes with direct access to Employment Park areas.	LTS
	C-I-40 Require the truck route street designs on “H” Street and others to match the estimated truck weight and include unloading and turning movement for safe and efficient goods delivery.	
<b>Parks and Recreation</b>		
3.3-1. Buildout of the proposed General Plan will increase the ratio of parkland from the existing 5 acres per thousand residents but still fall short of the City’s goal of 7 acres per thousand residents.	POSR-I-2 Maintain and update a 10-year City’s Park and Recreation Master Plan in consultation with neighborhood leaders. Community design standards for new park and recreation facilities should include: Standards for bicycle/pedestrian and handicapped access; Minimum safety standards in accordance with State guidelines; and Allowable native and drought resistant plant species.	LTS
	POSR-I-3 Amend the Subdivision Ordinance to require developers make contributions to the City’s Park System, at a minimum ratio of 5 acres of park land per thousand residents.	
	POSR-I-4 Acquire and develop parks and open spaces, consistent with the ability of the City to finance acquisition and their operation, to reach a functional goal of 7 acres per thousand residents.	
	POSR-I-5 Establish the following minimum criteria as a guide to improving the park system: Neighborhood Parks will have a minimum size of 2 acres and a general service area of one-half mile radius; Community Parks will have a minimum size of 9 acres and a general service area of two mile radius.	
3.3-2. Buildout of the General Plan	POSR-I-10 Develop new parks with high quality park facilities which are durable and require low	LTS

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
will result in the increase in use of existing parks such that substantial physical deterioration of the facility would occur or be accelerated.	<p>maintenance, wherever possible. Retrofit existing parks, as appropriate, to reduce maintenance cost and water use, and to improve safety and aesthetics.</p> <p>POSR-I-11 Involve citizens, especially youths, in maintaining park areas through participation in park watches, citizen based graffiti watch and cleanup and repair.</p>	
3.3-3. Expansion and construction of new trails along waterways or canals as shown in the proposed General Plan Diagram will negatively impact the environment.	<p>POSR-I-12 Link parks together by a system of trails, bike paths, and/or open space.</p> <p>POSR-I-13 Continue to develop existing trails and linkages and create new trails where feasible:</p> <p>Rail Corridor Park - Continue to develop the Rail Corridor Park and implement developments in the Rail Corridor Master Plan; HG Fawcett Parkway - Continue to improve and expand the HG Fawcett Parkway with activity inducing uses, more lighting, exercise equipment, park furniture, landscaping, and safety barricades along the water's edge; Los Banos Creek Trail - Prepare, adopt and implement a Los Banos Creek Parkway Plan.</p> <p>POSR-I-19 Establish priorities for open space preservation and acquisition based on an evaluation of: Watersheds or significant water recharge areas; Lands suitable for recreation such as biking, photography or nature study.</p> <p>POSR-I-23 Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive habitat areas, or areas of potential sensitive status species, and protection of sensitive habitat areas and "special status" species in the following order: 1) avoidance; 2) onsite mitigation, and 3) offsite mitigation.</p>	LTS
3.3-4. Implementation of the proposed General Plan will increase the percentage of residents living within ½ square mile of a community park and ¼ square mile of neighborhood or pocket park.	<p>POSR-I-1 Provide a range of park and recreational facilities to serve the needs of all residents.</p> <p>POSR-I-8 Cooperate with the Los Banos Unified School District to promote joint development and use of school facilities after school hours.</p>	BEN

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<b>Public Facilities and Utilities</b>		
<p>3.4-1. Implementation of the proposed General Plan will increase demand for school facilities.</p>	<p>LU-I-8 Require new development to pay its fair share of the costs of public infrastructure, services and transportation facilities. These may include parks, fire and police stations, schools, utilities, roads, and other needed infrastructure.</p> <p>POSR-I-8 Cooperate with the Los Banos Unified School District to promote joint development and use of school facilities after school hours.</p> <p>PFU-I-1 Ensure adequate elementary school sites are reserved in new subdivisions, consistent with the Land Use Diagram and State law.</p> <p>PFU-I-2 Require that elementary schools be located close to residential neighborhoods, and away from major streets to avoid vehicular traffic and noise.</p> <p>PFU-I-3 Maintain a close, collaborative relationship with Los Banos Unified School District on all matters of mutual interest.</p>	<p>LTS</p>
<p>3.4-2. Implementation of the proposed General Plan will increase demand for public water to 18.5 mgd in 2030 and require new filtration facilities and distribution facilities.</p>	<p>LU-I-53 Designate land for civic and institutional land uses, to be maintained through capital projects, for parks and open spaces, police and fire services, water and sanitary facilities, infrastructure and other City services.</p> <p>POSR-I-19 Establish priorities for open space preservation and acquisition based on an evaluation of watersheds or significant water recharge areas.</p> <p>POSR-I-38 Work with Central California Irrigation District to provide for water recharge and to ensure reasonable amounts of water delivery for recharge during drought periods.</p> <p>POSR-I-40 Actively monitor groundwater quality and quantity throughout the Planning Area.</p> <p>PFU-I-13 Ensure that water supply capacity and infrastructure are in place prior to occupancy of new</p>	<p>LTS</p>

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
development.	
<p>PFU-I-19 Continue to pursue the identification and acquisition of surface water rights or supply agreements to meet future regional water supply needs.</p>	
<p>PFU-I-20 Require all major development projects to submit a landscaping plan:</p> <p>Commercial and public right-of-way, and park projects will be required to submit planting plans, irrigation plans, irrigation schedules and water use estimates for City approval prior to issuance of building permits;</p> <p>Industrial projects will be required to submit plans for water recycling and explain how water use will meet requirements of the National Pollutant Discharge Elimination System program during the plan review process. They will also be required to submit irrigation plans for proposed landscaping.</p>	
<p>PFU-I-21 Develop water filtration facilities to ensure the quality of groundwater meet federal and State drinking water standards. The City may place a temporary cap on urban development, if necessary, to allow facilities to catch up with growth.</p>	
<p>PFU-I-22 Become a signatory to the California Urban Water Conservation Council and implement all Demand Management Measures as soon as they become feasible.</p>	
<p>PFU-I-23 Implements recommendations set forth in the 2005 Urban Water Management Plan including initiatives such as: A water survey program; A water conservation program (Water Patrol); and A Residential Plumbing retrofit program.</p>	
<p>PFU-I-24 Encourage the use of reclaimed water for irrigation and landscaping purposes.</p>	
<p>PFU-I-25 Promote the use of evapotranspiration (ET) water systems in irrigating agriculture and large parks.</p>	
<p>PFU-I-26 Educate the general public about the importance of water conservation, water recycling and</p>	

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
	groundwater recharge through the following means: Making water production and treatment facilities available for tours by schools or organized groups; Encouraging educators to include water conservation in their curriculums; and Providing tips to business groups on water conservation and recycling.	
3.4-3. Implementation of the proposed General Plan will generate wastewater flows that exceed the treatment and collection capacity of the existing Wastewater Treatment Plant.	<p>PFU-I-14 Design stormwater and wastewater collection and treatment facilities to serve expected buildout of the areas served by these facilities.</p> <p>PFU-I-15 Establish equitable methods for distributing costs associated with providing water and sewerage service to development, including impact mitigation fees where warranted.</p> <p>PFU-I-16 Implement recommendations put forth by the 2007 Strategic Wastewater Management Plan with regards to: The near-term expansion of Wastewater treatment plant to 4.9 mgd; The future expansion of existing Wastewater treatment facilities beyond 4.9mgd, and/or the construction of a new membrane bi-reactor (MBR) facility to meet projected population growth; and The acquisition of land for treatment purposes.</p> <p>In addition to the above, policies PSU-I-22 to PSU-I-26 on water conservation will serve to reduce wastewater treatment needs of the City.</p>	LTS
3.4-4. Implementation of the proposed General Plan will generate additional amounts of solid waste that exceed available disposal capacity.	<p>PFU-I-28 Support waste reduction and recycling programs through public education, including writing articles on City websites, newsletters, and other forms of publications.</p> <p>PFU-I-29 Explore the possibility of attracting a material recycling company to locate a facility in Los Banos.</p> <p>PFU-I-30 Work closely with the Joint Powers Authority to ensure adequate landfill space is available to meet projected growth.</p>	LTS
3.4-5. Solid waste diversion levels are in non-compliance with the California Public Resources Code 41780A2 50 percent diversion rates.	PFU-I-27 Reduce volumes of solid waste generated in Los Banos through recycling and resource conservation measures such as: Requiring new and refurbished buildings be designed with on-site storage facilities for recycled materials to make recycling more convenient; Using post-consumer recycled paper and other recycled materials in all City operations; Supporting the commingled-recycling program; and	LTS

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
	Continuing efforts to develop new specialized recycling programs for residential, commercial, industrial, and educational sectors.	
	In addition to the above, policy PFU-I-30 will also improve the solid waste diversion rates of the City.	
3.4-6. Implementation of the proposed General Plan will increase the urban area that would be exposed to the risk of wildland fire hazards, and increased density under the Plan will lead to a higher risk of structural fire.	S-I-16 Ensure Fire Department personnel are trained in wildfire prevention, response and evacuation procedures.	LTS
	S-I-17 Create a public awareness and weed abatement program to highlight the dangers of open burning and how home owners can protect their properties from wildfires.	
	S-I-18 Develop ways to update news media and city residents on current wildfire threat levels during drought periods.	
	S-I-30 Maintain fire department performance and response standards at Class 3 ISO rating or better.	
	S-I-31 Require adequate access for emergency vehicles in all new development, including adequate street width and vertical clearance on new streets.	
	S-I-32 Require sprinklers in all mixed use development to protect residential uses from non-residential uses, which typically pose a higher fire risk.	
3.4-7. Implementation of the proposed General Plan will place a higher demand on available police and fire protection services.	S-I-33 Maintain mutual aid agreements with Merced County, California Department of Forestry and nearby cities.	
	LU-I-8 Require new development to pay its fair share of the costs of public infrastructure, services and transportation facilities. These may include parks, fire and police stations, schools, utilities, roads, and other needed infrastructure.	LTS
	LU-I-53 Designate land for civic and institutional land uses, to be maintained through capital projects, for parks and open spaces, police and fire services, water and sanitary facilities, infrastructure and other City	

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<p>services.</p> <p>S-I-26 Assess the manpower, facility, and equipment needs of police and fire services as the city undergoes expansion to provide all residents with an optimal level of protection.</p> <p>S-I-28 Maintain mutual aid agreements with Merced County, neighboring law enforcement agencies, and the California Highway Patrol.</p> <p>In addition to the above, policies S-I-30 and S-I-33 will serve to reduce the impact of new development on fire services.</p>	

<b>Energy Use and Climate Change</b>	
<p>3.5-1. New development under the proposed General Plan is anticipated to result in a substantial increase in total Vehicle Miles Traveled (VMT) as well as an increase in VMT per capita. This could result in an increase in the per capita generation of greenhouse gases.</p>	<p>POSR-I-46 Support federal and State efforts to reduce greenhouse gases and emissions through local action that will reduce motor vehicle use, support alternative forms of transportation, require energy conservation in new construction, and energy management in public buildings.</p> <p>POSR-I-52 Purchase hybrid gasoline-electric or bio-diesel fuel vehicles for the City fleet, and provide incentives to City employees who car-pool or use hybrid vehicles.</p> <p>POSR-I-53 Establish a Clean Air Awards program to acknowledge outstanding effort and to educate the public about the linkage between lifestyle, transportation and air quality.</p> <p>POSR-I-54 Educate City employees and department managers about sustainability with a focus on specific operational changes that can be made to reduce greenhouse gas emissions, such as fuel-efficient driving and reducing energy use at work.</p> <p>C-I-4 Provide for greater street connectivity by: Incorporating in subdivision regulations requirements for a minimum number of access points to existing local or collector streets for each development (e.g. at least two access points for every 10 acres of development); Encouraging traffic circles and roundabouts over signals where feasible; Requiring the bicycle and pedestrian connections from cul-de-sacs to nearby public</p>

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
	<p>areas and main streets; and Requiring new residential communities on undeveloped land planned for urban uses to provide stubs for future connections to the edge of the property line. Where stubs exist on adjacent properties, new streets within the development should connect to these stubs.</p>	
<p>3.5-2. New development under the proposed General Plan will result in a substantial increase in the energy consumed by residential and non-residential users in Los Banos.</p>	<p>POSR-I-47 Incorporate energy efficient building standards into the Zoning Ordinance and building code to ensure a high level of energy efficiency in all new development, retrofitting projects, and City facilities. These standards may include, but are not limited to: Requiring all new residential development to be pre-wired for optional photovoltaic roof energy systems and /or solar water heating on south facing roofs; Requiring all new residential development to incorporate green building methods to qualify for the equivalent of U.S. Green Building Council’s “Leadership in Energy and Environmental Design” (LEED) silver standard; and Promoting the use of Energy Star® appliances and fixtures in private development, and requiring their use in all City facilities.</p> <p>POSR-I-48 Require developers to implement Best Management Practices to reduce air pollutant emissions due to construction work and operation of equipment. During clearing, grading, earth-moving or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures; All materials excavated or graded shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust; All materials transported off-site shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust; All motorized vehicles shall have their tires watered before exiting a construction site; The area disturbed by demolition, clearing, grading, earth-moving, or excavation shall be minimized at all times; and All construction-related equipment shall be maintained in good working order to reduce exhaust from this equipment.</p> <p>POSR-I-49 Do not allow wood-burning stoves and fireplaces in new development, and seek grant funding to establish a change-out program to remove them in existing homes.</p> <p>POSR-I-51 Convert street lights and traffic signals to LED and other more efficient technologies as they become available.</p>	<p>LTS</p>

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<b>Geologic and Seismic Hazards</b>		
<p>3.6-1. Implementation of the proposed Los Banos General Plan has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death resulting from fault rupture, groundshaking, seismic related ground failure, landslides or liquefaction.</p>	<p>S-I-1 Review proposed development sites at the earliest stage of the planning process to locate any potential geologic or seismic hazard.</p> <p>S-I-2 Facilitate greater safety provisions for important or critical-use structures (such as hospitals, schools, fire, police, and public assembly facilities; substations and utilities) through input during site selection and a comprehensive geotechnical investigation.</p> <p>S-I-3 Require mitigation for buildings requiring a permit for structural alterations, especially un-reinforced masonry buildings, to ensure structural safety.</p> <p>S-I-4 Require utilities be designed to withstand probable seismic forces to be encountered in Los Banos.</p> <p>S-I-5 Require preparation of a soils report as part of the development review and/or building permit process.</p> <p>S-I-8 Require that alterations to existing buildings and all new buildings be built according to the seismic requirements of the Uniform Building Code.</p>	LTS
<p>3.6-2. Implementation of the proposed Los Banos General Plan has the potential to result in substantial soil erosion or the loss of topsoil.</p>	<p>S-I-6 Control erosion of graded areas with revegetation or other acceptable methods.</p> <p>Policies S-I-1 and S-I-5 listed under Impact 3.6-1 also help to reduce this impact and thus are incorporated here by reference.</p>	LTS
<p>3.6-3. Implementation of the proposed Los Banos General Plan has the potential to create structural damage from placing development on a potentially unstable geologic unit or soil.</p>	<p>Policies S-I-1, S-I-2, S-I-3, S-I-4, S-I-5, and S-I-8 listed under Impact 3.6-1 help to reduce this impact and thus are incorporated here by reference.</p>	LTS
<p>3.6-4. Implementation of the proposed Los Banos General Plan may have the potential to create risk</p>	<p>Policies S-I-1, S-I-2, S-I-3, S-I-4, and S-I-5 listed under Impact 3.6-1 help to reduce this impact and thus are</p>	LTS

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
to life or property by placing development on expansive soils.	incorporated here by reference.	
<b>Water Resources</b>		
3.7-1. New urban land uses and increased intensity of urban land uses could increase stormwater runoff rates, overwhelming storm drain capacity, decreasing groundwater recharge, and causing flooding in downstream receiving waters.	<p>POSR-I-36 Engage the business community in protecting the City’s water supply.</p> <p>POSR-I-37 Encourage the use of enhanced stormwater control facilities that provide additional filtration of stormwater to remove pollutants prior to discharge to pastureland or the Grasslands Water District.</p> <p>POSR-I-38 Work with Central California Irrigation District to provide for water recharge and to ensure reasonable amounts of water delivery for recharge during drought periods.</p> <p>POSR-I-39 Promote the combined use of recharge areas, public recreation, wetland mitigation programs and banking, as part of the City’s open space or recreational trail system to the extent deemed feasible by good engineering or geotechnical practice.</p> <p>POSR-I-40 Actively monitor groundwater quality and quantity throughout the Planning Area.</p> <p>S-I-6 Control erosion of graded areas with revegetation or other acceptable methods.</p> <p>S-I-11 Require new development to prepare hydrologic studies and implement appropriate mitigation measures to minimize surface water run-off and reduce the risk of flooding.</p> <p>S-I-12 Require developers to provide for the ongoing maintenance of detention basins.</p> <p>S-I-13 Maintain and regularly update the Storm Drain Master Plan.</p> <p>PFU-I-14 Design stormwater and wastewater collection and treatment facilities to serve expected buildout of the areas served by these facilities.</p>	LTS
3.7-2. New and increased intensity of urban land uses could result in	Policies POSR-I-34, POSR-I-35, POSR-I-36, POSR-I-37, POSR-I-38, S-I-6, S-I-9, and S-I-10 summarized	LTS

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
increased levels of nonpoint source pollutants in stormwater runoff, adversely affecting water quality in receiving water bodies.	under Impact 3.6-1 reduce this impact and thus are incorporated here by reference.	
<b>Biological Resources</b>		
3.8-1. Implementation of the proposed Los Banos General Plan would have a substantial adverse effect, either directly or through habitat modifications, on any officially designated species identified as an endangered, threatened, candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	<p>POSR-I-23 Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive habitat areas, or areas of potential sensitive status species, and protection of sensitive habitat areas and special status species in new development in the following order: 1) avoidance; 2) onsite mitigation, and 3) offsite mitigation.</p> <p>POSR-I-24 Establish and maintain a protection zone around wetlands, riparian corridors, and identified habit areas where development shall not occur, except as part of a parkway enhancement program (e.g., trails and bikeways).</p> <p>POSR-I-25 Establish a “no net loss” policy for wetlands and vernal pools within and adjacent to the Planning Area.</p> <p>POSR-I-26 Review development proposals in accord with applicable Federal and State protecting special-status species and jurisdictional wetlands and use the California Natural Diversity Database and field reconnaissance, where necessary to confirm habitat value, to assist in identifying potential conflicts with sensitive habitats or special status species and establishing appropriate mitigation and monitoring requirements.</p> <p>POSR-I-27 Establish and maintain a Grasslands Resources Overlay Zone (GROZ) to the Intercanal Area between the San Luis Canal and the Santa Fe Canal north of SR-152 where lands within the GROZ shall remain in agricultural and open space uses.</p> <p>POSR-I-28 Provide wildlife corridors to allow movement of animals and minimize wildlife-urban conflicts.</p> <p>POSR-I-29 Require the preservation of mature trees and encourage the planting of drought resistant street</p>	SU

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
	and shade trees in all new developments.	
	POSR-I-30 Promote the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.	
3.8-2. Implementation of the proposed Los Banos General Plan would have a potentially substantial adverse effect on identified riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Policies summarized under Impact 3.8-1 reduce this impact and thus are incorporated here by reference.	LTS
3.8-3. The proposed General Plan would have a substantial adverse effect on "federally protected" wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means.	Policies summarized under Impact 3.8-1 reduce this impact and thus are incorporated here by reference.	LTS
3.8-4. The proposed General Plan would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Policies summarized under Impact 3.8-1 help reduce this impact and thus are incorporated here by reference.	SU

Air Quality

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<p>3.9-1. Implementation of the proposed Los Banos General Plan would result in a cumulatively considerable net increase of criteria pollutants. Future growth in accordance with the Plan and traffic associated with the Plan would generate emissions exceeding the annual SJVAPCD thresholds for NOx and ROG.</p>	<p>POSR-I-46 Support federal and State efforts to reduce greenhouse gasses and emissions through local action that will reduce motor vehicle use, support alternative forms of transportation, require energy conservation in new construction, and energy management in public buildings.</p> <p>POSR-I-48 Require developers to implement Best Management Practices to reduce air pollutant emissions due to construction work and operation of equipments. During clearing, grading, earth-moving or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures; All materials excavated or graded shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust; All materials transported off-site shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust; All motorized vehicles shall have their tires watered before exiting a construction site; The area disturbed by demolition, clearing, grading, earth-moving, or excavation shall be minimized at all times; All construction-related equipment shall be maintained in good working order to reduce exhaust from these equipments.</p> <p>POSR-I-49 Do not allow wood-burning stoves and fireplaces in new development, and seek grant funding to establish a change-out program to remove them in existing homes.</p> <p>POSR-I-50 Use the SJVAPCD Guidelines for Assessing and Mitigating Air Quality Impacts for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents.</p> <p>C-I-13 Require traffic impact studies for all proposed new developments that will generate significant amounts of traffic (100 or more peak hour trips).</p> <p>C-I-14 Establish a Transportation Performance Monitoring (TPM) program for the southern part of the Westside subarea to monitor and control traffic arising from new development. (See figure on page 103.)</p> <p>C-I-22 Establish bicycle lanes, bike routes and bike paths consistent with the General Plan.</p>	<p>SU</p>

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
3.9-2. The proposed General Plan would expose sensitive receptors to substantial pollutant concentrations.	Policies summarized under Impact 3.9-1 help to reduce this impact and thus are incorporated here by reference.	SU
<b>Fire Hazards and Hazardous Materials</b>		
3.10-1. The proposed General Plan could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonable foreseeable upset and accident conditions involving the release of hazardous materials to the environment.	<p>S-I-19 Apply provisions of the Merced County Hazardous Waste Management Plan to decisions involving hazardous materials in Los Banos as appropriate.</p> <p>S-I-20 Prohibit the location or expansion of businesses producing, utilizing or storing hazardous materials within a half mile of schools, hospitals, and residential neighborhoods.</p> <p>S-I-21 Ensure that any proposed new development on identified or suspected hazardous materials sites address hazardous materials through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project.</p> <p>S-I-22 Require remediation and cleanup of sites contaminated with hazardous substances.</p> <p>S-I-23 Coordinate enforcement of the Hazardous Material Disclosure Program with the Merced County Health Department to identify facilities producing, utilizing, or storing hazardous wastes.</p> <p>S-I-24 Promote the reduction, recycling, and safe disposal of household hazardous wastes through public education and awareness.</p> <p>S-I-25 Review, update, and implement the City’s Hazardous Materials Plan on a continual basis.</p>	LTS
3.10-2. The proposed General Plan could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Policies summarized above in Impact 3.10-1 reduce this impact and thus are incorporated here by reference.	LTS

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**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<p>3.10-3. Development under the proposed General Plan could be located on a site which is included on a list of hazardous materials sites compiled pursuant to government code section 65962.5 and, as a result, could create a significant hazard to the public or the environment.</p>	<p>Policies S-I-17, S-I-18, S-I-19, S-I-20, S-I-21, S-I-22, S-I-21, and S-I-35 summarized above in Impact 3.10-1 reduce this impact and thus are incorporated here by reference.</p>	LTS
<p>3.10-4. The proposed General Plan would result in development located within an airport land use plan area or and could result in a safety hazard for people residing or working in the Planning Area.</p>	<p>LU-I-7 Require preparation of developer master plans to guide future development in the following subareas: The Westside subarea; Airport subarea. Both the Westside and Airport subareas area envisioned to become master-planned employment centers containing a mix of office parks, light industries, and R&amp;D facilities.</p> <p>LU-I-54 Until such a time as the airport is relocated, ensure that proposed residential, commercial, and industrial uses near the airport be consistent with Los Banos Municipal Airport Plan and the Merced County Airport Land Use Compatibility Plan.</p> <p>LU-I-62 Require developers to mitigate fully the environmental effects of development at or near the Airport site following the relocation of the airport, particularly the potential impacts to Los Banos Creek riparian corridor and the City’s water supply, by clustering development to maximize open space.</p> <p>C-I-36 Initiate development feasibility and site planning for a new Airport location outside the urban area, with access to the State highway system, at a location that will minimize environmental impacts.</p> <p>C-I-37 Work with the County to ensure future development around the new Airport is compatible with Airport operations.</p>	LTS
<p>3.10-5. The proposed General Plan could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<p>S-I-34 Prepare and adopt a Los Banos Natural Hazard Mitigation Plan (NHMP), consistent with guidelines of the Federal Emergency Management Agency (FEMA) and the Disaster Act of 2000.</p> <p>S-I-35 Work with owners and operators of critical use facilities (i.e., hospitals, police stations, public assembly facilities, transportation services) to ensure that they can provide alternate sources of electricity,</p>	LTS

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
	water, and sewerage in the event that regular utilities are interrupted in a disaster.	
	S-I-36 Maintain and improve current early warning systems and response facilities (Local E.O.C, National Warning System, Civil preparedness radio systems, etc).	
	S-I-37 Coordinate regular emergency drills with City and County emergency service providers.	
3.10-6. The proposed General Plan could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	<p>S-I-16 Ensure Fire Department personnel are trained in wildfire prevention, response and evacuation procedures.</p> <p>S-I-17 Create a public awareness and weed abatement program to highlight the dangers of open burning and how home owners can protect their properties from wildfires.</p> <p>S-I-18 Develop ways to update news media and city residents on current wildfire threat levels during drought periods.</p> <p>S-I-30 Maintain fire department performance and response standards at Class 3 ISO rating or better.</p> <p>S-I-31 Require adequate access for emergency vehicles in all new development, including adequate street width and vertical clearance on new streets.</p> <p>S-I-32 Require sprinklers in all mixed use development to protect residential uses from non-residential uses, which typically pose a higher fire risk.</p> <p>S-I-33 Maintain mutual aid agreements with Merced County, California Department of Forestry, and nearby cities.</p> <p>Policies summarized under Impact 3.10-5 also help to reduce this impact and thus are incorporated here by reference.</p>	LTS

Executive Summary

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<b>Noise</b>		
<p>3.11-1. New development under the proposed General Plan could expose persons to or generate noise levels in excess of 60dB as established in the existing General Plan.</p>	<p>N-I-1 Use the community noise level exposure standards, shown in Table 3.11-3 as review criteria for new land uses.</p>	<p><b>LTS</b></p>
	<p>N-I-2 Require a noise study and mitigation measures for all projects that have noise exposure greater than “normally acceptable” levels based on specific criteria and standards in the Zoning Ordinance. These measures may include, but are not limited to, the following actions: Screen and control noise sources, such as parking and loading facilities, outdoor activities and mechanical equipment; Increase setbacks for noise sources from adjacent dwellings; Retain fences, walls, and landscaping that serve as noise buffers; Use soundproofing materials and double-glazed windows; and Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.</p>	
	<p>N-I-3 Promote the use of noise attenuation measures to improve the acoustic environment inside residences where existing single-family residential development is located on an arterial street.</p>	
	<p>N-I-4 Do not permit sound walls, except along freeways. In all other instances, permit sound walls only upon finding that alternative noise attention measures are not available.</p>	
	<p>N-I-6 Protect especially sensitive uses, including schools, hospitals, and senior care facilities, from excessive noise.</p>	
	<p>N-I-7 Require the use of Best Available Control Technology (BACT) to minimize noise from all stationary sources as well as mobile/temporary sources such as operation of construction equipment.</p>	
	<p>3.11-2. The proposed General Plan would potentially expose existing noise-sensitive uses to construction-related noise related to groundborne vibration and ambient noise.</p>	

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
<p>3.11-3. The proposed General Plan may expose people residing or working in the vicinity of the Los Banos Municipal Airport to aircraft noise.</p>	<p>N-I-5 Minimize noise impacts of flight operations on existing noise-sensitive development.</p> <p>Implementation of this policy, in addition to policies N-I-1, N-I-2, N-I-3, N-I-6, and N-I-7 summarized under Impact 3.11-1, will reduce this impact to a level that is less than significant.</p>	<p>LTS</p>
<p><b>Cultural Resources</b></p>		
<p>3.12-1. Implementation of the proposed Los Banos General Plan has the potential to cause a substantial adverse change in the significance of an existing or potential historical resource as defined in Section 15064.5.</p>	<p>LU-I-10 Adopt design standards in the Zoning Ordinance to ensure that new and infill development and associated infrastructure are compatible in scale and character with existing uses and historic structures and neighborhoods.</p> <p>LU-I-12 Promote pedestrian-oriented development in selected areas, including Downtown, neighborhood centers, and the Pacheco Boulevard corridor.</p> <p>LU-I-13 Require street trees on all public street frontages, except local and industrial streets, and adopt street tree guidelines that specify preferred species, spacing requirements and planting guidelines in coordination with the Urban Tree Foundation.</p> <p>LU-I-14 Establish a distinct design character for Pacheco Boulevard with signage or banners, landscaping, designer lighting poles, and other visual cues to provide a celebrated entrance into the City.</p> <p>LU-I-16 To the extent possible, ensure that new public and private investment preserves, enhances, rehabilitates and celebrates local landmarks, buildings, neighborhoods, historic treasures, open spaces, cultures, and traditions that make Los Banos unique.</p> <p>LU-I-19 Continue to require undergrounding of utilities in all new development.</p> <p>POSR-I-41 Require that new development analyze and avoid any potential impacts to archaeological, paleontological, and designated historic resources by: Requiring a record search at the Central California Information Center located at California State University Stanislaus and other appropriate historical repositories for development proposed in areas that are considered archaeologically sensitive; Studying the</p>	<p>LTS</p>

*Executive Summary*

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
	<p>potential effects of development and construction (as required by CEQA); Requiring pre-construction field surveys (where appropriate) and monitoring during any ground disturbance for all development in areas of historical, archaeological, and paleontological sensitivity; and Implementing appropriate measures or project alternatives to avoid identified significant impacts to historical resources. Where such impacts are unavoidable, document the structure(s) in accordance with the National Park Service’s Historic American Building Survey/Historic American Engineering Record (HABS/HAER). Such affects would still be considered significant.</p> <p>POSR-I-42 Retain a qualified architectural historian to undertake an inventory of historic resources to determine sites or buildings of federal, State, or local historic significance.</p> <p>POSR-I-43 Promote the registration of historic sites, buildings, and structures in the National Register of Historic Places, and inclusion in the California Inventory of Historic Resources.</p> <p>POSR-I-44 Update the City’s building regulations to implement the State Historic Building Code for alterations to designated historic properties.</p> <p>POSR-I-45 Require applicants of major development projects to consult with Native American representatives regarding cultural resources to identify locations of importance to Native Americans, including archeological sites and traditional cultural properties.</p>	
<p>3.12-2. Implementation of the proposed Los Banos General Plan has the potential to cause a substantial adverse change in the significance of a unique archaeological resource as defined in Section 15064.5, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those</p>	<p>The policies summarized under Impact 3.12-1 serve to reduce this impact to a level that is less than significant and thus are incorporated by reference here.</p>	<p><b>LTS</b></p>

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
interred outside of formal cemeteries.		
<b>Visual Resources</b>		
<p>3.13-1. Implementation of the proposed General Plan has the potential to adversely affect scenic views of peripheral agricultural lands, grasslands, and wetlands as seen from public viewing areas.</p>	<p>LU-I-4 Require contiguous development within the SOI unless it can be demonstrated that development of property which is contiguous to urban development is unavailable or economically infeasible.</p> <p>LU-I-19 Continue to require undergrounding of utilities in all new development.</p> <p>POSR-I-16 Work with Grasslands Water District to create a greenbelt/open space buffer around the perimeter of the city that provides a clear sense of identity and also protects the Grassland Ecological Area.</p> <p>POSR-I-17 Establish regulatory incentives for open space preservation, including density bonuses and provision for purchase of development rights (PDRs).</p> <p>POSR-I-19 Establish priorities for open space preservation and acquisition based on an evaluation of: Significant natural areas that are historically, ecologically, or scientifically unique or are outstanding, important or threatened; Wildlife habitats and fragile ecosystems in need of protection; Watersheds or significant water recharge areas; Lands suitable for recreation such as biking, photography or nature study; and Land suitable for agricultural production.</p> <p>POSR-I-24 Establish and maintain a protection zone around wetlands, riparian corridors, and identified habit areas where development shall not occur, except as part of a parkway enhancement program (e.g., trails and bikeways).</p>	<p>LTS</p>
<p>3.13-2. Future development projects could be of different intensity, size, and character than existing development and could degrade the existing visual character of Los Banos.</p>	<p>LU-I-10 Adopt design standards in the Zoning Ordinance to ensure that new and infill development and associated infrastructure are compatible in scale and character with existing uses and historic structures and neighborhoods.</p> <p>LU-I-13 Require street trees on all public street frontages, except local and industrial streets, and adopt street tree guidelines that specify preferred species, spacing requirements and planting guidelines in coordination</p>	<p>LTS</p>

Executive Summary

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
with the Urban Tree Foundation.	
LU-I-16 To the extent possible, ensure that new public and private investment preserves, enhances, rehabilitates and celebrates local landmarks, buildings, neighborhoods, historic treasures, open spaces, cultures, and traditions that make Los Banos unique.	
LU-I-22 Ensure that the scale, operation, location, and other characteristics of community facilities, including parks, schools, child care facilities, religious institutions, other public and quasi-public facilities, enhance the character and quality of neighborhoods.	
LU-I-23 Require new residential development adjacent to established neighborhoods provide a transition zone where the scale, architectural character, pedestrian circulation and vehicular access routes of both new and old neighborhoods are well integrated.	
LU-I-47 Establish design guidelines to assure high quality design and site planning at the Business Opportunity Area and the Airport site.	
POSR-I-40 Retain a qualified architectural historian to undertake an inventory of historic resources to determine sites or buildings of federal, State, or local historic significance.	
POSR-I-41 Promote the registration of historic sites, buildings, and structures in the National Register of Historic Places, and inclusion in the California Inventory of Historic Resources.	

**Table ES-6: Summary of Impacts and Proposed General Policies that Reduce the Impact**

	<i>Proposed General Plan Policies that Reduce the Impact</i>	<i>Significance after Mitigation</i>
3.13-3. Development under the proposed General Plan has the potential to adversely affect visual resources in the short term during periods of construction by blocking or disrupting views.	POSR-I-48 Require developers to implement Best Management Practices to reduce air pollutant emissions due to construction work and operation of equipments. During clearing, grading, earth-moving or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures; All materials excavated or graded shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust; All materials transported off-site shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust; All motorized vehicles shall have their tires watered before exiting a construction site; The area disturbed by demolition, clearing, grading, earth-moving, or excavation shall be minimized at all times; All construction-related equipment shall be maintained in good working order to reduce exhaust from these equipments.	LTS
3.13-4. Development under the proposed General Plan has the potential to create a new source of substantial light or glare which would adversely affect nighttime views in the area.	<p>LU-I-30 Integrate standards for varying scales of commercial development including large-format regional centers, neighborhood-serving centers, and mixed-use Downtown into the zoning regulations.</p> <p>Policy LU-I-47 summarized under Impact 3.13-1 also helps to reduce this impact and thus is incorporated here by reference.</p>	LTS

Source: Dyett & Bhatia, 2007; Environmental Science Associates, 2007.

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# I Introduction

This Program Environmental Impact Report (EIR) has been prepared on behalf of the City of Los Banos in accordance with the California Environmental Quality Act (CEQA). This chapter outlines the purpose of and overall approach to the preparation of the DEIR on the proposed Los Banos 2030 General Plan. The City of Los Banos is the lead agency responsible for ensuring that the proposed General Plan complies with CEQA.

## I.1 PURPOSE OF THE EIR

---

The EIR on the proposed General Plan has three purposes:

- First, the EIR will help the City of Los Banos meet California Environmental Quality Act (CEQA) requirements for analysis of environmental impacts by including a complete and comprehensive programmatic evaluation of the physical impacts of the proposed General Plan and its alternatives.
- Second, the EIR will inform residents and members of the City Council of the environmental impacts prior to the Commission and Council taking action on the Plan. This information will assist City officials in reviewing and adopting the proposed Plan.
- Third, the EIR will assist local decision-makers in determining appropriate amendments to Los Banos's land use regulations and other implementation actions, based on a balanced assessment of the environmental impacts of the proposed General Plan.

The EIR also identifies further measures that decision-makers may want to incorporate into the General Plan, or implementation programs to minimize environmental effects.

The proposed General Plan consists of policies and proposals to guide the future growth of the City of Los Banos within its Planning Area (see Chapter 2 for discussion and map of planning and jurisdictional boundaries). This EIR evaluates the potential impacts of the adoption of the proposed Plan. This EIR will also be used as a reference for subsequent environmental review of specific plans, area plans, infrastructure improvements, zoning amendments, new subdivision ordinances, impact fees, and development proposals.

CEQA requires that the agency with the primary responsibility over the approval of a project (the lead agency) evaluate the potential impacts of the project in an EIR. The City is required to prepare an EIR on the General Plan in order to provide the City Council, as the ultimate decision maker, with an informational document for use in evaluating the proposed Plan. After adoption, the EIR will serve the additional function of providing direction to the City in implementation of the new Plan. The EIR also identifies mitigation measures to minimize significant impacts and evaluate reasonable alternatives to the proposed Plan. The "No Project Alternative" discusses the result of not implementing the proposed General Plan or any of the alternatives but rather continuing to implement the existing general plan. An environmentally superior alternative also is identified as part of the alternatives analysis to inform the public—the ultimate decision-makers on this project.

This EIR will be used by Los Banos residents, elected officials, and City staff during the public review process. The Draft EIR used in public review and the Final EIR, which includes responses to public comments received during the 45-day comment period, will be certified by the Los Banos City Council prior to consideration of the proposed Los Banos 2030 General Plan. The proposed Plan and the EIR have been prepared concurrently, and policies in the proposed Plan take into consideration the EIR discussion of impacts and mitigation measures.

## **I.2 GENERAL PLAN PROCESS AND PUBLIC INVOLVEMENT**

---

The General Plan update was initiated in the fall of 2005. To help prepare the General Plan, a General Plan Advisory Committee (GPAC) was formed. This committee was charged with serving as ambassadors to the community during the preparation of the new Plan and with reviewing and commenting on interim products prepared by the project consultants. The committee included representatives from the Los Banos Planning Commission and City Council and local citizens residing both within and outside the planning Sphere of Influence.

The Committee met on a frequent basis to address concerns and guide the planning process. A number of community meetings were held, one in December of 2005 to discuss city concerns and conduct a visioning exercise, one in April of 2006 to present sketch plan designs, and another in June of 2006 to discuss a Preferred Plan Concept. Discussions were organized in small groups and Spanish translators and translated workshop materials were made available to allow all participants to be heard. A wide variety of viewpoints were expressed by participants from all segments of the community. Public feedback at these workshops and those expressed indirectly through GPAC meetings have been incorporated into the planning process. Finally, in order to update the community on the planning progress, a number of newsletters were prepared and widely distributed to residents in Los Banos. All of the documents, maps, and meeting agendas were also made available for public download through the City's website at [www.losbanos.org](http://www.losbanos.org).

The proposed General Plan will be considered by the Planning Commission and City Council at public hearings following public review of this Draft EIR.

## **I.3 EIR APPROACH AND ASSUMPTIONS**

---

The proposed Plan EIR is a program EIR, defined in the CEQA Guidelines Section 15168 as: "...an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically; (2) As logical parts in the chain of contemplated actions; (3) In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways."

Program EIRs can be used as the basic, general environmental assessment for an overall program of projects developed over a 25 year planning horizon. A program EIR has several advantages. First, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. Second, it allows the lead agency to look at the broad, regional impacts of a program of actions before its adoption and eliminates redundant or contradictory approaches to the consideration of regional and cumulative impacts.

As a program EIR, this document focuses on the overall effects of the proposed General Plan in the Planning Area; the analysis does not examine the effects of potential site-specific projects that may occur under the overall umbrella of this program in the future. In fact, this EIR assumes that specific development projects and infrastructure improvement proposals submitted to Los Banos will necessitate an independent environmental assessment in accord with the requirements of CEQA. The nature of general plans is such that many proposed policies are intended to be general, with details to be later determined during implementation. Thus, many of the impacts and mitigation measures can only be described in general or qualitative terms.

In order to place many of the proposed General Plan policies into effect, the City will adopt or approve specific actions—zoning regulations, zoning map amendments, subdivision regulations, design guidelines, development impact fees, specific plans, area plans, capital improvement programs, development projects, etc.—that are consistent with the policies and implementation measures of the Plan. This program EIR does not preclude the need for environmental review of specific plans, area plans, and individual projects subsequent to Council adoption of the proposed General Plan.

CEQA mandates that lead agencies adopt mitigation monitoring and reporting programs for projects identified as having significant impacts where mitigation measures have been identified. Mitigation monitoring and reporting programs are intended to ensure compliance during project implementation. These programs have the additional advantage of providing staff and decision-makers with feedback on the effectiveness of mitigation measures, as well as experience and information to shape future mitigation measures.

The proposed General Plan is intended to be self-mitigating, in that the policies and programs of the proposed Plan are designed to mitigate environmental impacts. This EIR clearly shows how the impacts of future development in Los Banos will be mitigated through implementation of the policies and programs of the proposed Plan. Any residual impact after implementation of these proposed policies and programs is identified as measured against the significance criteria established for each impact area. The significance criteria are identifiable quantitative, qualitative, or performance indicators of a particular environmental effect in which non-compliance indicates that the effect is significant.

This EIR represents the best effort to evaluate the potential environmental effects of the proposed General Plan given its long-term planning horizon. It can be anticipated that conditions will change; however, the assumptions used are the best available at the time of preparation and reflect existing knowledge of patterns of development, human activity and environmental conditions.

The proposed General Plan EIR is based on the following key assumptions:

- **Full Implementation.** This EIR assumes that all policies in the proposed General Plan will be fully implemented and all development will be consistent with the proposed General Plan Land Use Diagram.
- **Buildout in 2030.** This EIR assumes that buildout of the proposed General Plan will occur by 2030. It is understood that development under the proposed General Plan will be incremental and timed in response to market conditions. And while the proposed General Plan includes policies intended to control the amount and location of new growth, it does not include interim “phases” (development scenarios) as this is considered speculative.

## **I.4 ISSUES ADDRESSED IN THIS EIR**

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The issues evaluated in this EIR were determined during the initial phase of the project. A Notice of Preparation (NOP) for the EIR on the Los Banos 2030 General Plan was circulated in December of 2006 and the City received comments during a 30-day review period. The NOP and comments are included in Appendix A of this EIR. These comments, along with input received during public workshops and meetings helped to identify the major planning and environmental issues and concerns about the General Plan and helped establish the framework and focus of the environmental analysis.

The first step toward completion of this EIR was the initial analysis of the environmental setting. This analysis compiled specific information on the current conditions, the characteristics of the city, and the major environmental, growth and development issues it faces. Information on the environmental setting provides background regarding relevant issues and is used to evaluate potential impacts. Based on the initial analysis of the environmental setting, as well as the NOP comments and public meetings, the following issues are analyzed in this EIR:

- Land Use, Housing and Agriculture
- Transportation
- Parks, Recreation and Open Space
- Public Facilities and Services
- Global Warming and Energy
- Geology, Soils, and Seismicity
- Hydrology and Water Quality
- Biological Resources
- Air Quality
- Fire Hazards and Hazardous Materials
- Noise
- Cultural Resources
- Visual Resources

Each issue area is addressed in Chapter 3: Settings, Impacts, and Mitigation Measures, of this EIR.

## **I.5 DOCUMENTS INCORPORATED BY REFERENCE**

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Section 15150 of the CEQA Guidelines permits documents of lengthy technical detail to be incorporated by reference in an EIR. Specifically, Section 15150 states that an EIR may "incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public...." Incorporated documents are to be briefly summarized in the EIR and be made available to the public for inspection or reference. The Los Banos 2030 General Plan Draft EIR incorporates by reference the documents noted below. These documents are available at the City of Los Banos, City Hall, 520 J Street, Los Banos, CA 93635.

- *Los Banos General Plan Update: Map Atlas (November 2005)*. This document provides baseline information regarding existing conditions that will influence future development in the City of Los Banos. The Atlas uses maps to illustrate the supply of available land in the City, which will help guide the decision-making process regarding future growth and conservation. The Atlas maps highlight information for natural resources, land uses, and civic and transportation infrastructure throughout the City and its Sphere of Influence.
- *Los Banos General Plan Update: Sketch Plan Workbook (March 2006)*. This document also referred to as the Sketch Plans, presents various land use and transportation alternatives that may be incorporated into the proposed General Plan and compares these with the current General Plan.

Other project and program EIRs that have been prepared for projects in the Los Banos Planning Area have been reviewed during preparation of this EIR. These EIRs address approved development and development currently underway. The Bibliography lists all pertinent technical references and EIRs consulted during the preparation of this EIR.

## **I.6 EIR ORGANIZATION**

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The Draft EIR is organized into the following main chapters:

- *Chapter 2: Project Description*. This chapter includes a detailed description of the proposed General Plan. The General Plan Land Use Diagram, the land use classification system, resource protection policies and programs, and buildout estimates are presented.
- *Chapter 3: Setting, Impact Analysis, and Mitigation*. This chapter analyzes the environmental impacts of the proposed General Plan. Impacts are organized by major topic. Each topic includes a description of the environmental setting, methods and assumptions, significance criteria, impacts, and mitigation measures. Policies in the proposed General Plan that would avoid or reduce the impacts are also discussed.
- *Chapter 4: Analysis of Alternatives*. This chapter compares the impacts of the proposed General Plan with land use alternatives including a No Project Alternative and two alternatives that use different assumptions about future development. Chapter 4 also specifies the Environmentally Superior Alternative.
- *Chapter 5: CEQA Required Conclusions*. Chapter 5 provides a summary of significant environmental impacts, including unavoidable, irreversible, growth-inducing, and cumulative impacts.

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## 2 Project Description

The project analyzed in this EIR is the proposed Los Banos 2030 General Plan. A city's general plan has been described as its constitution for development; it establishes the framework within which decisions on how to grow, provide public services and facilities, and protect and enhance the environment must be made. The proposed General Plan is intended to address growth and development over the next 23 years.

Under California Government Code Section 65300 et. seq., cities are required to prepare a general plan that establishes policies and standards for future development, housing affordability, and resource protection for the entire planning area. By law, a general plan must be an integrated, internally consistent statement of city policies. Section 65302 requires that the general plan include the following seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. Additional elements may be included in the general plan as well, at the discretion of the City. Optional elements in the proposed Los Banos 2030 General Plan include Economic Development, Parks and Recreation and Public Facilities and Services. Housing is not included in this General Plan Update because the Element was updated in 2004. All elements have equal weight, and no one element supersedes another. Cities may amend the general plan four times a year (each amendment may include any number of changes), and cities are encouraged to keep the plan current through regular updates.

This chapter provides background information regarding the Los Banos Planning Area regional location, the policy development process, the proposed land use plan for the city, General Plan objectives and key themes/components of the proposed General Plan. Additional details are provided in the Plan itself. This description provides the basis for the environmental analysis in Chapter 3.

### 2.1 REGIONAL LOCATION AND PLANNING BOUNDARIES

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#### REGIONAL LOCATION

The City of Los Banos is situated within the western portion of Merced County, in the northern part of the San Joaquin Valley. The City is conveniently located in the center of California, near the junction of California State Route (SR)-152 and Interstate 5, approximately 120 miles southeast of San Francisco, 83 miles northeast of Monterey and 72 miles northwest of Fresno. Los Banos is the second largest city in the county and borders the communities of Dos Palos, Gustine, Volta, and Santa Nella. The San Luis Reservoir State Recreation Area is located to the west of the Planning Area. Various State and Federal Wildlife Areas and Refuges surround the Planning Area including the Volta State Wildlife Area to the northwest, the Los Banos Wildlife Area to the northeast, and the Mud Slough Wildlife Area to the east. The Planning Area is bordered on the east by the Grassland Ecological Area (GEA), a non-jurisdictional boundary encompassing 230,000 acres designated by the U.S. Fish and Wildlife Service as priority lands for public easements to preserve and enhance wetlands. The regional location is depicted in Figure 2.1-1.

#### PLANNING BOUNDARIES

The City of Los Banos exhibits characteristics of many Central Valley communities, with a traditional downtown surrounded by residential neighborhoods, commercial and industrial areas, and

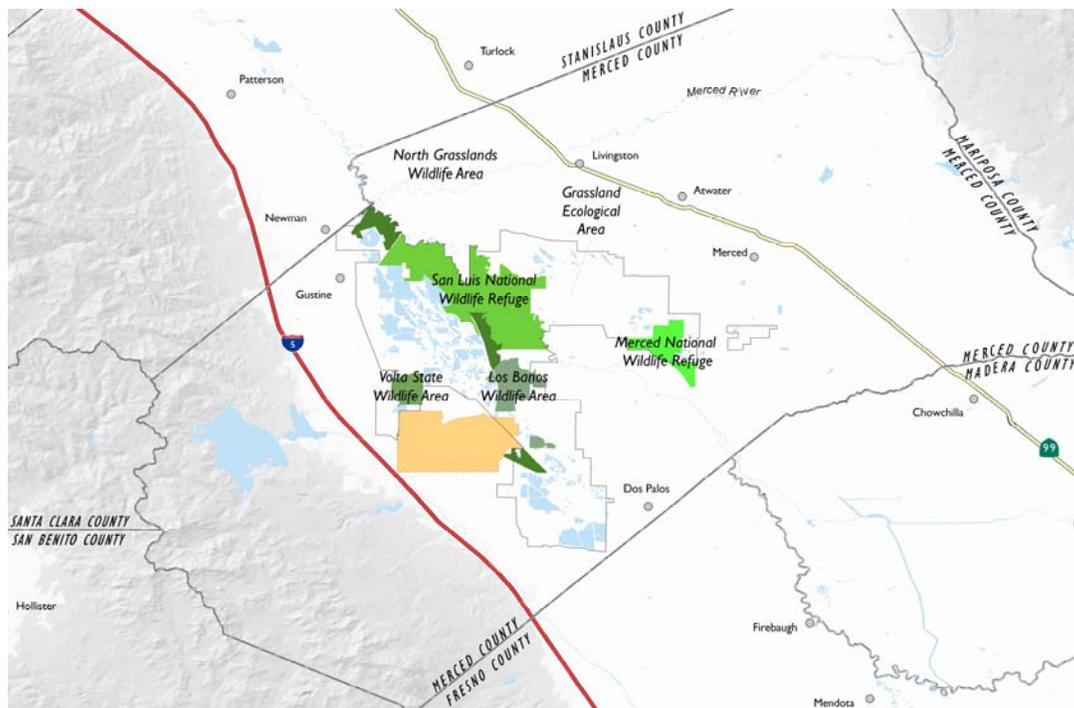
agriculture lands. According to State law, the City can establish a Planning Area that consists of land within the City and, “any land outside its boundaries which, in the planning agency’s judgment, bears relation to its planning.” The inclusion of land within the Planning Area that is outside City Limits does not necessarily mean that Los Banos is considering annexation, but they are included because land uses in these areas have a direct impact on the City.

### Planning Area

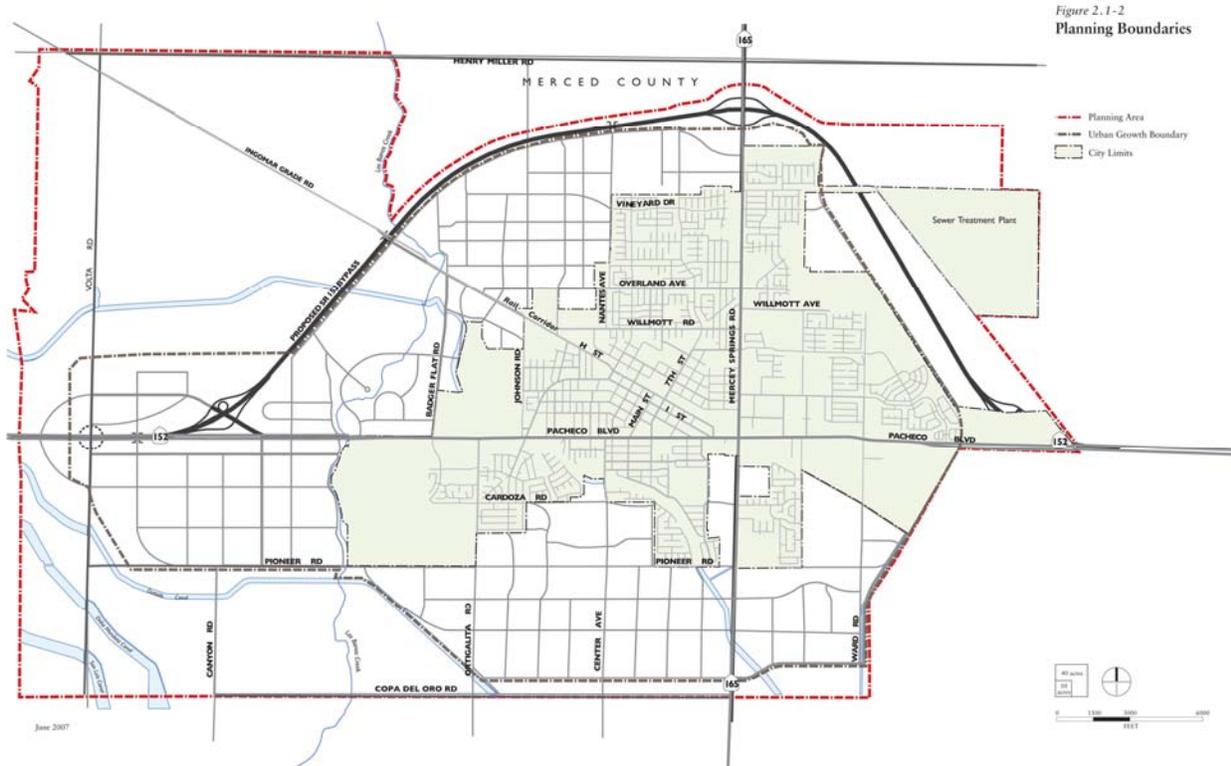
The Planning Area comprises approximately 22,000 acres (34.4 square miles) of both incorporated and unincorporated land bearing relation to the City’s future growth (see Figure 2.1-2). More specifically, the Planning Area extends one quarter mile beyond Henry Miller Road to the north, to the Wastewater Treatment Plant to the east, Sunset and Copa de Ora Road to the south and Volta Road to the west. The Planning Area has been defined with the intention of focusing future growth on land contiguous to the City and preventing scattered development on adjacent farmlands. The Planning Area includes residential, commercial and industrial developments as well as public facilities, including parks, schools, the Waste Water Treatment Plant and the proposed location of the SR-152 Bypass. The Planning Area also includes existing transportation facilities such as SR-152, SR-165, the disused Union Pacific Railroad, and Los Banos Municipal Airport<sup>1</sup>.

The Planning Area excludes a total of 1,505 acres previously included in the 1999 General Plan Area of Interest.

Figure 2.1-1 Regional Location



<sup>1</sup> As of the date of this report, there are specific plans to relocate the Municipal Airport to a location south of the Planning Area.



**Table 2.1-1: Planning Area Boundaries**

Boundary	Acreage	Percent of Total Planning Area
City Limits	6,350	29
Urban Growth Boundary	13,000	60
Sphere of Influence	14,400	65
2030 General Plan Planning Area	22,000	100

Source: Dyett & Bhatia, 2007.

The 1999 General Plan Area of Interest incorporated 23,400 acres (36.6 square miles), approximately seven percent more territory than the current Planning Area. This boundary includes prime farmlands to the north and south that are excluded from the 2030 General Plan update.

### Urban Growth Boundary

The General Plan Land Use Diagram depicts an Urban Growth Boundary (UGB) representing land that is appropriate for and likely to be needed for urban purposes up to the year 2030. Within the UGB, many agricultural areas are already zoned for residential or commercial uses because of anticipated conversion of agriculturally zoned land to meet the city’s growth needs.<sup>2</sup> The UGB is shown in Figure 2.1-2. The primary purpose of the UGB is to promote compact urban development and protect surrounding agricultural land. Prior to urbanization, rural uses, including farming, are encouraged on land inside the UGB but outside current city limits. The UGB includes approximately 13,000 acres or a little over 20 square miles.

<sup>2</sup> The most recent revision to the City’s Sphere of Influence Boundary was approved by the Local Agency Formation Commission (LAFCO) on September 15, 2004. (Resolution No. 4532)

### **Sphere of Influence**

Under State law, the Sphere of Influence (SOI) is defined as the ultimate physical boundary and service area of the City, beyond which urban development will not be allowed except for public parks and recreational facilities. In this General Plan the SOI is contiguous with the UGB in most areas. However, in the west and south of the Planning Area, the UGB defines the areas of denser development, while the SOI extends to encompass rural agricultural land that the City wishes to keep as green buffer with little or no development. This green buffer includes some land planned for very low density clustered rural residential development. There are approximately 14,400 acres of land within the SOI. Specific policies for administering the SOI are in the Growth Management section of the proposed General Plan.

### **City Limits**

The existing City Limits encompass approximately 6,350 acres (9.9 square miles) of incorporated land, 29 percent of the Planning Area. The existing City Limits include residential, commercial and industrial developments as well as public facilities, including parks, schools, the Waste Water Treatment Plant and the Los Banos Municipal Airport.

## **2.2 PURPOSE AND OBJECTIVES OF THE GENERAL PLAN**

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CEQA Guidelines Section 15124(b) requires a description of project purpose and objectives.

### **PLAN PURPOSE**

The Los Banos General Plan is a document required under State law and adopted by the City Council to address issues related to physical development and conservation of City resources. Plan policies focus on what is concrete and achievable in the next 23 years and set forth actions to be undertaken by the City. The Plan is both general and long-range. It is designed to be used on an ongoing basis as State law requires a variety of City regulations, requirements, and actions to be consistent with the General Plan. Nonetheless, the General Plan does not and cannot cover all aspects of City government. There are some instances where detailed studies are necessary before Plan policies can be implemented.

The proposed Los Banos 2030 General Plan serves the following purposes:

- It outlines a long-range vision that reflects the aspirations of the community, and provides steps to achieve this vision;
- It establishes long-range development policies that will guide the Community Development Department, Public Works Department, Redevelopment Agency, Planning Commission, Airport Advisory Commission, Parks and Recreation Commission, Traffic and Safety Committee and City Council decision-making;
- It provides a basis for judging whether specific development proposals and public projects are in harmony with plan policies;
- It allows City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve environmental resources, and minimize hazards; and

- It provides the basis for establishing and setting priorities for detailed plans and implementing programs, such as the zoning ordinance, subdivision regulations, specific and area plans, and the Capital Improvement Program.

Los Banos last adopted a General Plan in 1999. The proposed General Plan integrates many key ideas from developments and programs occurring since 1999, such as the 2004 Housing Element and the 2005 Rail Corridor Master Plan.

## **PLAN OBJECTIVES**

The proposed General Plan focuses on meeting current community requirements and future needs. It is designed to address the challenge of accommodating growth while enhancing quality of life. Broad topics such as “economic development”, “quality of life” and “neighborhood character” are tailored in support of community objectives united under one overarching vision – that of *a vibrant, safe, and attractive city with small town community character, an improved economy with new job opportunities, affordable housing, improved public services and facilities, and an excellent circulation system.*

Major objectives not covered in the 1999 plan include:

- Create strong neighborhoods;
- Enhance Downtown as a vibrant center;
- Build a diversified and stable local job base;
- Provide housing options that meet community needs; and
- Protect prime agricultural land while accommodating growth.

These objectives provide the foundation for the key initiatives, guiding policies, and implementing policies that comprise the proposed General Plan.

## **2.3 THE PROPOSED GENERAL PLAN**

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The proposed General Plan includes updates of the following elements: Land Use, Circulation, Open Space, Conservation, Safety, and Noise. It also includes two optional elements that address local concerns: Public Facilities and Utilities and Economic Development.

### **KEY INITIATIVES**

The maps and policies in the proposed General Plan are structured around the following seven initiatives:

*Providing for balanced and sustainable growth.* The proposed Plan offers proposals to create and maintain a cohesive development pattern amidst the agriculture landscape, with clearly defined urban edges. An urban growth boundary (UGB) is created to protect Los Banos’s surrounding lands from sprawl, reduce the cost of extending costly infrastructure, and enhance the visual character of the City’s edge. Land use policies are enacted to reduce incompatible land uses and ensure developments pay for their share of infrastructure, public facilities, and any environmental costs they might impose.

***Creating new jobs to develop the local economy.*** City officials and residents alike recognize that if Los Banos is to continue as a desirable community, being simply a bedroom community to the Bay Area is not an option. The proposed Plan strives for more local jobs and an improved jobs/housing ratio. Land has been set aside in employment parks in various parts of the city, and economic development initiatives have been proposed to help make Los Banos a desirable place to work and live.

***Integrating neighborhoods and neighborhood centers.*** Another central idea in this proposed General Plan is the concept of neighborhoods. Neighborhoods are the essential building blocks of good cities. Quality neighborhoods typically mean a quality urban environment. Balanced neighborhoods include a mix of residential opportunities and include activities and facilities that are used on a frequent basis – such as schools, stores and parks. Land uses are designated to ensure balanced neighborhood development with a mix of uses and housing types, provision of parks and schools, and easy access to commercial activity centers.

***Creating a network of parks and open space.*** In addition to neighborhood and community parks, the proposed General Plan provides for an interconnected network of pathways and trails. This system is envisioned to connect neighborhoods to one another and also to create a pedestrian or bikeway linkage between parks, schools, neighborhood commercial centers, downtown, and employment centers.

***Creating a safe, efficient, and attractive circulation system.*** The proposed Plan establishes a comprehensive set of principles and policies to enhance the existing system and promote a well-integrated and coordinated transit network and safe and convenient pedestrian and bicycle circulation. Also, the proposed Plan provides for a system of plantings, trees, and other amenities to enhance the visual character of city streets.

***Providing ample retail and shopping opportunities.*** Quality communities are often gauged by the quality of retail outlets. With this in mind, combined with the jobs and sales tax revenue that commercial properties produce, the proposed General Plan proposes a mix of retail sites. These are intended to serve both local residents and a regional population and are to be accessible by both automobiles and pedestrians, depending on type and location.

***Planning for environmental justice.*** The proposed General Plan calls for the equitable distribution of community facilities and services to meet the needs of all segments of the population and provide services for special needs that increase and enhance the community's quality of life while avoiding over-concentration in any one area.

## GENERAL PLAN LAND USE DIAGRAM

The proposed General Plan provides for growth to the north, south, and west of the existing city while keeping the eastern border of the 1999 General Plan in order to protect the GEA. Large scale commercial, business and industrial land uses are planned to the west of Los Banos Creek, while residential is mainly planned towards the north and south. The proposed SR-152 Bypass north of the city is used as a growth boundary. The Planning Area is smaller than that set forth in the 1999 General Plan as well, the result of pulling in from the north and south.

The 1999 General Plan has some deficiencies the proposed General Plan is designed to remedy:

- Where the existing General Plan did not provide for enough land or density to accommodate population growth, the proposed General Plan provides for that additional land and density;
- Where the existing General Plan does not show accurate information on the location of the proposed SR-152 Bypass, the proposed General Plan shows the location according to current policy;
- Where the existing General Plan suggests too large a role for industrial development, the proposed General Plan reduces that role and instead provides a Business Opportunity Area;
- Where the existing General Plan created generic residential land areas, the proposed General Plan creates neighborhood centers focused on school and park combinations; and
- Where the existing General Plan indicates a large recreational park area on the outskirts of the city, the proposed General Plan provides for a green space network inside the city.

The updated land use framework of the proposed General Plan is illustrated in the General Plan Land Use Diagram, **Figure 2.3-1**. It designates the proposed general location, distribution, and extent of land uses through buildout. As required by State law, land use classifications—shown as color/graphic patterns, letter designations, or labels on the diagram—specify a range for housing density and building intensity for each type of designated land use. These density/intensity standards allow circulation and public facility needs to be determined.

The Diagram is to be used and interpreted only in conjunction with the text and other figures contained in the General Plan. The legend of the General Plan Diagram includes the land use classifications described below, which represent an adopted component of the Plan. The Diagram is not parcel-specific, and uses on sites less than one acre in size are generally not depicted.

The following descriptions apply to land uses indicated on the General Plan Land Use Diagram. Land use classifications are organized into the following categories: Residential, Mixed Use, Commercial, Office/Industrial and Public/Open Space. Total acreage for each land use classification is presented in **Table 2.4-1**. These land use classifications are meant to be broad enough to give the City flexibility in implementing City policy, but clear enough to provide sufficient direction to carry out the General Plan. The City's Zoning Ordinance will contain more detailed provisions and standards. More than one zoning district may be consistent with a single General Plan land use classification.

### RESIDENTIAL

**Low Density Residential.** This designation is intended for single-family development on lot sizes found in more urban settings. Lot sizes would vary from 5,000 to 15,000 square feet. Development

intensities range from 2 to 6 units per net acre, and an average density of 4 units per net acre is used for buildout projections.

**Medium Density Residential.** This designation is intended for small-lot, single family, low density apartment complexes, and multiple-unit homes with typical lot sizes ranging from 2,000 to 5,000 square feet. Allowable residential density is between 7 and 18 units per net acre. The high range of this density is achievable with supportive development regulations and does not necessarily require multi-family development. An average density of 12 units per acre is used for buildout projections.

**High Density Residential.** This designation is intended for multi-family apartments and condominium development. Residential densities ranging from 12 to 30 units per net acre, and an average density of 20 units per acre is used for buildout projections.

## **MIXED USE**

**Downtown Mixed Use.** This designation is intended for mixed-use development, located downtown; allowing for a mixture of commercial, office, institutional, public/semi public, and residential uses. Maximum permitted ratios of gross floor area to site area, or Floor Area Ratio (FAR)<sup>3</sup> for non-residential uses, are 0.25 for retail, 2.0 for office use, and a maximum of 18 dwelling units per acre. For buildout projections, an average density of 12 residential units per net acre and a non-residential FAR of 1.0 are used.

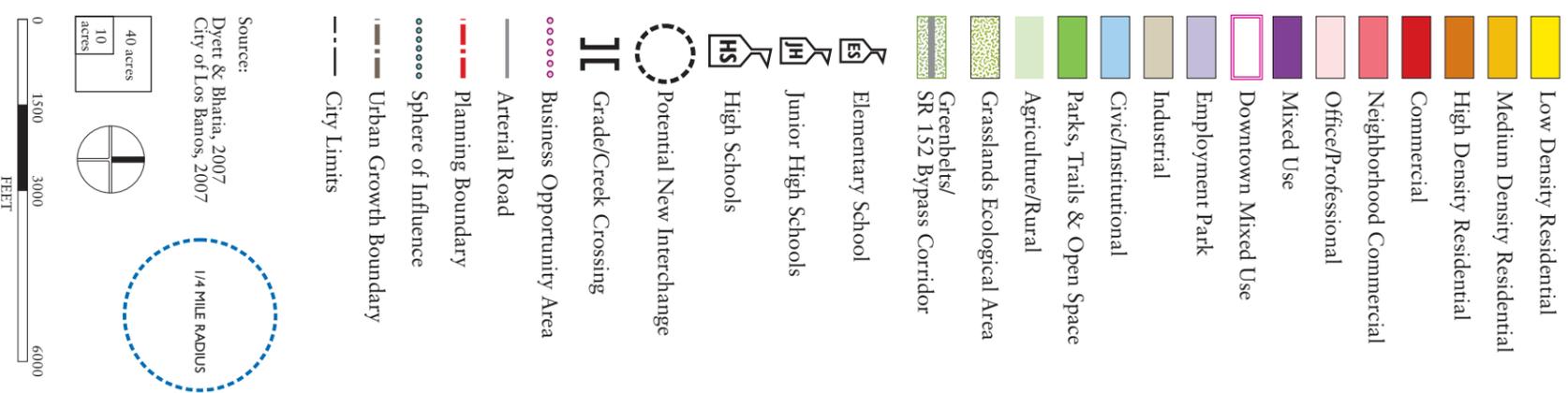
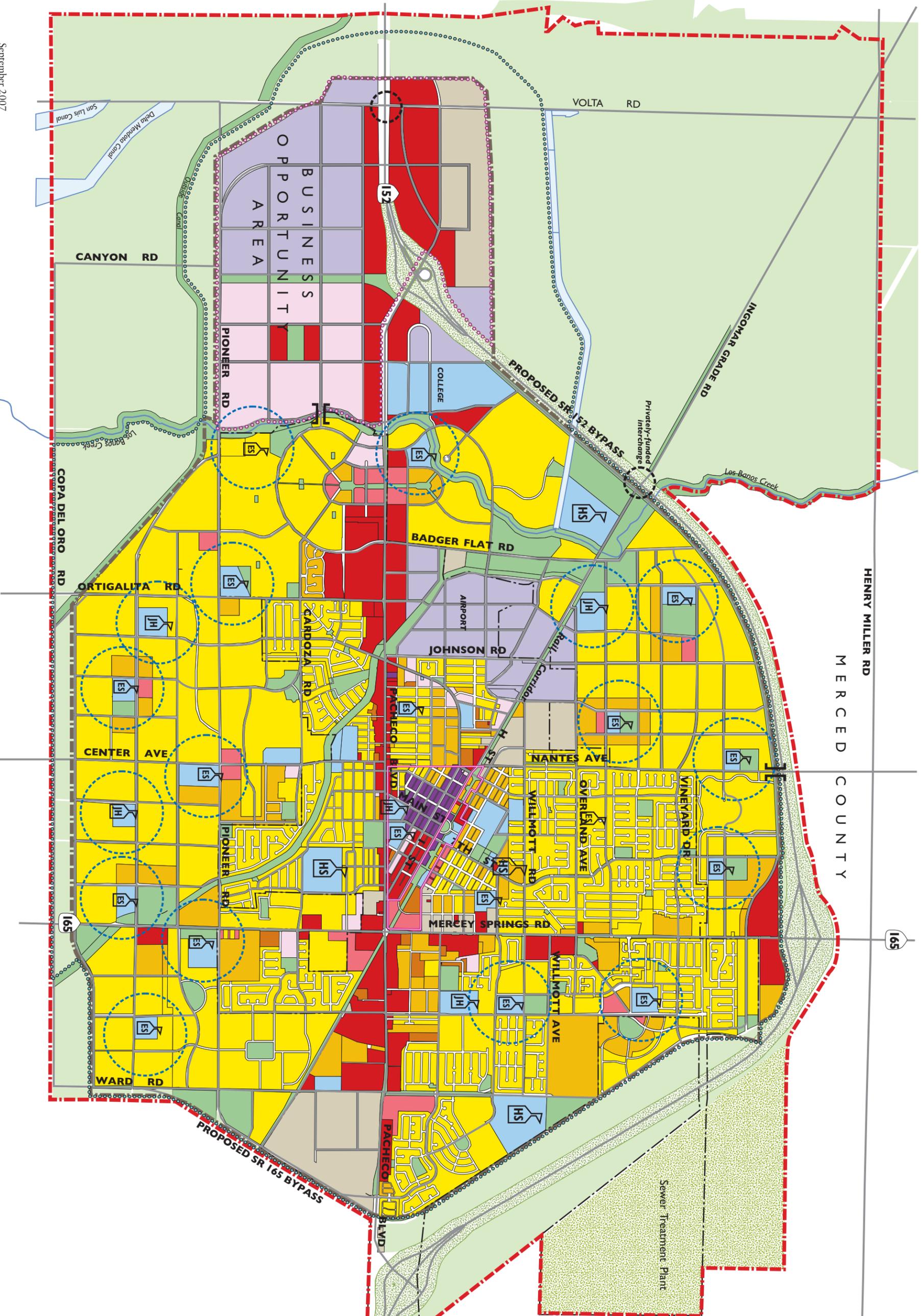
**Neighborhood Commercial.** This designation is intended for a mix of neighborhood-scale commercial use that includes small-scale office space and small retail stores, including grocery stores that serve local neighborhoods. The FAR range for this use is between 0.25 and 0.6 with a typical buildout value of 0.3.

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<sup>3</sup> A building FAR or Floor Area Ratio calculates the total floor area of buildings on a certain location to the size of the land of that location.

Insert Figure 2.3-1: General Plan Diagram

Figure 2.3-1  
**General Plan Land Use  
 Diagram**



back

## **COMMERCIAL/OFFICE/INDUSTRIAL**

*Commercial.* This designation is intended for large-scale commercial developments that serve both residents, visitors, and the surrounding region. Examples of this land use include: shopping centers, large-format retail such as Wal-Mart or Home Depot, auto sales and travel-related services such as hotels, gas stations, and restaurants. These uses typically require excellent access to freeway interchanges. The FAR range is 0.25 to 0.60 with a typical value of 0.25 used for buildout estimates.

*Office/Professional.* This designation is intended for small-scale offices and campus-like office complex development, including professional and medical offices, and research and development (R&D) activities. This designation may also allow small restaurants, support services, and convenience retail activities. The FAR range for Office/Professional use is 0.25 to 0.60 and the typical FAR for buildout estimates is 0.30.

*Employment Park.* This designation is intended for a mix of light industrial, R&D/high technology, office, commercial, and service uses. Typical uses might include office space and R&D/light industrial with limited customer access and support commercial services. Uses in this category are expected to have elements of architectural and landscape design. The FAR range is 0.25 to 0.50 with a typical value of 0.35 for buildout estimates.

*Industrial.* This designation allows primary manufacturing, R&D, wholesale and warehouse distribution, agricultural sales and services, and similar activities including those with outdoor facilities. It also accommodates warehousing and distribution, with support commercial services and ancillary office space. No large-scale retail uses are allowed to minimized land-use conflicts and provide support for the City's commercial areas. FAR range for Industrial use is 0.25 to 0.35 and the typical FAR for buildout estimates is 0.30.

## **OTHER**

*Grasslands Ecological Area.* Land within this designation is considered an important resource that needs protection from urban development. Included within this designation are the Los Banos Wildlife Area and the eastside of the Planning Area. The Volta State Wildlife Area is outside the western Planning Area.

*Agriculture/Rural.* This designation is generally intended for rural and agricultural land uses without municipal services. The typical development allows for large parcels with housing and agricultural related service buildings and uses an average density of 0.1 units per acre for buildout projections. Where applied to land within the SOI adjacent to residential development, clustered, very low density "executive" housing in a rural setting is allowed at an average density of 0.4 units per acre.

*Parks.* This designation is intended for public and private recreation sites and facilities at intensities of up to 0.05 FAR.

*Civic/Institutional.* This designation is intended for lands owned by public entities, including schools, administrative offices, corporation yards, and public facilities, including recycling centers, sewage treatment ponds, police and fire stations. Given the range of possible uses, there is no way to determine a typical FAR.

**SUMMARY OF DENSITY AND INTENSITY**

The density and intensity (FAR) standards used in the General Plan are shown in Table 2.3-1.

**Table 2.3-1: Los Banos General Plan Update Land Use Density Assumptions**

Land Use Classification	Unit Density (du/net acre)			Floor Area Ratio (FAR)		
	Min	Typical	Max	Min	Typical	Max
Agricultural / Rural		0.05	0.1 <sup>1</sup>	0.01	0.01	0.05
Environmental Conservation						0.01
Special Use Park						0.05
Civic / Institutional						
Low Density Residential	2.0	4.0	6.0			
Medium Density Residential	7.0	12.0	18.0			
High Density Residential	12.0	20.0	30.0			
Downtown Mixed Use	-	12.0	18.0	0.50 <sup>2</sup>	1.00	2.00
Neighborhood Commercial				0.25	0.30	0.60
Commercial				0.25	0.25	0.60
Office / Professional				0.25	0.30	0.60
Employment Park				0.25	0.35	0.50
Industrial				0.25	0.30	0.35

<sup>1</sup> 0.4 for clustered rural residential within the proposed SOI.

<sup>2</sup> 0.25 for retail.

Source: Dyett & Bhatia, 2007.

## 2.4 BUILDOUT UNDER THE PROPOSED GENERAL PLAN

Full development under the General Plan is referred to as “Buildout”. Although the General Plan applies a time horizon to 2030, the Plan is not intended to specify or anticipate when buildout will actually occur; nor does the designation of a site for a certain use necessarily mean the site will be built within the next 23 years. What the proposed General Plan does is provide adequate land to accommodate anticipated housing and job needs in Los Banos through 2030. This section describes the implications of the proposed General Plan buildout in terms of future population, housing units and jobs.

Table 2.4-1 shows the buildout acreage of the General Plan Land Use Diagram.

**Table 2.4-1: Los Banos General Plan Land Use Acreage at Plan Buildout**

<i>Land Use</i>	<i>Current Development Projects<sup>1</sup></i>	<i>Additional Acreages with General Plan Buildout</i>	<i>Total Acreages with General Plan Buildout</i>	<i>Percent of Total</i>
Residential	2,081	2,202	4,282	25
Low Density Residential	1,800	1,885	3,685	21
Medium Density Residential	281	307	588	3
High Density Residential	-	10	10	0
Mixed Use	57	121	177	1
Mixed Use	1	5	6	0
Neighborhood Commercial	55	116	171	1
Commercial/Office Professional	253	2,358	2,611	15
Commercial	200	568	768	4
Office Professional	35	480	515	3
Employment Park	-	819	819	5
Industrial	18	491	509	3
Others	470	9,964	10,434	60
Agriculture/Rural	-	7,837	7,837	45
Parks, Trails and Open Space	229	1,004	1,233	7
Civic/Institutional	241	234	475	3
SR-152 Bypass	-	889	889	5
<b>Total</b>	<b>2,860</b>	<b>14,640</b>	<b>17,500</b>	<b>100</b>

Due to rounding, sub-columns may not equal total counts.

<sup>1</sup> Current Development Projects refers to those proposed projects that were undeveloped but approved or under review at the time of the NOP.

Source: City of Los Banos; Dyett & Bhatia, 2007.

**POPULATION GROWTH AND HOUSING**

**Buildout Population**

Los Banos contained 34,220 people in 2006 according to an estimate from the City. Using a 3.0 percent annual population growth rate (the rate projected by the county), the total population will be 69,560 in 2030. However, over the last 50 years, annual growth rates have ranged from 1.2 to 5.9 percent, with 1990-2000 experiencing the most significant growth. The State Department of Finance estimated a population growth rate of 4.6 percent over the last five years. For purposes of the proposed 2030 General Plan, a moderate growth rate of around 4.2 percent is adopted based on historic and future expectations of local and regional housing demand and economic growth. The basic idea is to expand opportunities for residents to live and work in the community.

As shown in Table 2.4-2, the proposed General Plan will accommodate more than 90,000 residents at buildout, an increase of about 160 percent over the 2006 population. Most of these residents will live in new residential neighborhoods surrounding the core of the City. This represents an expected annual population increase of 4.1 percent over the next 24 years, about 3,000 more residents than provided for in the current General Plan.

**Residential Development**

Approximately 10,170 households currently exist in the Los Banos Planning Area. The proposed General Plan is designed to incorporate some flexibility by providing slightly more land for residential units than projected. Based on average buildout densities for new residential uses, the proposed Plan accommodates 17,060 new households at an average household size of 3.3 persons per household through infill development as well as new development. In total, proposed General Plan buildout will result in approximately 27,230 households in Los Banos.

**Table 2.4-2: Population, Households, and Housing Units at Plan Buildout**

	<i>Existing (2006)</i>	<i>Additional</i>	<i>Buildout (2030)</i>	<i>Annual Percent Growth</i>
Population	34,220	56,200	90,400	4.1
Households	10,170	17,000	27,200	4.2
Housing Units	10,710	17,900	28,600	4.2

Population at buildout was calculated assuming 3.3 persons per household. All numbers are rounded to the nearest tenth.

For projected buildout, households equals 95 percent of all housing units (5 percent vacancy)

Source: Merced County employment data for 2000; Existing Population from City of Los Banos; all others Dyett & Bhatia, 2006.

**EMPLOYMENT**

The General Plan at full buildout will accommodate an additional 41,900 jobs. This employment growth would require a 10.2 percent per year growth rate, which may not be achievable. Based on historical trends, a more probable job growth rate is 6.3 percent as reflected by the Plan’s economic development initiatives. At this rate, complete buildout of employment-related land should be reached around 2055. In other words, the General Plan provides for more employment-related land than is needed for employment at 2030. This gives the City more flexibility and a longer horizon when planning for economic development.

The assumptions for these estimates of buildout employment are presented in Table 2.4-3. They include a building intensity (FAR) multiplier used to calculate the potential commercial and industrial space in square feet that would be added, and a square-feet-per-job multiplier to derive the future employment estimate.

**Table 2.4-3: Employment Assumptions**

<i>Land Use Category</i>	<i>Gross Acreage</i>	<i>Building Intensity<sup>1</sup> (FAR)</i>	<i>Potential Buildup Space<sup>2</sup> (Sq ft)</i>	<i>Employment Intensity<sup>3</sup> (Sq ft per Job)</i>
Neighborhood Commercial	171	0.30	1,966,600	500
Commercial	768	0.25	7,356,700	500
Office/Professional	515	0.30	3,741,500	400
Employment Park	819	0.35	5,085,700	750
Industrial	509	0.30	4,989,100	750
Downtown Mixed Use	6	1.00	243,200	500

<sup>1</sup> A building FAR or Floor Area Ratio, calculates the total floor area of buildings on a certain location to the size of the land of that location.  
<sup>2</sup> Calculated on a “net” basis, after deducting land needed for rights-of-way and easements.  
<sup>3</sup> This factor calculates the number of jobs a certain type of land use will accommodate. For example, Office/Professional land use is expected to create 1 job per 400 square feet.

Source: Dyett & Bhatia, 2007.

Details on additional employment by land use category are presented in Table 2.4-4. Jobs from commercial and neighborhood center development compose 44 percent of additional employment for the plan. Office uses account for 22 percent, Downtown mixed use account for 1 percent, while Employment Park and industrial land uses account for the remaining 32 percent.

**Table 2.4-4: Additional Private Sector Employment**

<i>Land Use Category</i>	<i>Total New Jobs</i>	<i>Percent of Total</i>
Neighborhood Commercial	3,900	9
Commercial	14,700	35
Office/Professional	9,400	22
Employment Park	6,800	16
Industrial	6,600	16
Downtown Mixed Use	500	1
<b>Total</b>	<b>41,900</b>	<b>100</b>

Job numbers are estimates only. Inaccuracies may arise from rounding

Source: Dyett & Bhatia, 2007.

## JOBS/HOUSING BALANCE

A city’s jobs/employment ratio (jobs to employed residents) would be 1:1 if the number of jobs in the city equaled the number of employed residents. In theory, such a balance would eliminate the need for commuting. As shown in Table 2.4-5, the current jobs housing ratio in Los Banos is 0.41, which means the number of jobs in the City is less than the number of employed residents. This is because many local residents commute to areas outside Los Banos for work, returning only at night for their residence. As more jobs are added under the proposed General Plan buildout, the jobs/housing ratio should rise, depending on two factors:

- How quickly local jobs are created and,
- The total number of employed residents in 2030.

Under a maximum job growth scenario, all land currently allocated for non-residential use is taken up by 2030. This would produce a total of 46,460 jobs and achieve a jobs/employment ratio of 1.43:1. In a more likely scenario, not all non-residential land will be developed. This would produce a jobs/employment ratio of 0.60:1.

**Table 2.4-5: Jobs per Employed Resident Ratios**

	<i>Existing</i>	<i>Maximum Buildout<sup>1</sup></i>	<i>Probable 2030 Development<sup>2</sup></i>
Jobs	4,540	46,400	19,700
Employed Residents <sup>3</sup>	11,100	32,500	32,500
<b>Ratio</b>	<b>0.41</b>	<b>1.43</b>	<b>0.60</b>

Note:

<sup>1</sup> Assumes all non residential land is developed by 2030, resulting in an annual job growth rate of 10.2 percent.

<sup>2</sup> Assumes job growth averages 6.3 percent per year.

<sup>3</sup> Assumes employed residents to be 0.36 of total population based on current levels and population trends.

Sources: Merced County; California Employment Development Department; U.S. Census; Dyett & Bhatia, 2007.

## 2.5 KEY POLICY DIRECTION

Policy direction for each of the proposed Los Banos General Plan elements is described in this section. Element-specific initiatives and guiding policies are listed; implementing policies are included in the Plan itself. All Plan policies are incorporated by reference into this project description and analyzed in this EIR.

### ECONOMIC DEVELOPMENT

Economic development initiatives include:

- *Sectoral targeting.* Identifying and attracting economic sectors whose growth has the greatest potential for job growth and wage increases, and whose development is compatible with the City’s vision in keeping Los Banos a vibrant, safe, and attractive place to live.

- **Marketing.** Adopting a marketing message that serves to differentiate the Los Banos business environment from regional competitors, focusing on characteristics that make it a desirable business location.
- **Investment in infrastructure.** Providing a modern, attractive, dependable, efficient and cost competitive infrastructure plan through investments and continued improvements.
- **Investment in human capital.** Improving college graduation rates and skilled labor through encouraging job training, workforce development, and life long education.
- **Improving business climate.** Increasing the ease and reducing the cost of doing businesses through policies that simplify permitting and other application procedures, reduce barriers to investment, and implement local assistant programs as needed.
- **Improving downtown.** The Economic Element recognizes its historic role and potential value in serving economic goals of the City.
- **Maintaining fiscal health.** Economic and other initiatives called for in the General Plan will have fiscal consequences for Los Banos. Increasing residential development and business activity will boost revenue sources. At the same time, rising demand for services and capital facilities will increase operating costs. The City intends to ensure revenue and expenditure achieve a healthy balance and a sufficient operating reserve is maintained at all times.

Guiding policies that support these initiatives are as follows:

- Create jobs and improve job quality for existing and future Los Banos residents.
- Facilitate the development of new businesses, and/or expansion of existing businesses through site availability, infrastructure investment, and labor force preparedness.
- Make Los Banos an ideal place to do business by fostering a business friendly climate.
- Strengthen positive working relationships among the business community, education providers, regional economic institutions and City government.
- Promote Downtown as a cultural and entertainment center to bring people downtown and stimulate business opportunities.
- Foster a fiscally healthy City government.

## LAND USE

Land use initiatives include:

- **Clearly Defined Urban Edges.** As depicted on the General Plan Diagram, all development is planned to occur within the Urban Growth Boundary.
- **Economic Development and Jobs.** A significant amount of land is set aside for job-related land uses. Areas designated “Office and Professional”, “Employment Park”, and “Industrial” accommodate uses that will provide employment opportunities for existing and future residents.
- **Integrated Neighborhoods and Neighborhood Centers.** The General Plan Diagram depicts a network of neighborhoods which are internally accessible by non-motorized means, include community facilities such as parks and schools, and have a central focal point. The arrange-

ments of land uses on the Diagram show how these neighborhoods are related to each other and to neighborhood center and shopping areas.

- *A Mix of Housing Types.* Three types of residential density ranges are depicted on the Diagram. These will accommodate a full range of housing types and prices to provide housing choice.
- *Enhanced Community Character and Aesthetics.* Community character is enhanced through encouraging compact design, pedestrian-oriented circulation, neighborhood centered activities, and environmental sensitiveness.
- *Parks.* Neighborhood parks are depicted on the General Plan Diagram. Medium and high residential uses are often situated adjacent to these parks, which provide a valuable amenity to nearby residents.
- *A Network of Open Space.* All of the Parks and Open Space uses are linked by a system of parkways, bikeways, and roadways.
- *A Complete Roadway System.* The land uses presented on the diagram are structured around the proposed roadway network, and the two components are interactive and interrelated.
- *A Range of Commercial and Retail Opportunities.* The General Plan provides for the full range of commercial and retail uses needed for the future population and business community. Regionally-oriented establishments are placed on major roadway corridors; community- and neighborhood-oriented uses are placed within planned communities and neighborhoods.
- *Adequate, Flexible School Sites.* New school sites are proposed to accommodate future students. The sites depicted on the General Plan Diagram are intended to relate well to adjacent uses, such as neighborhood focal areas and park sites.

A summary of key policies is as follows:

### **Patterns of Development, Growth, and Expansion**

- Promote a sustainable, balanced land use pattern that satisfies existing needs and safeguards future needs of the City.
- Maintain a well-defined compact urban form, with a defined urban growth boundary and development intensities on land designated for urban uses.
- Ensure that new development provides for infrastructure, schools, parks, neighborhoods shops, and community facilities in close proximity to residents.

### **Community Design**

- Preserve and enhance Los Banos neighborhood character and small town feel.
- Reinforce the City's image by protecting historical resources, strengthening focal points, improving streetscapes and the safety of neighborhoods.
- Promote environmentally sensitive and sustainable design in new development.

### **Residential Areas**

- Provide for residential development with strong community identities, appropriate and compatible scales of development, identifiable centers and edges and well-defined public spaces for recreation and civic activities.
- Provide for a full range of housing types and prices within neighborhoods, including minimum requirements for small-lot single family homes, townhouses, and multi-family housing to ensure that the economic needs of all segments of the community are met.
- Provide for a transition between higher density and lower density residential areas, or require buffers of varying size between residential uses and non-residential uses without restricting pedestrian and bicycle access.

### **Retail and Commercial**

- Foster viable, pedestrian-oriented neighborhood centers and strong, visually attractive regional commercial centers with a mix of tenants to serve both local and regional needs.
- Develop a vibrant, mixed-use Downtown that is the pride of the community.

### **Office and Employment Centers**

- Provide appropriately located areas for a broad range of employment generating uses to strengthen the City's economic base and provide employment opportunities for residents.
- Foster high quality design and allow secondary uses in Employment Park or industrial areas if they can complement or enhance the primary use.

### **Civic, Municipal and Community Facilities**

- Provide appropriate settings for a diverse range of civic, institutional and community land uses.

## **TRANSPORTATION AND CIRCULATION**

A summary of key traffic and circulation policies include:

### **Overall Circulation System Planning**

- Promote safe and efficient vehicular circulation.
- Provide a wide variety of transportation alternatives and modes to service all residents and businesses to enhance the quality of life.
- Make efficient use of existing transportation facilities and, through coordinated land use planning, strive to improve accessibility to shops, schools, parks and employment centers and reduce total vehicle miles traveled per household to, minimize vehicle emissions and save energy.
- Protect neighborhoods by discouraging through-traffic on local streets.
- Improve the scenic character of transportation corridors in the City.

**Traffic Level of Service**

- Maintain acceptable levels of service and ensure that future development and the circulation system are in balance.

**Funding for Improvements**

- Ensure that new development pays its fair share of the costs of transportation facilities

**Parking**

- Foster practical parking solutions.

**Transit**

- Promote the use of public transit for daily trips to schools, work and doctors appointments.
- Promote the development and use of park-and-ride facilities for commuters.

**Bicycle and Pedestrian Circulation**

- Promote bicycling and walking as alternatives to the automobile.

**Regional Transportation and Good Movement**

- Promote the Los Banos Municipal Airport to meet increasing business and industrial goods movement demand.
- Participate in the planning process for the California High-Speed Train.
- Improve commercial goods movement.

**PARKS, OPEN SPACE, AND RESOURCES**

The proposed General Plan includes policies and programs that are designed to improve the systems of parks and open space to accommodate recreation needs and preserve environmental resources. Key initiatives include:

- *Increase Park Ratio.* Achieve a ratio of 7.5 acres of park land per thousand residents.
- *Support Linear Parks.* Linear parks contribute to the City’s ability to preserve and protect natural areas, and help expand alternative transportation opportunities.
- *Protect Open Space and Natural Resources.* Open space provides recreation services, environmental quality services, and acts as a boundary to shape urban form and limit sprawl.

Guiding policies include:

**Parks**

- Establish and maintain a high-quality public park system for Los Banos.
- Provide park and recreation facilities within close proximity to residents they are intended to serve.

- Provide a unified and consistently marked trail system throughout the City, including bike-ways, pathways, sidewalks, and other trails that link key destinations in the city including parks and recreational facilities, community facilities, public schools, and downtown.

### **Open Space**

- Preserve and maintain open space around the City for future generations.
- Continue to provide public access to public open space to the maximum extent feasible.

### **Conservation**

- Protect rare and endangered species.
- Protect and enhance the natural habitat features and open space corridors within and around the Planning Area.
- Promote preservation of agriculture within the Planning Area.
- Protect the quality of storm water that discharges into areas in and around Los Banos.
- Ensure adequate groundwater reserves are maintained for present and future domestic, commercial, and industrial uses.
- Ensure ground water quality is maintained at a satisfactory level for domestic consumption.
- Identify and preserve the archaeological and historic resources that are found within the Los Banos Planning Area.

### **Air Quality**

- Improve Los Banos's air quality.
- Make air quality a priority in land use planning by introducing concepts that reduce vehicle trips.

## **SAFETY AND NOISE**

The proposed General Plan includes policies and programs related to safety and noise. Guiding policies include:

### **Hazard Reduction**

- Minimize risks of property damage and personal injury posed by seismic hazards, soil hazards, and erosion.
- Protect the community from risks to lives and property posed by flooding and stormwater runoff.
- Protect Los Banos residents and businesses from potential wildfire hazards.
- Protect Los Banos ecology and residents from harm resulting from the improper production, use, storage, disposal, or transportation of hazardous materials.
- Minimize the risk of personal injury, property damage, and environmental damage from both natural and man-made disasters.

- Improve natural disaster response capabilities through a variety of preparedness measures.

#### **Emergency Services**

- Maintain and enhance the City's capacity for law enforcement and fire-fighting.
- Improve current police and fire response times and staffing ratios.

#### **Noise**

- Strive to achieve an acceptable noise environment for the present and future residents of Los Banos.

### **PUBLIC FACILITIES AND SERVICES**

The proposed General Plan includes policies and programs related to public facilities and utilities. Guiding policies include:

#### **Water and Wastewater**

- Ensure an adequate supply of fresh water to serve existing and future needs of the City.
- Ensure that adequate waste water treatment capacity is available to serve existing and future needs of the City.
- Promote the conservation of water within Los Banos.

#### **Solid Waste**

- Meet the City's solid waste disposal needs, while maximizing opportunities for waste reduction and recycling.

#### **Education**

- Provide superior educational opportunities for children and all members of the community.
- Provide public and cultural facilities that contribute to a positive image of Los Banos, enhance community identity, and meet the civic and social needs of residents.

## **2.6 IMPLEMENTATION OF THE PROPOSED GENERAL PLAN**

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The proposed General Plan provides specific policy guidance for implementation of plan concepts in each of the Plan elements and establishes a basis for coordinated action by the City, adjacent jurisdictions, and regional and state agencies. The policies in each element of the Plan provide details that will guide program development.

### **RESPONSIBILITIES**

Implementing the General Plan will involve the City Council, the Planning Commission, other City boards and commissions, and City departments. The City also will need to consult with Merced County and other public agencies about implementation proposals that affect their respective areas of jurisdiction. The principal responsibilities that City officials and staff have for Plan implementation are briefly summarized below; details on their powers and duties are in the Los Banos Municipal Code.

### **City Council**

The City Council is responsible for the overall management of municipal affairs; it acts as the legislative body and is responsible for adoption of the General Plan and any amendments to the General Plan. The City Council appoints the City Manager who is the chief administrator of the City and has overall responsibility for the day-to-day implementation of the Plan. The City Council also appoints other boards and commissions established under the Municipal Code.

The City Council's role in implementing the General Plan will be to set implementation priorities and approve zoning map and text amendments, consistent with the General Plan, and a Capital Improvement Program and budget to carry out the Plan. The City Council also acts as the Redevelopment Agency and, in this capacity, will help finance public facilities and improvements needed to implement the Plan.

### **Planning Commission**

The Planning Commission is responsible for preparing and recommending adoption or amendment of the General Plan, zoning and subdivision ordinances and other regulations, resource conservation plans, and programs and legislation needed to implement the General Plan. The Planning Commission also may prepare and recommend adoption of specific plans, neighborhood plans or special plans, as needed for Plan implementation.

### **Community Development Department**

The Community Development Department is responsible for the general planning and development review functions undertaken by the City. Specific duties related to General Plan implementation include preparing zoning and subdivision ordinance amendments, design guidelines, reviewing development applications, conducting investigations and making reports and recommendations on planning and land use, zoning, subdivisions, development plans and environmental controls. The Department also will coordinate activities with Los Banos Unified School District related to school sites and the Los Banos Municipal Airport in consultation with Merced County, and the Airport Land Use Commission. Finally, the Department will have the primary responsibility for preparing the annual report on the General Plan and conducting the five-year review. These reporting requirements are described in Chapter 1 of the General Plan.

### **Economic Development Division**

The Economic Development Division of the Department will be responsible for actions pertaining to marketing, industrial targeting, workforce preparedness, improving the Los Banos business climate, and other actions highlighted in Chapter 3: Economic Development of the General Plan.

### **Public Works Department**

The Public Works Department provides Engineering Services and Maintenance Services.

- The Public Works Engineering Services Department is responsible for the review of current development applications, subdivision maps, grading permits, public improvement plans, encroachment permits, development in the flood zone, and sewer permits. It also does construction inspection for permits it issues. It is also responsible for the design and construction of capital improvement projects.

- The Public Works Maintenance Services Department is responsible for transportation planning and operations, sign, striping and street maintenance, infrastructure maintenance, and parks and facilities maintenance. Specific implementing responsibilities are established in the Land Use, Circulation, and Public Facilities and Utilities Elements of the General Plan.

### **Parks and Facilities Division**

The Parks and Facilities Division of the Public Works Department is responsible for managing the City's recreation services, its parks and open spaces, and various facilities such as sports complexes. Specific implementing responsibilities are established in the Parks, Open Space, Conservation and Air Quality Element of the General Plan. The division is also charged with the task of maintaining and improving all City-owned street trees, park trees, and all other trees considered to be publicly owned trees.

### **Police and Fire Departments**

Within the City, responsibility for public safety is assigned to the Police and Fire Departments. The Police Department is responsible for preventing crime and maintaining law and order; while the Fire Department is responsible for fighting urban and wildland fires. Both Departments also coordinates with the County on mutual aid. Specific implementing responsibilities under the General Plan are established in the Public Facilities and Utilities Element and Safety Element of the General Plan.

### **Other Boards and Commissions**

The City Council is assisted by the following four citizen commissions and one committee:

- Parks and Recreation Commission;
- Youth Assistance Commission;
- Airport Advisory Commission;
- Redevelopment Advisory Committee; and
- Cultural Heritage Commission.

The General Plan does not envision any substantive change in the responsibilities assigned to these boards and commissions. They will be administering new or amended regulations adopted pursuant to Plan policies, and their actions will need to be consistent with the General Plan.

## 3 Settings, Impacts and Mitigation Measures

CEQA Guidelines require that this Draft EIR include a description of the physical environmental conditions in the vicinity of the project, with special emphasis placed on environmental resources that are rare or unique to the region and that would be affected by the proposed General Plan. This Draft EIR must also discuss the regulatory setting and any inconsistencies that exist between the proposed General Plan and applicable general and regional plans or local, State or federal agency regulations.

The Draft EIR must also identify the possible significant environmental impacts of the proposed General Plan, as well as describe feasible mitigation measures that decision-makers could adopt in order to reduce or eliminate the identified impacts.

Chapter 3 of this Draft EIR is organized by impact issue area, and contains for each issue the physical and regulatory environmental settings, the impact identification and analysis, as well as listing the specific proposed General Plan policies that were found to reduce or eliminate potential significant impacts. Significant and unavoidable impacts are identified here and summarized again in Chapter 5, CEQA-Required Conclusions.

### 3.1 LAND USE

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This section presents the environmental setting and proposed General Plan impact assessment for land use, housing displacement and agricultural resources in the Los Banos Planning Area. Information related to population growth and projections is provided in Section 5.1 of this EIR.

#### ENVIRONMENTAL SETTING

##### Physical Setting

Much of the existing land use pattern found in the Planning Area can be traced to the evolution of Los Banos as an agriculture center in the valley. The Downtown is characteristic of an older central business district, incorporating a mixture of retail, public facilities, and older residential neighborhoods. Larger commercial, agriculture and newer residential neighborhoods are located further out from the city center. Some industrial land is located adjacent to SR-152 and H-Street (Old Union Pacific Rail). Parks and schools are distributed throughout residential neighborhoods within the city.

##### *Existing Land Use*

The existing land use pattern in Los Banos is illustrated in **Figure 3.1-1** and current land uses are listed in **Table 3.1-1**. Residential land is the most significant use of incorporated land within the current City Limits. The next largest category of land use within the City is public or government land at 22 percent. The Los Banos Municipal Airport and Wastewater Treatment Plant comprise large portions of this land. While agricultural land contributes only 842 acres or 16 percent of the land located within the incorporated area, it comprises up to 70 percent of land in the Planning Area as a whole. Approximately 887 acres of vacant land comprise almost 17 percent of the area inside the City.

The Downtown District, as delineated in the existing General Plan, is located between the Union Pacific rail corridor and Pacheco Boulevard; it is surrounded by older residential neighborhoods, commercial uses, schools, and parks. The major commercial land uses are located along two State Routes. Some industrial land is located in close proximity to the Union Pacific Railroad and Los Banos Municipal Airport. Parks of various sizes are distributed throughout the city, often in close proximity to schools (see Section 3.3 for details on parks and recreation).

**Table 3.1-1: Existing Developed Land Uses in the Los Banos Planning Area, 2006**

<i>Land Use</i>	<i>Incorporated</i>		<i>Unincorporated</i>		<i>Planning Area<sup>1</sup></i>	
	<i>Acreage</i>	<i>Percentage</i>	<i>Acreage</i>	<i>Percentage</i>	<i>Total Acres</i>	<i>Percent of Total</i>
Single Family Residential	1,675	31.1	207	1.4	1,883	9.2
Multi-Family Residential	56	1.0	5	0.0	61	0.3
Commercial	153	2.8	1	0.0	154	0.8
Neighborhood Commercial	80	1.5	27	0.2	107	0.5
Service Commercial	36	0.7	0	0.0	36	0.2
Public	1,161	21.5	545	3.6	1,705	8.4
Industrial	297	5.5	231	1.5	528	2.6
Professional Office	24	0.4	0	0.0	24	0.1
Parks	80	1.5	0	0.0	80	0.4
Agriculture	842	15.6	13,508	90.0	14,351	70.3
Other	19	0.3	44	0.3	63	0.3
Canal	77	1.4	400	2.7	477	2.3
Vacant\Unassigned	887	16.5	47	0.3	934	4.6
<b>TOTAL</b>	<b>5,387</b>	<b>100.0</b>	<b>15,015</b>	<b>100.0</b>	<b>20,401</b>	<b>100.0</b>

1. Acres of the Planning Area used for transportation facilities (highways, roads, streets, and railroads) are not counted.

Source: Merced County Association of Governments, Dyett & Bhatia, 2006.

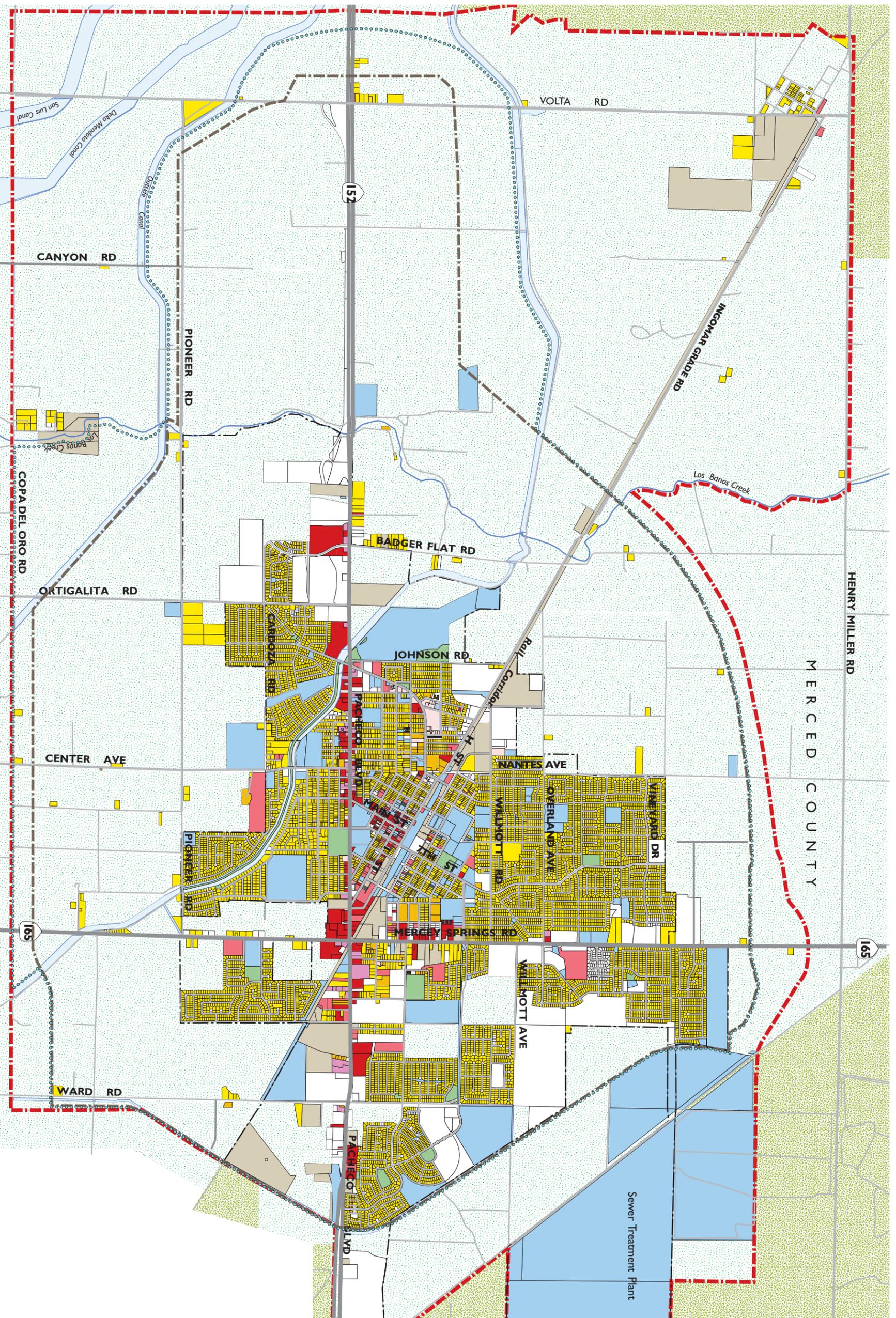
### *Housing*

The City of Los Banos currently (as of 2007) maintains a total of approximately 10,710 housing units. A sizeable amount of new residential development has occurred since 2000 and numerous additional housing projects are planned or under permit application review. The City’s share of overall County residential units is approximately 13 percent. The majority of recent single family and multi-family residential projects are located along the edge of the City Limits.

Figure 3.1-1 Existing Land Use

Figure 3.1-1

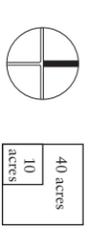
Existing Developed Land Uses, 2006



- Single Family Residential
- Multi-family Residential
- Commercial
- Neighborhood Commercial
- Service Commercial
- Office/Professional
- Industrial
- Civic/Institutional
- Parks, Trails & Open Space
- Agriculture/Rural
- Grasslands Ecological Area
- Vacant

- Planning Area
- Sphere of Influence
- Urban Growth Boundary
- City Limits

Source:  
 City of Los Banos 2006  
 Dyer & Bharia 2007  
 ESA, 2006



Back

### *Agricultural Production*

Merced County is ranked 5th in the state and 6th in the nation in terms of agricultural production. The region contains rich soils, available water, and climatic conditions that allow farms to be so productive. Agriculture is especially significant to the economy of California's Central Valley where it accounts for 21 percent of all income and 25 percent of all employment (University of California Agricultural Issues Center, 2000). In 2005, Merced County agriculture surpassed the 2 billion dollar mark in gross production value of agricultural commodities for the second consecutive year, with a gross production value of \$2,390,367,000 (Merced County Farm Bureau, 2005). The top five leading commodities include milk, chickens, tomatoes, cattle, and almonds.

Most of the outlying areas around Los Banos are in intensive agricultural use, concentrated mainly on orchard and row crops. There are more than 9400 agricultural processing jobs in Merced County, not including the thousands of seasonal jobs (Merced Farm Bureau, 2005). According to the Employment Development Department, those processing jobs equate to over \$290 million employment, which does not factor in multiplier spending.

### *Farmland Soils*

The California Department of Conservation classifies soils based on their agricultural potential; the following agricultural classifications are found within the Los Banos Planning Area<sup>4</sup>:

- *Prime Farmland.* Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- *Farmland of Statewide Importance.* Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. The land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- *Unique Farmland.* Land of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- *Farmland of Local Importance.* Land of importance to the local economy, as defined by each county's Board of Supervisors and a local advisory committee.
- *Grazing Land.* Land on which the existing vegetation is suited to grazing livestock.

The acreages of farmland types are listed in Table 3.1-2 and locations are mapped in Figure 3.1-2. Prime Farmland land is dispersed throughout the Planning Area and comprises a total of 6,195 acres (approximately 28 percent of the Planning Area). Farmland of Statewide Importance is the second most significant portion of the Planning Area, comprising approximately 2,222 acres. Most Farmland

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<sup>4</sup> Definitions obtained from the California Department of Conservation, Farmland Mapping and Monitoring Program. Available online at: [http://www.consrv.ca.gov/DLRP/finmp/mccu/map\\_categories.htm](http://www.consrv.ca.gov/DLRP/finmp/mccu/map_categories.htm)

of Statewide Importance is nestled outside the northwest portion of the City Limits and in the western portion of the Planning Area. Of the total farmland in the Planning Area, approximately 887 acres are in Williamson Act contracts (see Regulatory Setting).

**Table 3.1-2: Existing Farmland in the Los Banos Planning Area**

<i>Farmland Type</i>	<i>Acres</i>	<i>Percent of Planning Area</i>
Urban and Built up Land	9,802	45
Grazing Land	346	2
Farmland of Local Importance	858	4
Prime Farmland	6,195	28
Farmland of Statewide Importance	2,222	10
Unique Farmland	1,833	8
Other Land	641	3
<b>TOTAL</b>	<b>21,896</b>	<b>100</b>

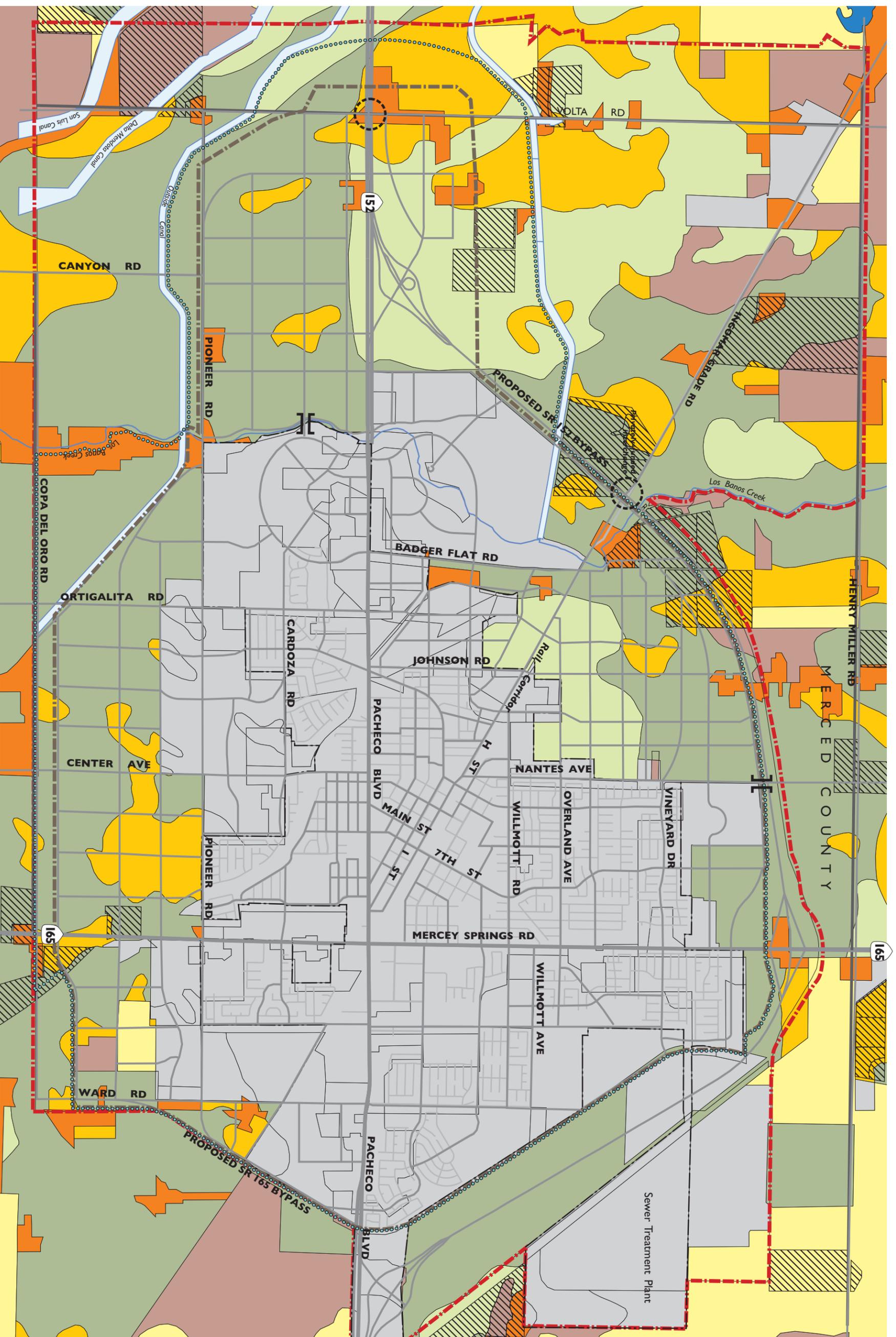
Source: Department of Conservation: Division of Land Resource Protection, Dyett & Bhatia, 2007.

*Agriculture Protection Issues*

Over 6,500 acres of agricultural land in Merced County was converted to nonagricultural use from 1994 to 2004. More specifically, this conversion resulted in a reduction of 1,834 acres of prime farmland—less than half a percent of the total inventory of prime agriculture land in Merced County in 2004 (1,162,954 acres).

Figure 3.1-2 Soils of Farmland Significance

Figure 3.1-2  
Farmland



Source:  
California Dept. of Conservation, 2006

(back)

## **REGULATORY SETTING**

The primary plan currently guiding land use decision-making within Los Banos is its 1999 General Plan. The City also has an airport master plan that suggests regulations, actions, and capital improvements associated with airport development and maintenance through 2015. The development of land in unincorporated Merced County within the Los Banos Sphere of Influence (SOI) is guided by the Merced County Year 2000 General Plan. These plans are described briefly below.

### **State Regulations**

#### *Williamson Act*

The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict land to agricultural and open-space uses.

### **Local Plans and Regulations**

#### *Los Banos General Plan (1999)*

The Plan contains six Elements: Land Use; Circulation; Open Space, Conservation and Recreation; Hazards Management; and Public Facilities and Services. The Housing element was adopted in a previous year. The Plan provides a land use framework for the pattern of development within City limits, including the establishment of an Urban Limit Line (ULL). This existing General Plan, with the exception of the Housing element, would be updated and replaced by the proposed General Plan.

#### *Merced County Year 2000 General Plan*

Adopted in 1990, the Merced County Year 2000 General Plan guides land use decisions in the unincorporated areas around the City of Los Banos. In the spring of 2006, Merced County began a three year process for updating this general plan.

#### *Los Banos Municipal Airport Master Plan (1995-2015)*

The City of Los Banos contracted with an engineering firm for an airport master plan study to evaluate existing airport facilities, assess airport demand, and produce a master plan to accommodate demand through the year 2015.

#### *Merced County Airport Land Use Commission*

In the 1960s the California legislature created a system of county commissions to regulate land planning in the vicinity of airports. The commission's chief business is to prepare and enforce a land use plan for the area surrounding each airport in its jurisdiction. A compatibility review is required of new land uses proposed that fall under this commission's jurisdiction.

## **IMPACT ANALYSIS**

### **Significance Criteria**

A significant impact would occur with full implementation of the proposed General Plan if it would do one or more of the following:

- Physically divide an established community;
- Displace substantial numbers of existing housing or people;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project;
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use;
- Conflict with existing zoning for agricultural use or a Williamson Act contract; or
- Involve other changes which, due to their location or nature, could result in conversion of farmland to non-agricultural use.

Changes in land use are not, in and of themselves, environmental impacts. Land use changes are impacts only relative to the prior use of the site (i.e., conversion of open space or farmland, an irreplaceable resource, or displacement of homes) or the surrounding usage and character (i.e., division of an established community).

### **Methodology and Assumptions**

The proposed General Plan land use diagram and policies were compared to existing land use conditions to determine whether implementation of the plan would trigger any impacts listed in the significance criteria. To calculate future land use development, the analysis assumed full buildout of the proposed plan, although it is not certain when or if this buildout would occur. Farmland resource acreages were assessed based on the California Department of Conservation's Farmland Mapping and Monitoring Program, a biennial report and mapping resource on the conversion of farmland and grazing land. The data from this source is for general planning purposes, has a minimum mapping unit of 10 acres, and is current as of 2006.

The proposed General Plan was compared to existing land use policies established in the County General Plan, the Los Banos Municipal Airport Plan and the Merced County Airport Land Use Compatibility Plan. Project consistency with habitat and natural community conservation plans is addressed in Section 3.8, Biological Resources.

### **Summary of Impacts**

The proposed General Plan Land Use Diagram is presented in **Figure 2.4-1**. The intent of the new General Plan is to create land use patterns without imposing a nuisance, hazards, or unhealthy condition upon adjacent uses. Implementation of the proposed General Plan would not create a land use pattern that physically divides an established community, nor would it displace substantial numbers of housing or people. In fact, the new General Plan would accommodate additional housing and employment opportunities. The proposed General Plan would be consistent with existing land

use policies and regulations. Uses within development areas are expected to be compatible with one another because General Plan policies establish requirements for compatible development.

A land use compatibility issue was raised during scoping regarding future land uses near the Los Banos Municipal Airport. The proposed General Plan anticipates that the City will relocate the airport in the future (see proposed General Plan Circulation Element policy C-I-34). However, the plan contains the following provision for the interim time period in which the airport remains in its current location:

LU-I-54    Until such time as the airport is relocated, ensure that proposed residential, commercial, and industrial uses near the airport be consistent with Los Banos Municipal Airport Plan and the Merced County Airport Land Use Compatibility Plan.

With implementation of this policy, land use conflicts would not occur near the airport.

The only adverse land use impact is the potential conversion of agricultural land, particularly prime agricultural soils and Williamson Act lands (agricultural preserves). Although there are policies in the proposed General Plan to reduce this impact, the impact remains significant and unavoidable.

### **Impacts and Mitigation Measures**

#### *Impact*

#### ***3.1-1    Buildout of the proposed General Plan would convert substantial amounts of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. (Significant and Unavoidable)***

As shown in Table 3.1-3, approximately 2,959 acres of Prime Farmland soils would be converted to urban uses as a result of full buildout of the proposed General Plan. Substantial amounts of Farmland of Statewide Importance and Unique Farmland soils would also be converted. It should be noted that the acreages are based on soils maps, not on actual agricultural production. Of the total agricultural land conversion, 198 acres are in Williamson Act contracts. Although the conversion of these agricultural lands is considered significant, it is important to note that the General Plan has incorporated land use patterns and policies to minimize the amount of overall urban growth/sprawl in the Planning Area. Furthermore, Los Banos has been designated as a growth center in the Central Valley, to accommodate projected growth in the region. As a growth center, it is necessary to convert some agricultural lands since the City is surrounded by agricultural uses.

**Table 3.1-3: Farmland Conversion with Proposed General Plan Buildout**

<i>Farmland Type</i>	<i>Existing Acres</i>	<i>Proposed General Plan Acres</i>	<i>Converted Farmland in Proposed General Plan</i>
Urban and Built up Land	9,802	14,755	
Grazing Land	346	292	54
Farmland of Local Importance	858	804	54
Prime Farmland	6,195	3,236	2,959
Farmland of Statewide Importance	2,222	1,351	871
Unique Farmland	1,833	1,061	772
Other Land	641	397	244
<b>TOTAL</b>	<b>21,896</b>	<b>21,896</b>	<b>4,954</b>

Source: Dyett & Bhatia, 2007.

The proposed General Plan contains several features intended to minimize impacts on existing agriculture operations, including:

- A greenbelt buffer zone between City urban development and outlying agriculture;
- Establishment of permanent urban growth boundary and efficient use of acreage for land use development within the urban growth boundary, to preserve agriculture in the Planning Area;
- Policies to ensure that existing or remaining agricultural operations are not impacted by new development.

*Proposed General Plan Policies that Reduce the Impact*

- LU-I-1 Delineate an Urban Growth Boundary in the General Plan Land Use Diagram that is an area within which urban development will occur.
- LU-I-3 Seek LAFCO approval of a Sphere of Influence (SOI) line corresponding with the General Plan designation for the proposed SOI.

*A Sphere of Influence line will represent the ultimate edge of urban development in Los Banos, beyond which development will remain rural in nature and without urban services. This policy is not intended to limit extension of services to existing rural uses, nor deny existing rural property owners the option of requesting annexation. The proposed SOI encompasses an additional 1400 acres of rural agricultural land outside the UGB, all of which is to be maintained in rural uses. 500 acres are envisioned for rural clustered development of executive housing along Copa del Oro Road, and 900 acres are proposed as a rural greenbelt around the Business Opportunity Area on the city’s west side.*

POSR-I-31 Work with the County and with the Grasslands Water District to preserve agricultural uses outside the Urban Growth Boundary.

*The City will work with Merced County to encourage the continuation of farming activities outside the Urban Growth Boundary with programs such as conservation easements and Williamson Act contracts.*

POSR-I-32 Require developers of residential developments adjoining agricultural land provide, fund and maintain a sufficient physical buffer to ensure that agricultural practices will not be adversely affected.

*The buffer may include additional setbacks, walls, roads, canals or other similar structures on the design development or on land adjacent to the proposed development, as long as they clearly define the boundary of agricultural functions.*

POSR-I-33 Require property developers adjacent to sites where agricultural uses are being conducted to inform subsequent buyers of potential continued agricultural production and the lawful use of agricultural chemicals, including pesticides and fertilizers.

POSR-I-34 Require anti-vandalism designs (appropriate fencing or other landscape features) to ensure that new development has conditions that minimize increased vandalism of adjacent agricultural activities outside the Urban Growth Boundary.

POSR-I-35 Retain water rights in all annexed areas so that agricultural production can continue on annexed land until the time of development. These rights will then be made available to meet urban water demands, or where feasible, be exchanged for ground water recharge opportunities as part of a comprehensive water recharge program.

*The City will work with the Central California Irrigation District on implementation of this policy.*

### ***Mitigation Measures***

Conversion of agricultural land to urban use is not directly mitigable, aside from preventing development altogether. In order to minimize the impact of converting prime agricultural lands, the City may consider requiring conservation easements on agricultural land of similar quality to that within the proposed development sites. Although this mitigation measure would not reduce the amount of acreage converted under buildout of the proposed General Plan, it would help ensure protection of remaining agricultural acreage.

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## 3.2 TRANSPORTATION

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This section of the EIR evaluates potential transportation impacts resulting from implementation of the proposed Los Banos 2030 General Plan. The impact analysis examines the roadway, intersection, truck routes, transit, bicycle/pedestrian and rail components of the overall transportation system. Impacts are evaluated based upon a comparison between existing conditions and future conditions with the proposed General Plan.

### ENVIRONMENTAL SETTING

The existing physical and regulatory conditions for the transportation system are described below. This section provides an overview of existing transportation infrastructure and services including public transit, non-motorized components, as well as current operating conditions within the City.

#### Physical Setting

##### *Roadway System*

At the core of Los Banos' circulation network is the roadway system. In Los Banos, this system is based on a traditional grid pattern orientated in a northeast/southwest direction at Downtown, surrounded by a pattern of arterial roadways orientated in a modern north-south/east-west direction outside of Downtown. Two state highways bisect the city into four quadrants. The study area and roadway classifications for the assessment of transportation impacts is shown in **Figure 3.2-1**.

SR-152 and SR-165 are the “backbone” of the roadway system through the city. SR-152 (or Pacheco Boulevard within City Limits) is the main east-west route in the city and connects with Dos Palos to the east and San Luis Reservoir to the west. The highway varies from a four-lane divided highway (west of Badger Flat Road and east of Ward Road) to a four-lane urban arterial within City Limits. The posted speed limit varies from 30-65 miles per hour and is the most heavily traveled roadway in the city. Currently, the California Department of Transportation (Caltrans) has plans to divert part of its traffic through a bypass located north of the city. A number of new interchanges are also planned. The construction of the bypass is projected to start in the next five years. When completed, there will be less interregional traffic passing through Pacheco Boulevard, as most will be routed to pass north of the city.

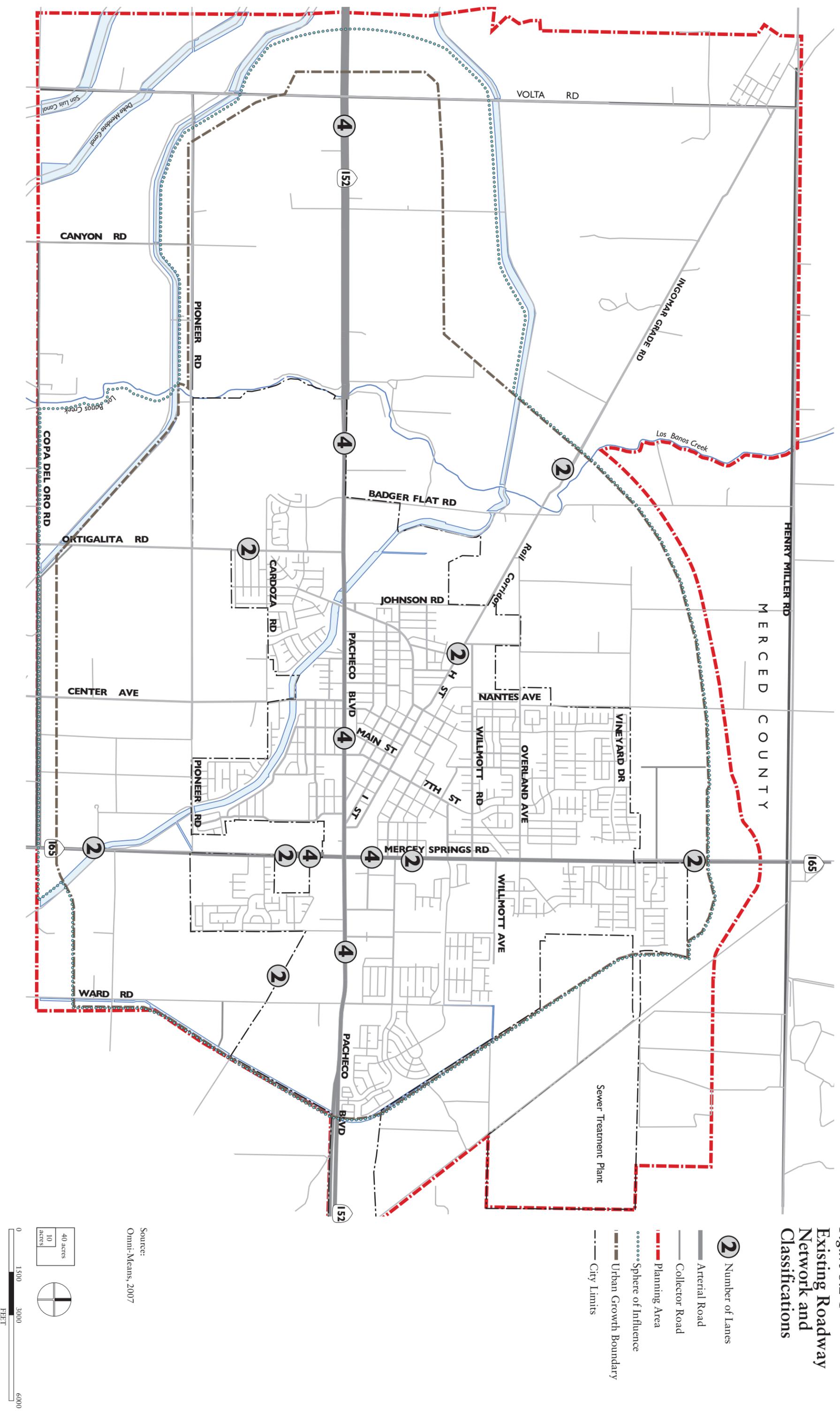
SR-165 (or Mercey Springs Road within City Limits) is the main north-south roadway through the city. It connects Los Banos to Stevinson to the north and Interstate 5 in the south. SR-165 varies from a two-lane highway north and south of city limits to a two-lane urban arterial within city limits; it carries between 16,000 and 17,000 vehicles per day in the vicinity of the Pacheco Boulevard junction. Seasonal traffic volumes may be higher due to agriculture activity. Current planned improvement include widening this road to a four-lane facility to help facilitate north-south traffic circulation and interregional through traffic movement on the east side of the city.

The City's roadway system is setup around a hierarchy of street types, which are commonly referred to as functional classifications:

- **Freeways** – Freeways are limited access interregional roadways primarily intended to carry large volumes of traffic. The future SR-152 Bypass north of the city falls under this category.
- **Highways** – Highways are limited access regional roadways primarily intended to carry high volumes of interurban traffic. In Los Banos, highways may also carry considerable local traffic due to the limited number of alternative routes. The existing SR-152 (Pacheco Boulevard) and SR-165 (Mercey Springs Road) fall under this category.
- **Major arterials** – Major arterials are access controlled roadways emphasizing mobility between major portions of the city and to regional freeways and highways. Pioneer Road and Ward Road are examples of major arterials in the city.
- **Minor arterials** – Minor arterials are roadways that provide mobility through the city and access to major residential, employment, and activity centers. Minor arterials in the city include such roads as I-Street near downtown and 7<sup>th</sup> Street north of SR-152.
- **Collectors** – Collectors are roadways that collect traffic from local streets within residential areas and provide access to arterials. There are numerous collector streets in the city, including B Street, Overland Avenue, Forth Street, G Street and others.
- **Neighborhood/Local Streets** – Local streets are roadways whose primary function is to provide direct access to neighborhoods. Neighborhood /Local Streets are found throughout Los Banos in residential areas.

Figure 3.2-1 Existing Roadway Network and Functional Classifications

**Figure 3.2-1**  
**Existing Roadway**  
**Network and**  
**Classifications**



- 2** Number of Lanes
- Arterial Road
- Collector Road
- Planning Area
- Sphere of Influence
- Urban Growth Boundary
- City Limits

40 acres  
 10 acres



Source:  
 Omni-Means, 2007

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### Traffic Operations

Level of Service (LOS) is a qualitative assessment of perceived traffic conditions by motorists. LOS generally reflects driving conditions such as travel time and speed, freedom to maneuver, and traffic interruptions. LOS uses quantifiable traffic measures such as average speed, intersection control delay, and volume-to-capacity ratio to determine driver satisfaction. LOS is reported for individual intersections and is designated by a range of letters – “A” represents the most favorable conditions (free flow) and “F” represents the least favorable conditions (jammed with excessive delays). Table 3.2-1 describes the characteristics of each LOS designation.

LOS was calculated based on methodology contained in the Highway Capacity Manual (HCM) (Transportation Research Board 2000). The HCM methodology is the prevailing measurement standard used throughout the United States.

**Table 3.2-1: Qualitative Description of Level of Service**

<i>Level of Service</i>	<i>Driver's Perception</i>
A / B	LOS A / B are characterized by light congestion. Motorists are generally able to maintain desired speeds on two and four lane roads and make lane changes on four lane roads. Motorists are still able to pass through traffic-controlled intersections in one green phase. Stop-controlled approach motorists begin to notice absence of available gaps.
C	LOS C represents moderate traffic congestion. Average vehicle speeds continue to be near the motorist's desired speed for two and four lane roads. Lane change maneuvers on four lane roads increase to maintain desired speed. Turning traffic and slow vehicles begin to have an adverse impact on traffic flows. Occasionally, motorists do not clear the intersection on the first green phase.
D	LOS D is characterized by congestion with average vehicle speeds decreasing below the motorist's desired level for two and four lane roads. Lane change maneuvers on four lane roads are difficult to make and adversely affect traffic flow like turning traffic and slow vehicles. Multiple cars must wait through more than one green phase at a traffic signal. Stop-controlled approach motorists experience queuing due to a reduction in available gaps.
E	LOS E is the lowest grade possible without stop-and-go operations. Driving speeds are substantially reduced and brief periods of stop-and-go conditions can occur on two and four lane roads and lane changes are minimal. At signalized intersections, long vehicle queues can form waiting to be served by the signal's green phase. Insufficient gaps on the major streets cause extensive queuing on the stop-controlled approaches.
F	LOS F represents stop-and-go conditions for two and four lane roads. Traffic flow is constrained and lane changes minimal. Drivers at signalized intersections may wait several green phases prior to being served. Motorists on stop-controlled approaches experience insufficient gaps of suitable size to cross safely through a major traffic stream.

Source: 2000 Highway Capacity Manual.

**Roadway Segments**

For roadways segments, the HCM procedures were used to calculate average daily capacities for each LOS threshold from A to F. Table 3.2-2 contains the LOS capacity thresholds; it also shows volume to capacity ratios, associated with each LOS threshold.

**Table 3.2-2: Level of Service Criteria for Roadway Segments**

	LOS A	LOS B	LOS C	LOS D	LOS E
<i>All Facilities (Volume-to-Capacity Ratio (V/C))</i>	<0.6	0.6-0.7	0.7-0.8	0.8-0.9	0.9-1.0
	<i>Total Two-way Average Daily Traffic (ADT) Threshold</i>				
<i>Roadway Segment Type</i>	LOS A	LOS B	LOS C	LOS D	LOS E
6-Lane Freeway	64,500	75,500	86,500	97,000	108,000
4-Lane Freeway	43,000	50,500	57,500	64,500	72,000
4-Lane Highway	4,800	29,300	34,700	35,700	-
4-Lane Rural Highway	21,500	25,000	28,500	32,500	36,000
2-Lane Rural Highway	10,500	12,500	14,500	16,000	18,000
6-Lane Major Arterial	26,000	30,000	34,500	39,000	43,000
4-Lane Major Arterial	17,500	20,000	23,000	26,000	28,500
4-Lane Minor Arterial	15,000	17,500	20,000	22,500	25,000
2-Lane Minor Arterial	7,500	8,500	10,000	11,500	12,500
4-Lane Collector	13,000	15,000	17,500	19,500	21,500
2-Lane Collector	6,500	7,500	8,500	9,500	10,500

1. Based on "Highway Capacity Manual", Transportation Research Board, 2000 peak hour capacities. Daily capacities in the study area are assumed as nine times the peak hour capacity.

2. All volumes are approximate and assume ideal roadway characteristics. Actual threshold volumes for each Level of Service listed above may vary depending on a variety of factors including (but not limited to) roadway curvature and grade, intersection or interchange spacing, driveway spacing, percentage of trucks and other heavy vehicles, travel lane widths, signal timing characteristics, on-street parking, volume of cross traffic and pedestrians, etc.

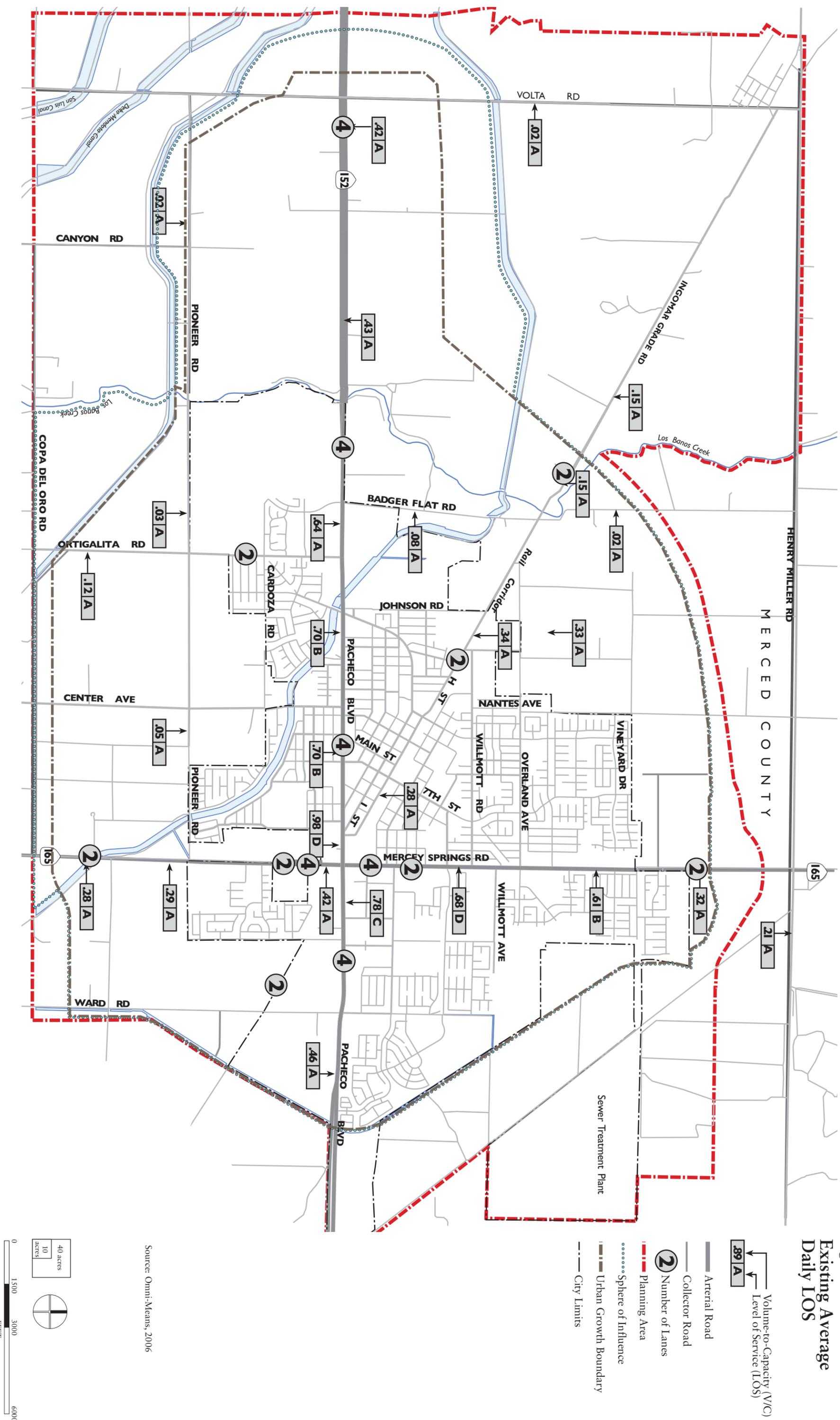
Source: *Omni-Means, 2007.*

Existing average daily traffic (ADT) counts conducted in summer of 2006 for the 44 study area roadway segments shown in Table 3.2-3 were compared to the thresholds in Table 3.2-2 to determine the daily LOS as it relates to capacity. These counts also were used for model validation and remain valid for existing conditions analysis. The LOS results do not describe operating conditions experienced by drivers during peak hour conditions, but indicate the level of daily capacity utilization for the roadway segment. Increasing levels of utilization typically correlates with a worsening of LOS, but may not be directly related to driving conditions for all hours of the day, due to the variation that occurs during peak hours. Figure 3.2-2 depicts average daily LOS for existing conditions.

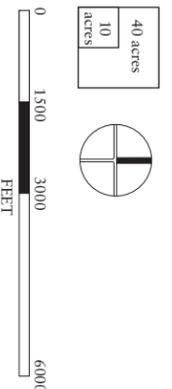
Most of the roadways currently operate at LOS C or better, except for SR-165, from B Street to D Street (LOS "F"), and 7<sup>th</sup> Street from H Street to G Street (LOS "F").

Figure 3.2-2 Average Daily LOS Existing Conditions

**Figure 3.2-2**  
**Existing Average**  
**Daily LOS**



Source: Omni-Means, 2006



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**Table 3.2-3: Existing Traffic Volumes and Level of Service**

<i>Street Name</i>	<i>Location</i>	<i>Daily Volume</i>	<i>Level of Service</i>	<i>Number of Lanes</i>
<i>State Highways</i>				
SR-165	From Study Area Boundary to Pioneer Road	6,400	A	2
SR-165	From Henry Miller Avenue to St Francis Drive	5,900	A	2
SR-165	From B Street to D Street	13,200	F	2
SR-165	From Scripps Drive to Pioneer Road	8,500	B	2
SR-165	From SR-152 to Scripps Drive	18,200	B	4
SR-152 (Pacheco Boulevard)	From I Street to Maryland Street	29,500	C	4
SR-152 (Pacheco Boulevard)	From 7th Street to 9th Street	34,500	C	4
SR-152 (Pacheco Boulevard)	From SR-165 to Ward Road	31,500	C	4
SR-152 (Pacheco Boulevard)	From Ward Road to Nickel Street	20,800	B	4
SR-152 (Pacheco Boulevard)	From Ortigalita Road to I Street	30,500	C	4
<i>Other Roadways</i>				
B Street	From SR-165 to Wisteria Street	4,100	A	2
B Street	From SR-165 to Santa Ana Street	2,750	A	2
Birchwood Avenue	From Nantes Avenue to Zinfandel Street	740	A	2
Center Avenue	From SR-152 to Washington Avenue	2,180	A	2
I 1th Street	From SR-152 to Washington Avenue	4,390	A	2
G Street	From 7th Street to 8th Street	2,930	A	2
G Street	From SR-165 to Santa Rita Street	2,450	A	2
H Street	From 4th Street to 5th Street	5,920	A	2
H Street	From 2nd Street to 3rd Street	4,930	A	2
H Street	From 4th Street to 3rd Street	5,830	A	2
H Street	From 2nd Street to Nevada Avenue	4,060	A	2
I Street	From 6th Street to 5th Street	2,600	A	2
I Street	From SR-152 to L Street	7,790	C	2
I Street	From SR-152 to Hawthorne Drive	6,660	B	2

**Table 3.2-3: Existing Traffic Volumes and Level of Service**

<i>Street Name</i>	<i>Location</i>	<i>Daily Volume</i>	<i>Level of Service</i>	<i>Number of Lanes</i>
Nantes Avenue	From Overland Avenue to Santa Barbara Street	1,750	A	2
Overland Avenue	From 2nd Street to 1st Street	2,470	A	2
Overland Avenue	From 2nd Street to 3 <sup>rd</sup> Street	3,100	A	2
Overland Avenue	From H Street to Santa Lucia Ave	1,800	A	2
Place Road	From B Street to San Luis Street	660	A	2
San Luis Street	From Ward Road to Warren Drive	1,120	A	2
Santa Barbara Drive	From SR-165 to Santa Venetia Street	2,100	A	2
2nd Street	From H Street to I Street	4,510	A	2
7th Street	From Willmott Road to B Street	5,870	A	2
7th Street	From F Street to E Street	7,290	B	2
7th Street	From H Street to G Street	13,150	F	2
7th Street	From SR-152 to K Street	2,910	A	2
7th Street	From SR-152 to Washington Avenue	2,330	A	2
6th Street	From SR-152 to K Street	4,500	A	2
Stonewood Drive	From Overland Avenue to Olivewood Drive	4,240	A	2
Stonewood Drive	From Overland Avenue to Rhoda Avenue	5,470	A	2
Ward Road	From SR-152 to Technology Drive	670	A	2
Willmott Road	From 2nd Street to 1st Street	1,400	A	2
Willmott Road	From 3rd Street to 2nd Street	2,380	A	2

Source: Omni-Means, 2006.

**Intersections**

Peak hour traffic operations (a.m. and p.m.) were investigated at key intersections in Los Banos based on the 2000 HCM procedures. The a.m. peak hour is defined as the peak one-hour period of traffic between 7.00 and 9.00 am. The p.m. peak hour is defined as the peak one-hour period between 4.00 and 6.00 pm. Table 3.2-4 shows the LOS criteria for intersections and traffic counts conducted in summer of 2006 for 17 intersections, respectively.

**Table 3.2-4: PM Peak Hour Intersection Operations Summary – 2006 Conditions**

Intersection	Traffic Control	LOS (Delay in seconds per vehicle)
		PM Peak Hour
SR-152 (Pacheco Boulevard)/11th Street	Signal	C (26.2)
SR-152 (Pacheco Boulevard)/Miller Lane	TWSC	F (OVRFL)
SR-152 (Pacheco Boulevard)/Place Road	TWSC	D (32.5)
SR-152 (Pacheco Boulevard)/Nickel Street	TWSC	E (42.0)
SR-152 (Pacheco Boulevard)/Ward Road	Signal	B (16.4)
San Luis Street/Ward Road	AWSC	A (8.0)
B Street/SR-165 (Mercey Springs Road)	AWSC	F (63.0)
B Street/Ward Road	AWSC	A (7.3)
Overland Road/Ingomar Grade/H Street	TWSC	A (9.0)
Overland Road/Nantes Avenue	TWSC	B (10.1)
Overland Road/Cabernet Street	AWSC	A (8.4)
Overland Road/Stonewood Drive	AWSC	B (10.5)
Overland Road/ SR-165 (Mercey Springs Road)	TWSC	C (23.5)
Vineyard Drive/Nantes Avenue	TWSC	A (8.9)
Dove Street/SR-165 (Mercey Springs Road)	TWSC	C (20.7)
Henry Miller Avenue/Nantes Avenue	TWSC	B (10.1)
Henry Miller Avenue/ SR-165 (Mercey Springs Road)	TWSC	C (19.8)

Note: Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. A TWSC procedure does not take into account the effects of platooning from signalized intersections and therefore sometimes reports a worse LOS than what is actually occurring.

Source: *Omni-Means, 2006.*

Eleven of the fourteen intersections currently operate at LOS C or better. Exceptions to this include the following:

- SR-152 (Pacheco Boulevard)/Miller Lane (LOS “F”)
- SR-152 (Pacheco Boulevard)/Nickel Street (LOS “E”)
- B Street/SR-165 (Mercey Springs Road) (LOS “F”)

None of the study intersections currently meet the Manual on Uniform Traffic Control Devices (MUTCD) Peak-Hour Warrant 3 under “Existing” PM peak hour traffic volumes.

## **Public Transit**

Transit service and facilities in Los Banos include both private and public operations. Private operations are limited to taxi and limo services, while public transportation is provided by Merced County Transit (MCT). The MCT operates both regularly scheduled fixed-route and Dial-A-Ride (door-to-door) transit services throughout Merced County. The fixed route bus service operates five routes that traverse major nodes in the city. It is available on weekdays between 7 a.m. to 6 p.m. and on Saturday from 9:30 a.m. to 5:30 p.m. There is no service on Sunday. The frequency between buses during both peak and off-peak hours of operation is 30 minutes. The busses have fixed stops along their designated routes but patrons may wave down the bus anywhere along the route to take advantage of transit opportunities. Recently, the MCT has equipped all buses with bike racks to encourage biking. Many of the outlying residential areas are not served by transit.

The Dial-A-Ride service is provided by a fleet of 16 vehicles throughout Merced County. In Los Banos, it is reserved for the exclusive use by the elderly (age 60 and older) and the handicapped. All Dial-A-Ride users must register for Dial-A-Ride service and pay the same fare as fixed route users. Bur routes are indicated on **Figure 3.2-3**.

## **Pedestrian and Bicycle Circulation**

Bicycling and walking are important modes of transportation and are inexpensive, energy conserving, and non-polluting. Los Banos's flat topography and warm climate make walking and biking attractive transportation options for getting around town.

Currently, Los Banos has good bicycle connectivity along major transportation corridors. Bicycle paths, lanes and trails are provided, but they are not continuous and rarely connect neighborhoods to important city nodes such as Downtown or schools. Los Banos has a single Class I bike route along the CCID Channel and several Class II and III routes along city roads. **Figure 3.2-4** illustrates existing and proposed bicycle and pedestrian routes in the city.

Pedestrians are served by sidewalks that are located on arterials, collectors and most local roadways in the City. Crosswalks with pedestrian call-buttons are provided at signalized intersections and school crossings are provided at a number of elementary schools. The Rail Corridor Trail and HG Fawcett Parkway are specifically reserved for pedestrians and bikers and provide an alternative to traveling along high volume vehicular streets.

## **Aviation System**

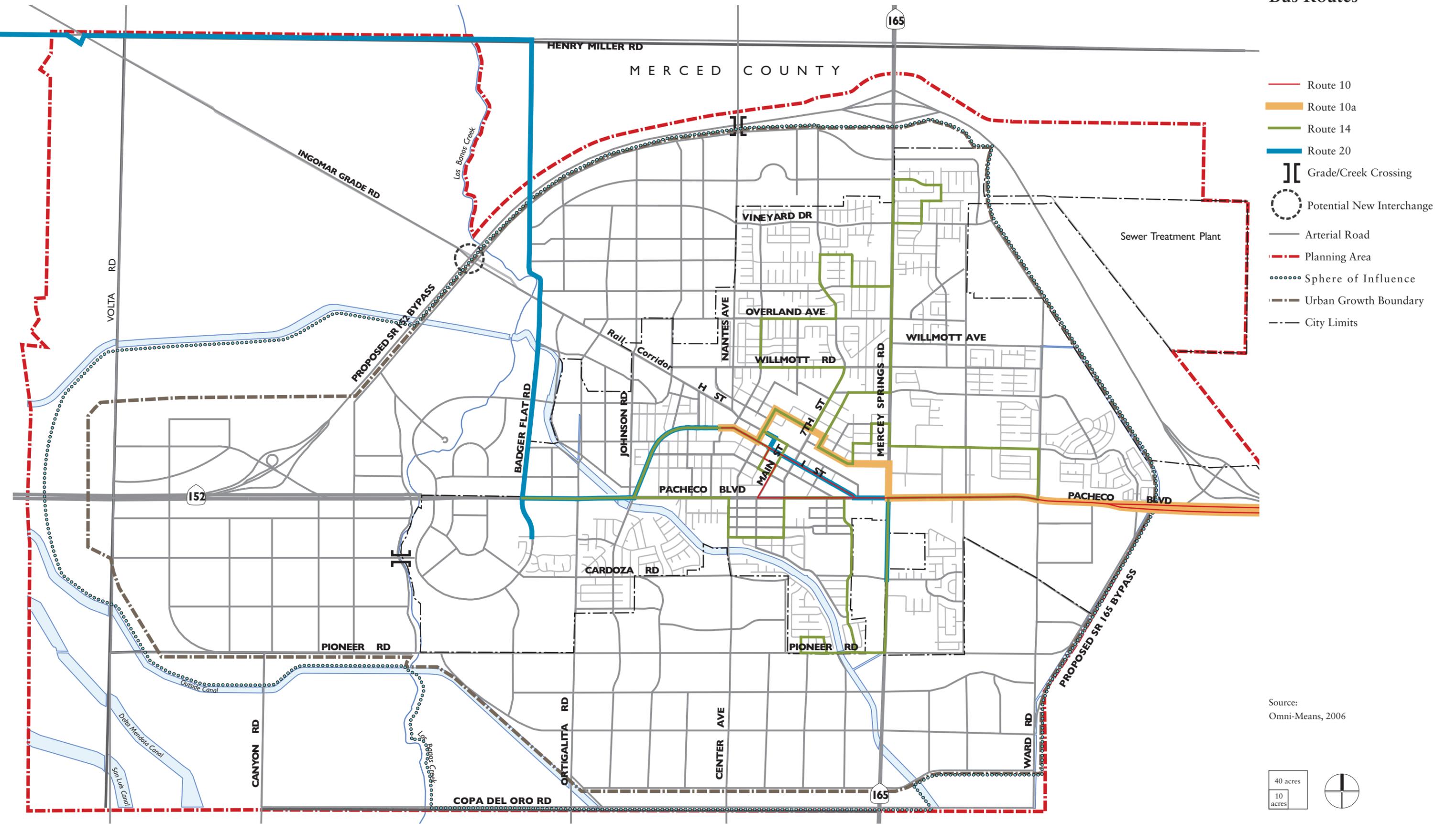
The Los Banos Municipal Airport is a publicly owned airport located at the west of the city, north of Pacheco Boulevard near Badger Flat Road. It has a 3,000 foot runway with a full return taxiway. The airport is open 24 hours a day and receives mainly small twin engine passenger aircrafts and private jets. According to FAA records, the number of air operations average about 51 per day in 2005.

## **Truck Routes**

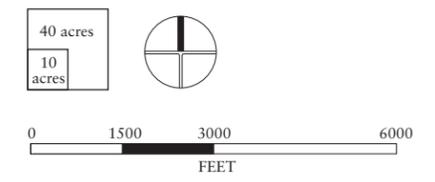
In addition to moving cars, bicycles and people, the roadway system in Los Banos carries a substantial number of trucks due to Los Banos's strategic location. These routes are designed to allow truck traffic to pass through the City with minimal impact on residential neighborhoods as well as local vehicular and pedestrian traffic. **Figure 3.2-5** shows existing and proposed future truck routes.

Figure 3.2-3: Bus Routes

Figure 3.2-3  
Bus Routes



Source:  
Omni-Means, 2006



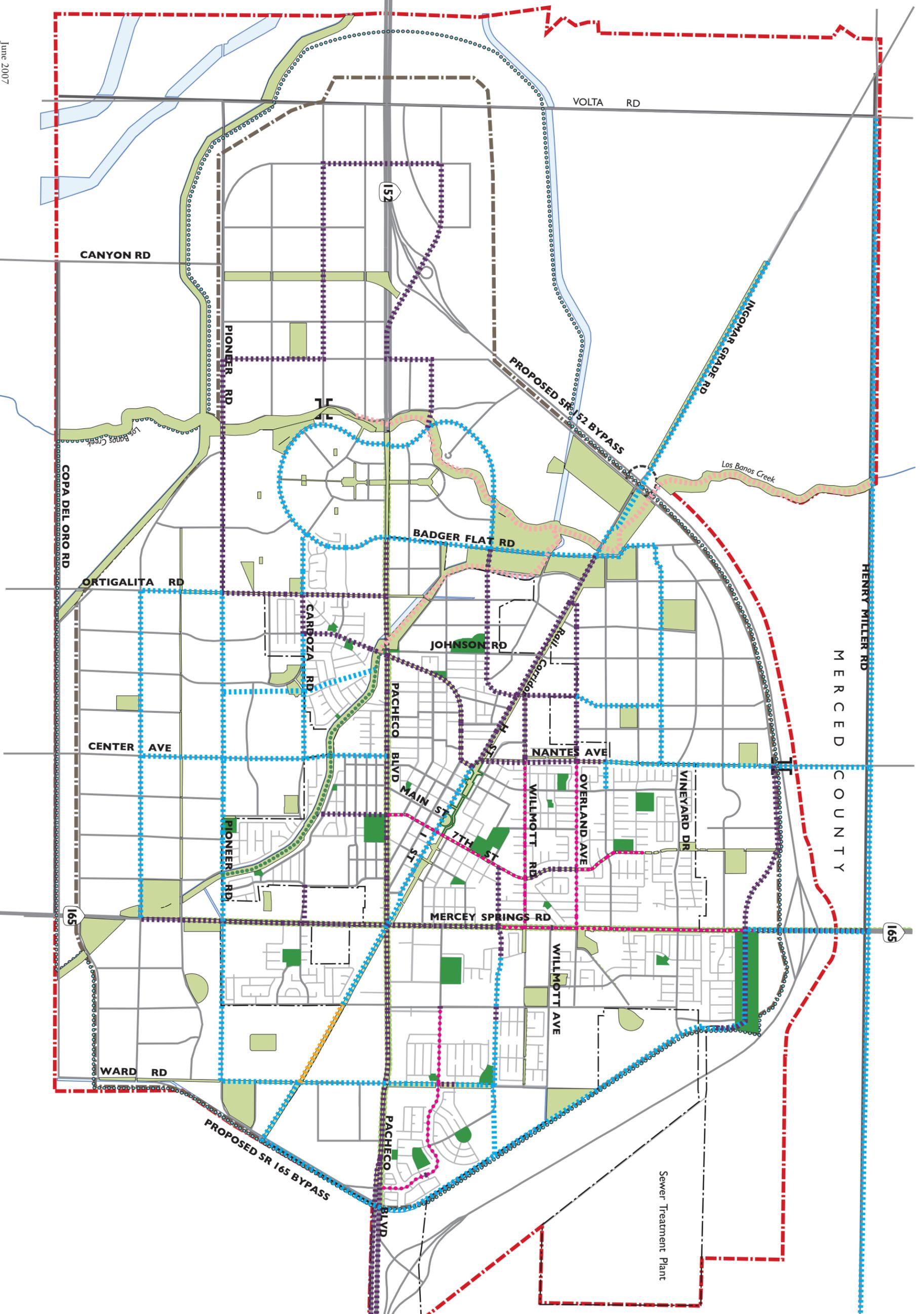
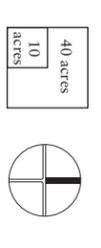
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Figure 3.2-4 Bicycle Network and Pedestrian Circulation

**Figure 3.2-4**  
**Existing and Future**  
**Bicycle, and Pedestrian**  
**Networks**

-  CMAAQ Project
-  Proposed Bike Lane
-  Proposed Bike Path
-  Proposed Trailway
-  Existing Bike Lane
-  Existing Trailway
-  Existing Parks
-  Proposed Parks
-  Grade/Creek Crossing
-  Potential New Interchange
-  Planning Area
-  Sphere of Influence
-  Urban Growth Boundary
-  City Limits

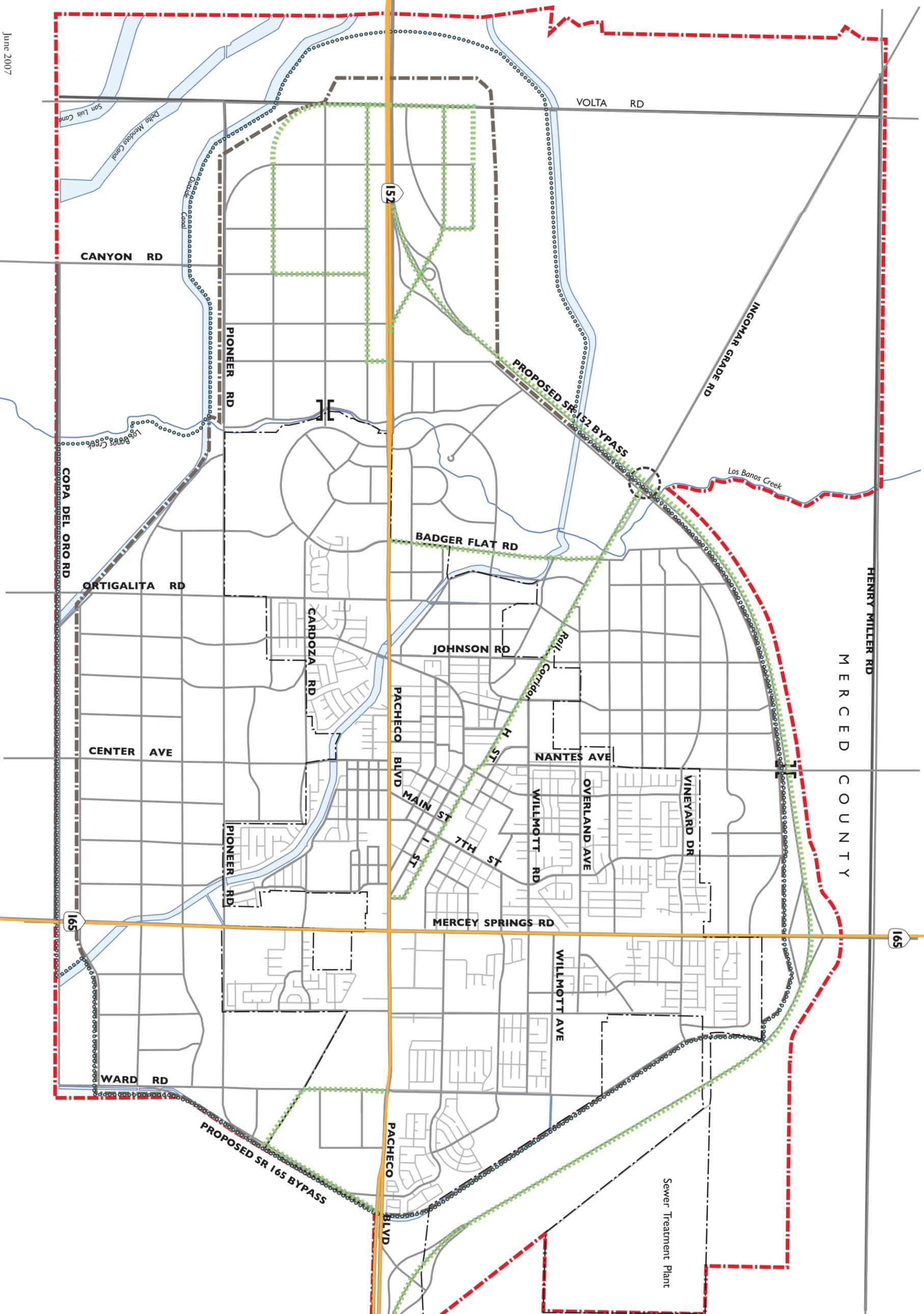
Sources:  
 Omni-Means, 2006  
 Dyett & Bhatta, 2007  
 City of Los Banos, 2007



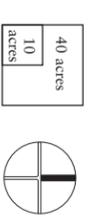
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Figure 3.2-5: Truck Routes

Figure 3.2-5  
Truck Routes



- Existing Truck Routes
- ..... Proposed Truck Routes
- I Potential New Interchange
- Intersection Improvements
- - - Planning Area
- ..... Sphere of Influence
- - - Urban Growth Boundary
- City Limits



Sources:  
California Department of Transportation, 2006  
Dyett & Bhata, 2007

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## REGULATORY SETTING

Existing transportation policies, laws, and regulations that would apply to the General Plan Circulation Element are summarized below. This information provides a context for the impact discussion related to the plan's consistency with applicable regulatory conditions.

### State

Caltrans is responsible for planning, design, construction, and maintenance of all state highways. Two highways pass through Los Banos: SR-152 and SR-165. Caltrans' jurisdictional interest extends to improvements to these roadways at the interchange ramps serving area freeways. Any federally funded transportation improvements are subject to review by Caltrans staff and the California Transportation Commission.

*Draft Environmental Impact Report and Section 4(F) Evaluation for State Route 152 in Merced County* (Caltrans District 10, 2005) is an environmental study document evaluating the options to construct a four-lane freeway bypass on a new alignment for SR-152 around Los Banos. According to the report, the purpose of the project is to:

- Relieve congestion in the Los Banos community by reducing the amount of interregional, recreational, and commuter traffic that travels through the center of Los Banos.
- Improve the route continuity of SR-152 within Merced County. The existing SR-152 roadway through Los Banos is the only remaining undivided segment of the route between the Merced/Santa Clara line on the west and SR-99 on the east.
- Improve safe operation of SR-152. While the overall accident rate is similar to the state average, 18 intersections within Los Banos have accident rates at least twice the state average.

The SR-152 Bypass project is scheduled to begin construction in year 2012.

*Route Concept Report, State Route 152* (Caltrans District 10, November 2004). Caltrans' Route Concept Report describes SR-152 as an east-west rural interregional facility and identifies it as a high emphasis and focus route for the Interregional Road System (IRRS). The segment through the City of Los Banos between Los Banos Creek to Santa Fe Grade is the only remaining undivided portion of the highway. Traffic growth along the segment is expected to be great during the 20 year concept span. Major highway improvement is expected in the form of a bypass around the City of Los Banos. The report has set a LOS of D for this segment of SR-152 in year 2025.

*Route Concept Report, State Route 165* (Caltrans District 10, March 2004). According to the route concept report, SR-165 is functionally classified as a minor arterial throughout its entire length with the exception of the segment passing through Los Banos, where it is classified as a principal arterial. Being the principal connection route between Los Banos, Stevinson and Turlock; SR-165 is described as very important to the economic well being of the region. The report recognizes potential future traffic congestions along the route, especially segments passing through Los Banos. The report has set a LOS of D for this segment of SR-152 in year 2025.

*Guide for the Preparation of Traffic Impact Studies* (Caltrans, December 2002). provides consistent guidance for Caltrans staff who review local development and land use change proposals as well as

inform local agencies of the information needed for Caltrans to analyze the traffic impacts to State highway facilities including freeway segments, on- or off-ramps, and signalized intersections.

### **Regional**

Merced County Association of Governments is the regional organization responsible for prioritizing transportation projects in a *Regional Transportation Improvement Program* (RTIP) for federal and state funding. The process is based on each project for need, feasibility, and adherence to federal transportation policies. The most current plan was adopted in March 2004 and proposes how \$29 million in funding is spent from fiscal years 2004-2009.

The *Regional Transportation Plan* (RTP) for Merced County (Merced County Association of Governments, 2007) is a federally mandated long range transportation plan for the six incorporated cities of Atwater, Dos Palos, Gustine, Livingston, Los Banos and Merced. The Plan specifies the policies, projects, and programs necessary over a 20 plus year period to maintain, manage, and improve the region's transportation systems. It establishes goals and objectives for the future system. It identifies the actions necessary to achieve these goals and describes a funding strategy and options for implementing the actions. The RTP is updated every three years. The present 2007 update concerns the period from 2007 to 2030.

### **Local**

*The City of Los Banos 1999 General Plan.* The existing General Plan has a traffic element that establishes LOS C as the minimum overall LOS threshold and LOS D as the minimum peak hour LOS threshold.

*Final Environmental Assessment Report – Los Banos Municipal Airport Master Plan (1999).* The 1995 Airport Master Plan and EIR describes existing and proposed facilities, air traffic volumes, noise contours, and flight paths at the Los Banos Municipal Airport. The EIR further describes short term as well as long term impacts and mitigation measures from airport activities.

*The City of Los Banos Commuter Bike Plan* (2002, and 2006 update) provides guidelines on implementing a comprehensive and coordinated bikeway network in Los Banos. The key goals of the plan are listed below:

- Actively promote bicycle use as a viable, attractive, non-polluting form of transportation and assure safe and convenient access to all areas of the city and vicinity.
- Provide for a safe system of bikeways, interrelated with other modes of transportation throughout the city and vicinity.
- Provide literature and up-to-date bikeway maps for the public.

## IMPACT ANALYSIS

### Significance Criteria

Adoption of the proposed General Plan would have a potentially significant impact if additional development under the plan, proposed policies, actions, or improvements would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the V/C ratio for freeways, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service (LOS) standard established by the county congestion management agency or City of Los Banos for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Increase substantially hazards due to a design feature (i.e., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. transit service, carpooling, bicycling, walking).

### Methodology and Assumptions

#### *Traffic Model Development and Base Year Calibration*

The integrated urban transportation planning software package called TP+/Viper (copyright Citilabs) was the modeling software used for the City of Los Banos traffic model. While the new Los Banos Citywide traffic model uses regional traffic-related assumptions consistent with the MCAG regional travel demand forecast model, it should be noted that the new Citywide model has been essentially designed to run independently as a “stand-alone” model, outside of the MCAG model. This is mainly because the new Citywide model is a “focused” traffic model that basically uses assessor’s parcel-based land use information and digital parcel mapping based street network component, which together yield a relatively higher degree of resolution and accuracy in the traffic modeling process, compared to the larger census-tract based regional land use and network assumptions used by the MCAG regional model. In other words, the new Citywide model may be regarded as being relatively more Geographic Information Systems (GIS) compatible. Therefore, for technical reasons that involve higher model accuracy and efficiency, the Citywide traffic model was created as a stand-alone model outside of the MCAG regional travel demand forecast model.

The City of Los Banos traffic model uses a “two-step” iterative trip distribution-assignment process. In the first step, “free-flow” (or un-congested) travel times are utilized to compute preliminary estimates of inter-zonal trip distribution. The initial trip distribution is then utilized to perform a preliminary trip assignment in order to estimate “congested” travel times on the street network. In the second and final step, a final trip distribution is estimated utilizing the congested inter-zonal travel times, which is then used to perform the final trip assignment to create the final loaded network. Additional technical information regarding the traffic model is included in the Appendix.

**Trip Generation**

The number of trips generated in the City was determined from the travel demand model. The model estimates 115,000 daily trips under existing conditions. Of these trips, 18 percent were for Home-based Work purposes, 50 percent were for Home-based Other purposes (e.g. shopping and recreation), and 32 percent were for Non-Home based purposes. Under buildout conditions, the City is estimated to experience nearly a three-fold increase in daily trips, to 338,000. The trip purpose distribution would be the same.

Interregional traffic, i.e. traffic that passes through Los Banos but does not stop, is projected to grow as the San Joaquin Valley continues to develop. The gateway trip volumes into the City were taken from traffic counts for existing conditions and the StanCOG model for future projections. SR-152 is estimated to currently handle 25,000 to 30,000 daily trips through the City, with 15,000 of those trips being interregional in nature. Under buildout conditions, SR-152 will handle 20,000 interregional trips, although most of them will be diverted to the freeway bypass. The freeway bypass is projected to handle 27,000 to 30,000 daily trips, while “old SR-152” is projected to experience traffic demand in the range of 28,000 to 35,000 daily trips. Most of the high traffic demand along “old SR-152” is projected to occur west of SR-165, where much of the commercial development of the City is planned.

SR-165 is estimated to currently handle 14,000 to 17,000 daily trips. Few interregional trips are estimated to occur on SR-165, although in the future the number of interregional trips may grow by 5,000 daily trips as SR-165 develops as a connection between Los Banos/I-5 and the City of Turlock.

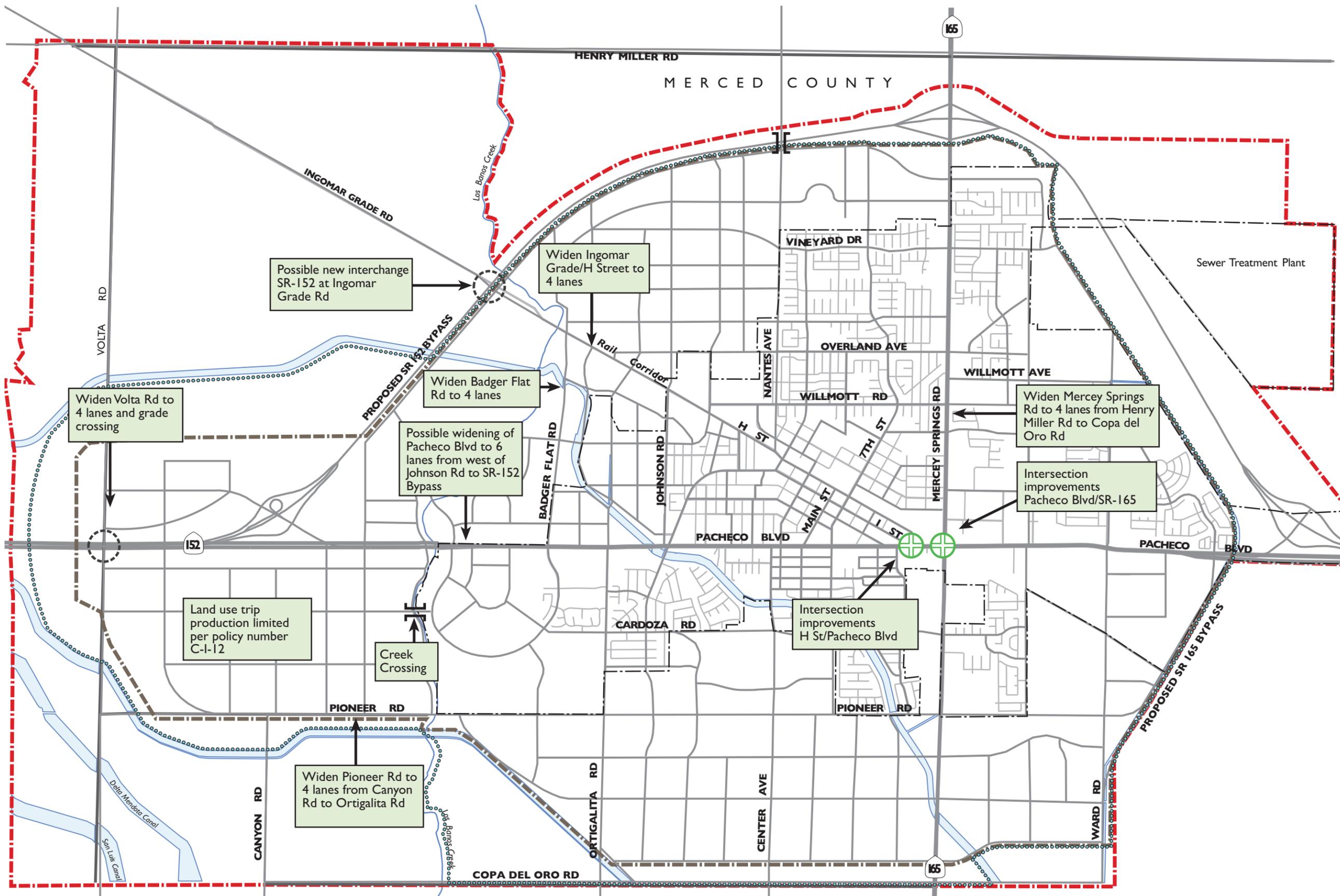
**Table 3.2-5: Daily Vehicle-Trip Generation**

<i>Scenario</i>	<i>Vehicle Trips</i>	<i>Increase</i>	<i>Percent Increase</i>
Existing Conditions	115,000	N/A	N/A
Proposed General Plan (2030)	369,960	254,960	220

Source: Omni-Means, 2007.

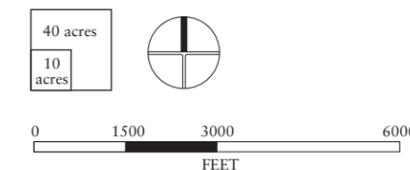
Figure 3.2-5 Planned Improvements:

Figure 3.2-6  
Planned Improvements



- Arterial Road
- Collector Road
- Road Widening
- ⌈⌋ Grade/Creek Crossing
- Potential New Interchange
- ⊕ Intersection Improvements
- - - Planning Area
- ..... Sphere of Influence
- - - Urban Growth Boundary
- - - City Limits

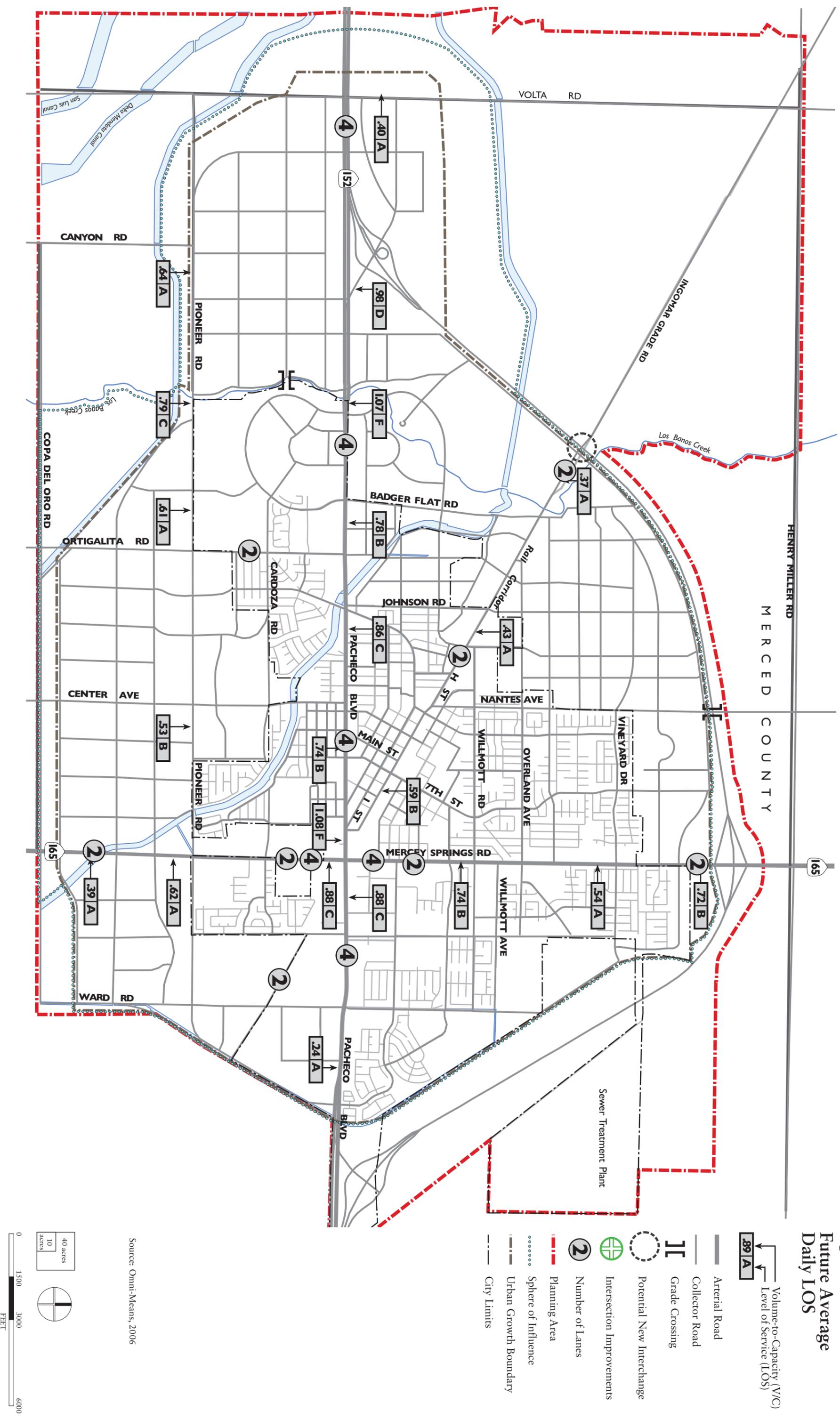
Source:  
Omni-Means, 2006



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Figure 3.2-6: Future Average Daily LOS

Figure 3.2-7  
 Future Average  
 Daily LOS



*back*

### *Planned Improvements*

Planned improvements include all major projects envisioned in the City Capital Improvement Program (CIP). Below is a brief description of recommended improvements:

- *Pioneer Road from Business Opportunity Area to Ortigalita Road* – Widening this road to a four-lane facility will facilitate Business Opportunity Area traffic and satisfy creek crossing traffic demand.
- *Badger Flat Road, from the SR-152 Bypass to “Old SR-152” (Pacheco Boulevard)* – Widening this road to a four-lane facility will facilitate north-south traffic circulation through the west side of the City.
- *Ingomar Grade Road/H Street, from the SR-152 Bypass to “Old SR-152” (Pacheco Boulevard)* – Widening this road to a four-lane facility will facilitate east-west traffic circulation. Ingomar Grade Road should be considered as a possible location of a future interchange with the SR-152 Bypass.
- *Volta Road, SR-152 Overcrossing* – Constructing this road as a four-lane facility will facilitate movement from the Business Opportunity Area across SR-152, thereby eliminating at-grade intersection delays on SR-152 and divert non-freeway traffic from the interchange.
- *7<sup>th</sup> Street, from H Street to G Street* – Operational improvements on this road will facilitate movement and reduce existing congestion.

Figure 3.2-6 illustrates the planned improvements and the proposed new streets that make up the future roadway network under the proposed General Plan, while Figure 3.2-7 shows future average daily levels of service.

### **Summary of Impacts**

Full buildout of the proposed General Plan will have a less than significant impact on the existing traffic system, with increased congestion on highways, arterial roads, as well as intersections but no unacceptable levels of service with implementation of General Plan policies and planned improvements. Total daily vehicle trips, for example, is expected to increase by 220 percent over existing levels. To mitigate the effects of traffic growth, many policies and programs along with planned street improvements, are called for under the proposed Plan. These include a Transportation Performance Monitoring Program to reduce traffic generated in the Business Opportunity Area, policies to promote transit ridership, bicycle use and pedestrian activity, as well as physical improvements to roadway segments and intersections and construction of new roadways. Together, these policies will ensure the roadway LOS is kept to an acceptable level even though there may be increased traffic volume during peak hours.

## Impacts and Mitigation Measures

### Impact

#### 3.2-1 *Implementation of the proposed General Plan would generate increased traffic congestion but not unacceptable LOS Standards on State Highways. (Less than Significant)*

Caltrans is currently in the final stages of planning for a SR-152 Bypass that would loop around the north of Los Banos. The project is slated to begin construction in year 2012. When completed, the bypass will divert interregional traffic and significantly reduce the volume of traffic passing through the city center. Concurrent improvements to SR-165 are also planned in terms of constructing new highway interchanges and widening existing roadways.

Taking these improvements into consideration, traffic modeling under full buildout conditions indicates that although traffic volumes will increase, the level of service on these highways will be kept within acceptable limits of Caltrans SR-152 and SR-165 Route Concept Report LOS standard of D (See Table 3.2-6). Various other policies on transportation management, such as transportation performance monitoring program for the planned Business Opportunity Area on the Westside are also included to reduce the impact to a less-than-significant level.

#### *Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

- C-I-13      Require traffic impact studies for all proposed new developments that will generate significant amounts of traffic (100 or more peak hour trips).

*Specific thresholds will be based on location and project type, and exceptions may be granted where traffic studies have been completed for adjacent development. The City's new traffic model developed for the 2030 General Plan will facilitate this analysis.*

- C-I-14      Establish a Transportation Performance Monitoring (TPM) program for the southern part of the Westside subarea to monitor and control traffic arising from new development.

*Development occurring within the TPM program area must submit data to the city traffic engineer to calculate the number of site trips generated per developable acre. As a starting guide, the maximum number of trips allowed in the subarea shall not exceed 33,500 daily or 3,200 during PM peak hours. No development would be allowed to generate traffic that directly or cumulatively would exceed this number. These trip limits then will maintain levels of service as established in the Land Use Element, with exceptions to be granted only for development for which the City Council makes a Statement of Overriding Considerations. The City will maintain a "trip ledger" showing all site trips that have been approved for each TAZ, with allocations made on the basis of receipt of a Certificate of Reservation of Site Trips or a building permit application. The City Council will periodically review the trip generation*

*rates and allowable adjustments and exceptions established for the TPM program and the trip allocations by TAZ and allow for recalculation of the maximum number of site trips allowed based on approved changes in trip generation rates or other adjustment factors.*

Implementation of the proposed policies summarized above would reduce potential Impact 3.2-1 to a level that is less than significant.

**Table 3.2-6 : State Highways and Freeways Level of Service**

Street Name	Location	<u>Build-out without Plan Improvements</u>			<u>Build-out with Plan Improvements</u>		
		Daily Volume	Level of Service	Number of Lanes	Daily Volume	Level of Service	Number of Lanes
SR-165	From Study Area Boundary to Pioneer Road	16,400	A	4	16,900	A	4
SR-165	From Henry Miller Avenue to St Francis Drive	14,700	A	4	15,500	C	4
SR-165	From B Street to D Street	16,100	A	4	24,900	B	4
SR-165	From Scripps Drive to Pioneer Road	16,300	A	4	23,400	B	4
SR-165	From SR-152 to Scripps Drive	21,800	C	4	26,600	C	4
Pacheco Boulevard	From I Street to Maryland Street	31,500	C	4	32,300	C	4
Pacheco Boulevard	From 7th Street to 9th Street	23,600	C	4	26,400	C	4
Pacheco Boulevard	From SR-165 to Ward Road	24,000	C	4	27,500	C	4
Pacheco Boulevard	From Ward Road to Nickel Street	10,100	A	4	12,800	A	4
Pacheco Boulevard	From Ortigalita Road to I Street	36,400	F	4	34,500	D	4
SR-152	SR 152 west of SR 165	-	-	4	30,430	A	4
SR-152	SR 152 east of SR 165	-	-	4	30,680	A	4

Source: Omni-Means, 2007.

*Impact*

**3.2-2 Implementation of the proposed General Plan would generate increased traffic congestion but not unacceptable LOS Standards on local roadways. (Less than Significant)**

As described previously and listed in Table 3.2-7, numerous new roadway improvements are identified in the proposed General Plan. When those improvements are carried out, only two roadway segments – Pacheco Boulevard from Ortigalita to I Street, and 11<sup>th</sup> Street from SR-152 to Washington Avenue, will experience LOS standard D. This level of service is within bounds of Policy C-I-11 of the proposed General Plan, which specifies a goal of LOS D or better for two hour peak periods (a.m. and p.m.) on all major roadways and intersections. Future Average Daily LOS is shown in Figure 3.2-5.

**Table 3.2-7: Roadway Level of Service**

Street Name	Location	<u>Build-out without Plan Improvements</u>			<u>Build-out with Plan Improvements</u>		
		Daily Volume	Level of Service	Number of Lanes	Daily Volume	Level of Service	Number of Lanes
B Street	From SR-165 to Wisteria Street	3,300	A	2	4,000	A	2
B Street	From SR-165 to Santa Ana Street	3,700	A	2	3,300	A	2
Birchwood Avenue	From Nantes Avenue to Zinfandel Street	1,400	A	2	1,700	A	2
Center Avenue	From SR-152 to Washington Avenue	6,400	B	2	5,000	A	2
I 11th Street	From SR-152 to Washington Avenue	7,100	B	2	9,400	D	2
G Street	From 7th Street to 8th Street	2,100	A	2	2,200	A	2
G Street	From SR-165 to Santa Rita Street	3,100	A	2	3,200	A	2
H Street	From 4th Street to 5th Street	8,200	C	2	18,700	B	4
H Street	From 2nd Street to 3rd Street	6,900	B	2	16,600	A	4
H Street	From 4th Street to 3rd Street	8,700	C	2	18,800	B	4
H Street	From 2nd Street to Nevada Avenue	8,500	C	2	16,400	A	4
I Street	From 6th Street to 5th Street	7,900	C	2	2,600	A	2
I Street	From SR-152 to L Street	9,500	D	2	8,300	C	2
I Street	From SR-152 to Hawthorne Drive	7,700	B	2	6,800	B	2

**Table 3.2-7: Roadway Level of Service**

Street Name	Location	<i>Build-out without Plan Improvements</i>			<i>Build-out with Plan Improvements</i>		
		Daily Volume	Level of Service	Number of Lanes	Daily Volume	Level of Service	Number of Lanes
Nantes Avenue	From Overland Avenue to Santa Barbara Street	3,400	A	2	1,800	A	2
Overland Avenue	From 2nd Street to 1st Street	7,500	A	2	7,200	A	2
Overland Avenue	From 2nd Street to 3 <sup>rd</sup> Street	6,900	A	2	6,900	A	2
Overland Avenue	From H Street to Santa Lucia Ave	10,000	B	2	8,000	A	2
Place Road	From B Street to San Luis Street	7,400	B	2	4,200	A	2
San Luis Street	From Ward Road to Warren Drive	2,400	A	2	2,600	A	2
Santa Barbara Drive	From SR-165 to Santa Venetia Street	2,500	A	2	2,800	A	2
2nd Street	From H Street to I Street	4,600	A	2	4,300	A	2
7th Street	From Willmott Road to B Street	6,200	B	2	3,200	A	2
7th Street	From F Street to E Street	7,700	C	2	5,700	A	2
7th Street	From H Street to G Street	10,000	B	2	8,500	A	2
7th Street	From SR-152 to K Street	4,200	A	2	2,600	A	2
7th Street	From SR-152 to Washington Avenue	4,900	A	2	3,500	A	2
6th Street	From SR-152 to K Street	6,900	B	2	5,100	A	2
Stonewood Drive	From Overland Avenue to Olivewood Drive	6,500	B	2	4,800	A	2
Stonewood Drive	From Overland Avenue to Rhoda Avenue	6,200	B	2	3,800	A	2
Ward Road	From SR-152 to Technology Drive	2,300	A	2	2,300	A	2
Willmott Road	From 2nd Street to 1st Street	4,000	A	2	4,000	A	2
Willmott Road	From 3rd Street to 2nd Street	5,400	A	2	4,600	A	2

Source: *Omni-Means, 2007.*

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

- C-I-11 Develop and manage the roadway system to obtain LOS D or better for two hour peak periods (a.m. and p.m.) on all major roadways and intersections in Los Banos. Exceptions to LOS D policy may be allowed by the City Council in areas, such as Downtown, where allowing a lower LOS would result in clear public benefits.
- C-I-12 Develop and manage residential streets (i.e., streets with direct driveway access to homes) to limit average daily vehicle traffic volumes to 2,500 or less and 85th percentile speeds to 25 miles per hour or less.
- C-I-15 Establish and implement additional programs to maintain adequate peak hour level of service at intersections and along roadway segments as circumstances warrant, including the following actions:
- Collect and analyze traffic volume data on a regular basis and monitor current intersection and roadway segment levels of service on a regular basis. Use this information to update and refine the City's travel forecasting model so that estimates of future conditions are more strongly based upon local travel behavior and trends.
  - Consider, on a case by case basis, how to shift travel demand away from the peak period, especially in those situations where peak traffic problems result from a few major generators (e.g. the Business Opportunity Area on the Westside).
  - Perform routine, ongoing evaluation of the efficiency of the urban street traffic control system, with emphasis on traffic signal timing, phasing and coordination to optimize traffic flow along arterial corridors. Use traffic control systems to balance arterial street utilization (e.g., timing and phasing for turn movements, peak period and off-peak signal timing plans).

*To assure acceptable traffic operating standards over time, the City Traffic Engineer shall monitor conditions on an ongoing basis and apply applicable remedial measures as needed.*

Policies listed under Impact 3.2-1 also help to reduce this impact and thus are incorporated here by reference.

Implementation of the proposed policies summarized above would reduce potential Impact 3.2-2 to a level that is less than significant.

*Impact*

**3.2-3 Implementation of the proposed General Plan would increase traffic affecting high intersection operations during a.m. and p.m. peak hours. (Less than Significant)**

As shown in Table 3.2-4, congestion at intersections is already evident at several locations in existing conditions. Intersections at SR-152/Miller Lane, and B Street/SR-165 are operating at LOS F while the intersection at SR-152/Place Road is operating at LOS D. Under full development of the proposed General Plan, congestion at these locations may worsen.

As long as roadway improvements highlighted under the proposed General Plan and the below mentioned policies are carried out, impacts of development will be reduced to a less than significant.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

**C-I-4 Provide for greater street connectivity by:**

- Incorporating in subdivision regulations requirements for a minimum number of access points to existing local or collector streets for each development (e.g. at least two access points for every 10 acres of development);
- Encouraging traffic circles and roundabouts over signals where feasible;
- Requiring the bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets; and
- Requiring new residential communities on undeveloped land planned for urban uses to provide stubs for future connections to the edge of the property line. Where stubs exist on adjacent properties, new streets within the development should connect to these stubs.

Policy C-I-15 listed under Impact 3.2-2 also helps to reduce this impact and thus is incorporated here by reference.

Implementation of the proposed policies summarized above would reduce potential Impact 3.2-3 to a level that is less than significant.

*Impact*

**3.2-4 Implementation of the proposed General Plan would result in greater demand for transit service. (Less than Significant)**

Given the expected increase in vehicle trip generation from 115,000 to 338,000 under full buildout conditions in year 2030, it is expected transit demand will also grow, especially since many of the General Plan policies promote the use of public transit. According to data provided by Merced County Association of Government's Regional Transportation Plan (Table 3.2-8), total ridership in

Los Banos for fiscal year 2005 was approximately 136,400. Assuming steady growth of ridership, nearly 600,000 people could use the bus system in year 2030.

**Table 3.2-8: Ridership Trends for Merced County Bus Service**

	2001-2002	2005-06	Percent increase over 5 years	Projected increase in 2030
Merced County	720,500	974,300	35	4,400,000
Los Banos <sup>1</sup>	100,900	136,400	35	600,000

<sup>1</sup>Ridership from Los Banos estimated based on a comparison of City population to County population

Source: MCAG Regional Transportation Plan, 2007; Dyett & Bhatia, 2007

Given the projected increase in transit demand, more routes will need to be added to the current five that traverse Los Banos. Existing routes will need more frequent service or larger capacity busses. While the City of Los Banos ultimately does not control service providers' decisions regarding route planning or service frequency, the proposed Plan contains policies which ensure that the City will work closely with the County on transit planning to reduce any growth impacts to public transit to a less than significant level.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

C-I-5 Develop a multi-modal transit system map integrating bicycle, public transportation, pedestrian and vehicle linkages within the city to ensure circulation gaps are being met.

C-I-18 Work with Merced County Transit to situate transit stops and hubs at locations that are convenient for transit users, and promote increased transit ridership through the provision of shelters, benches, bike racks on buses, and other amenities.

*The City shall work with Merced County Transit to identify existing underserved neighborhoods and new areas under development.*

C-I-19 Ensure that new development is designed to make transit a viable choice for residents. Design options include:

- Have neighborhood focal points with sheltered bus stops;
- Locate medium-high density development whenever feasible near streets served by transit; and
- Link neighborhoods to bus stops by continuous sidewalks or pedestrian paths.

C-I-20 Coordinate with Caltrans and Merced County Transit to identify and implement Park and Ride sites with convenient access to public transit.

*Park and Ride areas should include secure parking for cars, motorcycles and bicycles and have minimal impact on neighborhoods.*

Implementation of the proposed policies summarized above would reduce potential Impact 3.2-4 to a level that is less than significant.

***Impact***

***3.2-5 Implementation of the proposed General Plan will result in improved pedestrian and bicycle circulation. (Beneficial)***

One of the main goals of the proposed General Plan is to encourage pedestrian circulation and bicycle use in the City. The proposed bicycle plan (See **Figure 3.2-3**) includes several path extensions and upgrades serving the existing built areas of the City as well as areas where future development is expected to occur. Key upgrades include the extension of a Class II route along Mercey Springs Road and Overland Avenue, and new routes on Pacheco Boulevard and Henry Miller Road. Existing Class I routes along the Central California Irrigation District Canal are also to be extended. In all, a total of 78.5 miles of bikelanes and trailways are proposed, up from the existing 8.7 miles. When fully implemented, residents will be able to cycle from their place of residence to work areas, neighborhood centers and schools within an interconnected system.

In addition to the planned Bicycle Network, the proposed Plan contains policies that strongly support walking for recreating and commuting. Plan policies ensure compact development, locate complimentary land uses close to each other and promote a mixed land use pattern in areas such as downtown and neighborhood centers. Together, these policies encourage bicycling and walking and creates a beneficial impact on pedestrian and bicycle circulation.

***Proposed General Plan Policies that Support Bicycle and Pedestrian Circulation***

- C-I-4 Provide for greater street connectivity by:
  - Requiring the bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets.
  
- C-I-21 Support implementation of the Los Banos Commuter Bikeway Program in coordination with the County's Regional Bikeway Plan.
  
- C-I-22 Establish bicycle lanes, bike routes and bike paths consistent with the General Plan.
  
- C-I-23 Increase bicycle safety by:
  - Sweeping and repairing bicycle lanes and paths on a regular basis;
  - Ensuring that bikeways are delineated and signed in accordance with Caltrans' standards, and lighting is provided, where needed;
  - Providing bicycle paths or lanes on bridges and overpasses;

- Ensuring that all new and improved streets have bicycle-safe drainage grates and are free of hazards such as uneven pavement and gravel;
  - Provide adequate signage and markings warning vehicular traffic of the existence of merging or crossing bicycle traffic where bike routes and paths make transitions into or across roadways; and
  - Work with the Los Banos Unified School District to promote classes on bicycle safety in the schools.
- C-I-24 Give bikes equal treatment in terms of provisions for safety and comfort on arterials and collectors as motor vehicles.
- C-I-25 Amend the Zoning Ordinance to require bicycle facilities at large commercial and industrial employer sites.
- C-I-26 Develop a series of continuous walkways within new office parks, commercial districts, and residential neighborhoods so they connect to one another.
- C-I-27 Provide for pedestrian-friendly zones in conjunction with the development, redevelopment, and design of mixed-use neighborhood core areas, the Downtown area, schools, parks, and other high use areas by:
- Providing intersection "bump outs" to reduce walking distances across streets in the Downtown and other high use areas;
  - Providing pedestrian facilities at all signalized intersections;
  - Providing landscaping that encourages pedestrian use; and
  - Constructing adequately lit and safe access through subdivision sites.
- C-I-28 Establish specific standards for pedestrian facilities to be accessible to physically disabled persons, and ensure that roadway improvement projects address mobility or accessibility for bicyclists or pedestrians.

*The City will seek to incorporate Federal and State requirements of the Americans with Disabilities Act (ADA) into circulation access and pedestrian facilities (such as provisions for ramp improvements, curb cuts, audible traffic signals, etc.)*

### **Impact**

#### **3.2-6 Implementation of the proposed General Plan will increase the demand for general aviation services and facilities. (Less than Significant)**

The Los Banos Municipal Airport is located west of Downtown in the vicinity of several existing and planned neighborhoods. Continued airport use and increasing activity could adversely affect adjacent land use. Noise exposure will no doubt increase over existing levels, an issue evaluated in the Noise

Impacts section of this EIR. The frequency of take-offs and landings will rise with increased air freight operations and private jet use. The impact on existing and proposed residential land close to the airport will be significant if no remedial action is taken.

In light of these potential impacts, the City is considering whether to relocate the airport to a location south of the Planning Area. When this occurs, the flight paths will likely by pass the city.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

- C-I-36 Initiate development feasibility and site planning for a new Airport location outside the urban area, with access to the State highway system, at a location that will minimize environmental impacts.
- C-I-37 Work with the County to ensure future development around the new Airport is compatible with Airport operations.

Implementation of the proposed policies summarized above would reduce potential Impact 3.2-6 to a level that is less than significant.

*Impact*

***3.2-7 Implementation of the proposed General Plan will consolidate truck operations onto specified truck routes and increase volumes on these routes. (Less than Significant)***

Driven by regional growth, truck volumes passing through Los Banos has been increasing over the years. Implementation of the General Plan will introduce additional population and jobs and continue to increase truck traffic. To reduce potential impact on city residents, particularly noise and smog generated by truck traffic, the proposed General Plan includes policies to consolidate truck movement onto specified truck routes. These routes are located on arterial streets and industrial areas away from residential streets. Additionally, the SR-152 Bypass is expected to reduce interregional truck traffic passing through the city center. Implementation of the following policies will reduce impact from trucks to a less than significant level.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

- C-I-39 Provide appropriate truck routes with direct access to Employment Park areas.

*Truck routes should avoid passing through residential areas. Where capital improvements are necessary to provide suitable truck routes, they will be incorporated into the Capital Improvement Program adopted by the City.*

C-I-40      Require the truck route street designs on “H” Street and others to match the estimated truck weight and include unloading and turning movement for safe and efficient goods delivery.

Implementation of the proposed policies summarized above would reduce potential Impact 3.2-7 to a level that is less than significant.

### **3.3 PARKS, OPEN SPACE AND RECREATION**

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This chapter presents the environmental setting and impact analysis for parks, open space and recreation facilities. The City’s existing and proposed park and open space setting, park standards and their impacts are discussed in relation to applicable State and Federal regulations. Additional information is contained in the *Los Banos General Plan Update Map Atlas (2005)* and the proposed General Plan.

#### **ENVIRONMENTAL SETTING**

##### **Physical Setting**

The majority of park acreage presently available in the City of Los Banos is contained in a few community-level parks and the Ag Sports Complex. Smaller neighborhood and pocket parks are dispersed throughout the City. Open space resources are composed primarily of agriculture land, grazing lands, wetlands, waterways, and creeks within and in proximity to the Planning Area boundary.

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

Currently, the Recreation Department of the City of Los Banos maintains a total of 35 neighborhood, community, and pocket parks—totaling approximately 159 acres of parkland. This Division also manages the operation and maintenance of various facilities, such as the Miller and Lux Center and the Recreation Hall, and provides maintenance services to other departments as needed. Existing parks range in size from the 50-acre Ag Sports Complex to numerous playlots and pocket parks at small fractions of an acre each. Examples of facilities provided include a skate park, volleyball courts, baseball, soccer and football fields, playgrounds, basketball courts, horseshoe pits, and a swimming pool. Currently there is a joint-use agreement between the school district and the City for facility use, however, public access is limited because supply is barely enough to meet the demand of existing school-related uses.

Significant existing open spaces within the Planning Area are composed primarily of various types of farmland to the north- and south-west. Park land around waterways such as the HG Fawcett Parkway also provides open space features in the heart of the city. It should be noted that the government land associated with the waste water treatment plant to the northeast is the only Planning Area land within the Grasslands Ecological Area (GEA). Outside the Planning Area boundary, several thousand acres of open space are preserved as part of the GEA and Pacific Flyway. The Grasslands Water District (GWD) manages these lands as habitat for migratory waterfowl and shorebirds. The GWD is described in more detail under regulatory setting in this chapter.

The City’s current parks and recreation facilities offer a diverse range of services to meet the needs of the community. Table 3.3-1 summarizes existing parkland by park type. Figure 3.3-1 illustrates existing parks and recreation facilities.

**Table 3.3-1: Existing Public Parks and Recreation Facilities – Detailed Acreages**

Name	Acreage	Name	Acreage
<b>Community Parks</b>		<b>Pocket Parks</b>	
Ag Sports Complex <sup>1</sup>	49.9	Airport Park	0.3
College Green Park	5.0	Catholic Park	0.4
Colorado Ball Park	9.6	Citrus Terrace I Park	0.3
Pacheco Park	12.5	City Park	0.8
Fairgrounds Park	6.1	Daffodil Park	0.6
HG Fawcett Canal Side Park	13.0	Davis Park	0.4
Ranchwood Park	4.5	Dos Amigos Park	0.7
Talbott Park	10.7	Flag Pole Park	0.6
Rail Trail Park	7.8	Gardens Park	0.8
<b>Neighborhood Parks</b>		Highway 33 Park (H Street Park)	0.9
Big Page Park	0.9	JoLin Park Strips	0.2
Citrus Terrace 2 Park	0.9	Little Page Park	0.2
Cresthills Park	3.6	Presidential (Estates) Park	0.5
JoLin Park	3.0	Park Gardens Subdivision Park	0.1
Meadowlands Park	4.2	Woodduck Park	0.6
Meadowlands Basin Park	3.1		
Orchard Terrace Park	1.5		
Seventh Street Ball Park	5.8		
Skylark Park	1.3		
Vineyards Basin Park	6.1		
Wolfsen Park	2.4		
		<b>TOTAL</b>	<b>159</b>

<sup>1</sup> Includes acres of city-owned land designated for this use but currently undeveloped.

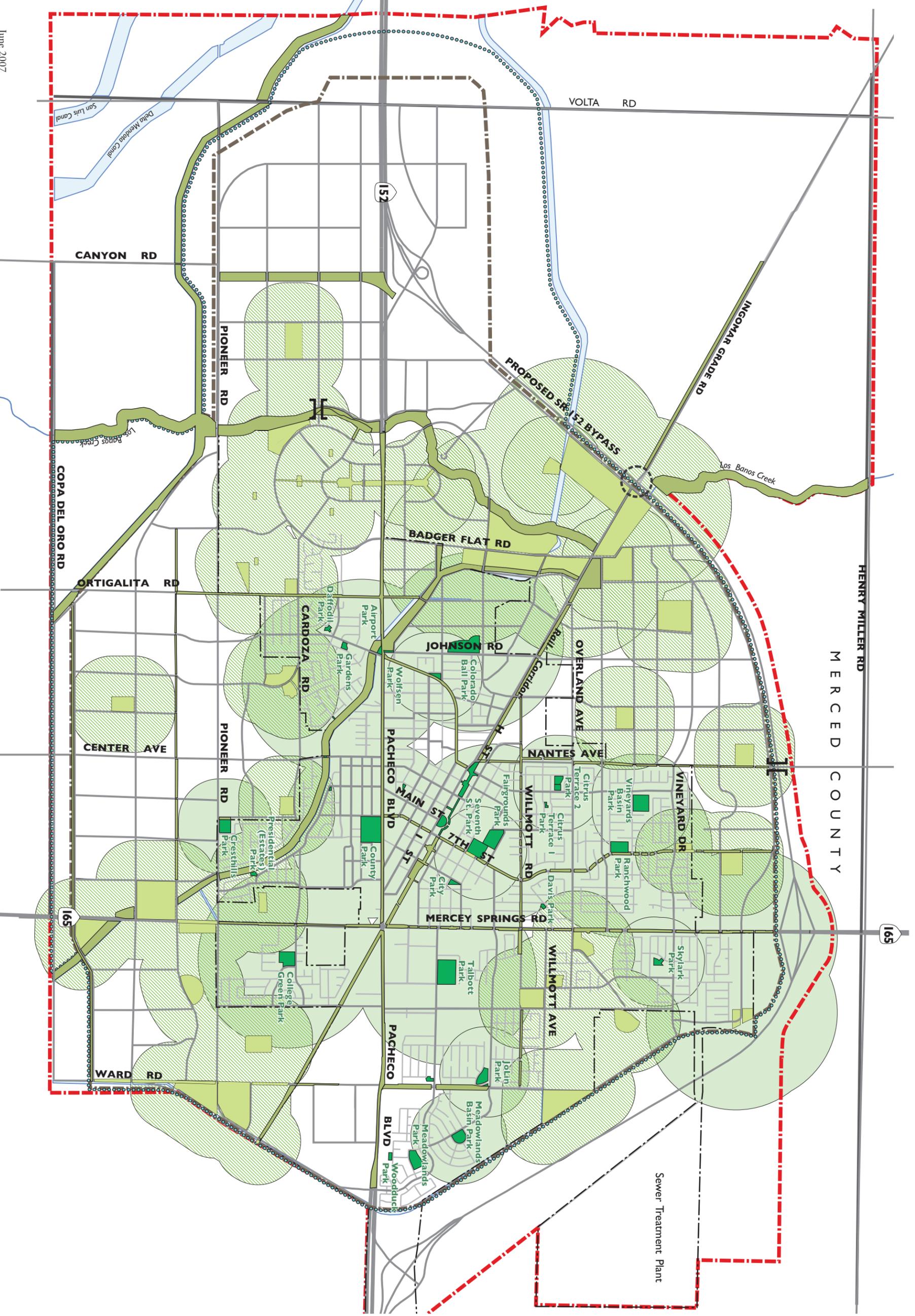
Source: City of Los Banos, 2006.

**Existing Service Standards**

The existing City standard for parkland dedication established in the subdivision ordinance is 3.6 acres of parkland per thousand residents. Currently, Los Banos’s 159 acres of community, neighborhood, and pocket parks serve a population of approximately 34,200 residents for an existing ratio of about 5 acres per thousand residents. Table 3.3-2 shows the existing acreage by park type and the acres per thousand residents as of 2006.

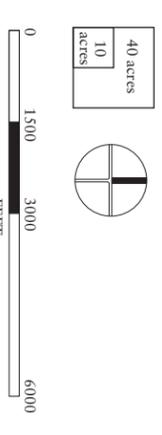
Figure 3.3-1: Existing Parks and Recreation Facilities

**Figure 3.3-1  
Parks and Recreation  
Facilities**



- Existing Parks
  - Proposed Parks
  - Proposed Trails
  - Grade/Creek Crossing
  - Potential New Interchange
  - Planning Boundary
  - Sphere of Influence
  - Urban Growth Boundary
  - City Limits
- 
- Existing Parks  
Community Parks  
(1/4 mile radius)
  - Neighborhood Parks  
(1/2 mile radius)
  - Proposed Parks  
Community Parks  
(1/4 mile radius)
  - Neighborhood Parks  
(1/2 mile radius)

Sources:  
City of Los Banos, 2006  
Dyett & Bhattacharya, 2007



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**Table 3.3-2: Summary of Existing Recreation Facilities**

<i>Park Type</i>	<i>Acreage</i>	<i>Current Ratio</i>
Community Park	119	4
Neighborhood Park	33	1
Pocket Park	7	0
<b>TOTAL</b>	<b>159</b>	<b>5</b>

Source: City of Los Banos, 2006.

As discussed in Chapter 2: Project Description, the buildout of the proposed General Plan Diagram would result in approximately 56,000 new residents in Los Banos, with a total population of about 90,000. Using the existing condition of 5 acres per thousand residents as the standard, this new population would require an additional 278 acres of parkland in order to maintain the current parkland ratio. This information is summarized in Table 3.3-3.

**Table 3.3-3: Parkland Demand Summary at Plan Buildout**

Population at Buildout	90,000
Additional Parkland Acreage Needed at Buildout	278

Source: Dyett & Bhatia, 2007.

### **Proposed Parks**

Under the General Plan Land Use Diagram, a total of 627 acres of parkland is incorporated into the Plan. Most of these are in the form of larger community parks which do not fall into any specific neighborhoods but serve the needs of an entire population. These parkland areas are to be acquired by the City through an increase in the subdivision parkland dedication requirements, private and public funding sources or through development contributions. In all, the General Plan aims to achieve a parkland goal of 7 acres per thousand residents. The proposed system of parks and recreational facilities is geographically distributed throughout the City.

### **REGULATORY SETTING**

The 1975 Quimby Act (California Government Code Section 66477) authorized cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The Act states that the dedication requirement of parkland can be a minimum of 3 acres per thousand residents, up to 5 acres per thousand residents if the existing ratio is greater than the minimum standard. Revenues generated through in lieu fees collected through the Quimby Act cannot be used for the operation and maintenance of park facilities. In 1982, the act was substantially amended. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through traffic studies required by the California Environmental Quality Act (CEQA).

The Parks and Facilities Division maintains and operates the City's parks, open space, and landscape areas. The Recreation and Parks Commission was established to serve in an advisory capacity to the Public Services Director and the City Council on all matters pertaining to public recreation, including the management, conduct, and care of the parks and playgrounds in the City.

The Grasslands Water District (GWD) manages a large area of land surrounding the City, particularly to the north, south, and northeast. Within the Planning Area, approximately 1,015 acres (about 5 percent of the total Planning Area) lies within the boundary of the district. These lands are located around the City's wastewater treatment plant. The GWD is a California Water District that provides water to wildlife refuges, duck clubs, and agricultural lands in Merced County. It is charged under state law and federal contract with the responsibility to manage water resources and carry out conservation programs in order to preserve and protect water resource, primarily as a habitat for water fowl and other local wildlife species. Land within the districts, in combination with other state and federal refuges and privately held wetlands, comprise approximately 230,000 acre of Grasslands Ecological Area (GEA) designated by the United States Fish and Wildlife Service. The GWD has a long standing interest in land use in Los Banos as the City lies just adjacent to the district.

In addition to the GWD, the Central California Irrigation District (CCID) owns and manages land surrounding the CCID irrigation canal which cuts through the city in a southeast to northeast direction. The agency is one of the many central valley water districts and is responsible for delivering irrigation water to Los Banos and the vicinity.

## **IMPACT ANALYSIS**

### **Significance Criteria**

Impacts of the proposed General Plan would be significant if buildout resulted in:

- A shortage of parks facilities for residents due to growth, by not meeting the General Plan goal of 7 acres per thousand new residents; or
- Increase in the use of existing parks such that substantial physical deterioration of the facility would occur or be accelerated.

### **Methodology and Assumptions**

This analysis considered the proposed General Plan policies and applicable regulations, as well as existing parks and recreation facilities within the city. Acres of park needed for the park standard were calculated by dividing the projected new population at buildout (90,000) by 1,000 and then multiplying by 5 acres. The ratio for parkland at buildout with no new parks was calculated by dividing total existing parkland (159) by the total buildout population divided by 1,000. It is assumed that a large decrease in the parkland ratio would increase park deterioration.

### **Summary of Impacts**

Implementation of the proposed Los Banos General Plan would result in a substantial increase in parkland and demand for park and recreation facilities due to the growth of population from 34,220 to 90,000 residents. While new parks can be added for residents living in new development areas, those living in the city center will have to content with existing parks. The deterioration of park facilities from increased use is a concern. Another concern is the possibility that park development will meet the requirement of 5 acres per thousand residents but still fall short of the desired goal of 7 acres per thousand residents. Nonetheless, the increase of parkland provision above 5 acres per thousand residents by itself represents an increase in service standards for Los Banos, thus making this a less than significant impact.

Another development impact relates to environmental concerns arising from the creation of new trails along waterways or canals. The proposed General Plan includes policies to reduce this impact to a less than significant level.

**Impacts and Mitigation Measures**

*Impact*

**3.3-1 Buildout of the proposed General Plan will increase the ratio of parkland from the existing 5 acres per thousand residents but still fall short of the City’s goal of 7 acres per thousand residents. (Less than Significant)**

The proposed General Plan contains a parks policy that calls for parks acquisition and development to reach a goal of 7 acres of parkland per thousand residents. Currently, with a population of 34,220, Los Banos has an average of 5 acres per thousand residents. The City’s policy is to maintain this ratio of 5 acres per thousand residents through neighborhood and community parks provided by new development through land dedication and payment of fees in lieu of land, and achieve the higher ratio of 7 acres per thousand residents by additional parkland paid for through other funding sources such as public grants, park land bonds or private contributions. (See Table 3.3-4)

Although funding shortages may prevent the City from reaching its goal of 7 acres per thousand residents, implementation of the proposed General Plan policies will ensure that the future parkland will *exceed* existing parkland ratios. This will lead to better accessibility, less physical deterioration, and fewer use conflicts for all residents. Therefore, even though there may be a shortfall from the goal of 7 acres per thousand residents, the overall impact to the city is less than significant.

**Table 3.3-4: Proposed and New Parks in Los Banos**

	<i>Acres</i>
Existing Parks	159
Proposed Parks	512
Total Existing and Proposed Parks <sup>1</sup>	627
Park Need (based on 5 /1,000 residents)	278
Additional Acreage Provided by the General Plan	178
Park Ratio Provided by the General Plan	7

<sup>1</sup> Total does not include undeveloped section of existing Ag Sports Park that will be converted into future residential land.

Source: Dyett & Bhatia, 2007.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

POSR-I-2 Maintain and update a 10-year City's Park and Recreation Master Plan in consultation with neighborhood leaders. Community design standards for new park and recreation facilities should include:

- Standards for bicycle/pedestrian and handicapped access;
- Minimum safety standards in accordance with State guidelines; and
- Allowable native and drought resistant plant species.

*A comprehensive Master Plan will ensure that planned park, amenities and recreational programs will serve the needs of all residents regardless of age, income or ability, including the physically disabled, and that recreational equipment meet passive (picnicking, walking, etc) and active needs (sports and team activities) of the population.*

POSR-I-3 Amend the Subdivision Ordinance to require developers make contributions to the City's Park System, at a minimum ratio of 5 acres of park land per thousand residents.<sup>5</sup>

*This obligation can be satisfied by dedication of land and development of recreation facilities meeting the standards of the Master Plan for Parks and Recreation. Payment of "in lieu" fees may be allowed for small projects located in the developed portions of the City where additional parkland can not be feasibly provided.*

POSR-I-4 Acquire and develop parks and open spaces, consistent with the ability of the City to finance acquisition and their operation, to reach a functional goal of 7 acres per thousand residents.

*In addition to new parkland dedication by developers, the City will continue to acquire or re-develop parklands as needed, subject to availability of funding. It is the City's intent to meet this criterion with functional acreage only. Private recreation facilities (such as golf courses), pocket parks and trails are not included in this parkland totals. The City maintains flexibility in the location and design of parks.*

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<sup>5</sup> The current requirement in the subdivision ordinance is 3.7 acres per thousand residents. State law allows the parkland dedication requirement to be as high as 5 acres per thousand residents provided the proposed ratio does not exceed the City's existing ratio. If pocket parks are included, and they do represent parkland, the City's existing parkland per capita ratio is 5, thereby justifying the proposed increase. The overall goal for the new General Plan is 7 acres per thousand residents; the additional parkland would have to be secured by means other than the 5 acres allowed by State law.

POSR-I-5 Establish the following minimum criteria as a guide to improving the park system:

- Neighborhood Parks will have a minimum size of 2 acres and a general service area of one-half mile radius
- Community Parks will have a minimum size of 9 acres and a general service area of two mile radius.

*Community Parks will be situated at a location where either other types of parks are not feasible, or located where it could serve a community-wide need. They shall be provided with adequate parking and whenever possible, developed in conjunction with non-conflicting uses such as storm drainage basins, water recharge, water production and noise attenuation buffers.*

Implementation of the proposed policies summarized above would reduce potential Impact 3.3-1 to a level that is less than significant.

### ***Impact***

***3.3-2 Buildout of the General Plan will result in the increase in use of existing parks such that substantial physical deterioration of the facility would occur or be accelerated. (Less than Significant)***

The proposed General Plan will provide for infill development on vacant and underutilized sites in the city center, where parkland provision is less than the plan goal of 7 acres per thousand residents. This may result in the increase in use of existing park facilities. However, proposed Plan policies requiring developer dedications at a ratio of 5 acres per thousand residents, and in addition, new parkland through city funds or other means to reach a goal of 7 acres per thousand residents will result in an overall net increase in parkland over current levels. While new parkland is intended to serve areas of increased growth, existing residents may commute to utilize new parkland facilities outside of their community – thereby lessening the use of an existing facility. In consideration of the additional facilities that will be provided by the General Plan, impacts to existing recreational facilities are less than significant. Furthermore, the Plan has policies on facilities maintenance to ensure any physical deterioration of existing facilities is kept to a minimum.

### ***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

POSR-I-10 Develop new parks with high quality park facilities which are durable and require low maintenance, wherever possible. Retrofit existing parks, as appropriate, to reduce maintenance cost and water use, and to improve safety and aesthetics.

POSR-I-11 Involve citizens, especially youths, in maintaining park areas through participation in park watches, citizen based graffiti watch and cleanup and repair.

Implementation of the proposed policies summarized above would reduce potential Impact 3.3-2 to a level that is less than significant.

*Impact*

**3.3-3 Expansion and construction of new trails along waterways or canals as shown in the proposed General Plan Diagram will negatively impact the environment. (Less than Significant)**

The proposed General Plan calls for the construction of additional bicycle trails and linear parks in the City. The goal is to connect neighborhood and community parks together and help expand opportunities for alternative transportation, allowing bicyclists and pedestrians to move from one area of the community to another in a green and relaxing environment. Specifically, the Plan proposed an expansion of the existing HQ Fawcett Parkway along the CCID Channel, continued expansion of the Rail Corridor Park along the old railway line, and the creation of a new Los Banos Creek Trail along Los Banos Creek. It is worthy to note that two of the three trails are pre-existing and skirt along man-made structures, only the Los Banos Creek Trail lie adjacent to a naturally occurring creek and riparian corridor. At full completion, residents will be able to enjoy 43 miles of trails and linear parks, up from 2 miles at current conditions.

The creation of trails will help to preserve these areas as open space and protect them from encroaching development. To keep any impacts to plant life, watershed and biological resources to a minimum; the plan prohibits any alteration of existing waterways or canals. Plan policies require assessments of resources prior to carrying out any development within 300 feet of creeks, sensitive habitat areas, or areas of potential sensitive species. Specifically for the proposed Los Banos Creek Trail, the plan calls for a specific plan before allowing development. Implementation of the Plan policies will ensure environmental impacts are kept to a less than significant level.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

POSR-I-12 Link parks together by a system of trails, bike paths, and/or open space.

*The trails will provide a landscaped, signed environment and safe connections to destination points, using crosswalks, planting buffers, and signal pre-emption as necessary.*

POSR-I-13 Continue to develop existing trails and linkages and create new trails where feasible:

- Rail Corridor Park - Continue to develop the Rail Corridor Park and implement developments in the Rail Corridor Master Plan;
- HG Fawcett Parkway - Continue to improve and expand the HG Fawcett Parkway with activity inducing uses, more lighting, exercise equipment, park furniture, landscaping, and safety barricades along the water's edge;

- Los Banos Creek Trail - Prepare, adopt and implement a Los Banos Creek Parkway Plan.

POSR-I-19 Establish priorities for open space preservation and acquisition based on an evaluation of:

- Watersheds or significant water recharge areas;
- Lands suitable for recreation such as biking, photography or nature study.

POSR-I-23 Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive habitat areas, or areas of potential sensitive status species, and protection of sensitive habitat areas and “special status” species in the following order: 1) avoidance; 2) onsite mitigation, and 3) offsite mitigation.

*The term “special status” species includes species classified as rare and endangered. These priorities are consistent with the California Department of Fish and Game guidelines. When habitat preservation onsite is not feasible (i.e., preserved parcels would be too small to be of any value), then offsite mitigation should occur (Off-site mitigation is compensatory mitigation that is implemented a distance away from the impact site).*

Implementation of the proposed policies summarized above would reduce potential Impact 3.3-3 to a level that is less than significant.

### **Impact**

**3.3-4 Implementation of the proposed General Plan will increase the percentage of residents living within ½ square mile of a community park and ¼ square mile of neighborhood or pocket park. (Beneficial)**

The General Plan proposes parks, recreation facilities, and trails within walking distance of residential neighborhoods. Figure 3.3-1 shows local accessibility of homes within to all park sites by identifying ¼ mile radii from neighborhood and pocket parks, and ½ mile radii from community parks. Overall, 91 percent of all residential development is within walking distance of a park. This is an improvement from existing conditions, where only 85 percent of residential land is within walking distance. Also, the proposed trails system improves connectivity between parks, encouraging residents to walk and cycle from their homes. The increased connectivity is considered a beneficial impact. No mitigation is required.

### **Proposed General Plan Policies that Facilitate the Beneficial Impact**

POSR-I-1 Provide a range of park and recreational facilities to serve the needs of all residents.

*Aside from school-going kids and young adults, mothers with toddlers and elder residents frequently use the city’s parks for recreation or exercise. The City will ensure that its Community, Neighborhood and Pocket Parks serve the needs of all residents regardless of age, income or physical ability.*

POSR-I-8 Cooperate with the Los Banos Unified School District to promote joint development and use of school facilities after school hours.

*Joint development and use of school sites is especially important in developed areas where park standards have not yet been achieved. This approach will maximize opportunities for park and recreation facilities for Los Banos residents.*

Implementation of policy POS-I-5 above also helps to reduce this impact to a level that is less than significant.

### 3.4 PUBLIC FACILITIES AND UTILITIES

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This section presents the environmental setting and impact analysis for various public services and safety resources in Los Banos. The public services included in this EIR are schools, water supply, wastewater treatment, solid waste disposal, police, and fire and emergency response.

#### ENVIRONMENTAL SETTING

The following sections describe the existing services and facilities for schools, water, wastewater, solid waste, and public safety services and facilities within the City of Los Banos.

#### Schools

##### *Existing School Facilities*

The City of Los Banos contains elementary, middle school, and high school facilities to service local residents. Public schools (grade K-12) in the Planning Area are provided by the Los Banos Unified School District. While the District serves several communities around the region, most of the District's schools are located within the Planning Area.

As of late 2006, the Los Banos Unified School District operates 10 public schools in the Planning Area. All schools are located within a ¼-mile walking distance of either a park or an open space facility. The District also has one alternative high school, an adult education program, and operates the Learning Center, a latchkey child care program, and S.T.A.R., a before/after school program. In addition to public schools, there are three private schools in Los Banos. They are Cornerstone Christian Academy, Los Banos Adventist School, and Our Lady of Fatima Catholic School. The Merced Community College (Los Banos campus) located on SR-152 serves college students on the west side of the Planning Area.

##### *Enrollment and Capacity*

In 2006, the Los Banos Unified School District provided education to approximately 8,800 elementary, middle and high school students, according to the California Department of Education. These schools are running between 13 percent under capacity to 27 percent over capacity. The high schools still have some capacity for enrollment, but they are also close to reaching their optimum capacity. Currently a new high school, a new junior high, five new elementary schools are being planned.

Table 3.4-1 summarizes recent enrollment and capacity counts for these schools. The locations of existing and potential school facilities sites are illustrated in the Project Description, Figure 2.5-1 General Plan Diagram.

**Table 3.4-1: Existing Public Schools in Los Banos, 2006-2007**

<i>School</i>	<i>Location</i>	<i>Enrollment</i>	<i>Total Capacity<sup>1</sup></i>	<i>Percent Capacity</i>
<b>Elementary Schools (K-5)</b>				
Charleston	18463 W. Charleston Rd	357	366	97.5
Miano (R.M)	1129 B St	918	854	107.5
Los Banos	1260 Seventh St.	988	776	127.3
Henry Miller	545 West L St	866	786	110.2
Volta	24307 W. Ingomar Grade	277	317	87.4
Lorena Falasco	310 Overland Ave	828	659	125.6
<i>Total Elementary Schools</i>		4,234	3,758	112.7
<b>Middle Schools (6-8)</b>				
Westside Union Intermediate	659 K St	801	780	102.7
Los Banos Junior High	1750 San Luis St	1,423	1,433	99.3
<i>Total Middle Schools</i>		2,224	2,213	100.5
<b>High Schools (9-12)</b>				
Los Banos High	1966 11th St	2,221	2,288	97.1
San Luis High (Continuation)	125 7th St	157	160	98.1
<i>Total High Schools</i>		2,378	2,448	97.1
<b>Total</b>		<b>8,840</b>	<b>8,420</b>	<b>105.0</b>

Source: Enrollment data from California Department of Education, 2006-07; Capacity data from Los Banos School District, School Facility Master Plan, January, 2005.

## **Water**

### *Supply*

The Los Banos Public Works Department (PWD) is responsible for water provision in the City. Water supply facilities include 13 wells, 155 miles of water lines, and nearly 1,500 fire hydrants dispersed throughout the city. The system is connected to an elevated storage tank with a capacity of 100,000 gallons and surface mounted storage tank of 5 million gallons.<sup>6</sup> The wells have a total maximum production capacity of about 15,575 gallons per minute (gpm) and delivers good quality drinking water. To anticipate rising demand, the PWD has plans to construct a second 5-million gallon water storage tank and booster pump station in the northern part of the City by the year 2012.<sup>7</sup>

### *Demand*

Los Banos is located in the San Joaquin River Hydrologic Region and extracts ground water from the Delta-Mendota Sub-basin to meet all of the city's water supply needs. The amount of groundwater pumped from city wells have been increasing steadily over the years. Table 3.4-2 shows pumpage records for 2004 and 2005, and an estimate for 2030 based on the assumption that the per-capita use will remain constant during the planning period. In addition to regular household and business water use, fire water pressure must also be considered when planning capacity increases for new

<sup>6</sup> City of Los Banos 2005 Urban Water Management Plan, page 2-2.

<sup>7</sup> Email update with Dwayne Chisam, Los Banos Public Works Director, March 28, 2007.

development. Standard minimum water flow for residential development is considered to be 2000 GPM, while for commercial and industrial development it is considered to be 3500 GPM. The 2005 Urban Water Management Plan estimates that the supply is sufficient to meet City needs through 2025. The PWD also believes the water supply is sufficient for needs in 2030 as the Delta-Mendota Sub-basin is connected to one of the deepest water basins in California.<sup>8</sup>

While quantity is not expected to be a problem, it will be increasingly difficult to find good quality potable water as annual pumpage rises beyond 8,000 acre feet per year (AFY). This mean that pumped water must be filtered or the City must find alternative sources of water to supplement ground water. The 2000 Water Master Plan recommended that treated surface water be used in conjunction with ground water. Whether this will be put to practice will depend on future conditions, especially the cost of water procurement. Regardless of the outcome, the City plans to continue its cooperation with Central California Irrigation District and Department of Water Resources to monitor water levels in the Delta-Mendota Sub-basin and explore other means to supplement groundwater.

**Table 3.4-2: Current and Projected Water Demand**

	2004	2005	2030 (Projected)
Population	30,626	32,380	90,520 <sup>1</sup>
Water Demand (AFY) <sup>2</sup>	7,332	7,598	20,820 <sup>3</sup>
Water Demand (MGD)	6.54	6.78	18.57

<sup>1</sup> Population at year 2030 is based on full buildout of the General Plan. <sup>2</sup> AFY (Acre feet per year) <sup>3</sup> Water estimate for 2030 based on per capita ratio of 0.23 AFY, from 2005 Urban Water Management Plan estimate for 2025.

Source: City of Los Banos 2005 Urban Water Management Plan, Dyett & Bhatia, 2007.

### Wastewater Treatment System

Wastewater is collected throughout the city via a 126-mile network of sanitary sewer collection pipelines ranging from 6 to 30 inches in diameter. With the aid of 13 sewer lift stations, the influent is gravity fed into a Wastewater Treatment Plant (WWTP) located in the northeastern portion of the city. The WWTP consists of a headwork, four facultative ponds, three storage ponds, a recirculation system with associated pumping, and disposal fields. All wastewater generated within the city, including wastewater from the city’s food processing industries, is treated at the WWTP. Effluent is pumped to storage ponds and disposed of by irrigation on City owned agriculture land. Demand for wastewater treatment from 2003 to 2005 is shown in Table 3.4-3. In 2004, the plant treated a total of 1,261 million gallons of wastewater, an average of 3.4 million gallons per day (mgd). In 2005, this rose to 3.8 mgd. Roughly three quarters of this effluent came from residential and commercial sources, with the remaining from industrial sources.

<sup>8</sup> The Delta-Mendota Subbasin has a capacity of 51,000,000 AF to a depth of <1000 feet. For details refer to “San Joaquin Valley Ground Water Basin” California Groundwater Bulletin 118, Jan 2006 by Department of Water Resources.

**Table 3.4-3: Average Daily Flow from 2003 to 2005 (Alternate Months)**

<i>Month-Year</i>	<i>WWTP Influent Average Daily Flow (mgd)</i>	<i>Industrial Average Daily Flow (mgd)</i>	<i>Residential and Commercial Average Daily Flow (mgd)</i>
Jan-03	3.17	0.81	2.36
Mar-03	2.90	0.75	2.15
May-03	3.08	0.84	2.24
Jul-03	3.35	0.78	2.57
Sep-03	3.70	0.57	3.13
Nov-03	3.15	0.58	2.57
Jan-04	3.19	0.58	2.61
Mar-04	3.33	0.74	2.59
May-04	3.51	0.81	2.70
Jul-04	3.67	0.80	2.87
Sep-04	3.43	0.65	2.78
Nov-04	3.42	0.57	2.85
Jan-05	3.51	0.65	2.86
Mar-05	3.22	0.69	2.53
May-05	3.59	0.71	2.88
Jul-05	3.58	0.73	2.85
Sep-05	3.55	0.71	2.84
Nov-05	3.47	0.71	2.76

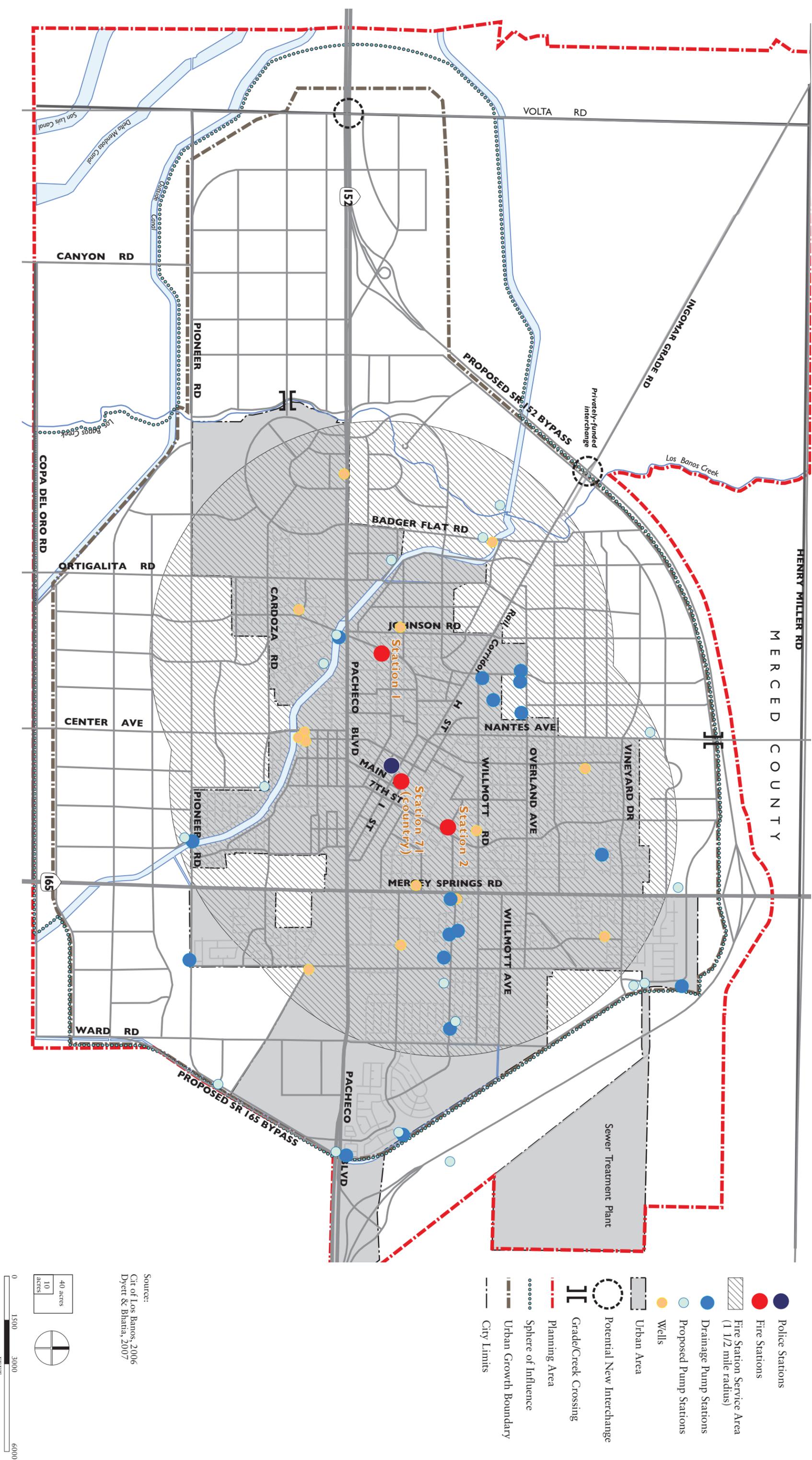
Source: Eco:Logic Engineering, 2007.

Table 3.4-4 illustrates an estimate for wastewater service demand in 2030. Currently, the City is in the design process to expand the treatment and disposal capacity to 4.9 mgd by adding mechanical aerators to the four treatment ponds. Additionally, plans are underway to construct a new headworks that will be sized to handle 14.0 mgd peak hour flow (equivalent to 6.0 mgd average flow), with the ability to mirror a future facility, or upsize equipment to double its capacity. This increased capacity will be able to provide six to seven years of wastewater capacity if the city were to grow at 800 homes per year, or 12 to 13 years of capacity at 400 homes per year. The project is scheduled to bid in late 2007 and has an expected construction duration of 18 months.

Figure 3.4-1 depicts public facilities including water, wastewater, police and fire.

Figure 3.4-1: Public Facilities

**Figure 3.4-1**  
**Public Facilities and Services**



0 1500 3000 6000  
 FEET

40 acres  
 10 acres

Source:  
 Cit of Los Banos, 2006  
 Dyett & Bharia, 2007

Back

**Table 3.4-4: Current and Projected Wastewater Treatment Needs**

	2004	2005	2030 (Projected)
Population	30,626	32,380	90,380 <sup>1</sup>
Wastewater Treatment (AFY)	3,857	4,234	12,332
Wastewater Treatment (MGD) <sup>3</sup>	3.44	3.78	11.00 <sup>2</sup>

<sup>1</sup> Population at year 2030 based on full buildout of the General Plan.

<sup>2</sup> Wastewater estimate for 2030 from Wastewater Strategic Plan.

<sup>3</sup> One AFY (acre feet per year) = 8.92x10<sup>-4</sup> MGD (million-gallons per day)

Source: City of Los Banos 2005 Urban Water Management Plan; City of Los Banos 2007 Wastewater Strategic Plan; Dyett & Bhatia, 2007.

However, even at 4.9 mgd, this expanded facility will fall short of the estimated 15.3 mgd expected under full buildout of the General Plan in 2030. A secondary treatment will be required to address future growth issues. The Wastewater Strategic Plan Report 2007 recommends the procurement of 800 acres of near by agriculture lands for future use. The report states that the combination of current city lands and the 800 acres of additional farmland would provide the City with enough storage and disposal capacity for approximately 11,000 additional homes.

Additionally, the Wastewater Strategic Plan Report recommends that any new plant must be able to treat water to a higher quality to ensure that their impact on local groundwater is kept to a minimum. Fiscal planning around a new membrane bioreactor (MBR) facility is recommended. A MBR system is a high tech water filtration system that combines activated sludge treatment with a membrane liquid-solid separation process. The membrane component utilizes low pressure microfiltration or ultra filtration membranes and eliminates the need for tertiary filtration. A new MBR facility with a capacity of 1.0 mgd and accommodations for future growth is expected to cost \$43 million in 2007 dollars. To diversify effluent disposal, one option is to create a separate pre-treatment facility for Los Banos Foods, which currently represents almost 40 percent of the total organic load entering the WWTP. At this point, the City has not decided on any actions beyond the near-term expansion of the existing WWTP to 4.9 mgd pending the outcome of various studies.

### *Wastewater Disposal*

Treated water at the City’s WWTP is currently ground discharged to approximately 600 acres of pastureland. The planned expansion of the WWTP includes the development of additional existing disposal area and the purchase of another 108 acres to bring the total disposal area to 720 acres. This reuse reduces the demand on fresh water supplies available to the area and provides additional groundwater recharge. However, due to lack of treatment and recycling facilities, the water is not currently used for agriculture, industrial, landscape or park irrigation.

### **Solid Waste**

Solid waste disposal throughout Los Banos is managed by Merced County Association of Governments. Landfill operations are operated as an enterprise function by Merced County. The City contracts with Allied Waste, Inc. for solid waste collection services. The majority of the City’s solid waste is taken to Billy Wright Landfill, a Class III facility with a lifespan until 2010, located on the west side of the county. The landfill has a capacity of 3.65 million cubic yards and is nearing full

capacity. Additional waste is taken to Highway 59 Landfill, a Class III facility with a lifespan until 2035, located on the east side of the county. The county is currently studying the future needs of solid waste services including expansion of the Billy Wright Landfill versus a transfer station or closing the Billy Wright facility and relocating all waste services to the Highway 59 Landfill. Preliminary conclusions from the County suggest that within the EIR for that project, there are sufficient options for expansion or relocation of services to meet the demand created by future growth in Los Banos.

**Table 3.4-5: Merced County Solid Waste Diversion Rates, 1997 - 2005**

Year	Diversion Rate (Percent of waste recycled)
1997	47
1998	43
1999	48
2000	49
2001	50
2002	48
2003	45
2004	42
2005 <sup>1</sup>	39

<sup>1</sup> Diversion rates calculated with preliminary data. Preliminary data is subject to change during the Board review process or when a jurisdiction submits updated information.

Source: Integrated Waste Management Board, Waste Stream Information Profiles <http://www.ciwmb.ca.gov/Profiles/>, 2006.

Table 3.4-5 illustrates solid waste diversion rates from 1997-2005 for Merced County. Since 2000, State law has requires that cities and counties divert at least 50 percent of all solid waste produced within their jurisdiction through recycling or other means. According to the Consolidated Waste Management Authority, the diversion rate for Merced County was 39 percent in 2005.

**Police, Fire and Emergency Preparedness**

The City of Los Banos Police and Fire Departments provide police, fire and life-safety services within the city. The Police and Fire Departments also coordinate with other public agencies on emergency preparedness. Additional police and fire protection services within unincorporated areas are provided by the County of Merced Police and Fire Departments.

*Fire Protection*

The Los Banos Fire Department currently provides fire protection and suppression and life safety services for the city. The Department responds to structural and wildland fires, emergency medical service, and hazardous/toxic material spills in the Planning Area. The Department operates two fire stations, Station 1 and Station 2, within City Limits. Fire dispatch is handled through the Los Banos Police Department. The Los Banos Fire Department is currently comprises a total of 19 full-time staff members and 32 certified volunteers with the majority of the staffing concentrated at Station 1. Station 2 has only one fire fighter and one engineer on duty at any given time. A minimum of five personnel are assigned to shifts across a 24-hour period. The City currently exceeds its desired ratio of 1 fire fighter per thousand residents with its current ratio of 1.45 fire fighters (including volunteers) per thousand residents. Table 3.4-6 illustrates fire fighting equipment and Station 1 and 2.

**Table 3.4-6 Fire Station Staffing and Facilities**

	<i>Location</i>	<i>Equipment</i>
Station 1	333 7 <sup>th</sup> St	One ladder truck, three engines, one medium rescue, one light rescue, one air unit
Station 2	1150 West I St	Two engines

Source: Los Banos Fire Department, 2006.

*Fire Response Standard*

Currently, the Department has an Insurance Service Office’s (ISO) rating of 3, on a scale of 1 to 10 with 1 being the highest. City policy establishes a 5 to 6 minute response standard for fire service within a 1 ½ mile radius. As the city develops outside the current City Limits, the Fire Department anticipates that stations, equipment, and personnel will need to be added in order to maintain the current ISO rating and response times. Growth to the west of the Planning Area will necessitate construction of additional fire stations in the area. In addition, the water supply distribution system will need to be extended.<sup>9</sup> The passage of the Public Safety Measure (Measure P) has allowed the Fire Department to hire six new fire fighters in the 2006-2007 fiscal year. In the near term, the Fire Department plans to continue to replace older equipment and apparatus, and plan for Station 3 as budget allows.

*Police Services*

Law enforcement services in Los Banos are provided by the City of Los Banos Police Department. Additionally, the California Highway Patrol and the Merced County Sheriff have cooperative agreements with the Los Banos Police Department and provide law enforcement services in the Planning Area.

As of 2006, the Department has a total of 46 sworn officers and 31 support personnel and operates out of one central Police Headquarters office that is located downtown at 945 5<sup>th</sup> Street. The current level of service is 1.34 officers per thousand residents, which is slightly lower than the western U.S. average of 1.5 officers per thousand residents reported by the Federal Bureau of Investigation. However, the Department has increased its staffing in recent years with the aim of achieving a ratio of 1.5 officers per thousand residents. The department also plans to increase the ratio of support staff to officers from the current level of .67 (about 2 support staff for every 3 officers) to .75 (3 support staff for every four officers). The officers are distributed throughout the City on automobile patrol assignments through its fleet of 50 vehicles. With the passage of Measure P, the Department is using this source of funding to modernize its equipment and facilities, including the use of Mobile Data Computers, wireless data transfer, “real time” video feeds, and planning for a new police facility.

The Merced County Sheriff’s Department is responsible for law enforcement in the unincorporated areas surrounding the city. The Department operates a “Westside” substation located in the City of Los Banos and serves Gustine, Santa Nella, Volta, Santa Rita Park, and South Dos Palos.

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<sup>9</sup> Chet Guintini, Fire Chief of Los Banos Fire Department, Jan 4, 2007.

## REGULATORY SETTING

The provision of public facilities and services in the City of Los Banos and its Sphere of Influence is the responsibility of several local, regional and state agencies.

### Schools

The Los Banos Unified School District is the primary provider of K-12 public schools in the City. School facilities and curriculum are governed by

*Los Banos Unified School District School Facility Master Plan (2005)*. The School District Master Plan addresses the future facility needs of the District and provides options to meet needs within the planning horizon from 2005 to 2015. The Plan considers regional demographic data and development activities to project enrollment and facility needs of the schools. Additionally, the Plan also identifies potential sources of funding and other methods to pay for needed facilities.

### Water and Wastewater

Los Banos is responsible for obtaining water from the Delta-Mendota Sub-basin, and for wastewater collection, treatment and disposal. The City operates shared drainage ditch facilities with Central California Irrigation District (CCID) and Grassland Water District (GWD) which divert water through the Planning Area. Regulatory authorities exist on federal level, state and local levels for the control of water quality in California.

*Clean Water Act*. The Clean Water Act is the principal Federal law that addresses water quality. The primary objectives include the regulation of pollutant discharges to surface water, financial assistance for public wastewater treatment systems, technology development, and non-point source pollution prevention programs. The Clean Water Act also requires that states adopt water quality standards to protect public health and welfare and enhance the quality of water.

*California Water Code*. Division 7 of the California Water Code (Porter-Cologne Act) establishes a program to protect water quality and beneficial uses of state water resources and includes groundwater and surface water. The State Water Resources Control Board and the Regional Water Quality Control Boards (RWQCBs) are the principal state agencies responsible for control of water quality.

*California Safe Drinking Water Act*. The Safe Drinking Water Act (SDWA), administered by the U.S. EPA in coordination with the states, is the main federal law that ensures the quality of drinking water. Under the SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

*City of Los Banos Urban Water Management Plan 2005*. The Urban Water Management Plan was approved by the California Department of Water Resources and adopted by the City in April 2006. The Plan includes a description of groundwater supply, water quality and reliability, calculations of existing and projected water use up to the year 2025, a description of demand management measures, and planned water supply projects and programs.

*Municipal Code Section 6-7.28*. This section regulates water waste, lawn/landscape irrigation timings and other initiatives on water conservation.

## **Solid Waste**

Solid waste disposal throughout Los Banos is managed by Merced County Association of Governments (MCAG). Landfill operations are operated as an enterprise function by Merced County. The City contracts with Allied Wastes Inc for solid waste collection services, though the City is responsible for diversion programs like commingled recycling.

*Resource Conservation and Recovery Act (Amendment 1986).* The Resource Conservation and Recovery Act is a federal act regulating the potential health and environmental problems associated with solid waste hazards and non-hazardous wastes. It gives the U.S. EPA the authority to control hazardous wastes and provide a general framework for the management of these wastes. Specific regulations addressing solid waste issues are contained in Title 40, Code of Federal Regulations.

*California Integrated Waste Management Act.* California Integrated Waste Management Act, AB 939 mandates that the County of Merced and all other municipalities in the State to divert at least 50 percent by 2000 through source reduction, composting, and recycling activities. The Act gives the highest priority to source reduction and defines it as the act of reducing the amount of solid waste generated in the first place. Recycling and composting are given the next highest priority. The Act specifies that all other waste that is not diverted be properly and safely disposed of in a landfill or through incineration. The County relies on a broad mix of waste stream diversion programs to meet state mandated diversion goals.

*Source Reduction and Recycling Element.* The California Integrated Waste Management Act also mandates that each jurisdiction adopt a Source Reduction and Recycling Element (SRRE) which specifies how the community will meet the 50 percent goals set forth in the Act. Each community is also required to take measures to reduce solid waste generation and to provide for the safe disposal of special and hazardous wastes.

*Merced County General Plan (2000).* The General Plan lists solid waste recycling and disposal sites, plan goals and implementing actions to reduce and recycle wastes generated within the county.

## **Police and Fire Services**

The City of Los Banos Police and Fire Departments provide police, fire and life-safety services within the City. Both Police and Fire Services are subject to regulations in Title 4 of the Los Banos Municipal Code, as well as state and federal legislation relating to public safety and fire-fighting. Fire hazards are addressed mainly through the application of the State Fire Code and the Uniform Building Code. The Fire Code addresses access, including roads, vegetation removal, and safety issues. The Building Code requires the construction of certain types of development provide fire compartments, fire stops, and adequate fire flows in sprinklers and other systems.

**IMPACT ANALYSIS**

**Significance Criteria**

A significant impact would occur with full implementation of the proposed General Plan if the following negative impacts occur to level of service standards for school, water, solid waste, wastewater, fire hazard, and emergency response services:

- Generation of student levels that exceed available or planned school capacity;
- Water demand exceeds available supply or distribution capacity;
- Wastewater flows that exceed available collection or treatment capacity;
- Solid waste levels exceed available disposal capacity;
- Solid waste levels are in non-compliance with federal, state, or local regulations related to solid waste;
- Increased risk of exposure to fire hazards; or
- Police, fire, or emergency response levels of service drop below General Plan performance standards.

**Methodology and Assumptions**

This analysis considered current and proposed General Plan policies and goals, existing and proposed public facilities and services within the city, and applicable regulations and guidelines.

The projected student population was calculated according to total single-family and multi-family housing units under buildout according to the proposed General Plan. The school facilities calculations were based on Los Banos Unified School District’s assumption on student generation factors for single-family (0.738) and multi-family (0.948) housing, as well as the average student ratio attending public schools in Merced County. **Table 3.4-7** shows these assumptions. These calculation also assume an average school size of 650 students (grades K-5), 800 students (grades 6-8), and 1,650 students (grades 9-12). This new student population and composition were compared with existing school capacity to determine the number and type of new facilities needed.

**Table 3.4-7 Student Generation Assumptions**

	<i>Student Generation Factors</i>	<i>Ratio of Students Attending Public Schools</i>
Single Family Households	0.738	0.968
Multi-Family Households	0.948	0.968

*Source: Los Banos Unified School District, 2007. Dyett & Bhatia, 2007.*

The analysis of water, solid waste, and wastewater demand, services, and facilities is based on discussions with the Los Banos Public Works Department. Water supply projections for 2030 are based on per capita ratio of 0.23 AFY in the 2005 Urban Water Management Plan. Wastewater projections for 2030 are based on projected data in the 2007 Wastewater Strategic Plan. The analysis of solid waste demand, services, and facilities is based on information provided by the California Integrated Waste Management Board.

To ensure that new development does not adversely affect the City’s current ability to provide police services, the total projected population under the proposed General Plan at buildout, 90,520 residents, is divided by 1,000 and then multiplied by 1.34 to calculate the number of total police officers necessary to maintain the existing ratio of officers to residents. The analysis of police services is based on discussions with the Los Banos Police Department.

To evaluate potential impacts on fire facilities and services, an analysis was done using 1.5 mile radii around existing fire stations in order to calculate the percentage of land within the City that is located inside and outside of these fire station service areas. To ensure that new development does not adversely affect the City’s current ability to provide fire services, the total projected population under the proposed General Plan at buildout is divided by 1,000 and then multiplied by 1 to calculate the total number of firefighters necessary to meet the fire department’s goal of 1 firefighter per thousand residents. The analysis of fire services is based on discussions with the Los Banos Fire Department.

### Impacts and Mitigation Measures

#### Impact

#### 3.4-1 Implementation of the proposed General Plan will increase demand for school facilities. (Less than Significant)

In 2006, public school enrollment in Los Banos was approximately 8,840 students. According to total housing unit projections, full buildout of the General Plan will result in a total of 22,150 students, or an additional 13,310 new elementary, middle, and high school students. School age population and school needs are detailed in Table 3.4-8 and Table 3.4-9.

**Table 3.4-8: Additional Public School Students Based on Housing Plan Buildout**

	<i>Additional Households at Buildout</i>	<i>Student Generation Factors</i>	<i>Ratio of Students Attending Public Schools</i>	<i>Additional Students</i>
Single Family Households	11,500	0.738	0.968	8,215
Multi-Family Households	5,550	0.948	0.968	5,093
<b>Total</b>	<b>17,050</b>	<b>N/A</b>	<b>N/A</b>	<b>13,310</b>

Source: Los Banos Unified School District, 2007. Dyett & Bhatia, 2007.

**Table 3.4-9: Buildout of Student Population and School Demand**

Type	Current Students	Additional Students attending Public Schools at Buildout <sup>1</sup>	Current Capacity	Students at Buildout in Excess of Current Capacity	New Schools Needed <sup>3</sup>	Acres Needed <sup>4</sup>
K-5	4,234	7,736	3,758	8,212	13	130
6-8	2,224	2,135	2,213	2,146	3	45
9-12	2,378	3,236	2,448	3,166	2	80
<b>Total</b>	<b>8,836</b>	<b>13,106</b>	<b>8,419</b>	<b>13,523</b>	<b>18</b>	<b>255</b>

<sup>1</sup> Assumes 0.439 elementary school, 0.124 middle school, and 0.175 high school students per single family household, and 0.552 elementary school, 0.146 middle school, and 0.250 high school students per multi family household.

<sup>2</sup> Assumes average school size of 650 students (grades K-5), 800 students (grades 6-8), and 1,650 students (grades 9-12). Number of schools needed are rounded up.

<sup>3</sup> Assumes average school sizes of 10 acres (grades K-5), 15 acres (grades 6-8), and 40 acres (grades 9-12) .

<sup>4</sup> Student numbers is an estimate of those attending public schools only. According to the California Department of Education report 2004-05, 3.2 percent of all County's students attend private schools

Source: Los Banos Unified School District, 2007; Dyett & Bhatia, 2007.

This increase in student population represents a significant increase in demand for public school facilities. Accordingly, 18 new school facilities (13 elementary schools, 3 middle schools and 2 high schools) will be needed to accommodate this new demand on public school facilities. The General Plan designates land to be reserved for schools within walking distance of new residential development. Policies in the proposed General Plan are aimed at coordinating an increase in demand with appropriate agencies in order to ensure that this new development is met with appropriate school capacity. Proposed General Plan policies that ensure that sufficient land is identified and reserved to accommodate projected growth in the community (PFU-I-1) would reduce potential impacts to a less than significant level. No additional mitigation is warranted because SB 50, specifically California Government Code Section 65995(e) is the exclusive method for financing school facilities and preempts all measures, both financial and non-financial, to mitigate the impacts of land use approvals on school facilities. As a consequence, the City and other local responsible agencies are preempted by this state law from imposing any other mitigation.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

- LU-I-8 Require new development to pay its fair share of the costs of public infrastructure, services and transportation facilities. These may include parks, fire and police stations, schools, utilities, roads, and other needed infrastructure.
- POSR-I-8 Cooperate with the Los Banos Unified School District to promote joint development and use of school facilities after school hours.

*Joint development and use of school sites is especially important in developed areas where park standards have not yet been achieved. This approach will maximize opportunities for park and recreation facilities for Los Banos residents.*

- PFU-I-1 Ensure adequate elementary school sites are reserved in new subdivisions, consistent with the Land Use Diagram and State law.
- PFU-I-2 Require that elementary schools be located close to residential neighborhoods, and away from major streets to avoid vehicular traffic and noise.
- PFU-I-3 Maintain a close, collaborative relationship with Los Banos Unified School District on all matters of mutual interest.

*This includes the provision and location of school sites and facilities, the development of education programs that are in line with City goals, the creation of natural hazards preparation workshops or anti-drug abuse programs with Los Banos Police, and the development of joint internship programs with Los Banos City Departments and local businesses.*

Implementation of the proposed policies summarized above would reduce potential Impact 3.4-1 to a level that is less than significant.

### **Impact**

#### **3.4-2 Implementation of the proposed General Plan will increase demand for public water to 18.5 mgd in 2030 and require new filtration facilities and distribution facilities. (Less than Significant)**

Whether the city could grow at its expected rate of growth will depend on its the ability to provide adequate public utilities and services. New development under the General Plan will add an addition of 17,060 households and 41,920 new jobs. This will result in approximately two and a half times increase in water demand over 2005 levels. The Los Banos Public Works Department currently derives all of its water from ground water from the Delta-Mendota Sub-basin. The Sub-basin is connected to one of the deepest water basins in California and is not adjudicated. Therefore, there are no limitations placed on pumpage volumes. While portions of the San Joaquin River Groundwater Basin has been in a state of overdraft for years, Delta-Mendota Sub-basin water levels have remained relatively stable and actually rose during the 1970 to 2000 period (DWR Bulletin 118)<sup>10</sup>. In addition, it is also not anticipated that a single or multiple dry year period will reduce the availability of water to the city up to a period of 4 years.<sup>11</sup> While quantity is not expected to be a problem, it will be increasingly difficult to find good quality potable water if pumpage rises above 8,000 AFY as many of the City wells have arsenic concentrations exceeding 10 milligrams per liter. This mean that pumped

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<sup>10</sup> California's Groundwater Bulletin 118 (1/20/06), Department of Water Resources

<sup>11</sup> City of Los Banos, Urban Water Management Plan 2005, page 2-4

water must be filtered or the City must find alternative sources of water to supplement ground water. The 2000 Water Master Plan recommended that treated surface water be used in conjunction with ground water. Since the City has no water treatment facilities at present, they will need to be planned and constructed. The City is acutely aware of the need for water filtration facilities and is evaluating its options.

The proposed General Plan policies ensure that new development pay their fair share of the cost of upgrading water infrastructure. Additionally, it requires new water infrastructure to be in place prior to occupation of development, and calls for a temporary development cap on urban development to allow facilities to catch up with development. Various other policies on water demand management, water conservation and water recharge to reduce the overdraft, are also included to reduce development impact to a less than significant level.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

LU-I-53 Designate land for civic and institutional land uses, to be maintained through capital projects, for parks and open spaces, police and fire services, water and sanitary facilities, infrastructure and other City services.

POSR-I-19 Establish priorities for open space preservation and acquisition based on an evaluation of watersheds or significant water recharge areas.

POSR-I-38 Work with Central California Irrigation District to provide for water recharge and to ensure reasonable amounts of water delivery for recharge during drought periods.

POSR-I-40 Actively monitor groundwater quality and quantity throughout the Planning Area.

PFU-I-13 Ensure that water supply capacity and infrastructure are in place prior to occupancy of new development.

*The City Public Works Department will evaluate the adequacy of water infrastructure in areas where development is anticipated to occur, and require developers to secure additional water resources to meet increased demand and water quality standards, and to coordinate capital improvements that comply with the City Water Master Plan with regards to the direction, extend, and timing of development.*

PFU-I-19 Continue to pursue the identification and acquisition of surface water rights or supply agreements to meet future regional water supply needs.

PFU-I-20 Require all major development projects to submit a landscaping plan:

- Commercial and public right-of-way, and park projects will be required to submit planting plans, irrigation plans, irrigation schedules and water use estimates for City approval prior to issuance of building permits;
- Industrial projects will be required to submit plans for water recycling and explain how water use will meet requirements of the National Pollutant Discharge Elimination System program during the plan review process. They will also be required to submit irrigation plans for proposed landscaping.

*The City will provide clear guidelines and standards early in the development so that conservation efforts are included in the design process.*

PFU-I-21 Develop water filtration facilities to ensure the quality of groundwater meet federal and State drinking water standards. The City may place a temporary cap on urban development, if necessary, to allow facilities to catch up with growth.

PFU-I-22 Become a signatory to the California Urban Water Conservation Council and implement all Demand Management Measures as soon as they become feasible.

*The California Urban Water Conservation Council is a non-profit organization whose goal is to integrate urban water conservation Best Management Practices into the planning and management of California's water resources. Since its inception in 1991, 384 urban water agencies and environmental groups have signed the MOU pledge to develop and implement fourteen comprehensive conservation Best Management Practices (BMPs).*

PFU-I-23 Implements recommendations set forth in the 2005 Urban Water Management Plan including initiatives such as:

- A water survey program;
- A water conservation program (Water Patrol); and
- A Residential Plumbing retrofit program.

PFU-I-24 Encourage the use of reclaimed water for irrigation and landscaping purposes.

*Utilizing reclaimed water is currently not cost-effective. Should the costs of reclaimed water become more attractive, the City will define a program for encouraging reclaimed water use.*

PFU-I-25 Promote the use of evapotranspiration (ET) water systems in irrigating agriculture and large parks.

*ET water systems are “smart water systems” that can be programmed with data such as the type of soil, slope of landscape, type of vegetation, daily weather conditions so that it can automatically adjust irrigation schedules based on those conditions. The result is lower water bills and a healthier environment.*

PFU-I-26 Educate the general public about the importance of water conservation, water recycling and groundwater recharge through the following means:

- Making water production and treatment facilities available for tours by schools or organized groups;
- Encouraging educators to include water conservation in their curriculums; and
- Providing tips to business groups on water conservation and recycling.

*The City may solicit assistance from environmental groups, the Los Banos Unified School District, and/or concerned citizens to provide education materials or staff time for these public outreach programs.*

Implementation of the proposed policies summarized above would reduce potential Impact 3.4-2 to a level that is less than significant.

### ***Impact***

#### ***3.4-3 Implementation of the proposed General Plan will generate wastewater flows that exceed the treatment and collection capacity of the existing Wastewater Treatment Plant. (Less than Significant)***

The City's Urban Wastewater Strategic Plan for 2007 estimates wastewater disposal at 11.0 mgd in the year 2030, based on a population projection of approximately 90,000 and a city size of 21,500 acres. Currently, wastewater flows into the WWTP at an average rate of about 3.5 mgd. The City is in the process of expanding the WWTP to 4.9 mgd, which should be complete within the next 2 years. This upgraded facility will be able to handle a projected population of about 45,000 to 50,000, depending on the extent existing industries increase flow in the near term. Assuming a population growth rate of 4.1 percent and a constant home construction rate of 400 to 800 units per year, an additional facility may be needed to be online as early as 2010 or as late as 2017. Several studies are currently under way to explore the city's options. These include the procurement of land surrounding the existing WWTP for future expansions, the creation of a new membrane bioreactor (MBR) facility that could treat water to a higher standard, as well as the possibility of requiring large industrial operators such as Los Banos Foods to construct pre-treatment facilities at the source.

In addition to increasing the capacity of the WWTP, existing sewer lines will need to be extended and upgraded since most of the anticipated development will occur to the west of the City, while treatment facilities are located to the east.

The proposed General Plan policies ensure that an upgraded treatment plant will accommodate the growth anticipated by the General Plan. Plan policies will ensure land is set aside for a future water treatment plant and developers pay their fair share on the cost of upgrading sewerage utilities. Implementation of these policies will ensure that any impacts to wastewater from new development will be reduced to a less than significant level.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

PFU-I-14 Design stormwater and wastewater collection and treatment facilities to serve expected buildout of the areas served by these facilities.

*The City Public Works Department will evaluate the adequacy of wastewater collection and treatment in areas where development is anticipated to occur, and require developers to construct backbone infrastructure consistent with the Wastewater Master Plan and Storm Drain Master Plan. The development shall be reimbursed for these trunklines based on actual costs not to exceed the project costs identified in the master plan report with cost of construction escalation. Individual development projects will be responsible for construction of all collection lines for wastewater, storm drainage, and sewerage.*

PFU-I-15 Establish equitable methods for distributing costs associated with providing water and sewerage service to development, including impact mitigation fees where warranted.

PFU-I-16 Implement recommendations put forth by the 2007 Strategic Wastewater Management Plan with regards to:

- The near-term expansion of Wastewater treatment plant to 4.9 mgd;
- The future expansion of existing Wastewater treatment facilities beyond 4.9mgd, and/or the construction of a new membrane bi-reactor (MBR) facility to meet projected population growth; and
- The acquisition of land for treatment purposes.

In addition to the above, policies PSU-I-22 to PSU-I-26 on water conservation will serve to reduce wastewater treatment needs of the City.

***Impact***

***3.4-4 Implementation of the proposed General Plan will generate additional amounts of solid waste that exceed available disposal capacity. (Less than Significant)***

The City's solid waste disposal is managed by the Merced County Association of Governments and the majority of its waste is taken to Billy Wright Landfill. The landfill has a capacity of 3.65 million cubic yards, and an expected life span to the year 2010. The County is currently studying the future needs of solid waste services including expansion of the Billy Wright Landfill versus a transfer station or closing the Billy Wright facility and relocating all waste services to the Highway 59 Landfill, located east of Los Banos with a lifespan to the year 2035. The proposed General Plan supports working with the County to ensure adequate landfill space is available to meet future demands.

**Table 3.4-10: Estimated Solid Waste Generation for MCAG in 2030**

	2005	2030
Diversion Rate (percent recycled)	39	50
Total Waste Disposed (tons)	302,100	1,082,800

Source: Consolidated Waste Management Authority, Waste Stream Estimation Profiles, Merced County; Dyett & Bhatia, 2007.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

PFU-I-28 Support waste reduction and recycling programs through public education, including writing articles on City websites, newsletters, and other forms of publications.

PFU-I-29 Explore the possibility of attracting a material recycling company to locate a facility in Los Banos.

*Due to the lack of recycling material handlers/facilities in the area, the cost for recycling collection is generally higher than where a nearby facility exists.*

PFU-I-30 Work closely with the Joint Powers Authority to ensure adequate landfill space is available to meet projected growth.

*One of the two designated landfill facilities for the city, Billy Wright Landfill, is projected to reach full capacity in year 2010, so planning early expansion of Billy Wright Landfill or alternative landfill space will be a priority.*

Implementation of the proposed policies summarized above would reduce potential Impact 3.4-5 to a level that is less than significant.

***Impact***

***3.4-5 Solid waste diversion levels may continue to be in non-compliance with California Public Resources Code 41780A2 which requires 50 percent diversion rates. (Less than Significant)***

In accordance to the State mandate, cities and counties must achieve diversion rates of 50 percent through source reduction, recycling, and composting activities. In 2005, Merced County was only able to achieve a diversion rate of 39 percent. Although the County has not met the 50 percent diversion requirement, it was given a time extension for Biennial Review to meet the requirement.

The full implementation of the proposed General Plan will result in a significant increase in the amount of solid waste generated by the City. New collection and recycling facilities will need to be added to service the additional area and population. Although solid waste diversion is primarily the responsibility of the MCAG authority, the City’s proposed General Plan calls for source reduction

efforts as a means to help the County achieve the 50 percent diversion rate and to extend the life of the landfill. Implementation on the following proposed General Plan policies would result in impacts that are less than significant.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

PFU-I-27 Reduce volumes of solid waste generated in Los Banos through recycling and resource conservation measures such as:

- Requiring new and refurbished buildings be designed with on-site storage facilities for recycled materials to make recycling more convenient;
- Using post-consumer recycled paper and other recycled materials in all City operations;
- Supporting the commingled-recycling program; and
- Continuing efforts to develop new specialized recycling programs for residential, commercial, industrial, and educational sectors.

*Examples of specialized programs include initiatives such as (but not limited to), encouraging food waste composting by restaurants and schools, and promoting reuse of demolition materials by construction firms.*

In addition to the above, policy PFU-I-30 will also improve the solid waste diversion rates of the City.

*Impact*

**3.4-6 *Implementation of the proposed General Plan will increase the urban area that would be exposed to the risk of wildland fire hazards, and increased density under the Plan will lead to a higher risk of structural fire. (Less than Significant)***

New development outside the existing City Limits in the Planning Area would be adjacent to open space areas. Most of the open space areas possess little or no fire risk as they are either farmland or wetlands. The riparian forest corridor to the west of Los Banos Creek represents the single largest fire risk due to a small amount of tree cover and undergrowth. Even so, its fuel loading is light and the current moderate fire hazard risk should decrease as it becomes more developed. In all, only 16 percent of the Planning Area is classified under “moderate” fire risk.

In view of the above, it is unlikely that new development will result in an elevated risk of wildland fires. The General Plan requires all development occur within a compact urban growth boundary protected by a proposed SR-152 Bypass to the north. Plan policies also require training of Fire Department personnel and a public awareness program to highlight the potential dangers of open burning. The risk from wildland fire is unlikely to be of concern.

On the other hand, new development under the proposed General Plan will likely increase the risk of structural fires due to higher development densities and longer distances away from existing fire stations. The General Plan aims to reduce this risk through policies that require regular manpower and facility assessments and maintenance of fire response standards at Class 3 ISO rating or better. Implementation on the following proposed General Plan policies would result in impacts that are less than significant.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

S-I-16 Ensure Fire Department personnel are trained in wildfire prevention, response and evacuation procedures.

S-I-17 Create a public awareness and weed abatement program to highlight the dangers of open burning and how home owners can protect their properties from wildfires.

*This program will include training and information about fuel breaks, fuel reduction strategies, weed abatement, and the creation of buffer zones to minimize potential fire losses. Weed abatement activities will be conducted in a manner consistent with all applicable environmental regulations.*

S-I-18 Develop ways to update news media and city residents on current wildfire threat levels during drought periods.

S-I-30 Maintain fire department performance and response standards at Class 3 ISO rating or better.

S-I-31 Require adequate access for emergency vehicles in all new development, including adequate street width and vertical clearance on new streets.

S-I-32 Require sprinklers in all mixed use development to protect residential uses from non-residential uses, which typically pose a higher fire risk.

*Appropriate fire protection measures are necessary in mixed use developments, since residential units are typically in close proximity to higher fire load occupancies, such as retail stores, restaurants, etc.*

S-I-33 Maintain mutual aid agreements with Merced County, California Department of Forestry and nearby cities.

Implementation of the proposed policies summarized above would reduce potential Impact 3.4-7 to a level that is less than significant.

*Impact*

**3.4-7 Implementation of the proposed General Plan will place a higher demand on available police and fire protection services. (Less than Significant)**

Current police and fire protection is designed to meet the needs of the existing population and employment base. New development from the General Plan will add approximately 56,000 new residents and almost 41,920 new jobs to the city, increasing the long-term demand for police assistance and emergency fire response.

In order to provide an equivalent level of service, the Los Banos Police Department will need to hire new police officers and expand existing police facilities. To maintain the existing ratio of 1.34 officers per thousand residents, it will be necessary to hire an additional 75 police officers by the year 2030. To achieve the city’s goal of 1.5 officers to 1,000 residents, it will be necessary to hire an additional 90 police officers. Furthermore, an additional 50 support staff of non-sworn employees (jailers, dispatchers, parking officers, etc.) is necessary to maintain the ratio of 2 support staff to 3 officers, and by 2030, over 100 new staff would be necessary to meet the department goal of 3 support staff for every 4 officers.

**Table 3.4-11: Additional Police Officers Needed for Buildout**

<i>Year</i>	<i>Population</i>	<i>Officers</i>	<i>Ratio</i>
2006	34,220	46	1.34
2030	90,520	121	1.34
<b>Difference</b>	<b>56,300</b>	<b>75</b>	<b>N/A</b>

Source: Dyett & Bhatia, 2007.

In order to respond to future growth, the Department has plans to replace the current, aging (1969) police facility and jail using funds from the public safety sales tax. The new facility should be located as part of or adjacent to the existing local court facility. As the City spreads geographically there will be a need for more remote neighborhood police facilities. The Department plans to start by creating drop-in centers, followed by upgrading the centers to full substations as resources become available.<sup>12</sup>

Currently, the majority of Los Banos residents are located within 1.5 mile radii of a fire station, but approximately 2100 acres of developed land lie outside of the radius. Fire response time is 5 to 6 minutes within the radius and the department has an ISO rating of 3. The Department is comprised of 17 uniformed personnel and 32 volunteer fire fighters, with the majority of the volunteer staff concentrated at Station 1. At full General Plan buildout, 5500 acres of developed land will lie outside the 1.5 mile radii of both fire stations. To maintain current service standards and response time, additional fire personnel and stations will need to be added.

The proposed General Plan requires a review of development application to ensure that staffing ratios and response standards are met. Plan policies ensure that not only land is reserved for civic and institutional uses (such as Fire and Police Stations), but new development pays its fair share of the

<sup>12</sup> Chris Gallagher, Police Chief of Los Banos, Jan 5, 2007.

costs associated with the provision of additional personnel and facilities. Implementation of the proposed General Plan policies would result in impacts that are less than significant.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

LU-I-8      Require new development to pay its fair share of the costs of public infrastructure, services and transportation facilities. These may include parks, fire and police stations, schools, utilities, roads, and other needed infrastructure.

LU-I-53     Designate land for civic and institutional land uses, to be maintained through capital projects, for parks and open spaces, police and fire services, water and sanitary facilities, infrastructure and other City services.

S-I-26      Assess the manpower, facility, and equipment needs of police and fire services as the city undergoes expansion to provide all residents with an optimal level of protection.

*To meet existing and future demand, the City will continue to plan for adequate law enforcement and fire-fighting services, and ensure their staffing ratios and response time meet national standards. The requirements for additional police and fire stations shall be considered in Capital Improvement Programs and development fees.*

S-I-28      Maintain mutual aid agreements with Merced County, neighboring law enforcement agencies, and the California Highway Patrol.

In addition to the above, policies S-I-30 and S-I-33 will serve to reduce the impact of new development on fire services.

### **3.5 ENERGY USE AND CLIMATE CHANGE**

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Global climate change refers to alterations in temperature, wind patterns, precipitation, and climatic conditions that occur across the earth. Of particular concern is the gradual increase in average temperatures and associated changes in environmental conditions such as a rise in sea level. Although there is increasing acceptance of the concept that human activity has an impact on the earth's weather, the extent of the change and the exact contribution from human-caused sources remains in debate. Furthermore, the connection between local land use decisions and global climate change is not well understood and is not reflected in climate modeling. Nevertheless, there is agreement that certain changes that can occur as a consequence of land use decisions, such as an increase in vehicle emissions associated with an increase in vehicle trips, may have a cumulative impact on global climate change when combined with emissions throughout California, the nation, and across the globe. This section of the EIR identifies those effects resulting from implementation of the proposed Los Banos 2030 General Plan that may contribute to global climate change based upon a comparison between existing conditions and future conditions with the proposed General Plan. In addition, the impact analysis describes the potential impact of climate change on the City's future residents, workers, and visitors and the planning area's natural resources. This section also identifies Plan policies and actions that will help to minimize impacts on climate change.

#### **ENVIRONMENTAL SETTING**

The existing physical and regulatory conditions related to global climate change are described below. This section includes an overview of the primary factors the General Plan addresses that can have an effect on climatic conditions including transportation, energy usage, and industrial activity.

##### **Physical Setting**

Gases that trap heat in the Earth's atmosphere are called greenhouse gases (GHG). These gases play a critical role in determining the Earth's surface temperature. Part of the solar radiation that enters Earth's atmosphere from space, is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but greenhouse gases absorb some of the radiation. As a result, radiation that otherwise would have escaped back into space is retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

The accumulation in the atmosphere of GHG emitted by both natural processes and human activities regulates the earth's temperature. Without natural GHG, the Earth's surface would be about 61°F cooler (CCAT, 2006). However, many scientists believe that emissions from human activities, such as electricity production and vehicles, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Common GHG include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. GHG have varying global warming potential (GWP) and atmospheric lifetimes. Carbon dioxide equivalents is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The GWP is the potential of a gas or aerosol to trap heat in the atmosphere.

Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted. GWP ranges from 1 (carbon dioxide) to 23,900 (sulfur hexafluoride). GHG emissions with a higher GWP have a greater global warming effect on a molecule per molecule basis. For example, one ton of CH<sub>4</sub> has the same contribution to the greenhouse effect as approximately 21 tons of CO<sub>2</sub>. (California Climate Action Registry, *General Reporting Protocol*, Appendix C (2006))

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission 2006). Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 40.7 percent of total GHG emissions in the state (California Energy Commission 2006). This category was followed by the electric power sector (including both in-state and out-of-state sources) (22.2 percent) and the industrial sector (20.5 percent) (California Energy Commission 2006). Out-of-state sources, mostly coal-fired power plants in the Southwest, account for 22 to 32 percent of the total energy used in California but contribute 39 to 57 percent of the GHG emissions associated with electricity consumption. (CEC, 2006)

The San Joaquin Valley Air Pollution Control District does not presently monitor the emission of carbon dioxide. Although the Valley is still in the Non-Attainment category for ozone, another pollutant that contribute to global warming, concentrations have dropped as older vehicles are gradually replaced by newer models. In 2006, ozone levels exceeded the state and national standard only 7 days compared with 55 and 56 days respectively in 2002. At the same time, there has been an increase in the concentration of some Volatile Organic Compounds (VOCs), such as formaldehyde, that are ozone precursors. According to the ARB, it is difficult, however, to accurately determine how VOCs and nitrogen oxide (NO<sub>x</sub>), another ozone precursor, contribute to global warming. (California Air Resources Board, 2004)

### **Emissions from Transportation**

California's demand for gasoline and diesel has nearly doubled over the last twenty years. In 2004, the State consumed almost 15.4 billion gallons of gasoline and 2.8 billion gallons of diesel fuel, which comprised almost half of all fossil fuel energy that the State consumed (California Energy Commission, *2005 Integrated Energy Policy Report*, November, 2005).

Because of existing development conditions and limited transit opportunities, Los Banos businesses and residents now travel 141.5 million vehicles miles (VMT) every year, an average of 4,133.4 VMT per capita. Transit service and facilities in Los Banos are limited. Public transportation is provided by Merced County Transit (MCT), which operates both regularly scheduled fixed-route and Dial-A-Ride (door-to-door) transit services throughout all of Merced County. Private taxi and limo services are also available. The topography and warm climate should make walking and biking attractive options for getting around Los Banos. Moreover, the city has good bicycle connections along major transportation corridors. The city offers a variety of bicycle paths, lanes and trails, but these secondary bike routes are not continuous and rarely connect neighborhoods to important city nodes, such as Downtown or schools. As a result, bicycle trips are, for the most part, recreational and most essential transportation trips are by personal automobile.

Based on current mileage rates, Los Banos drivers consume almost 5.8 million gallons of gasoline a year, an average of 168.7 gallons a year per capita. Transportation-related emitters of GHGs include automobiles, trucks, motorcycles, off-road vehicles (including construction equipment), and airplanes. Carbon dioxide emissions, the primary GHG generated by mobile sources, are directly related to the quantity of fuel consumed. In contrast, the level of emissions of methane and nitrous oxide depends more on the type of vehicle and the emission control technologies it uses. Assuming that about a fifth of the cars and trucks driven in Los Banos use diesel fuel with an emissions factor of 9.96 kg per gallon compared with 8.55 kg per gallon for gasoline, on-road vehicular traffic now generates an estimated 50,990 metric tons of carbon dioxide a year or about 169 metric tons of carbon dioxide per capita. Assuming average emission levels of .05 grams per mile for both nitrous oxide and methane, cars and trucks also generate an estimated 12 tons of nitrous oxide and methane. Including these emissions, the total carbon dioxide equivalent emissions from on-road mobile consumption in Los Banos was about 53,330 metric tons in 2006. (California Climate Action Registry, 2007)

### **Emissions from Use of Electricity**

Los Banos homes and businesses use energy that Pacific Gas and Electric (PGandE) obtains from power plants and natural gas fields in northern California and from energy it purchases from outside its service area. These energy sources include utility companies in other western states, including northwest hydroelectric power sources, and Mexico (CEC, 2003). The combustion of fossil fuels to produce electricity generates greenhouse gases including carbon dioxide and, to a lesser extent, nitrous oxide and methane.

In 2005, Merced County consumed 3,050 million kWh of electricity. Non-residential users were responsible for 80 percent of the electricity use in the County, and users overall (residential and non-residential) consumed an average of 12,610 kWh per capita. Based on the City's estimated population of 34,220 in 2006, this means that Los Banos consumed an estimated 431.5 million kWh of electrical power. Using one of the many GHG calculation programs available on-line, this level of electrical use generated an estimated 163,107 tons of carbon dioxide and 107.9 tons of nitrous oxide. Nitrous oxide has 310 times the global warming potential of carbon dioxide. The approximate carbon dioxide equivalent emissions from electric use is, therefore, roughly 196,600 metric tons a year.

### **REGULATORY SETTING**

Existing policies, laws, and regulations regarding climate change that would apply to the General Plan are summarized below. This information provides a context for the impact discussion related to the plan's consistency with applicable regulatory conditions.

In 1990, Congress passed and the President signed Public Law 101-606, the Global Change Research Act of 1990. The purpose of the legislation was:

*. . . to require the establishment of a United States Global Change Research Program aimed at understanding and responding to global change, including the cumulative effects of human activities and natural processes on the environment, to promote discussions towards international protocols in global change research, and for other purposes.*

To that end, the Global Change Research Information Office (GCRIO) was established in 1991 to serve as a clearinghouse of information and to provide interagency Global Change Data and Information System (GCDIS) to high level users.

### **State**

The Governor of California signed Executive Order S-3-05 on June 1, 2005. The Order recognizes California's vulnerability to climate change, noting that increasing temperatures could potentially reduce snow pack in the Sierra Nevada, which contributes a primary source of water supply in the State. Additionally, according to this Order, climate change could influence human health, coastal habitats, microclimates, and agricultural yield.

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006 (Health and Safety Code Section 38500 et. seq.). AB 32 requires the reduction of statewide GHG emissions to 1990 levels by the year 2020. This change, which is equivalent to a 25 percent decline in current emission levels, will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. AB 32 directs the State Air Resource Board (ARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 also requires the state to develop regulations to address GHG emissions from vehicles. ARB has stated that the regulatory requirements for stationary sources will be first applied to electricity power generation and utilities, petrochemical refining, cement manufacturing, and industrial/commercial combustion. The second group of target industries will include oil and gas production/distribution, transportation, landfills and other GHG-intensive industrial processes.

AB 1493 (Pavley) requires the ARB to develop and adopt regulations that reduce greenhouse gas emission from passenger vehicles and light-duty trucks. The ARB has estimated that these regulations would reduce GHG emissions from these light-duty vehicles by 18 percent in 2020 and by 27 percent in 2030. (CARB, 2004)

To date, the State has not imposed any requirements on local agencies to help achieve the statute's objective for GHG emissions reductions. It has, however, adopted several so-called early action GHG reduction measures that will help to reduce GHG emissions from local land use decisions that may generate additional vehicle traffic. These actions include:

- A low-carbon fuel standard reducing carbon intensity in California fuels;
- Reduction of refrigerant losses from motor vehicle air conditioning system maintenance by restricting the sale of "do-it-yourself" automotive refrigerants; and
- Requiring broader use of state-of-the-art methane capture technologies to increase methane capture from landfills.

The ARB has also adopted a requirement, effective in 2009, that requires every new car sold in California to bear a sticker showing the vehicle's smog and greenhouse gas emission characteristics. The label will allow consumers to consider and compare a vehicle's environmental impacts. (CARB, 2007).

## **Regional**

The San Joaquin Air Quality Management District is the regional agency responsible for implementing State and federal air quality requirements in the eight Central Valley counties including Merced County, which includes Los Banos. The district has permit authority over stationary sources, acts as the primary reviewing agency for environmental documents and develops regulations consistent with State and federal air quality agencies. It does not presently regulate or monitor the emission of carbon dioxide or significant greenhouse gases.

The Merced County Association of Governments (MCAG) also has a role in air quality planning by ensuring its transportation plans, programs, and projects conform to the most recent air quality requirements; and to coordinate effectively with other government agencies.

## **Local**

The City of Los Banos has been a designated Tree City since 1990. In 2005, the City planted more than 3,000 new trees (State of the City Address, 2006). The City has not adopted any other strategies for reducing greenhouse gas emissions.

## **IMPACT ANALYSIS**

### **Significance Criteria**

Implementation of the proposed General Plan would have a potentially significant impact if it would prevent the reduction of statewide greenhouse gas emissions to 1990 levels by the year 2020 as required the California Climate Solutions Act of 2006.

### **Methodology and Assumptions**

The analysis of impacts on energy use and global climate change is based on information presented in Section 3.9 Air Quality and Section 3.2 Transportation. Using protocols developed by the California Climate Action Registry and other sources, projections of annual electricity usage and emission rates of criteria pollutants were used to project greenhouse gas emissions. In contrast to the criteria air pollutants that serve as indicators of air quality and toxic air contaminants and are pollutants of regional and local concern, respectively, GHGs are global pollutants. Moreover, neither the federal nor State governments have adopted any standards to which local agencies must adhere. While there are protocols for calculating greenhouse gas emissions at the local level, there are no accepted thresholds for determining the impact of such emissions on global warming or even on climate changes within California. In the absence of such requirements, the following analysis focuses on measures the city can undertake to reduce greenhouse gas emissions without quantifying the impact of the city's current or future emissions on global, national, or statewide conditions.

### **Summary of Impacts**

The primary sources of greenhouse gas emissions in Los Banos is anticipated to continue to be from the combustion of fossil fuels by motor vehicles and from electric power generation. To a lesser extent, agricultural activities in the planning area and some industry, most notably concrete plants and dairy processing, produce greenhouse gases that would contribute to global warming. Short-term impacts are also anticipated from construction activity that will occur during build-out under the proposed plan. Because the generation of GHGs is, for the most part, related to growth, policies that

reduce energy consumption and fuel usage can have a positive effect. In addition to promoting development patterns that will reduce the vehicles miles traveled per capita, the Plan proposes a variety of other actions that can reduce emissions that contribute to climate change and global warming, including green building measures, tree planting, energy conservation in new construction, and energy management in public buildings.

**Table 3.5-1: Proposed Los Banos General Plan Greenhouse Gas Emissions**

Source	Carbon Dioxide (metric tons)	CO <sub>2</sub> Equivalent of Nitrous Oxide Emissions (metric tons)	CO <sub>2</sub> Equivalent of Methane Emissions (metric tons)	Total Carbon Dioxide Equivalent (metric tons)
Electricity generation	431,471	88,474	Na	519,945
Vehicle emissions	263,464	7,228	490	271,182
<b>Total</b>	<b>694,935</b>	<b>95,702</b>	<b>490</b>	<b>791,126</b>

Source: Dyett & Bhatia, 2007; Abraxas Energy Consulting Emissions Calculator.

**Impacts and Mitigation Measures**

*Impact*

**3.5-1** *New development under the proposed General Plan is anticipated to result in a substantial increase in total Vehicle Miles Traveled (VMT) as well as an increase in VMT per capita. This could result in an increase in the per capita generation of greenhouse gases. (Less than Significant)*

Implementation of the proposed Plan is projected to result in a substantial increase in overall vehicle miles traveled (VMT) as well as a 31 percent increase in annual VMT per capita. Assuming the same fuel economy standards, this means consumption will outpace growth and suggests that drivers in Los Banos will consume three and a half times as much gasoline in 2030 as they were consuming in 2005.

If there is no improvement in emissions from mobile sources, Los Banos drivers would generate 263,464 metric tons of carbon dioxide in the year 2030 under the proposed Plan. The total of carbon dioxide equivalent emissions including methane and nitrous oxide would be approximately 271,182 tons. Assuming that the State implements the requirements of AB 1493, which mandate the imposition of regulations to achieve a 27 percent reduction in GHGs from light duty passenger vehicles by 2030 and a more conservative 20 percent overall reduction in emissions from mobile sources, total carbon dioxide equivalent emissions could be reduced to about 216,945 tons. This would be almost four times current emission levels but would be a less than significant increase in statewide emissions. Moreover, the projected increase in VMT within the Los Banos Planning Area must be evaluated within the larger context of development within the county and the region. For instance, the transportation conformity budgets described in the San Joaquin Valley Air Pollution Control District 2007 Ozone Plan are designed to help eliminate or reduce the severity and number of exceedances of the National Ambient Air Quality Standards (NAAQS) by calculating an allowable level of emissions by County. These levels show expected reductions over three-year increments to 2023, and the budgets take into account emissions reductions from District and ARB control

measures. Furthermore, the projected growth in Los Banos is a part of the larger regional effort to focus growth in population centers rather than permitting growth throughout the Central Valley. This effort attempts to reduce the relative impact of population growth and should result in relatively lower emissions than if a more dispersed development pattern were pursued.

A significant proportion of the additional trips are due to the proposed increase in jobs in the community. Increased employment in Los Banos will not only reduce commuting trips by existing residents but will also attract new residents who would otherwise drive longer distances to work. The traffic model does not document how improving the jobs-housing balance within Los Banos can reduce VMT within the region. The reduction is possibly significant, given the driving distances to Bay Area and other Valley employment centers. In addition, the Plan proposes compact development, mixed use centers, walkable neighborhoods, and green building technology, which can result in a per capita reduction in GHG emissions compared with communities where new residents might otherwise live.

The proposed Plan is also anticipated to promote a continued increase in the demand for transit. According to data provided by Merced County Association of Government's Regional Transportation Plan, total ridership in Los Banos for fiscal year 2005 was approximately 136,400. Assuming steady growth of ridership, nearly 600,000 people will use the bus system in year 2030. This 340 percent increase in transit usage exceeds the projected 239 percent increase in VMT.

*Proposed General Plan Policies and Actions that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce the impact to a level that is less than significant:

POSR-I-46 Support federal and State efforts to reduce greenhouse gases and emissions through local action that will reduce motor vehicle use, support alternative forms of transportation, require energy conservation in new construction, and energy management in public buildings.

*By proposing compact development, mixed use centers, walkable neighborhoods, green building technology, trip and job-housing balance, the City will be helping to implement many of the strategies and programs in the San Joaquin Valley 2007 Ozone Plan.*

POSR-I-52 Purchase hybrid gasoline-electric or bio-diesel fuel vehicles for the City fleet, and provide incentives to City employees who car-pool or use hybrid vehicles.

POSR-I-53 Establish a Clean Air Awards program to acknowledge outstanding effort and to educate the public about the linkage between lifestyle, transportation and air quality.

POSR-I-54 Educate City employees and department managers about sustainability with a focus on specific operational changes that can be made to reduce greenhouse gas emissions, such as fuel-efficient driving and reducing energy use at work.

C-I-4 Provide for greater street connectivity by:

- Incorporating in subdivision regulations requirements for a minimum number of access points to existing local or collector streets for each development (e.g. at least two access points for every 10 acres of development);
- Encouraging traffic circles and roundabouts over signals where feasible;
- Requiring the bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets; and
- Requiring new residential communities on undeveloped land planned for urban uses to provide stubs for future connections to the edge of the property line. Where stubs exist on adjacent properties, new streets within the development should connect to these stubs.

### *Impact*

***3.5-2 New development under the proposed General Plan will result in a substantial increase in the energy consumed by residential and non-residential users in Los Banos. (Less than Significant)***

Build-out under the proposed General Plan will increase the total demand for electrical energy in Los Banos. If current trends continued, total consumption of electrical energy would increase from 431.5 million to 1,141.2 million kWh, an increase of 709.7 million kWh of electrical power. This level of electrical use would generate 431,368.2 tons of carbon dioxide and 285.3 tons of nitrous oxide. Nitrous oxide has 310 times the global warming potential of carbon dioxide. The approximate carbon dioxide equivalent emissions from electric use would be roughly 519,811.2 metric tons a year.

Reductions in GHG emissions associated with on-going energy efficient building standards are expected to achieve a reduction of 3 million metric tons of carbon dioxide equivalents statewide by 2020. Emission reductions associated with existing energy efficient appliance standards are expected to result in a reduction of an additional 7 million metric tons of carbon dioxide equivalent emissions by 2020. (California Environmental Protection Agency, 2007) Implementation of these and other State requirements at the local level will reduce projected GHG emissions from electrical generation. Along with other measures that the Plan proposes, these actions will ensure that the additional energy that homes and businesses consume will not impede achievement of the Statewide reduction in emissions mandated by AB 32.

### ***Proposed General Plan Policies and Actions that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce the impact to a level that is less than significant:

POSR-I-47 Incorporate energy efficient building standards into the Zoning Ordinance and building code to ensure a high level of energy efficiency in all new development, retrofitting projects, and City facilities. These standards may include, but are not limited to:

- Requiring all new residential development to be pre-wired for optional photovoltaic roof energy systems and /or solar water heating on south facing roofs;
- Requiring all new residential development to incorporate green building methods to qualify for the equivalent of U.S. Green Building Council's "Leadership in Energy and Environmental Design" (LEED) silver standard; and
- Promoting the use of Energy Star® appliances and fixtures in private development, and requiring their use in all City facilities.

POSR-I-48 Require developers to implement Best Management Practices to reduce air pollutant emissions due to construction work and operation of equipment.

- During clearing, grading, earth-moving or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures;
- All materials excavated or graded shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All materials transported off-site shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All motorized vehicles shall have their tires watered before exiting a construction site;
- The area disturbed by demolition, clearing, grading, earth-moving, or excavation shall be minimized at all times; and
- All construction-related equipment shall be maintained in good working order to reduce exhaust from this equipment.

POSR-I-49 Do not allow wood-burning stoves and fireplaces in new development, and seek grant funding to establish a change-out program to remove them in existing homes.

*Pacific Gas & Electric and the Hearth Products Association have offered incentives in the past in the form of cash rebates to encourage replacement of old wood-burning appliances with more efficient fireplaces and stoves. These incentives are determined annually and are not necessarily offered each year.*

POSR-I-51 Convert street lights and traffic signals to LED and other more efficient technologies as they become available.

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## **3.6 SEISMIC AND GEOLOGIC HAZARDS**

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This section discusses the general topographical, geologic and seismic issues related to the implementation of the proposed Los Banos General Plan. The City's geologic setting and location relative to faults are described, as well as how underlying materials could contribute to erosion, subsidence, settlement, and seismic hazards such as ground shaking, liquefaction, and landslides.

### **ENVIRONMENTAL SETTING**

#### **Geology**

Los Banos is part of the Great Valley geomorphic province, otherwise known as the Central Valley of California, which includes both the Sacramento and San Joaquin Valley areas. The Central Valley stretches 500 miles in a generally northwest to southeast direction and averages about 40 miles in width between the Coast Ranges in the west and the Sierra Nevada in the east. This area is characterized by flat-lying sedimentary rocks overlain by alluvial soils, which can be up to 200 feet deep near the Sacramento River. Los Banos is underlain with sediments from alluvial deposits originating from sedimentary rocks of the Diablo Range.

#### **Soil Characteristics**

The Planning Area is situated in the vast alluvial deposit of the San Joaquin Valley. These soils experience geologic problems associated with very localized conditions. According to the United States Department of Agriculture Natural Resource Conservation Service (NRCS), a large portion of the Planning Area is comprised of Woo loam, Stanislaus clay loam, Pedcat clay loam, and Woo clay loam soil classifications. The agricultural value of these soils is discussed in Section 3.1 Land Use, Housing and Agriculture.

#### **Seismic and Geologic Hazards**

##### *Surface Fault Rupture*

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can vary for different faults or even along different strands of the same fault. Surface rupture can damage or collapse buildings, cause severe damage to roads and other paved areas, and cause failure of overhead as well as underground utilities. Future faulting is generally expected along different strands of the same fault (CGS, 1997b). Ground rupture is considered more likely along active faults, which are referenced in Table 3.6-1.

No active or potentially active faults are known to exist within the Planning Area, nor are there any Alquist-Priolo earthquake fault zones mapped in the Planning Area. The primary source of seismic activity in Los Banos would likely be the Ortigalita, O'Neil, Calaveras, San Andreas and Hayward Faults (see Table 3.6-1). Several of these faults are also identified in Figure 3.6-1.

**Table 3.6-1: Active Faults near Los Banos**

<i>Fault</i>	<i>Distance and Direction from Los Banos</i>	<i>Recency of Movement</i>	<i>Fault Classification</i>	<i>Historical Seismicity<sup>1</sup></i>	<i>Maximum Moment Magnitude Earthquake (Mw)<sup>2</sup></i>
Ortogonalita	5-7 Miles West	Holocene	Active	M3.7, 1981	6.9
O'Neil	3-5 Miles West	Late Quaternary	Potentially Active	Not Known	Not Known
Calaveras	40 Miles West	Historic	Active	M5.6-M6.4, 1861	6.8
San Andreas	40 Miles Southwest	Historic	Active	M7.1, 1989 M8.25, 1906	7.9
Hayward	65 Miles Northwest	Historic	Active	M6.8, 1868	7.1

<sup>1</sup> Richter magnitude (M) and year for recent and/or large events. The Richter magnitude scale reflects the maximum amplitude of a particular type of seismic wave.

<sup>2</sup> Moment magnitude is related to the physical size of a fault rupture and movement across a fault. Moment magnitude provides a physically meaningful measure of the size of a faulting event (CGS, 1997b). The Maximum Moment Magnitude Earthquake (Mw), derived from the joint CGS/USGS Probabilistic Seismic Hazard Assessment for the State of California, 1996. (CGS OFR 96-08 and USGS OFR 96-706).

Source: Jennings, 1994; Hart, 1997; Peterson, et al., 1996; CGS, 1999.

The Ortogonalita Fault Zone, which trends northwest-southeast, is designated by the California Division of Mines and Geology as an active fault zone. The Ortogonalita Fault Zone is considered capable of generating a 6 to 7 Richter Magnitude earthquake with a recurrence interval of 2,000 to 5,000 years. Seismic activity increases in the southern part of the fault zone. The last major earthquake attributed to this fault occurred in 1981 and had a Richter Magnitude of 3.7 (EMC, 2003).

The O'Neil Fault Zone, noted as three northwest-trending linear traces is a prominent fault that has experienced recurrent late Pleistocene and Holocene movements. This fault line closely parallels the strata of the underlying Central Valley sediments. Tectonic movement may have occurred in the southern segment of the fault zone within the past 10,000 years. Its relationship to the active Ortogonalita Fault Zone makes it a probable candidate for Special Studies Zoning by the California Division of Mines and Geology.

Los Banos is approximately 40 miles northeast of the San Andreas Fault and 40 miles east of the Calaveras Fault. The Hayward Fault is approximately 65 miles northwest of Los Banos.

Figure 3.6-1 Fault Zones

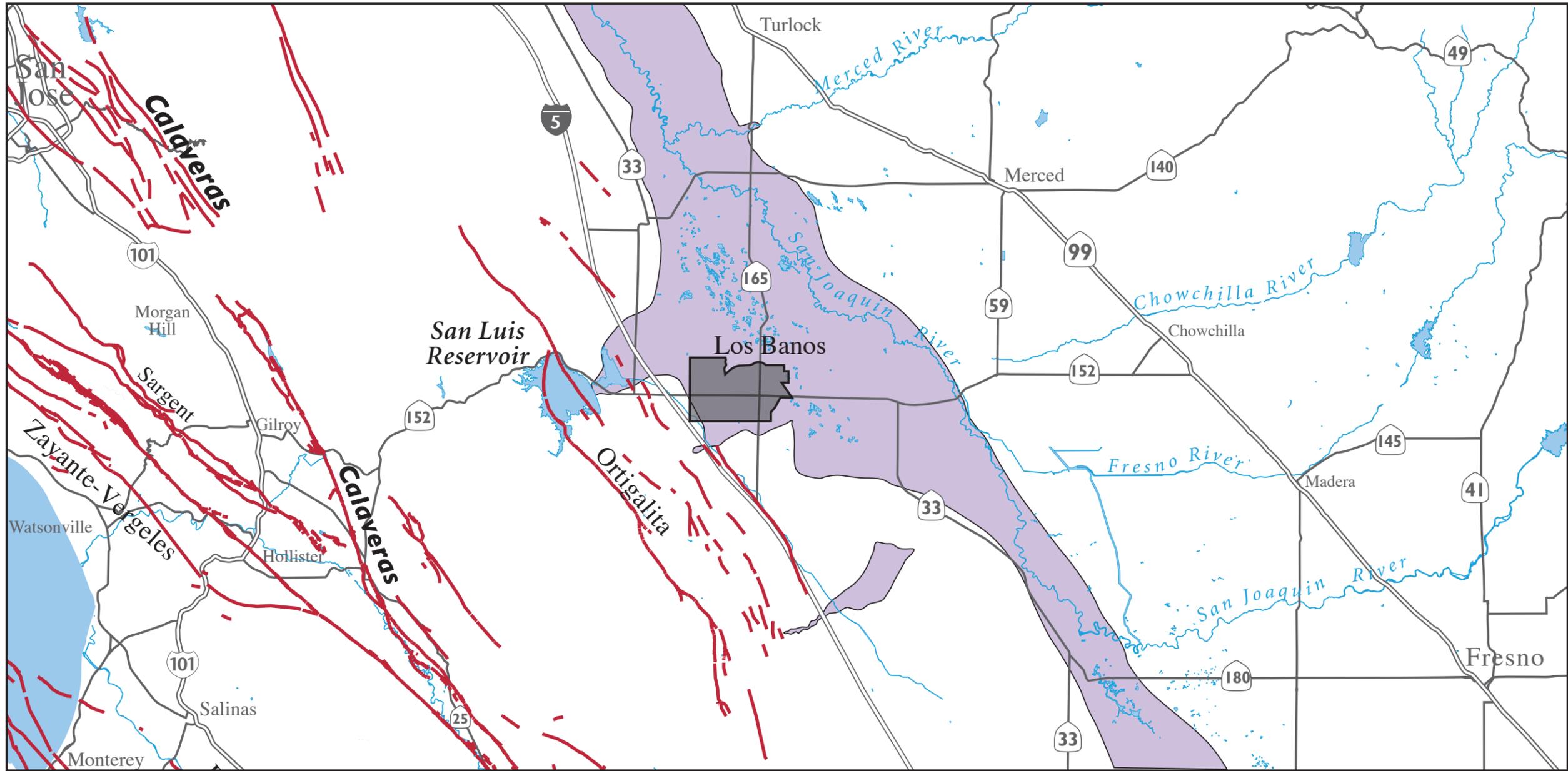


Figure 3.6-1  
Regional Faults and Dam Inundation Area

- Faults
- Dam Inundation Area
- Los Banos Planning Area

Source: Department of Conservation, California Geological Survey, 2005.

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### *Ground Shaking*

Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill or unconsolidated alluvial fill.

The Merced County General Plan indicates that Los Banos is within the 1997 Uniform Building Code Seismic Zone 4. The State of California Department of Conservation, Division of Mines and Geology indicates that the largest expected earthquake will have the ability to cause major damage within Zone 4 areas.

A major earthquake along one of the active regional faults has the greatest potential to generate major ground shaking within the City of Los Banos. Should a major earthquake occur on a fault near Los Banos, substantial structural damage in the City is probable. The Los Banos area has experienced several noticeable shocks from earthquakes over the years.

The Modified Mercalli (MM) intensity scale is commonly used to measure earthquake effects due to ground shaking. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total); intensities ranging from IV to X could cause moderate to significant structural damage (Table 3.6-2).

### *Liquefaction*

Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil. Soil liquefaction causes ground failure that can damage roads, pipelines, underground cables, and buildings with shallow foundations. Liquefaction more commonly occurs in looser, saturated materials.

Although no specific liquefaction hazard areas have been identified in Los Banos, the potential for liquefaction is recognized throughout the San Joaquin Valley where unconsolidated sediments and high water tables coincide. It is reasonable to assume that liquefaction hazards exist in and around many of Merced County's wetland areas.

**Table 3.6-2: Modified Mercalli Intensity Scale**

<i>Intensity Value</i>	<i>Intensity Description</i>	<i>Average Peak Acceleration</i>
I	Not felt except by a very few persons under especially favorable circumstances.	0.0017 g <sup>1</sup>
II	Felt only by a few persons at rest, especially on upper floors on buildings. Delicately suspended objects may swing.	< 0.014 g
III	Felt noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly, vibration similar to a passing truck. Duration estimated.	< 0.014 g
IV	During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.	0.014–0.039 g
V	Felt by nearly everyone, many awakened. Some dishes and windows broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles may be noticed. Pendulum clocks may stop.	0.039–0.092 g
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; and fallen plaster or damaged chimneys. Damage slight	0.092–0.18 g
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.	0.18–0.34 g
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed	0.34–0.65 g
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	0.65–1.24 g
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	> 1.24 g
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	> 1.24 g
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	> 1.24 g

<sup>1</sup> g (gravity) = 980 centimeters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

Source: Bolt, 1988; California Geological Survey, 2003.

### *Slope Failure and Earthquake-Induced Landslides*

A landslide or slope failure is a mass of rock, soil and debris displaced down slope by sliding, flowing, or falling. Slope failure is dependent on topography and underlying geologic materials, as well as factors such as rainfall, excavation, or seismic activities which can precipitate slope instability. Earthquake motions can induce significant horizontal and vertical dynamic stresses along potential failure surfaces within a slope. Steep slopes and down-slope creep of surface materials characterize areas most susceptible to failure. Engineered slopes have a tendency to fail during an earthquake if not properly designed, constructed, or compacted. The Los Banos Planning Area is relatively flat, with slope failure and earthquake-induced landslides considered a low risk.

### *Settlement*

Settlement is the depression of the bearing soil when a load, such as that of a building or new fill material, is placed upon it. Soils tend to settle at different rates and by varying amounts depending on the load weight, which is referred to as differential settlement. Differential settlement can be a greater hazard than total settlement if there are variations in the thickness of previous and new fills or natural variations in the thickness and compressibility of soils across an area. Settlement commonly occurs as a result of building construction or other large projects that require soil stockpiles. If these areas are comprised of soil stockpiles or other areas of unconsolidated fill materials, they have the potential to respond more adversely to additional load weights as compared to adjacent native soils.

### *Earthquake-Induced Settlement*

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments) due to the rearrangement of soil particles during prolonged ground shaking. Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Typically, areas underlain by artificial fills, unconsolidated alluvial sediments, slope wash, and areas with improperly engineered construction fills are susceptible to this type of settlement. During an earthquake, some settlement of soil materials in Los Banos may occur.

### *Erosion*

Soil erosion is a process whereby soil materials are worn away and transported to another area, either by wind or water. Rates of erosion can vary depending on the soil material and structure, placement, and human activity. Soil containing high amounts of silt can be easily eroded, while sandy soils are less susceptible. Excessive soil erosion can eventually damage building foundations and roadways. Erosion is most likely to occur on sloped areas with exposed soil, especially where unnatural slopes are created by cut-and-fill activities. Soil erosion rates can be higher during the construction phase. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, or asphalt. As shown in **Figure 3.6-2**, the Planning Area is comprised of various soil types that range in their susceptibility to erosion. The figure also identifies those particular areas that have not been classified to date.

### *Expansive Soils*

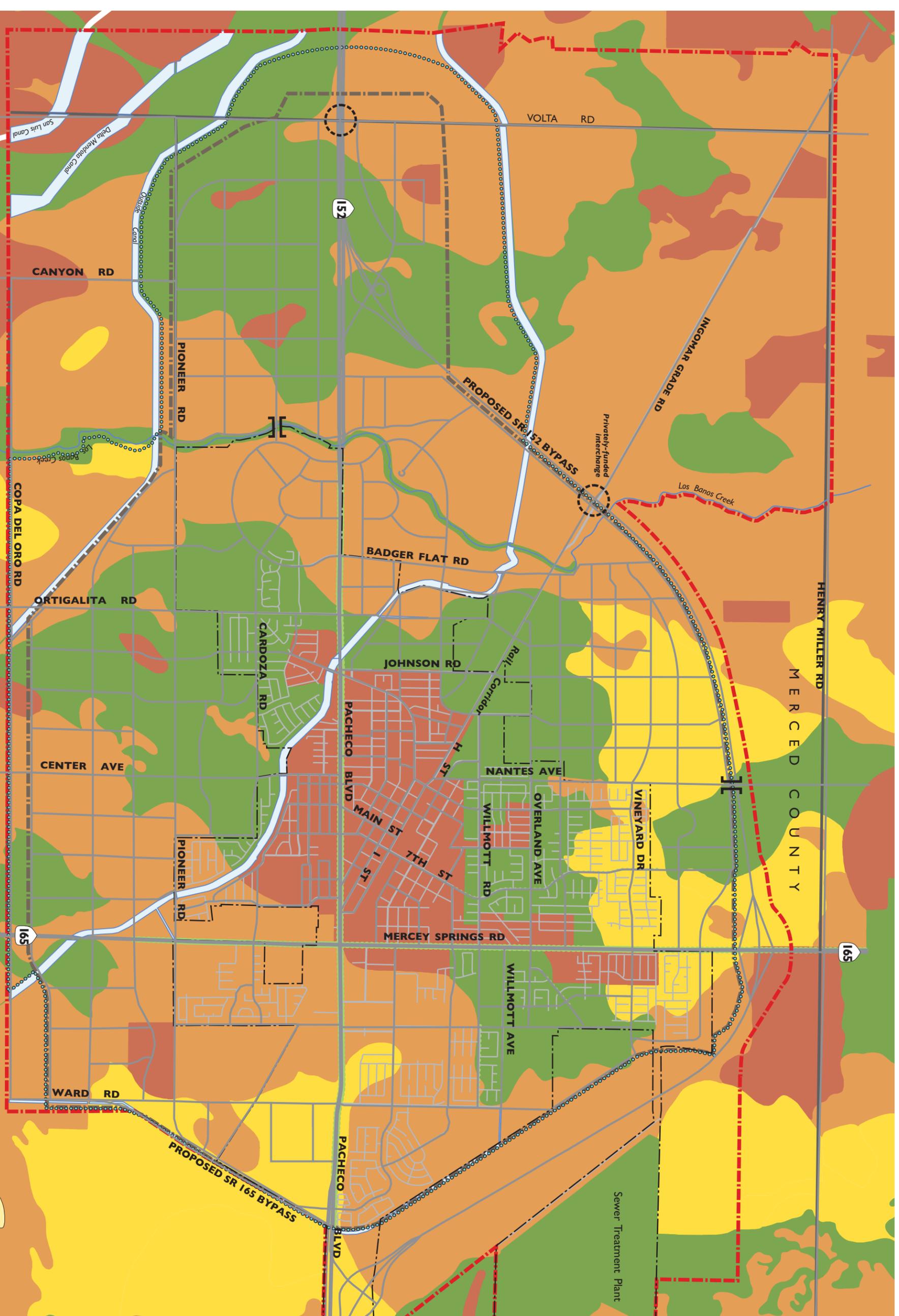
Expansive soils possess a “shrink-swell” characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering, or the placement of structures directly on expansive soils. Several portions of the Planning Area have soil with high to moderate shrink-swell potential.

### *Subsidence*

Subsidence is the gradual settling or sinking of the earth’s surface with little or no horizontal motion. Subsidence typically occurs in areas that overlie an aquifer where the groundwater level is gradually and consistently decreasing. Additionally, subsidence may also occur in the presence of oil or natural gas extraction. Areas of subsidence within the Planning Area are predominately related to groundwater withdrawal.

Figure 3.6-2 Erosion

Figure 3.6-2  
Erosion Hazards



- 0.17-0.20 - Low
- 0.24-0.28 - Moderate
- 0.32-0.37 - High
- 0.43-0.49 - Very High
- Not Classified

○ Potential New Interchange

⊥ Grade/Creek Crossing

--- Planning Area

..... Sphere of Influence

- - - Urban Growth Boundary

— City Limits

Source:  
ESA, 2005

40 acres  
10  
acres



0 1500 3000 6000  
FEET

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## **REGULATORY SETTING**

### **State Regulations**

#### *Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zones Act), signed into law in December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones by, for example, withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement (Hart, 1997). Surface fault rupture is not necessarily restricted to the area within a Fault Rupture Hazard Zone, as designated under the Alquist-Priolo Act.

#### *Hospital Facilities Seismic Safety Act of 1973*

To ensure that hospitals in California conform to high construction standards, the Alfred E. Alquist Hospital Facilities Seismic Safety Act (HSSA) was passed in 1973. The intent of the HSSA is to assure that hospitals are reasonably capable of providing services to the public after a disaster. The HSSA requires the establishment of rigorous seismic design regulations for hospital buildings and requires that new hospitals and additions to hospitals have the capacity, as far as is practical, to remain functional after a major earthquake.

#### *Seismic Evaluation and Retrofit Regulations (Senate bill 1953)*

Senate Bill (SB) 1953, passed in 1994, requires that all existing hospital buildings providing general acute care as licensed under provisions of Section 1250 of the California Health and Safety Code, be in compliance with the intent of the HSSA by the year 2030.

#### *Seismic Hazards Mapping Act*

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by CGS Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards (CGS, 1997c). Currently, Los Banos has yet to be mapped for seismic hazards.

#### *California Building Code*

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2, which is a portion of the California Building Standards Code. The California Building Standards Commission is responsible for coordinating building standards under Title 24. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to provide minimum standards to safeguard property and public welfare

by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of building and structures within its jurisdiction. The Uniform Building Code (UBC), published by the International Conference of Building Officials, is a widely adopted building code in the United States. The CBC is based on the 1997 UBC, with necessary California amendments. These amendments include significant building design criteria that have been tailored for California earthquake conditions. The national standards adopted into Title 24 apply to all occupancies in California, except for modifications adopted by State agencies and local governing bodies.

## **IMPACT ANALYSIS**

### **Significance Criteria**

Implementation of the proposed General Plan would have a potentially significant impact if it exposed people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
- Strong seismic ground shaking;
- Seismic-related ground failure, including liquefaction;
- Landslides;
- Substantial soil erosion or the loss of topsoil;
- A geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; or
- Expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994).

### **Methodology and Assumptions**

The potential for geologic and seismic impacts as a result of implementation of the proposed General Plan was reviewed and evaluated using readily available background information, such as pertinent geologic and seismic hazard maps and the location of planned development as depicted on the proposed Land Use Diagram. Key sources of technical information included the California Department of Conservation, Division of Mines and Geology (CDMG) and the United States Geologic Survey (USGS).

This analysis assumes that development in Los Banos will continue to be in compliance with pertinent local and State regulations as described in the Regulatory Setting.

### **Summary of Impacts**

Implementation of the Los Banos General Plan could result in the exposure of people or structures to potentially adverse impacts associated with earthquakes, soil erosion, liquefaction, or soil expansion due to future development and growth of the population. However, proposed General Plan policies ensure that impacts are not significant.

## Impacts and Mitigation Measures

### *Impact*

**3.6-1** *Implementation of the proposed Los Banos General Plan has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, in the event of a major earthquake, fault rupture, groundshaking, seismic related ground failure, landslide or liquefaction. (Less than Significant)*

Although a larger earthquake is likely to occur in the region of the Planning Area within the lifetime of the proposed General Plan, no surface rupture is likely because there are no active or potentially active faults in the Planning Area, and the continued construction of buildings, bridges, and other structures to current development codes would help to minimize the potential for severe damage and loss of life. No specific liquefaction hazard areas have been identified in the Planning Area; however the potential for liquefaction is recognized throughout the San Joaquin Valley.

### *Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

S-I-1 Review proposed development sites at the earliest stage of the planning process to locate any potential geologic or seismic hazard.

*Following receipt of a development proposal, engineering staff will review the plans to determine whether a geotechnical review is required. If the review is required, then the applicant will be referred to geotechnical experts for further examination.*

S-I-2 Facilitate greater safety provisions for important or critical-use structures (such as hospitals, schools, fire, police, and public assembly facilities; substations and utilities) through input during site selection and a comprehensive geotechnical investigation.

S-I-3 Require mitigation for buildings requiring a permit for structural alterations, especially un-reinforced masonry buildings, to ensure structural safety.

S-I-4 Require utilities be designed to withstand probable seismic forces to be encountered in Los Banos.

*This policy applies to underground utilities, overhead utilities including utility poles and utility equipment at sub-stations.*

S-I-5 Require preparation of a soils report as part of the development review and/or building permit process.

*The report would not be necessary when soil characteristics are known, and the City's building official determines it is not needed.*

- S-I-8        Require that alterations to existing buildings and all new buildings be built according to the seismic requirements of the Uniform Building Code.

Conformity with existing State and federal regulations in conjunction with implementation of the policies summarized above would reduce potential Impact 3.6-1 to a level that is less than significant.

***Impact***

***3.6-2 Implementation of the proposed Los Banos General Plan has the potential to result in substantial soil erosion or the loss of topsoil. (Less than Significant)***

As shown in Figure 3.6-2, the potential for soil erosion varies throughout the Planning Area, with many areas remaining "Unclassified" to date. Overall, implementation of the proposed General Plan (including the Circulation Diagram) would result in construction activities related to development projects that would involve groundbreaking and could lead to increased erosion rates on site soils. Increased soil erosion rates, especially for soils with moderate to high erosion hazards, can lead to unstable ground surfaces. Soil erosion at construction sites can increase sedimentation in nearby streams and drainage channels.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would help to reduce this impact to a level that is less than significant:

- S-I-6        Control erosion of graded areas with revegetation or other acceptable methods.

*Plant materials for revegetation should not be limited to hydro seeding and mulching with annual grasses. Trees add structure to the soil and take up moisture while adding color and diversity. Other acceptable methods to reduce erosion from grading may include construction techniques that utilize site preparation best management practices that provide erosion and sediment control to prevent construction-related contaminants from leaving development sites and polluting local waterways.*

Policies S-I-1 and S-I-5 listed under Impact 3.6-1 also help to reduce this impact and thus are incorporated here by reference.

Conformity with existing State and federal regulations in conjunction with implementation of the proposed policies summarized above would reduce potential Impact 3.6-2 to a level that is less than significant.

*Impact*

**3.6-3 *Implementation of the proposed Los Banos General Plan has the potential to create structural damage from placing development on a potentially unstable geologic unit or soil. (Less than Significant)***

The Planning Area's topography is relatively flat and is not located within a delineated Alquist-Priolo Earthquake Fault Zone. Additionally, no specific liquefaction hazard areas have been identified in Merced County and the probability of soil liquefaction actually taking place within the Planning Area is considered to be a low to moderate hazard. However, the potential for liquefaction is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high water table coincide. Additionally, subsidence in the Planning Area from groundwater removal occurs on a regional basis, so differential settlement of an individual building is unlikely.

***Proposed General Plan Policies that Reduce the Impact***

Policies S-I-1, S-I-2, S-I-3, S-I-4, S-I-5, and S-I-8 listed under Impact 3.6-1 help to reduce this impact and thus are incorporated here by reference.

Conformity with existing State and federal regulations in conjunction with implementation of the proposed policies summarized above would reduce potential Impact 3.6-3 to a level that is less than significant.

*Impact*

**3.6-4 *Implementation of the proposed Los Banos General Plan may have the potential to create risk to life or property by placing development on expansive soils. (Less than Significant)***

Soils with moderate to high shrink-swell potential do exist within the proposed General Plan Planning Area. Expansive soils require particular engineering design, site preparation, and construction practices in order to prevent structure damage from soil movement associated with moisture level changes. When these practices are employed on a project by project basis the potential for structural damage is minimal.

***Proposed General Plan Policies that Reduce the Impact***

Policies S-I-1, S-I-2, S-I-3, S-I-4, and S-I-5 listed under Impact 3.6-1 help to reduce this impact and thus are incorporated here by reference. Conformity with existing State and federal regulations in conjunction with implementation of the proposed policies summarized above would reduce potential Impact 3.6-4 to a level that is less than significant.

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## **3.7 HYDROLOGY AND WATER QUALITY**

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This section discusses a variety of hydrologic and water resource issues related to the implementation of the proposed Los Banos General Plan, including its consistency with applicable local, State, and Federal plans, policies, and regulations. Groundwater basins and surface water drainages within the City are also described, and existing water quality and flooding issues associated with these water bodies are assessed. The potential for future development under the proposed General Plan to affect water quality and flooding due to the creation of additional impervious surface area, increased storm water pollutant levels, and an increased rate or volume of storm water runoff are also analyzed.

### **ENVIRONMENTAL SETTING**

#### **Surface Water**

The City's Planning Area is located within the Middle San Joaquin-Lower Chowchilla watershed, which lies within the greater San Joaquin Hydrologic Sub-basin as defined by the California Department of Water Resources. Primary surface water features in the Planning Area include a variety of human-made water conveyance canals including the Main Canal, San Luis Canal, and the Santa Fe Canal. The Los Banos Creek, a seasonal water feature, also flows through the Planning Area. Figure 3.7-1 shows these water features.

The topography of Los Banos and surrounding areas is relatively flat, with the ground surface sloping from southwest to northeast. Los Banos Creek intercepts surface water runoff from the area immediately west of the City. The area northeast of the Main Canal is generally drained into the San Luis Canal, which flows through the Los Banos State Wildlife Area, northeast of the City.

#### **Groundwater**

The City of Los Banos is located in the Delta-Mendota Groundwater Basin of the San Joaquin River Hydrologic Region. Currently, Los Banos utilizes the underlying groundwater to meet all of the City's water supply needs. The City's water supply is drawn from 13 wells located throughout the Los Banos Planning Area. Of this total, one well is over the maximum contaminant level (MCL) of 10 milligrams per liter for arsenic, and one is at the gross alpha MCL (EMC, 2006). The locations of these wells are scattered throughout the City, generally within City Limits. According to the City of Los Banos Public Works Department, 2.2 billion gallons of water was served in 2003. During peak months the water usage is still well below capacity. Currently, pumped water is stored in a 100,000-gallon water tower. The City of Los Banos Public Works Department proposes to install a 5,000,000-gallon above-ground water storage tank in order to meet future needs.

Groundwater recharge occurs primarily from deep percolation of applied irrigation water and rainfall. The rate of recharge depends on the permeability of the surface and subsurface materials. Since 1998, the City has embarked on a ground water recharge program with CCID using Stockton Pond as the point of recharge. Treated wastewater from the Waste Water Treatment Plant (WWTP) is also discharged into pasture land to replenish the underground water supply.

The City of Los Banos Year 2000 Water Master Plan (Stoddard and Associates, 2000) identified that while the quantity and quality of groundwater is adequate for current development, future development within areas outside of the existing City Limits will need to be served with additional water infrastructure and capacity. To meet these future water demands, the 2000 Water Master Plan

recommends the placement of additional wells in the western portion of the Planning Area, where recharge by Los Banos Creek can maintain groundwater at current levels. The water in this area is also of higher quality due to the recharge influences of Los Banos Creek, which minimizes concentrations of undesired chemicals. Additional discussion of water supply can be found in the Public Utilities section of this EIR.

### **Flooding**

Storm water disposal capacity is a function of the volume of discharged water and the rate at which the water moves through a particular system. When the capacity of the creeks and/or pipelines of a drainage system are not sufficient or flow rates are low due to streambed conditions or stream length, drainage system efficiency is reduced and flooding can occur.

The entire City of Los Banos is located within Zone X, which is outside any flood prone areas (see **Figure 3.7-2**) according to the United States Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (Community Panel Number 06047C0850E, August, 1995). However, the City is within the inundation area for a catastrophic dam failure of the San Luis Reservoir and Los Banos Creek Detention area. The State Department of Water Resources has judged all of the dams in Merced County to be safe and the possibility of dam failure remote. In addition, the City maintains emergency plans and an early warning system.

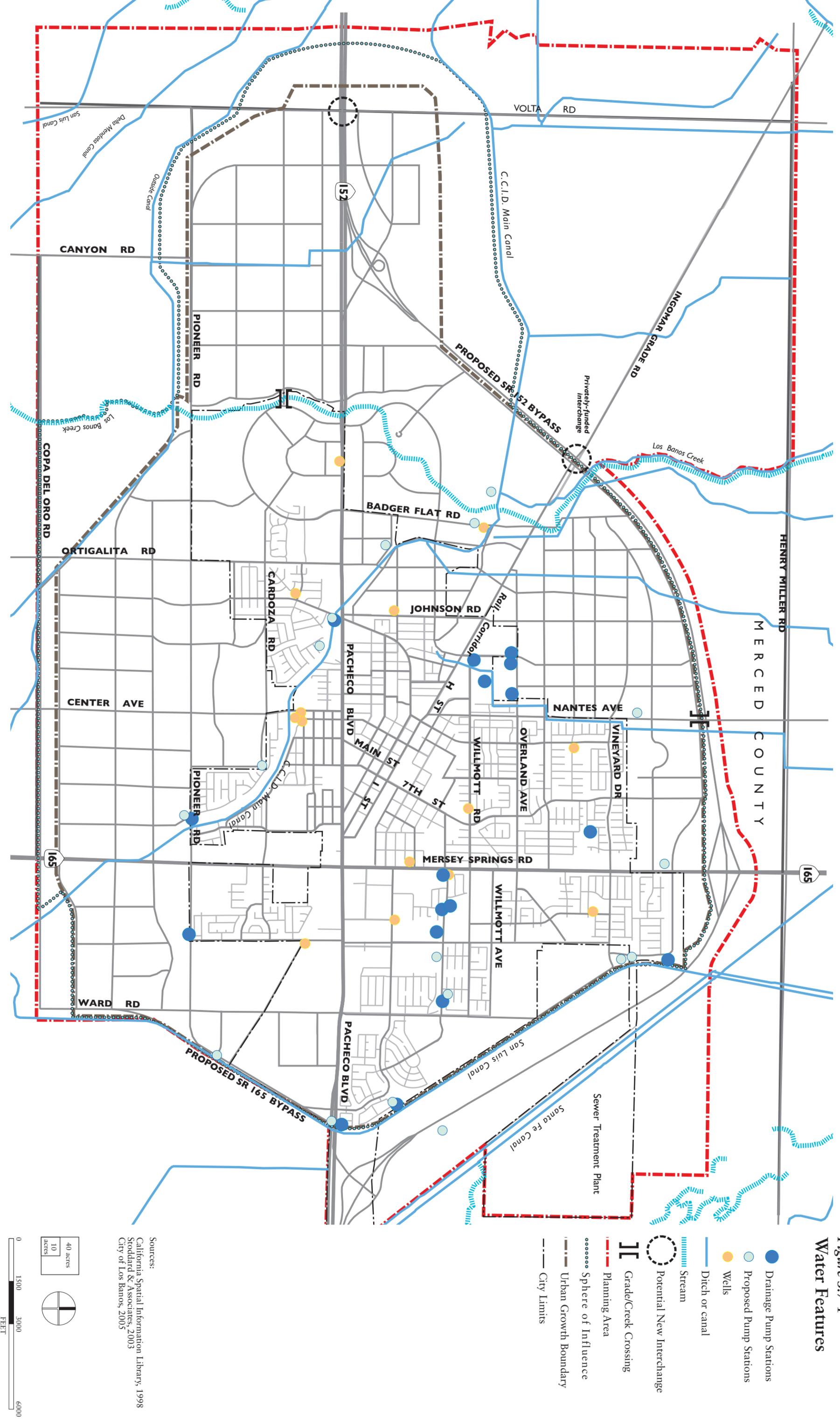
### **Water Quality**

During periods of wet weather, rain carries pollutants and sediments from all parts of a watershed into surface water bodies such as storm drains, streams, rivers, reservoirs, or marshes. In an urban setting, natural drainage patterns have been altered and storm water runoff, as well as non-storm discharge (irrigation water, accidental spills, washdown water, etc.), picks up sediments and contaminants from land surfaces, and transports these pollutants into surface and ground water. The diffused sources of pollutants range from: parking lots, bare earth at construction sites, agricultural sites, and a host of many other sources. Therefore, storm water discharged to surface waters may carry pollution from “nonpoint” sources. The total amount of pollutants entering aquatic systems from these diffused, non-point sources is now generally considered to be greater than that from any other source, such as pipe discharges (point source).

Surface water quality in the Planning Area canals is generally considered to be fair, and available data indicates that surface water quality in Los Banos Creek, when flowing, is good. Groundwater quality throughout the area is suitable for most urban and agricultural uses with only local impairments. The primary factor affecting the reliability of the City’s water supply is the limited quantity of groundwater meeting drinking water standards as opposed to a limit in the supply of groundwater. As mentioned above, one of the City’s 13 wells is over the MCL for arsenic, and one is at the gross alpha MCL (EMC, 2006). In the future, groundwater constituents such as salinity, manganese, uranium, and nitrates have the potential to reduce the desirability and affordability of using groundwater for drinking purposes.

Figure 3.7-1: water features

Figure 3.7-1  
Water Features



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## REGULATORY SETTING

Regulatory authorities exist on both the State and federal levels for the control of water quality in California. The major federal legislation governing the water quality aspects of the proposed Los Banos General Plan is the Clean Water Act, as amended by the Water Quality Act of 1987. The objective of the act is “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The State of California’s Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) provides the basis for water quality regulation in California. The State Water Resources Control Board (SWRCB) administers water rights, water pollution control, and water quality functions throughout the State, while the Regional Water Quality Control Boards (RWQCBs) conduct planning, permitting, and enforcement activities.

### State and Regional Water Quality Control Board

The primary responsibility for the protection and enhancement of water quality in California has been assigned by the California legislature to the SWRCB and the nine RWQCBs. The SWRCB provides State-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of State and Federal laws and regulations. The RWQCBs adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems.

The Planning Area lies within the jurisdiction of the Central Valley RWQCB, which has adopted the Water Quality Control Plan for the San Joaquin River Region (Basin Plan) to implement plans, policies, and provisions for water quality management. Beneficial uses of ground and surface waters within the San Joaquin River Region are described in the Basin Plan.

Both the SWRCB and the U.S. Environmental Protection Agency (US EPA), Region 9, have been in the process of developing new water quality objectives and numeric criteria for toxic pollutants for California surface waters since 1994, when a State court overturned the SWRCB’s water control plans containing water quality criteria for priority toxic pollutants. US EPA’s California Toxics Rule (CTR) was promulgated in 2000. The criteria largely reflect the existing criteria contained in US EPA’s 304(a) Gold Book (1986) and its National Toxics Rule (NTR) adopted in December 1992 [57 Federal Register 60848], and those of earlier state plans (the *Inland Surface Waters Plan* and the *Enclosed Bays and Estuaries Plan* of April 1991 have since been rescinded). With promulgation of the Final CTR, these federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

### *Section 303(d) of the Clean Water Act - Total Maximum Daily Load (TMDL)*

California has identified waters that are polluted and need further attention to support their beneficial uses. These water bodies are listed pursuant to Clean Water Act Section 303(d), which requires states to identify these polluted waters. Specifically, Section 303(d) requires that each state identify water bodies or segments of water bodies that are “impaired” (i.e., not meeting one or more of the water quality standards established by the state). Approximately 500 bodies of water or segments have been listed in California. Once the water body or segment is listed, the state is required to establish “Total Maximum Daily Load,” or TMDL, for the pollutant causing impairment. The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating water quality standards. Listing a water body as impaired does not necessarily suggest that the

pollutants are at levels considered hazardous to humans or aquatic life or that the water body segment cannot support beneficial uses. The intent of the 303(d) list is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for continued water quality degradation.

In accordance with Section 303(d) of the Water Act, the Central Valley RWQCB has identified impaired bodies of water within its jurisdiction, the pollutant or stressor impairing water quality, and prioritized the urgency for developing a TMDL. Located just east of the Planning Area (in the Los Banos Wildlife Area), Mud Slough is the nearest body of water currently included on the Section 303(d) list. The only identified pollutant found in Mud Slough was selenium, with the potential source being identified as agriculture.

### *Construction Activity Permitting*

The SWRCB administers the NPDES Permit Program through its General NPDES Permit. Construction activities of one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). A project sponsor must submit a Notice of Intent to the SWRCB in order to be covered by the General Permit prior to the commencement of construction. The General Construction Permit requires the preparation and implementation of a storm water pollution prevention plan (SWPPP), which must be prepared before construction begins. Components of SWPPPs typically include specifications for best management practices (BMPs) that must be implemented during project construction in order to minimize the discharge of pollutants in storm water from the construction area. In addition, a SWPPP includes measures to minimize the amount of pollutants in runoff after construction is completed, and identifies a plan to inspect and maintain project BMPs and facilities.

## **IMPACT ANALYSIS**

### **Significance Criteria**

Implementation of the proposed General Plan would have a potentially significant impact if it would:

- Violate water quality standards;
- Alter existing drainage patterns of the area, including stream or river course, in a manner which would result in substantial erosion or siltation on-or offsite or increase sediment loads thereby affecting water quality;
- Increase substantially nonpoint-source pollution entering storm water runoff and entering the regional storm drain system or surrounding water resources (from either construction or long-term development);
- Increase substantially construction-related erosion (including erosion from cut-and-fill slopes) and sedimentation into surface waters;
- Disrupt a creek or stream channel;
- Increase rates and amounts of runoff due to additional impervious surfaces, higher runoff values, or alterations to drainage systems that could cause potential flood hazards;
- Make storm drainage systems inadequate to accommodate 100- year flood flows; or

- Result in development within the 100-year flood zone.

### **Methodology and Assumptions**

The analysis considered proposed General Plan guiding and implementing policies, hydrologic conditions within the Planning Area, and applicable regulations and guidelines. Consideration is given to potential increases in hazardous material use, creation of new impervious surface area, erosion associated with future development related to construction activities, and other results of growth.

Implementation of proposed Los Banos General Plan may require the construction of new utility infrastructure (including storm water drainage facilities) within areas currently designated as open space or for agricultural activities (including lands designated as Important Farmlands by the Department of Conservation). Similar to any other development in areas of new growth, the construction of these facilities could result in the permanent conversion of agricultural lands or other open space lands. These impacts to agricultural or open space resources are more fully described in section 3.1, Land Use, Housing and Agriculture.

### **Summary of Impacts**

Potential impacts associated with implementation of the Los Banos General Plan include increased rates of stormwater runoff and subsequent flooding hazards, erosion, increases in nonpoint source pollutants and degradation of water quality in surface water resources, and a reduction in groundwater recharge. However, proposed General Plan policies, fully implemented, are sufficient to reduce all water resource and water quality impacts to less than significant levels.

### **Impacts and Mitigation Measures**

#### *Impact*

*3.7-1 New urban land uses and increased intensity of urban land uses could increase stormwater runoff rates, overwhelm storm drain capacity, decrease groundwater recharge, diminish surface water quality and cause flooding in downstream receiving waters. (Less than Significant)*

Increased urban development, such as that proposed under the General Plan (including the Circulation Diagram), is generally accompanied by decreases in natural ground cover and an increase in impervious surfaces (such as paved areas and buildings). Increasing the area of impervious surface reduces the amount of rain that can be absorbed by the land and increases stormwater runoff, as well as decreasing groundwater recharge. Development may also cause erosion, such as when ground is cleared for construction, resulting in the siltation of creeks and reduction of their capacity to accommodate stormwater flows.

#### *Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would help to reduce this impact to a level that is less than significant:

POSR-I-36 Engage the business community in protecting the City's water supply.

*The City will develop a priority list of businesses that may impact water quality as a result of the services they provide and give recognition to businesses that actively promote activities that reduce or eliminate stormwater pollution.*

POSR-I-37 Encourage the use of enhanced stormwater control facilities that provide additional filtration of stormwater to remove pollutants prior to discharge to pastureland or the Grasslands Water District.

*Enhanced stormwater control facilities may include drainage service areas and regional stormwater facilities, including stormwater detention and stormwater quality basins within these service areas. This will be accomplished in partnership with the Central California Irrigation District, the Department of Water Resources, and the Grasslands Water District.*

POSR-I-38 Work with Central California Irrigation District to provide for water recharge and to ensure reasonable amounts of water delivery for recharge during drought periods.

POSR-I-39 Promote the combined use of recharge areas, public recreation, wetland mitigation programs and banking, as part of the City's open space or recreational trail system to the extent deemed feasible by good engineering or geotechnical practice.

*Such programs may be jointly or individually managed by the City of Los Banos.*

POSR-I-40 Actively monitor groundwater quality and quantity throughout the Planning Area.

S-I-6 Control erosion of graded areas with revegetation or other acceptable methods.

*Plant materials for revegetation should not be limited to hydro seeding and mulching with annual grasses. Trees add structure to the soil and take up moisture while adding color and diversity. Other acceptable methods may include construction techniques that utilize site preparation, grading, and best management practices that provide erosion and sediment control to prevent construction-related contaminants from leaving development sites and polluting local waterways.*

S-I-11 Require new development to prepare hydrologic studies and implement appropriate mitigation measures to minimize surface water run-off and reduce the risk of flooding.

*Developers will be required to provide an assessment of a project's potential impacts on the local storm drainage system as part of the development review process. If development is found to have a negative impact on storm drainage, mitigation measures such as the creation of detention basins, provision of additional landscaped areas, and the use of permeable paving in driveways and parking areas, will be required. In addition to defining needed storm*

*drainage improvements, the assessments shall provide an estimate of the construction and maintenance costs associated with these improvements.*

S-I-12 Require developers to provide for the ongoing maintenance of detention basins.

*If wetlands are affected, maintenance of detention basins may include mitigation monitoring in compliance with regulatory requirements.*

S-I-13 Maintain and regularly update the Storm Drain Master Plan.

PFU-I-14 Design stormwater and wastewater collection and treatment facilities to serve expected buildout of the areas served by these facilities.

*The City Public Works Department will evaluate the adequacy of wastewater collection and treatment in areas where development is anticipated to occur, and require developers to construct backbone infrastructure consistent with the Wastewater Master Plan and Storm Drain Master Plan. The development shall be reimbursed for these trunklines based on actual costs not to exceed the project costs identified in the master plan reports with cost of construction escalation. Individual development projects will be responsible for construction of all collection lines for wastewater, storm drainage, and sewerage.*

Implementation of the proposed policies summarized above would reduce potential Impact 3.7-1 to a level that is less than significant.

### ***Impact***

***3.7-2 New and increased intensity of urban land uses could result in increased levels of nonpoint source pollutants in stormwater runoff, adversely affecting water quality in receiving water bodies. (Less than Significant)***

Nonpoint pollution includes oil and exhaust from cars that settles on city streets and parking lots and is washed into local waterways during storm events. Pollutants also include sedimentation caused by erosion from such activities as ground clearing for construction, chemicals used for lawn and garden maintenance, and litter. New and increased levels of urban land uses under the proposed General Plan will increase the level of nonpoint pollution through the creation of new impervious surface areas, intensification of hazardous material use, and other factors that could ultimately wash to area creeks and canals.

### ***Proposed General Plan Policies that Reduce the Impact***

Policies POSR-I-34, POSR-I-35, POSR-I-36, POSR-I-37, POSR-I-38, S-I-6, S-I-9, and S-I-10 summarized under Impact 3.6-1 reduce this impact and thus are incorporated here by reference.

Implementation of the proposed policies summarized above would reduce potential Impact 3.7-2 to a level that is less than significant.

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## 3.8 BIOLOGICAL RESOURCES

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This section presents the environmental setting and impact analysis for biological resources in the proposed Los Banos General Plan Planning Area (the “Planning Area”).

### ENVIRONMENTAL SETTING

#### Physical Setting

The City of Los Banos lies at the edge of the larger San Joaquin Valley eco-region, with portions of two key open space areas, the Grasslands Ecological Area (GEA) and the Pacific Flyway, neighboring to the east. Biological resources within the Planning Area are largely those associated with farmland, small isolated wetlands and the riparian habitat along Los Banos Creek. To the east, the GEA is considered the largest wetland complex in California. Wetlands are ecologically complex habitats that support a variety of plant and wildlife species. The GEA boundary is a non-jurisdictional border established by the U.S. Fish and Wildlife Service for the purpose of designating an area in which public easements for wetland conservation may be purchased. This area of year-round and seasonal wetlands, riparian corridors, and native grasslands provides habitat for over 550 species of plants and animals, including 47 species that have been federally listed as threatened, endangered or sensitive.

The Flyway is an important concentration area for ducks early in the fall, and by some estimates, the wetlands near the Planning Area are used by 30 percent of the Pacific Flyway wintering duck population (City of Los Banos General Plan, May 19, 1999). Isolated emergent wetlands within the Planning Area also may be used by wild fowl.

#### *Habitats*

Wildlife habitats provide food, shelter, movement corridors, and breeding opportunities for a variety of wildlife species. Habitats are classified in broad terms with an emphasis on vegetation structure, and include other elements such as vegetation species composition, soil structure, and water availability. Some wildlife species are generalists and may use a variety of habitats, while other species may be restricted to one habitat type. Species that are restricted to a single habitat type are more susceptible to habitat loss than are generalists, and are more likely to experience population declines. These species are presented in greater detail later in this section.

Habitats are not distinct features that can be managed in isolation from each other. More common wildlife species, such as the western scrub jay and the American crow frequently use more than one habitat type. They may use riparian habitat for breeding sites, resting sites, cover while moving from one area to another, or thermal cover, and range into open upland grasslands, scrub, or over open water to forage. Frequently it is at the edges of habitats, or where they transition from one habitat to another, that the greatest number of these more common wildlife species will be found.

The Planning Area contains mostly human-influenced habitats. As shown in **Figure 3.8-1**, the vast majority of these areas include urban and agricultural areas. Native habitats such as valley-foothill riparian, alkali desert scrub, and freshwater emergent wetlands exist in the Planning Area where they are affected by activities associated with regional agriculture and urban development. These habitats, as classified in the Guide to Wildlife Habitats of California (CDFG, 1988), are listed and briefly described below. Habitats present in the Planning Area, and acreage calculations, are based on the California Department of Forestry and Fire Protection’s Multi-source Land Cover Data v2 (2002)

which was re-classified following a reconnaissance survey and using aerial photo interpretation. A summary of the acreages for each habitat type in the Urban Growth Area and the larger Planning Area is provided below in Table 3.8-1. A brief description of each habitat type found within the Urban Growth Boundary and within the larger Planning Area is also provided below.

**Table 3.8-1: Summary of Habitats within the Urban Growth Boundary and the Planning Area**

Habitat Type	Acre Within the Urban Growth Boundary	Acre Within the Planning Area
Urban	7,880	8,628
Agriculture	5,292	12,388
Alkali Desert Scrub	0	6
Annual Grassland	83	769
Freshwater Emergent Wetland	0	51
Pasture	0	50
Valley-Foothill Riparian	5	5
Water	1	1

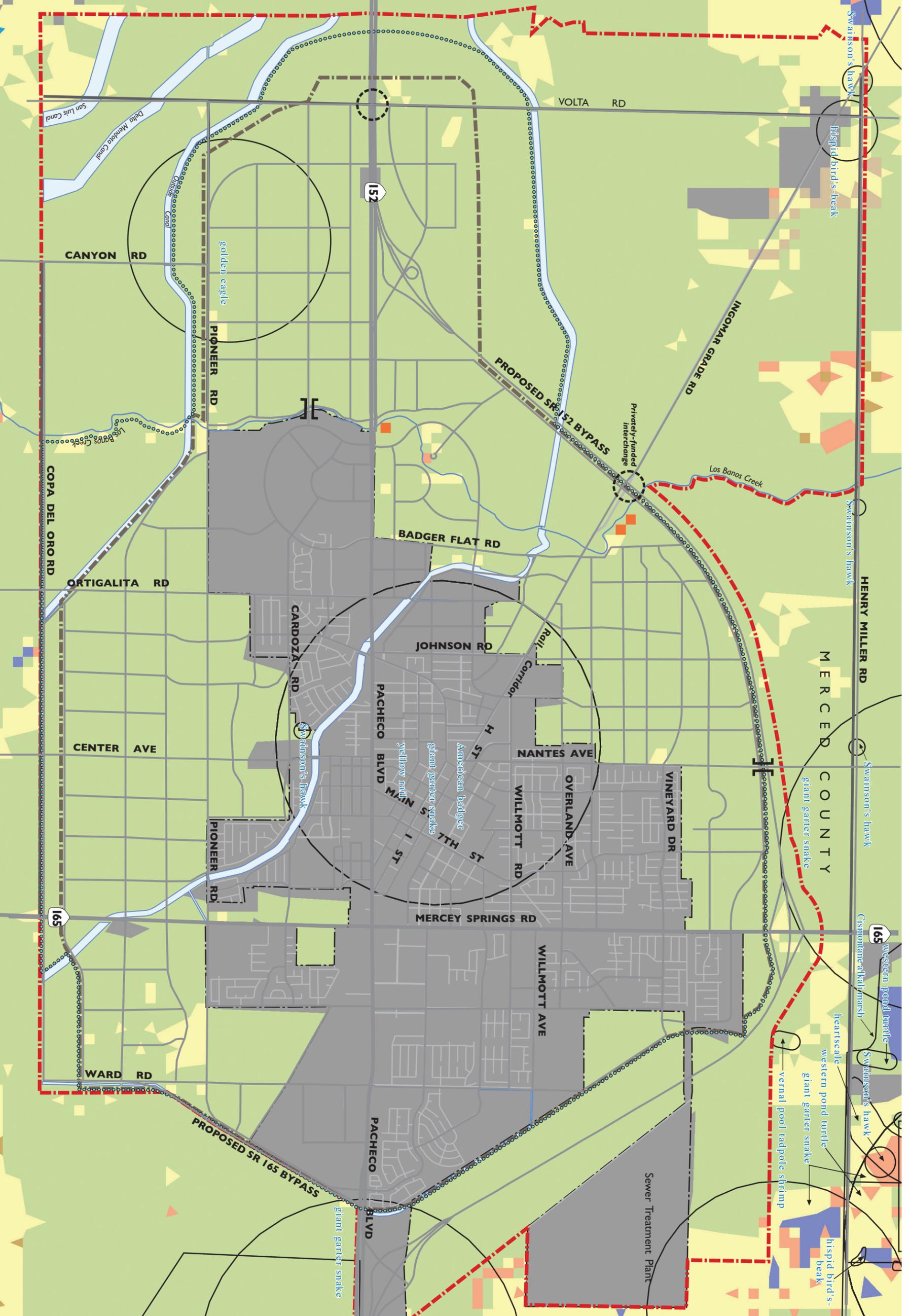
Source: Dyett & Bhatia, 2007.

**Agriculture.** Over 90 percent of the habitat in the Planning Area (12,388 acres) and 98 percent of the habitat within the Urban Growth Boundary (UGB) is agricultural land, which can be broken down into several key categories including cropland, orchard, and vineyard. Agriculture habitats occur throughout the Planning Area in large adjoining parcels. Croplands comprise the majority of the agricultural lands; vegetation includes a variety of sizes, shapes, and growing patterns. Plants may either be annual (e.g. tomatoes) or perennial (e.g. alfalfa), and when grown in rows provide a varying amount of bare ground between rows. Annual crops are usually planted in spring and harvested in summer or fall. However, they may be planted in rotation with other irrigated crops. Some agriculture fields are flooded, this flooding may be required by the type of crop produced (e.g. rice), or may be a management tool to meet other objectives. Orchards and vineyards typically are composed of a single species, and are evenly spaced in uniform rows. Crops are typically grown on the most fertile soils, and typically have lower habitat values than the native habitats they replaced.

Many species of rodents and birds have adapted to agricultural areas, with some considered agricultural pests. Agricultural practices can provide benefits to wildlife. Swainson’s hawks (*Buteo swainsoni*) forage on agricultural fields; flooding of agricultural fields in the fall and winter provides habitat and foraging opportunities for waterfowl; and irrigation ditches and canals provide movement corridors and foraging habitat for giant garter snakes (*Thamnophis gigas*). Agricultural habitats provide food and water for many species, but do not generally provide long-term shelter due to the frequency of their disturbance.

Figure 3.8-1 Special Status Species and Habitat

Figure 3.8-1  
Special Status Species  
and Habitat



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Within the region, the extensive irrigation of farmlands has led to continual leaching of the naturally-occurring mineral selenium from the soil which then is concentrated in wetland areas into which agricultural run-off drains. The elevated levels of selenium are known to cause reproductive failure in wildlife species, particularly waterfowl.

**Alkali Desert Scrub.** Alkali desert scrub is composed primarily of chenopods, including saltbush and black greasewood. This habitat can often be divided into two phases: xerophytic, open widely spaced stands with low-lying shrubs, and halophytic, closer spaced stands that can tolerate some degree of flooding (CDFG, 1998). This habitat occurs in small patches clumped in the northern and southwestern portions of the Planning Area (about 6 acres). Several special status species use alkali desert scrub including blunt-nosed leopard lizard (*Gambelia sila*), San Joaquin whipsnake (*Masticophis flagellum ruddocki*), California horned lizard (*Phrynosoma coronatum*), and Nelson's antelope ground squirrel (*Ammospermophilus nelsoni*). There are no acres of this habitat within the UGB except within approved development projects.

**Annual Grassland.** This habitat is annual herbaceous vegetation with little structural complexity. Within the Planning Area, it is mostly composed of the non-native grasses series, often dominated by wild oats, soft chess, red brome, and wild barley (CDFG, 1998). Many animal species also use annual grassland habitat frequently including special status species such as burrowing owls (*Athene cunicularia*), badgers (*Taxidea taxus*), and San Joaquin kit foxes (*Vulpes macrotis mutica*); as well as more common species including black-tailed jackrabbits, western harvest mice, and coyotes. This is the second most abundant habitat types (about 769 acres) within the Planning Area and occurs in small patches scattered throughout the Planning Area. Within the UGB, this habitat exists only in smaller isolated locations, with a total of 83 acres or 10 percent of the Planning Area total potentially converted by proposed new development.

**Freshwater Emergent Wetland.** Freshwater emergent wetlands can be characterized by the perennial monocots, often more than six feet tall, that dominate this habitat and the presence of hydric soils; some portions of this habitat are permanently flooded, while others are only seasonally flooded. Freshwater emergent wetlands support some of the highest wildlife diversity in California, providing food, water, and cover for numerous bird, mammal, reptile, and amphibian species. In the Planning Area, giant garter snakes (*Thamnophis gigas*), western pond turtles (*Emys marmorata*), tricolored blackbirds (*Agelaius tricolor*), and Aleutian Canada geese (*Branta canadensis leucopareia*) all use freshwater emergent wetland habitats. Small patches of area within the Planning Area are classified as freshwater emergent wetland (51 acres). There are no acres of wetlands potentially affected by new development.

**Pasture.** This habitat is present in a few small patches within the Planning Area (about 50 acres); these patches occur in the northern portion of the Planning Area and are often associated with or surrounded by Agriculture and Annual Grassland habitats. Pasture habitats comprise a mix of perennial grasses and legumes that provide 100 percent canopy cover. Height is variable, according to season, the type of livestock, and the livestock stocking rates. In Merced County, pastures are often flooded in the fall and winter to provide waterfowl hunting opportunities, and are grazed in the summer. Pastures are usually associated with poorer soils that are not suitable for growing crops and provide habitat for numerous species. Pastures provide food for many birds including Aleutian Canada geese (*Branta canadensis leucopareia*), sandhill cranes (*Grus canadensis*), raptors, shorebirds, gulls, and other waterfowl.

Urban. Large portions of the Planning Area (roughly 8,628 acres total, 7,880 within the UGB and the rest irrigated land associated with the wastewater treatment plant) are best characterized as urban habitat. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species. This habitat type varies structurally, and can be categorized into three zones: downtown, urban residential, and suburbia. Downtown, the most heavily developed, is usually at the center, followed by concentric zones of decreasing development and increasing vegetative cover through urban residential to the suburbs. Both native and exotic plant species are valuable, with exotic species providing a good source of additional food in the form of fruits and berries, and cover. Wildlife species richness and diversity increases along this same gradient. These areas provide cover and foraging opportunities for some wildlife species, especially those adapted to human disturbance. Common examples include raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaidura macroura*), Anna's hummingbird (*Calypte anna*), and European starling (*Sturnus vulgaris*).

**Valley Foothill Riparian.** Within the Planning Area, three small patches of riparian habitat occur near Los Banos Creek (5 acres). Many species of wildlife use this habitat type for movement corridors, foraging, cover, and breeding. Recent estimates of this habitat remaining in California range from 2–15; native riparian habitats have been recognized as an important component of properly-functioning ecosystems, and have been identified as the most important habitat to land-bird species (RHJV, 2000). The 5 acres of this habitat that exist in the Planning Area are also within the UGB, however, they are contained within a proposed riverside park and will not be developed.

**Water Resources.** Within the Planning Area, water habitats can be composed of flooded agricultural fields, riverine and lacustrine habitat, or freshwater emergent wetlands. The amount of water present in the Planning Area will vary seasonally. Within the Planning Area, riverine habitats are composed of rivers and streams (e.g. Los Banos Creek) or irrigation ditches and are defined by the presence of permanent or intermittent running water. Lacustrine habitats are primarily ponds containing open standing water. These habitats provide roosting, foraging and cover opportunities for numerous species, including waterfowl, sandhill cranes (*Grus canadensis*), western pond turtles (*Emys marmorata*), and giant garter snakes (*Thamnophis gigas*).

### **Special Status Species**

Special-status species are those plants and animals that, because of their acknowledged rarity or vulnerability to various causes of habitat loss or population decline, are recognized in some fashion by federal, state, or other agencies as deserving special consideration. According to records maintained by the United States Fish and Wildlife Service and the California Department of Fish and Game, several locations within the Planning Area are considered both known and potential habitat for several special status plant and animal species. **Figure 3.8-1** illustrates the locations of potential and known special status species sightings within the Planning Area along with radii representing occurrences within a particular area, assuming that the habitat for that species is still present.

The habitats located within the Planning Area have the potential to include a variety of special status species. Special status plant and wildlife species known or having the potential to occur in the Planning Area is identified below in **Table 3.8-2**, and discussed below. Information in the table

includes a brief description of each species along with a list of habitat areas where the species may occur.

Heartscale (*Atriplex cordulata*) is a CNPS 1B species that is commonly found in Alkali scrub habitat, alkali seasonal wetlands and grassland. This plant is often found in the sandy soils of alkaline flats and scalds in the Central Valley up to 1,200 feet in elevation. The CNDDDB contains a record of this species outside and northeast of the Planning Area; however, the potential for this species to occur in the Planning Area is high.

Hispid bird's beak (*Cordylanthus mollis ssp. Hispidus*) is a CNPS 1B listed species that is commonly found in meadows and seeps, playas, and in valley and foothill grassland communities with alkaline substrate up to 510 feet in elevation. The CNDDDB contains a record of this species within the northwest portion of the Planning Area.

Sanford's arrowhead (*Sagittaria sanfordii*) is a CNPS 1B listed species that is commonly found in marshes and swamps, assorted shallow freshwater features up to 2,000 feet in elevation. Project Area contains potentially suitable habitat and is within the range of this species.

Vernal pool tadpole shrimp (*Lepidurus packardii*) is listed as federally Endangered species. The life cycle for this species is restricted to vernal pools. The CNDDDB contains a record of this species in the grassland area of the GEA.

Giant garter snake (*Thamnophis gigas*) is listed as a federally Threatened and California Threatened species. This species generally inhabits marshes, sloughs, ponds, slow-moving streams, ditches, and rice fields which have water from early spring through mid-fall, emergent vegetation (such as cattails and bulrushes), and they need open areas for sunning, and high ground for hibernation and escape cover. The CNDDDB contains a record of this species within the in the UGB and in the Planning Area. Numerous occurrences just east of the Planning Area have also been documented.

The western pond turtle (*Clemmys marmorata marmorata*) is a California special concern species associated with permanent or nearly permanent water in a wide variety of habitats. It requires rocks, logs, or exposed soil for basking sites and may nest up to 0.3-mile (0.5-km) away from water. The CNDDDB contains a record of this species northeast of the Planning Area; however, the potential for this species to occur in the Planning Area is high.

Yellow rail (*Coturnicops noveboracensis*) is California Species of Special Concern that winters in coastal marsh and historically known from freshwater marsh. CNDDDB contains a record from 1911 of this species within the Planning Area. This species may winter in freshwater marshes, and potentially Los Banos Creek.

Golden eagle (*Aquila chrysaetos*) is a California Species of Special Concern. Forages over open terrain and nests on cliffs and trees. The CNDDDB contains a record of this species within the in the western portion of UGB, in the agricultural grassland area.

American badger (*Taxidae taxus*) is a State Species of Concern. In California, badgers occupy a diversity of habitats. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, and mountain meadows near timberline are

preferred. American badgers have been recorded in the UGB and in the grassland area northeast of the Planning Area.

San Joaquin kit fox (*Vulpes macrotis mutica*) is a federally listed as Endangered and California Threatened species. This species occurs in native valley and foothill grasslands and chenopod scrub communities of the valley floor and surrounding foothills, and prefers open level areas with loose-textured soils supporting scattered, shrubby vegetation and little human disturbance. The CNDDDB contains a record of this species in the southwestern portion of the Planning Area, but outside of the UGB.

## **REGULATORY SETTING**

Relevant federal, State, and local guidelines specific to biological resource issues are discussed in this section.

### **Federal Regulations**

*Clean Water Act – Section 404.* Wetlands and other waters of the U.S. are subject to jurisdiction by the Army Corps of Engineers and EPA under Section 404 of the Clean Water Act. Wet areas that are not regulated by this act would include stock watering ponds, agricultural ditches created in upland areas, and isolated wetlands that do not have a hydrologic link to other waters of the U.S., either through surface or subsurface flow. The discharge of fill into a jurisdictional feature requires a permit from the Corps.

The Corps has the option to issue a permit on a case-by-case basis (individual permit) or at a program level (general permit). Nationwide permits (NWP) are an example of general permits; they cover specific activities that generally have minimal environmental effects. Activities covered under a particular NWP must fulfill several general and specific conditions, as defined by the NWP. If a proposed project cannot meet these conditions, an individual permit may be required.

*Federal Endangered Species Act.* The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (16 USC Section 153 et seq.) and thereby has jurisdiction over federally listed threatened, endangered, and proposed species. Projects that may result in “take” of a listed species must consult with the USFWS. Federal agencies that propose a project that may affect a listed species are required to consult with the USFWS under Section 7 of the federal Endangered Species Act. If it is determined that a federally listed species may be adversely affected by the federal action, the USFWS will issue a Biological Opinion to the federal agency that describes minimization and avoidance measures that must be implemented as part of the federal action. Projects that do not have a federal nexus must apply for a take permit under Section 10 of the Act. Section 10 of the Act requires that the project applicant prepare a habitat conservation plan as part of the permit application.

Under the federal Endangered Species Act the USFWS designates Critical Habitat, areas that are essential for the conservation of a threatened or endangered species and which may require special management considerations. A designation only applies to projects with a federal nexus; it has no specific regulatory impact on landowners who take actions on their land that do not involve Federal funding. However, Federal agencies must consult with the USFWS before taking actions that could harm or kill protected species or destroy their habitat.

*Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act.* The Migratory Bird Treaty Act (MBTA, 16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668) protect certain species of birds from direct take. The MBTA protects migrant bird species from take through the establishment of hunting limits and seasons and protecting occupied nests and eggs. The Bald and Golden Eagle Protection Act prohibits the take or commerce of any part of these species. The USFWS administers both acts, and reviews federal agency actions that may affect species protected by the acts.

### **State Regulations**

*California Fish and Game Code Sections 1600 – 1616.* The CDFG regulates the modification of streams, rivers, and lakes under Sections 1600-1616 of the California Fish and Game Code. Modification includes diverting, obstructing, or changing the natural flow or bed, channel, or bank of a regulated feature. While most of the features regulated by the Fish and Game Code meet the definition of other waters of the U.S., the Code may regulate some ephemeral features that do not have all the criteria to qualify as other waters of the U.S. A project proponent, including both private parties and public agencies, proposing an activity that may modify a feature regulated by the Fish and Game Code must notify the CDFG before project construction. The CDFG will then decide whether to enter into a Streambed Alteration Agreement with the project proponent. The State Water Resources Control Board (SWRCB), acting through the Regional Water Quality Control Board (RWQCB), must certify that a Corps permit action meets state water quality objectives (Section 401 of the federal Clean Water Act).

*California Fully Protected Species.* Prior to the enactment of CESA, the CDFG used the designation of “Fully Protected” to identify species that had been given special protection by the California legislature by a series of statutes codified in Sections 3503.5, 3505, 3511, 3513, 4700, 4800, 5050, and 5515 of the California Fish and Game Code. Many fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations; however, because the original statutes have not been repealed, the legal protection they give the species identified within them remains in place. Fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Because endangered or threatened species can be “taken” for development purposes with the issuance of a permit by the CDFG, fully protected species actually enjoy a greater level of legal protection than listed species.

*California Endangered Species Act.* The California Department of Fish and Game (CDFG) administers the California Endangered Species Act of 1984 (Fish and Game Code Section 2080), which regulates the listing and “take” of endangered and threatened species. A “take” may be permitted by CDFG through implementing a management agreement. Under the State laws, the CDFG is empowered to review projects for their potential impacts to listed species and their habitats.

CDFG maintains lists for Candidate-Endangered Species (SCE) and Candidate-Threatened Species (SCT). California candidate species are afforded the same level of protection as listed species. California also designates Species of Special Concern (CSC) which are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists

in the future. The CSC list is intended by CDFG as a management tool for consideration in future land use decisions.

## **IMPACT ANALYSIS**

### **Significance Criteria**

Implementation of the proposed General Plan would have a potentially significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### **Methodology and Assumptions**

This evaluation of biological resource impacts includes a review of vegetation and wildlife habitat, special-status species, and jurisdictional “waters of the United States” with the potential to occur at or in the vicinity of the Planning Area. The results of this assessment are based upon limited field reconnaissance of the Planning Area, literature searches, and database queries. The sources of reference data reviewed include the following:

- U.S. Fish and Wildlife Service (USFWS) Species List for the following USFWS Quadrangles: Los Banos and Volta, California (USFWS, 2007).
- California Natural Diversity Database (CNDDDB), Rarefind 3 computer program (CDFG, 2007a) for a 9-quad search centered on both Los Banos and Volta, California USGS quadrangles.
- California Native Plant Society (CNPS), Electronic Inventory computer program (CNPS, 2006) for a 9-quad search centered on both Los Banos and Volta, California USGS quadrangles.
- California Department of Fish and Game (CDFG) Special Vascular Plants, Bryophytes, and Lichens List (CDFG, 2007b).

- CDFG Special Animals List (CDFG, 2006c).
- California Department of Forestry and Fire Protection (CDF 2002) Multi-source Land Cover Data v2.
- USGS Digital Orthophoto Quarter Quadrangles (1994).

### Summary of Impacts

Development and infrastructure resulting from the Los Banos General Plan would largely be situated on land contiguous to existing development, however it is likely that future development will also be located adjacent to, and with potential to encroach upon, sensitive adjacent habitats with known occurrences of several special status species. The potential loss of these sensitive habitats and their resultant impacts to sensitive biological resources are considered significant and unavoidable. The Planning Area is outside of the area covered by the Merced County Natural Community Conservation Area Plan. Consequently, the Los Banos General Plan would not conflict with the provisions of an adopted habitat conservation plan or other approved conservation plan. Implementation of the proposed Los Banos General Plan also would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

### Impacts and Mitigation Measures

#### *Impact*

**3.8-1** *Implementation of the proposed Los Banos General Plan would have a substantial adverse effect, either directly or through habitat modifications, on any officially designated species identified as an endangered, threatened, candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Significant and Unavoidable)*

Sensitive vegetation communities or habitats in the Planning Area include small areas of alkali desert scrub, annual grasslands, wetlands (including vernal pool areas), and riparian areas, of which many of these areas provide foraging and nesting habitat for various special status species (e.g., burrowing owls, San Joaquin kit fox, giant garter snakes, etc.) in addition to a variety of common plant and wildlife species. Additional, large portions of the Planning Area are currently composed of agricultural lands that also provide foraging habitat and movement corridors for various species including giant garter snakes and Swainson's hawks. Overall, land within and adjacent to the Planning Area has the potential for high wildlife diversity and an abundant wildlife population, in particular the large open space areas to the east of the Planning Area (i.e., Grasslands, etc.) that provide important foraging, dispersal, and migratory corridors for many sensitive wildlife species. Development resulting from build-out of the proposed General Plan, while affecting only a portion of the habitat within the larger Planning Area will result in both direct and indirect significant adverse impacts to plant and wildlife occurring in the Planning Area.

Buildout of the Los Banos General Plan will allow for the introduction of development (predominately residential land uses) into farmlands. Such construction has the potential to result in a significant impact on sensitive habitats, individual plants, and wildlife species. The primary impact will be the removal of sensitive habitats for building pad development

and the construction of buildings, infrastructure and roadways. Additional impacts will result from a continued increased incidence of fire due to human activity, increased erosion from roadways, and the introduction of non-native weed species. The introduction of developed land uses will also result in the elimination of habitat and food resources for wildlife through the removal of vegetative communities. The introduction of new sources of light and glare could affect nesting habitat and migratory corridors. These effects may be particularly pronounced for wildlife species with low tolerance for habitat modification or disturbance, especially some riparian bird and reptile species.

### *Indirect Impacts of the Los Banos General Plan*

Suitable habitat for listed species exists within the Planning Area and could be indirectly affected by both development under the proposed General Plan, and roadway improvement and construction (as identified in the Circulation Diagram and the Circulation Element of the General Plan). Just as direct impacts would occur to habitats where listed species are found, indirect impacts would occur as well. Indirect impacts occur primarily through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. Development of previously undeveloped land for residential uses can expose species to impacts from feral and unconfined pets. Additionally, the Los Banos General Plan proposes a network of bicycle and pedestrian trails throughout the City, further exposing habitat and species to possible indirect impacts associated with pedestrian and bicycle use of areas that are currently inaccessible.

### *Habitat Fragmentation*

Much of the habitat within the Planning Area used by listed species is currently interconnected with large areas of open space and sparse development that currently has a minor impact on species in the Planning Area. Wide-scale development of the Planning Area consistent with the Los Banos General Plan could result in small pockets of conserved habitat that are no longer connected by streams and open space, resulting in indirect impacts to species diversity and movement within the Planning Area. However, the planned SR-152 Bypass, a separate project, independent of the General Plan, will have a much more pronounced affect than the Plan itself. Habitat fragmentation reduces the species richness and increases the potential for extirpation of sensitive species. Patch dimensions influence extinction through edge effects, negative density dependence, inbreeding, dispersal, fecundity, survival, predation, growth, and population density. Alterations to the hydrology, increased sedimentation, pollutants or garbage, increase human disturbance from off-road vehicles, pedestrian traffic, may result from smaller preserves. For larger more mobile species such as the Swainson's hawk, for example, the smaller preserves are generally not used as foraging habitat due to their close proximity to human disturbances at the preserve boundaries.

This current analysis does not provide the level of detail to identify specific habitat needs at this time. However, it should be noted that most new development resulting from implementation of the proposed General Plan would be focused in the western portions of the Planning Area. This was intended to minimize encroachment on the more sensitive eastern portion of the Planning Area which is located near the GEA and the Pacific Flyway.

### *Encroachment by Exotic Weeds*

Generally, landscaping installed as part of development in the region has relied heavily on exotic, non-native plant species for decoration. However, some of these species can spread to natural areas,

causing native plant life to be replaced by exotic species. As native plants are replaced by exotic species, indirect impacts to the habitat of listed species would occur such as modification or degradation of habitat.

The majority of impacts on sensitive vegetation communities and wildlife species will occur as a result of project-specific activities developed subsequent to the proposed General Plan. At the time individual development applications are submitted, the City will assess development proposals for potential impacts to significant biological resources pursuant to CEQA and associated State and federal regulations. Potential impacts related to development of the Planning Area will also be mitigated through compliance with State and federal regulations. The preservation of biological resources is a goal of the proposed General Plan, however, even with implementation of the policies below, this impact is still considered significant.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would help to reduce this impact:

POSR-I-23 Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive habitat areas, or areas of potential sensitive status species, and protection of sensitive habitat areas and special status species in new development in the following order: 1) avoidance; 2) onsite mitigation, and 3) offsite mitigation.

*The term “special status species” includes species classified as rare and endangered. These priorities are consistent with the United States Fish and Wildlife and California Department of Fish and Game guidelines. When habitat preservation on-site is not feasible (i.e., preserved parcels would be too small to be of any value), then off-site mitigation should occur.*

POSR-I-24 Establish and maintain a protection zone around wetlands, riparian corridors, and identified habit areas where development shall not occur, except as part of a parkway enhancement program (e.g., trails and bikeways).

POSR-I-25 Establish a “no net loss” policy for wetlands and vernal pools within and adjacent to the Planning Area.

*Where development on wetlands cannot be avoided, require developers replace wetlands equal in size to the wetlands lost in accordance with State and federal requirements.*

POSR-I-26 Review development proposals in accord with applicable Federal and State protecting special-status species and jurisdictional wetlands and use the California Natural Diversity Database and field reconnaissance, where necessary to confirm habitat value, to assist in identifying potential conflicts with sensitive habitats or special status species and establishing appropriate mitigation and monitoring requirements.

POSR-I-27 Establish and maintain a Grasslands Resources Overlay Zone (GROZ) to the Intercanal Area between the San Luis Canal and the Santa Fe Canal north of SR-152 where lands within the GROZ shall remain in agricultural and open space uses.

POSR-I-28 Provide wildlife corridors to allow movement of animals and minimize wildlife-urban conflicts.

*Successful wildlife corridors, depending on the animal, provide short and direct routes and do not have a physical or psychological barrier. Factors such as smell, noise, and terrain also influence the success of the wildlife corridor. Wildlife tends to feel most secure in somewhat dark corridors with little human activity.*

POSR-I-29 Require the preservation of mature trees and encourage the planting of drought resistant street and shade trees in all new developments.

*Mature trees remove pollution and releases up to 400 gallons of water into the atmosphere per day. Their stronger roots help keep top soil together and provide foliage to pedestrians. The definition of a mature tree depends on the specie concerned and is generally defined as one that has reached 75 percent of its full canopy growth.*

POSR-I-30 Promote the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.

As stated above, the City will adopt and implement a variety of policies and implementation measures designed to address impacts to biological resources (including officially designated endangered, threatened, candidate, sensitive, or special status species). Although these policies seek to protect a variety of open space resources within the Planning Area, implementation of the proposed General Plan would still result in the conversion of some open space and habitat areas, which would result in the overall reduction of a plant or wildlife species habitat. Therefore, implementation of the proposed General Plan including the adoption of the policies and implementation measures listed above would still result in a significant impact. Because no additional, feasible, mitigation is currently available, this impact is considered significant and unavoidable.

### ***Impact***

***3.8-2 Implementation of the proposed Los Banos General Plan would have a potentially substantial adverse effect on identified riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Less than Significant)***

Areas along Los Banos Creek and other local waterways likely contain some riparian habitat. Riparian habitats support a variety of plant and wildlife species along watercourses or water bodies adaptable to seasonal flooding. Other sensitive habitats in the Planning Area include annual grassland, alkali desert scrub, and wetland habitats. As more fully described under Impact 3.8-1, development

resulting from buildout of the proposed General Plan (including the Circulation Diagram) will result in both direct and indirect significant adverse impacts to riparian and other sensitive natural communities occurring in the Planning Area. However, the Plan does impose a policy of “no net loss” of wetlands, and required buffer zones around wetlands and riparian habitat. The preservation of biological resources is a goal of the proposed General Plan, and with implementation of the policies listed under Impact 3.8-1 this impact is considered less than significant.

***Proposed General Plan Policies that Reduce the Impact***

Policies summarized under Impact 3.8-1 reduce this impact and thus are incorporated here by reference. Conformity with existing State and federal regulations in conjunction with implementation of the proposed policies summarized above would reduce potential Impact 3.8-2 to a level that is less than significant.

***Impact***

***3.8-3 Implementation of the proposed Los Banos General Plan would have a potential adverse effect on “federally protected” wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means. (Less than Significant)***

As more fully described above under Impact 3.8-1, development resulting from buildout of the proposed General Plan (including the Circulation Diagram) will result in both direct and indirect impacts on wetlands but within the UGB, these effect is limited to 5 acres of riparian habitat, which are within the site of a proposed park; other wetlands within the UGB would be affected by development that already is under review or approved by the City and therefore subject to site-specific analysis and mitigation. Citywide, the Draft General Plan established a “no net loss” policy for wetlands and will be working with the Grasslands Water District to ensure the no net loss goal is achieved, so this potential impact is considered less than significant.

***Proposed General Plan Policies that Reduce the Impact***

Policies summarized under Impact 3.8-1 reduce this impact and thus are incorporated here by reference. Conformity with existing State and federal regulations in conjunction with implementation of the proposed policies summarized above would reduce potential Impact 3.8-3 to a level that is less than significant.

***Impact***

***3.8-4 Implementation of the proposed Los Banos General Plan would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Significant and Unavoidable)***

Several areas (including agricultural lands) within the Planning Area could potentially be utilized as migratory corridors for the movement of wildlife. As more fully described above under Impact 3.8-1, development resulting from buildout of the proposed General Plan (including the Circulation

Diagram) would remove riparian and other habitat currently providing cover and would increase the distance that animals would need to traverse. The most significant change, though, will be due to construction of the SR-152 Bypass, not implementation of the Draft General Plan. Additionally, development within the Planning Area would also cause an increase in both vehicular traffic levels and nighttime light levels, which would also serve to deter wildlife movement in the Planning Area. The preservation of sensitive natural communities is a key goal of the proposed General Plan, however, even with implementation of the policies previously cited under Impact 3.8-1 this impact is still considered significant.

***Proposed General Plan Policies that Reduce the Impact***

Policies summarized under Impact 3.8-1 help reduce this impact and thus are incorporated here by reference.

### 3.9 AIR QUALITY

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This section addresses the impacts of the Draft Los Banos General Plan on local and regional air quality in the context of *Guidelines for Assess and Mitigating Air Quality Impacts*, prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

#### ENVIRONMENTAL SETTING

##### Physical Setting

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality. This setting description provides an overview of region-specific information related to climate, topography, and existing air quality conditions pertaining to the Planning Area.

##### *Climate and Meteorology*

The Planning Area is the City of Los Banos, which lies within the San Joaquin Valley Air Basin (SJVAB). The SJVAB is basically a flat area bordered on the east by the Sierra Nevada Mountains; on the west by the Coast Ranges; and to the south by the Tehachapi Mountains. Airflow in the SJVAB is primarily influenced by marine air that enters through the Carquinez Straits where the San Joaquin-Sacramento Delta empties into the San Francisco Bay (SJVAPCD, 2002). The region's topographic features restrict air movement through and out of the basin. As a result, the SJVAB is highly susceptible to pollutant accumulation over time (SJVAPCD, 2002). Frequent transport of pollutants into the SJVAB from upwind sources also contributes to poor air quality.

Wind speed and direction play an important role in dispersion and transport of air pollutants. During summer periods, winds usually originate from the north end of the San Joaquin Valley and flow in a south-southeasterly direction through the valley, through the Tehachapi pass and into the neighboring Southeast Desert Air Basin. During winter months, winds occasionally originate from the south end of the valley and flow in a north-northwesterly direction. Also, during winter months, the valley experiences light, variable winds, less than 10 miles per hour (mph). Low wind speeds, combined with low inversion layers in the winter, create a climate conducive to high concentrations of certain air pollutants.

The SJVAB has an inland Mediterranean climate that is characterized by warm, dry summers and cooler winters. Summer high temperatures often exceed 100 degrees Fahrenheit (°F), averaging from the low 90s in the northern part of the valley to the high 90s in the south. The daily summer temperature variation can be as high as 30 degrees °F. Winters are for the most part mild and humid. Average high temperatures during the winter are in the 50s, while the average daily low temperature is approximately 45 degrees °F.

The vertical dispersion of air pollutants in the valley is limited by the presence of persistent temperature inversions. Air temperatures usually decrease with an increase in altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Air above and below an inversion does not mix because of differences in air density thereby restricting air pollutant dispersal.

## **REGULATORY SETTING**

The U.S. Environmental Protection Agency (US EPA) is responsible for implementing the programs established under the Federal Clean Air Act, such as establishing and reviewing the Federal ambient air quality standards and judging the adequacy of State Implementation Plans (SIP). However, the EPA has delegated the authority to implement many of the Federal programs to the States while retaining an oversight role to ensure that the programs continue to be implemented. The California Air Resources Board (CARB) is responsible for establishing and reviewing the State ambient air quality standards, developing and managing the California SIP, securing approval of this plan from US EPA, and identifying toxic air contaminants (TACs). CARB also regulates mobile emissions sources, such as construction equipment, trucks, and automobiles, and oversees the activities of air quality management districts, which are organized at the county or regional level.

An air quality management district is primarily responsible for regulating stationary emissions sources at facilities within its geographic areas and for preparing the air quality plans that are required under the Federal Clean Air Act and California Clean Air Act. The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the regional agency with regulatory authority over emission sources in eight counties within California's Central Valley including San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the valley portion of Kern.

### **Criteria Air Pollutants**

As required by the Federal Clean Air Act passed in 1977, US EPA has identified six criteria air pollutants that are pervasive in urban environments and for which State and national health-based ambient air quality standards have been established. US EPA identifies these pollutants as criteria air pollutants because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM), and lead are the six criteria air pollutants.

#### *Ozone*

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>). ROG and NO<sub>x</sub> are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO<sub>x</sub> under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone. Ground level ozone in conjunction with suspended particulate matter in the atmosphere leads to hazy conditions generally termed as "smog."

### *Carbon Monoxide*

Carbon monoxide, a colorless and odorless gas, is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High carbon monoxide concentrations develop primarily during winter when periods of light wind combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased carbon monoxide emission rates at low air temperatures. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia.

### *Nitrogen Dioxide*

Nitrogen dioxide is an air quality concern because it acts as a respiratory irritant and is a precursor of ozone. Nitrogen dioxide is produced by fuel combustion in motor vehicles, industrial stationary sources, ships, aircraft, and rail transit.

### *Sulfur Dioxide*

Sulfur dioxide is a combustion product of sulfur or sulfur-containing fuels such as coal and oil, which are restricted in the San Joaquin Valley. Its health effects include breathing problems and may cause permanent damage to lungs. SO<sub>2</sub> is an ingredient in acid rain, which can damage trees, lakes and property, and can also reduce visibility.

### *Particulate Matter*

PM-10 and PM-2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM-10 and PM-2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles (PM-2.5) of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

PM emissions in the Planning Area are mainly from urban sources, dust suspended by vehicle traffic and secondary aerosols formed by reactions in the atmosphere. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants.

### *Lead*

Leaded gasoline (which is being phased out), paint (houses, cars), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects for which children are at special risk. Some lead-containing chemicals cause cancer in animals.

### **Ambient Air Quality Standards**

Regulation of air pollution is achieved through both national and State ambient air quality standards and emission limits for individual sources of air pollutants. As required by the Federal Clean Air Act, the US EPA has established National Ambient Air Quality Standards (national standards) to protect public health and welfare. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants (referred to as State Ambient Air Quality Standards or State standards). In addition, California has established State ambient air quality standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of California's unique meteorological problems, there are considerable differences between State and federal standards currently in effect in California, as shown in Table 3.9-1. The table also summarizes the related health effects and principal sources for each pollutant.

The ambient air quality standards are intended to protect the public health and welfare, and they incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

### **Attainment Status and Air Quality Plans**

Under amendments to the Federal Clean Air Act, US EPA has classified air basins or portions thereof, as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. The California Clean Air Act, which is patterned after the Federal Clean Air Act, also requires areas to be designated as "attainment" or "nonattainment" for the State standards. Thus, areas in California have two sets of attainment / nonattainment designations: one set with respect to the national standards and one set with respect to the State standards.

**Table 3.9-1: State and National Criteria Air Pollutant Standards, Effects and Sources**

Pollutant	Averaging Time	California Standard	National Primary Standard	Major Pollutant Sources	Pollutant Health and Atmospheric Effects
Ozone	1 hour	0.09 ppm	---	On-road motor vehicles, other mobile sources, solvent extraction, combustion, industrial and commercial processes.	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.
	8 hours	0.07 ppm	0.08 ppm		
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.25 ppm	---	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.	Irritating to eyes and respiratory tract. Colors atmosphere reddish brown.
	Annual Average	---	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	---	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.	Irritates upper respiratory tract, injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron and steel. Limits visibility and reduces sunlight.
	24 hours	0.04 ppm	0.14 ppm		
	Annual Avg.	---	0.03 ppm		
Respirable Particulate Matter (PM-10)	24 hours	50 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$	Dust- and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).	May irritate eyes and respiratory tract, decreases lung capacity and increases risk of cancer and mortality. Produces haze and limit visibility.
	Annual Average	20 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$		
Fine Particulate Matter (PM-2.5)	24 hours	---	35 $\mu\text{g}/\text{m}^3$	Fuel combustion in motor vehicles, equipment and industrial sources; residential and agricultural burning. Also formed from photochemical reactions of other pollutants, including $\text{NO}_x$ , sulfur oxides, and organics.	Increases respiratory disease, lung damage, cancer and premature death. Reduces visibility and results in surface soiling.
	Annual Average	12 $\mu\text{g}/\text{m}^3$	15 $\mu\text{g}/\text{m}^3$		
Lead	Monthly Average	1.5 $\mu\text{g}/\text{m}^3$	---	Present source: lead smelters, battery manufacturing and recycling facilities.	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurologic dysfunction.
	Quarterly	---	1.5 $\mu\text{g}/\text{m}^3$	Past source: combustion of leaded gasoline.	

Note: ppm=parts per million; and  $\mu\text{g}/\text{m}^3$ =micrograms per cubic meter

Source: California Air Resource Board, Available at <http://www.arb.ca.gov/aqs/aaqs2.pdf>, May 2006; California Air Resources Board, 2001. ARB Fact Sheet: Air Pollution Sources, Effects and Control, <http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>, last updated December 2005.

Table 3.9-2 identifies the attainment status of the San Joaquin Valley with respect to the national and State ambient air quality standards for criteria pollutants.

**Table 3.9-2: San Joaquin Valley Attainment Status for State and Federal Ambient Air Quality Standards**

Pollutant	Attainment Status	
	Federal Standards	State Standards
Ozone - one hour	No Federal Standard <sup>1</sup>	Nonattainment/Severe
Ozone - eight hour	Nonattainment/Serious	No State Standard
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified	Attainment
Respirable Particulate Matter (PM-10)	Nonattainment/Serious	Nonattainment
Fine Particulate Matter (PM-2.5)	Nonattainment	Nonattainment <sup>2</sup>
Lead	No Designation	Attainment

<sup>1</sup>Federal One Hour Ozone National Ambient Air Quality Standard was revoked on June 15,2005  
<sup>2</sup>Nonattainment per CARB's website: <[www.arb.ca.gov/desig/adm/s4\\_pm25.pdf](http://www.arb.ca.gov/desig/adm/s4_pm25.pdf)>

Source: <[www.valleyair.org/aginfo/attainment.htm](http://www.valleyair.org/aginfo/attainment.htm)> (June 2007), and <[arb.ca.gov/design/adm/adm.htm](http://arb.ca.gov/design/adm/adm.htm)>

**Air Quality Plans**

The 1977 Clean Air Act Amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile source of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated nonattainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as State Implementation Plans (SIPs).

The SJVAPCD is responsible for developing attainment plans for the SJVAB, for inclusion in California's SIP, as well as establishing and enforcing air pollution control rules and regulations. The attainment plans must demonstrate compliance with federal and state ambient air quality standards, and must first be approved by CARB before inclusion into the SIP. The SJVAPCD regulates, permits, and inspects stationary sources of air pollution. Among these sources are industrial facilities, gasoline stations, auto body shops, municipal solid waste landfills and dry cleaners to name a few. While the state is responsible for emission standards and controlling actual tailpipe emissions from motor vehicles, the SJVAPCD is required to regulate emissions associated with stationary sources such as agricultural burning and industrial operations. The SJVAPCD also works with eight local transportation planning agencies to implement transportation control measures, and to recommend mitigation measures for new growth and development designed to reduce the number of cars on the road. The SJVAPCD promotes the use of cleaner fuels, and funds a number of public and private agency projects that provide innovative approaches to reducing air pollution from motor vehicles.

The SJVAB is designated severe nonattainment for the federal 1-hour ozone standard and serious nonattainment for the federal PM10 standard. Ozone precursors, PM-10 emissions and toxic air contaminants are emphasized in the review of applications for an Authority to Construct / Permit to Operate. Federal and state air quality laws also require regions designated as nonattainment to prepare plans that either demonstrate how the region will attain the standard or that demonstrate reasonable improvement in air quality conditions. As noted, the SJVAPCD is responsible for developing attainment plans for the SJVAB for inclusion in California's SIP.

The following are the air quality plans with current or recent application to the SJVAB:

***1998 Carbon Monoxide State Implementation Plan (SIP).*** With the U.S. EPA's redesignation of 10 urban areas in California (including four urban areas in the SJVAB) from nonattainment to attainment for carbon monoxide in 1998, the South Coast Air Basin is the only basin in the state currently considered nonattainment for this pollutant. The 1998 Carbon Monoxide SIP revision modifies the carbon monoxide maintenance plan for the 10 areas, including the urban areas of the SJVAB.

***The Federal Ozone Attainment Demonstration Plan (adopted November 14, 1994 and amended 2001).*** This plan established a regulatory framework to bring the SJVAB into compliance with the national standards for ozone and satisfied a required triennial review for state standards. This plan did not achieve its goal of meeting the national standards for ozone by 1999 (SJVAPCD, 1994).

***2000 Ozone Rate of Progress Report (adopted April 20, 2000 and amended April 27, 2000).*** This report demonstrates that target levels of emission reductions mandated by the CAA for 1997 to 1999 (9 percent) and for 1990 to 1999 (24 percent) were achieved (SJVAPCD, 2000).

***Triennial Progress Report and Plan Revisions 1997–1999.*** This report states that all areas of the SJVAB have attained the state carbon monoxide standard and focuses on attainment of the state ozone standard, in light of the basin's "severe nonattainment" status under the state Health and Safety Code. The report reviews previously adopted and implemented Best Available Retrofit Control Technology (BARCT) measures and includes an adoption and implementation schedule for new measures to achieve additional emission reductions. Planned measures include new controls on stationary, mobile, and indirect sources, and plan revisions. This report was adopted March 15, 2001 (SJVAPCD, 2001a).

***2001 Amendment to the 1994 Ozone Attainment Demonstration Plan.*** These amendments to the 1994 OADP commit the SJVAPCD to revise, add or delete various Regulation IV rules pertaining to the use and storage of coatings and solvents and specific stationary sources (SJVAPCD, 2001b).

***2002 and 2005 Ozone Rate of Progress Plan (adopted May 16, 2002).*** In December 2001 U.S. EPA reclassified the SJVAB from serious to severe nonattainment for the national 1-hour ozone standard. The severe classification triggered a requirement for the SJVAPCD to prepare plans that demonstrate annual reductions of ozone precursors and attainment of the standard by 2005. The SJVAPCD determined that it could not reach attainment in 2005. This plan demonstrates rates of progress in emissions reductions in volatile organic compounds at the mandated average rate of 3 percent per year, based on three-year periods (i.e., 9 percent between 2000 and 2002 and an additional 9 percent

between 2003 and 2005). The plan also satisfies the requirement of the CAA that nonattainment areas adopt all reasonably available control measures (RACM) as expeditiously as possible.

**2007 Ozone Plan.** This plan contains a comprehensive and exhaustive list of regulatory and incentive based measures to reduce emissions of ozone and particulate matter precursors throughout the Valley. Additionally, this plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution, and a significant increase in state and federal funding for incentive-based measures to create adequate reductions in emissions to bring the entire Valley into attainment with the federal ozone standard.

The proposed plan calls for a 75 percent reduction in ozone-forming oxides of nitrogen (NO<sub>x</sub>) emissions. These reductions come on the heels of past successful efforts in the Valley that have already reduced ozone precursor emission by nearly 50 percent. Regulatory measures for mobile and stationary sources will reduce NO<sub>x</sub> emissions by 382 tons per day (61 percent) by 2023. The remaining 14 percent would come from incentives and the deployment of advanced technologies. The incentive-based measures contained in this plan generate NO<sub>x</sub> reductions of 50 tons per day in 2012, 56 tons per day in 2015, 41 tons per day in 2020, and 26 tons per day in 2023. In addition to the above-mentioned reductions in NO<sub>x</sub> emissions, full implementation of this plan will reduce Volatile Organic Compound (VOC) emissions by 111 tons per day through regulatory measures, which equates to a 25 percent reduction.

**2003 PM10 Plan: San Joaquin Valley Plan to Attain Federal Standards for Particulate Matter 10 Microns and Smaller.** This plan was adopted by the SJVAPCD Governing Board June 19, 2003 and submitted to CARB, which also has approved it and submitted it to U.S.EPA. U.S. EPA approved the plan as amended on May 26, 2004 effective June 26, 2004. The 2003 PM-10 plan demonstrates attainment of the national PM-10 standard at all monitoring stations within the air basin by 2010. It supersedes the SJVAPCD's previous plan, the 1997 PM-10 Attainment Demonstration Plan, which failed to meet the national standard by the 2001 target date and was withdrawn by the SJVAPCD.

**PM10 Attainment Demonstration Plan Progress Report 1997-1990. August 17, 2000.** This report describes progress achieved by the SJVAPCD implementing the 1997 PM-10 plan, including actions pertaining to stationary, area and mobile sources, research programs and revisions to Regulation VIII (Fugitive PM10 Prohibitions) that were then in progress.

The SJVAPCD's primary means of implementing the above air quality plans is by adopting and enforcing rules and regulations. Stationary sources within the jurisdiction are regulated by the SJVAPCD's permit authority over such sources and through its review and planning activities. In 2001, the SJVAPCD revised its Regulation VIII-Fugitive PM Prohibitions, in response to commitments made in the 1997 PM-10 Attainment Plan to incorporate best available control measures (BACM). The revision also includes new rules for open areas and agricultural operations. The provisions of the revised regulation took effect in May 2002. Regulation VIII consists of a series of dust control rules intended to implement the *PM-10 Attainment Demonstration Plan*. The *PM-10 Attainment Demonstration Plan* emphasizes reducing fugitive dust as a means of achieving attainment of the federal standards for PM10.

District Rules that may apply to the project are as follows:

**District Rule 2201 (New and Modified Stationary Source Review Rule).** This rule applies to all new stationary sources and all modifications of existing stationary sources that are subject to the SCVAPCD permit requirements and after construction emit or may emit one or more affected pollutants.

**District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).** Prior to any demolition activity, an asbestos survey of existing structures on the project site may be required to identify the presence of any asbestos containing building materials (ACBM). Any identified ACBM having the potential for disturbance must be removed by a certified asbestos-contractor in accordance with CAL-OSHA requirements.

**District Regulation VIII (Fugitive PM-10 Prohibitions).** Regulation VIII (Rules 8011-8081) is a series of rules designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction, road construction, bulk materials storage, landfill operations, etc. The Dust Control Plan threshold has changed from 40.0 acres to 5.0 or more acres for non-residential sites. If a non-residential site is 1.0 acre to less than 5.0 acres, an owner/operator must provide written notification to the SJVAPCD at least 48 hours prior to his/her intent to begin any earthmoving activities. If a residential site is 1.0 acre to less than 10.0 acres, an owner/operator must provide written notification to the SJVAPCD at least 48 hours prior to his/her intent to begin any earthmoving activities.

Regulation VIII specifically addresses the following activities:

- Rule 8011: General Requirements;
- Rule 8021: Construction, Demolition, Excavation, Extraction and other Earthmoving Activities;
- Rule 8031: Bulk Materials;
- Rule 8041: Carryout and Trackout;
- Rule 8051: Open Areas;
- Rule 8061: Paved and Unpaved Roads; and
- Rule 8071: Unpaved Vehicle/Equipment Traffic Areas.

**District Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).** If asphalt paving will be used, then paving operations specific to a project will be subject to Rule 4841. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt, and emulsified asphalt for paving and maintenance operations.

**District Rule 4102 (Nuisance).** This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that a specific project or construction of a project creates a public nuisance, it could be in violation and subject to District enforcement action.

Also, in addition to these above-described rules, District Rule 9510 Indirect Source Review (ISR) was adopted December 15, 2005. ISR was adopted to fulfill the SJVAPCD's emission reduction commitments in the PM10 and Ozone Attainment Plans. ISR requires submittal of an Air Impact Assessment (AIA) application no later than the date on which application is made for a final

discretionary approval from the public agency. The AIA will be the information necessary to calculate both construction and operational emissions of a development project. Section 6.0 of the Rule outlines general mitigation requirements for developments that include reduction in construction emissions of 20 percent of the total construction NO<sub>x</sub> emissions, and 45 percent of the total construction PM-10 exhaust emissions. Section 6.0 of the Rule also requires the project to reduce operational NO<sub>x</sub> emissions by 33.3 percent and operational PM-10 emissions by 50 percent. Section 7.0 of the Rule includes fee schedules for construction or operational excess emissions of NO<sub>x</sub> or PM10; those emissions above the goals identified in Section 6.0 of the Rule. Section 7.2 of the Rule identifies fees for excess emissions that are \$9,350/ton for NO<sub>x</sub> emissions after the year 2008, and \$9,011/ton for PM10 emissions after the year 2008.

### **Other Pollutants of Concern - Toxic Air Contaminants**

The Health and Safety Code defines toxic air contaminants (TACs) as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a present or potential hazard to human health. TACs are less pervasive in the urban atmosphere than criteria air pollutants, but are linked to short-term (acute) or long-term (chronic and/or carcinogenic) adverse human health effects. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust. The current list of toxic air contaminants includes approximately 200 compounds, including all of the toxics identified under federal law plus additional compounds, such as particulate emissions from diesel-fueled engines, which were added in 1998.

Unlike regulations concerning criteria air pollutants, there are no ambient air quality standards for evaluation of TACs based on the amount of emissions. Instead, TAC emissions are evaluated based on the degree of health risk that could result from exposure to these pollutants. Regulation of toxic air contaminants is achieved through Federal and State controls on individual sources. Federal environmental laws refer to “hazardous air pollutants,” while California environmental laws refer to “toxic air contaminants.” Both of these terms basically encompass the same constituent toxic compounds.

TACs have been regulated under federal air quality law since the 1977 federal Clean Air Act Amendments. The most recent federal Clean Air Act Amendments (1990) reflect a technology-based approach for reducing TACs. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT). The MACT standards vary depending on the type of emitting source. US EPA has established MACT standards for over 20 facilities or activities, such as perchloroethylene dry cleaning and petroleum refineries. The second phase of control involves determining the residual health risk represented by air toxics emissions sources after implementation of MACT standards.

Two principal laws provide the foundation for State regulation of TACs from stationary sources. In 1983, the State Legislature adopted Assembly Bill 1807, which established a process for identifying TACs and provided the authority for developing retrofit air toxics control measures on a Statewide basis. Air toxics from stationary sources in California are also regulated under Assembly Bill 2588, the Air Toxics “Hot Spots” Information and Assessment Act of 1987. Under Assembly Bill 2588, TAC emissions from individual facilities are quantified and prioritized by the regional air quality management district or county air pollution control district. High priority facilities are required to

perform a health risk assessment, and if specific thresholds are violated, they are required to communicate the results to the public in the form of notices and public meetings. Depending on the risk level, emitting facilities can be required to implement varying levels of risk reduction measures.

Locally, the SJVAPCD administers the state-mandated Air Toxics “Hot Spots” Program for the City and Merced County, which is intended to reduce public exposure to TACs from stationary sources in the San Joaquin Valley. SJVAPCD is currently working to control TAC impacts at local “hot spots” and to reduce TAC background concentrations. The control strategy involves reviewing new stationary sources to ensure compliance with required emissions controls and limits, maintaining an inventory of existing stationary sources of TACs, and developing new rules and regulations to reduce TAC emissions. The potential for new and modified stationary sources to emit toxic air contaminants is reviewed by the SJVAPCD’s Permit Services Division, which implements the SJVAPCD’s Risk Management Policy. Toxic air contaminant emissions from stationary sources are limited by:

- SJVAPCD adoption and enforcement of rules aimed at specific types of sources known to emit high levels of toxic air contaminants;
- Implementation of the Air Toxics “Hot Spots” Program; and
- Implementation of the Federal Title III Toxics program.

Regulation of TACs from mobile sources has traditionally been implemented through emissions standards for on-road motor vehicles (imposed on vehicle manufacturers) and through specifications for gasoline and diesel fuel sold in California (imposed on fuel refineries and retailers), rather than through land use decisions, air quality permits, or regulations addressing how motor vehicles are used by the general public.

### **SJVAPCD Rules and Regulations**

The SJVAPCD is the regional agency responsible for rulemaking, permitting, and enforcing activities affecting stationary sources in the San Joaquin Valley. Specific rules and regulations adopted by the SJVAPCD limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules regulate not only emissions of the six criteria air pollutants, but also toxic emissions and acutely hazardous non-radioactive materials emissions.

Emissions sources subject to these rules are regulated through the SJVAPCD’s permitting process and standards of operation. Through this permitting process, including an annual permit review, the SJVAPCD monitors the generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of the proposed General Plan would be subject to the SJVAPCD *Rules and Regulations*. Both Federal and State ozone plans rely heavily upon stationary source control measures set forth in SJVAPCD’s *Rules and Regulations*.

### **Sensitive Receptors**

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor

air quality because the population groups associated with these uses have increased susceptibility to respiratory distress and other air quality-related health problems. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions.

### **Existing Conditions**

Existing sources of emissions include on-road and off-road motor vehicles, farming operations, industrial activities, wood burning, and windblown dust. The SJVAPCD's regional air quality monitoring network provides information on existing ambient concentrations of criteria air pollutants. Monitored ambient air pollutant concentrations reflect the number and strength of emissions sources and the influence of topographical and meteorological factors. **Table 3.9-3** presents a five-year summary of air pollutant (concentration) data collected at the two monitoring stations closest to the Planning Area, one on South Coffee Avenue and one at 2334 M Street, both in Merced. Pollutant concentrations measured at these stations is considered to be representative of background air pollutant concentrations within the Planning Area. In **Table 3.9-3**, these measured air pollutant concentrations are compared with State and national ambient air quality standards. **Table 3.9-4** provides a summary of ozone data for the SJVAB for 1997 to 2006.

**Table 3.9-3: Air Quality Data Summary (2002-2006) for the Planning Area**

Pollutant	Standard <sup>1</sup>	Monitoring Data by Year				
		2002	2003	2004	2005	2006
<b>Ozone: South Coffee Avenue station in Merced.</b>						
Highest 1 Hour Average (ppm) <sup>2</sup>		<b>0.138</b>	<b>0.122</b>	<b>0.114</b>	<b>0.100</b>	<b>0.102</b>
Days over State Standard	0.09	55	54	14	6	4
Days over National Standard	NA	2	0	0	0	0
Highest 8 Hour Average (ppm) <sup>2</sup>		<b>0.125</b>	<b>0.110</b>	<b>0.109</b>	<b>0.093</b>	<b>0.091</b>
Days over National Standard	0.08	56	54	15	3	4
<b>Respirable Particulate Matter (PM-10): 2334 M Street station in Merced.</b>						
Highest 24 Hour Average ( $\mu\text{g}/\text{m}^3$ ) <sup>2</sup>		<b>88.0</b>	<b>75.0</b>	<b>57.0</b>	<b>75.0</b>	<b>98.0</b>
Measured Days over State Standard <sup>3</sup>	50	84	44	12	29	47
Measured Days over National Standard <sup>c</sup>	150	0	0	0	0	0
<b>Fine Particulate Matter (PM-2.5): 2334 M Street station in Merced.</b>						
Highest 24-Hour Average ( $\mu\text{g}/\text{m}^3$ ) <sup>2</sup>		<b>66.0</b>	46.7	53.1	53.9	55.8
Days over National Standard	35 <sup>4</sup>	1	0	0	0	0
National Annual Average ( $\mu\text{g}/\text{m}^3$ ) <sup>2</sup>	15	<b>18.7</b>	<b>15.7</b>	<b>15.2</b>	14.1	14.8

<sup>1</sup> Generally, state standards are not to be exceeded and national standards are not to be exceeded more than once per year.

<sup>2</sup> ppm = parts per million;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

<sup>3</sup> PM-10 is not measured every day of the year. It is measured once every 6 days. The data shown refers to the actual number of days measured over the standards.

<sup>4</sup> This NAAQS for PM-2.5 became effective December 17, 2006. Previously, the NAAQS had been 65  $\mu\text{g}/\text{m}^3$ , which the monitoring data depicted above was compared to determine the days above the National Standard.

NOTE: Values in **bold** are in excess of applicable standard. NA = Not Available.

Source: <http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start>

**Table 3.9-4: Summary of Ozone Data for the San Joaquin Valley Air Basin (1997-2006)**

Year	Number of Day Standard Exceeded			Ozone Concentrations (ppm)	
	State 1 hr	National 1 hr	National 8 hr	Maximum 1 hr	Maximum 8 hr
2006	90	18	86	0.141	0.121
2005	83	8	72	0.134	0.113
2004	106	9	109	0.155	0.126
2003	137	37	134	0.156	0.127
2002	127	31	125	0.164	0.132
2001	123	32	109	0.149	0.120
2000	114	30	103	0.165	0.131
1999	123	28	117	0.155	0.123
1998	90	39	84	0.169	0.136
1997	110	16	95	0.147	0.127

This table summarizes the data from all of the monitoring stations within the San Joaquin Valley Air Basin.  
ppm = parts per million

Source: <http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start>

## IMPACT ANALYSIS

### Significance Criteria

The Los Banos 2030 General Plan will establish development guidelines against which future projects will be judged for consistency. The significance criteria for this analysis were developed from criteria presented in Appendix G, the “Environmental Checklist”, of the CEQA Guidelines and based on the professional judgment of the City of Los Banos and its consultants. The project (or the project alternatives) would result in a significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

### Methodology and Assumptions

Build-out of the proposed Los Banos General Plan will allow planned development to occur within both developed (infill) and undeveloped portions of the Planning Area. While the pace and timing of build-out will ultimately be market driven, for modeling purposes this analysis is based on the assumption that most uses will be developed by the year 2030 and emissions were estimated for this

planning horizon. This analysis is based on methodologies and thresholds included in the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD, 2002).

### **Summary of Impacts**

Air quality impacts resulting from the implementation of the proposed Los Banos General Plan fall into two categories: short-term impacts due to construction, and long-term impacts due to operation. Construction activities would affect local particulate concentrations primarily due to fugitive dust sources and increase other criteria pollutant emissions from equipment exhaust. The Plan commits the City to use Best Management Practices to reduce these emissions, consistent with SJVAPCD guidelines.

Over the long term, the full implementation of the proposed Los Banos General Plan would result in an increase in criteria pollutant emissions primarily due to related motor vehicle trips. Stationary sources and area sources would result in lesser quantities of criteria pollutant emissions. Stationary sources and diesel-fueled mobile sources would also generate emissions of toxic air contaminants including diesel particulate matter that could pose a health risk. However, implementation of the proposed Los Banos General Plan in itself would not create objectionable odors affecting a substantial number of people. Overall, implementation of the proposed Los Banos General Plan would result in a cumulatively considerable net increase of criteria pollutants which would exceed the annual SJVAPCD thresholds for  $\text{NO}_x$  and ROG. However, the Plan also commits the City to support Federal and State efforts to reduce emissions through reduce automobile use, energy conservation in new buildings and energy management in public buildings, public infrastructures (e.g. street lighting) and publicly-owned vehicles, which may mean that the Draft General Plan would not interfere with the SJVAPCD's efforts to achieve and maintain air quality standards through the plan's incentives and regulatory programs it has established or is planning to put in place. However, because the full scope and effectiveness of these measures is not fully known, this impact is considered significant and unavoidable.

The analysis of vehicle emissions as they contribute to production of greenhouse gases appears in Section 3.5 Energy and Climate Change.

### **Impacts and Mitigation Measures**

#### *Impact*

**3.9-1** *Implementation of the proposed Los Banos General Plan would result in a cumulatively considerable net increase of criteria pollutants. Future growth in accordance with the Plan and traffic associated with the Plan would generate emissions exceeding the annual SJVAPCD thresholds for  $\text{NO}_x$  and ROG. (Significant and Unavoidable)*

Construction activity that would occur over the next 23 years in accordance with the proposed Los Banos General Plan would cause temporary, short-term emissions of various air pollutants. Nitrogen oxides and carbon monoxide would be emitted by activities that disturb the soil, such as grading and excavation, infrastructure construction, building demolition, and a variety of construction activities. Information regarding specific development projects, soil conditions, and the location of sensitive receptors in relation to the various projects would be needed in order to quantify the level of impact

associated with construction activity. However, overall, all new development under the Draft General Plan would be subject to Best Management Practices to reduce dust and other air pollutant emissions, so it is reasonable to assume that in general SJVAPCD adopted thresholds would not likely to be exceeded over the next 23 years although there may well be isolated instances requiring enforcement action. Actual significance would be determined on a project by project basis as future development applications are submitted. Additionally, the General Plan includes a variety of policies designed to address construction-related air quality impacts including requiring contractors to implement appropriate dust suppression measures (see specifically policy POSR-I-48).

Operational impacts would result from local and regional vehicle emissions generated by future population growth associated with build out of the proposed Los Banos General Plan. The total emissions generated by the proposed General Plan were calculated using the EMFAC 2007 model and the citywide traffic model and are provided in Table 3.9-5. As shown in the table, future growth in accordance with the proposed Los Banos General Plan would exceed the daily SJVAPCD thresholds for NO<sub>x</sub> and ROG.

**Table 3.9-5: Operational Emissions (tons per year) - Proposed Los Banos General Plan**

<i>Unmitigated Operation Emissions (tons/year)<sup>1</sup></i>			
<b>Pollutant</b>	<b>SJVAPCD Thresholds (tons/year)</b>	<b>Build out Year (2030)<sup>2</sup></b>	<b>Significant (Yes or No)<sup>b</sup></b>
ROG	10	<b>37.57</b>	<b>Yes</b>
NO <sub>x</sub>	10	<b>265.50</b>	<b>Yes</b>
PM-10	N/A	381.63	N/A
CO	N/A	586.99	N/A
CO <sub>2</sub>	N/A	264,308.50	N/A

<sup>1</sup>Emission factors were generated by the Air Resources Board EMFAC 2007 computer model (version 2.3) for the San Joaquin Valley Air Basin.

<sup>2</sup>Bold values are in excess of the applicable standard. The SJVAPCD established thresholds for ROG and NO<sub>x</sub> are 10 tons per year whereas CO and PM-10 do not have an established emissions threshold of significance.

Source: *Environmental Science Associates, 2007.*

An increase in stationary source emissions is also anticipated with build out of the proposed Los Banos General Plan. In addition to vehicle emissions, emissions will be generated from a variety of stationary sources including the use of natural gas, the use of landscape maintenance equipment, and the use of wood burning fireplaces. A variety of industrial and commercial processes (e.g., dry cleaning, etc.) allowed under the proposed Los Banos General Plan would also be expected to release emissions; some of which could be of a hazardous nature. These emissions are controlled at the local and regional level through permitting and would be subject to further study and a health risk assessment prior to the issuance of any necessary air quality permits. Policies included as part of the proposed General Plan that would minimize this impact are listed below. However, even with implementation of the below mentioned policies, this impact is still considered significant and unavoidable.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would help to reduce this impact:

POSR-I-46 Support federal and State efforts to reduce greenhouse gasses and emissions through local action that will reduce motor vehicle use, support alternative forms of transportation, require energy conservation in new construction, and energy management in public buildings.

*By proposing compact development, mixed use centers, walkable neighborhoods, green building technology, trip and job-housing balance, the City will be helping to implement many of the strategies and programs in the San Joaquin Valley 2007 Ozone Plan.*

POSR-I-48 Require developers to implement Best Management Practices to reduce air pollutant emissions due to construction work and operation of equipments.

- During clearing, grading, earth-moving or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures;
- All materials excavated or graded shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All materials transported off-site shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All motorized vehicles shall have their tires watered before exiting a construction site.
- The area disturbed by demolition, clearing, grading, earth-moving, or excavation shall be minimized at all times;
- All construction-related equipment shall be maintained in good working order to reduce exhaust from these equipments.

POSR-I-49 Do not allow wood-burning stoves and fireplaces in new development, and seek grant funding to establish a change-out program to remove them in existing homes.

*Pacific Gas & Electric and the Hearth Products Association have offered incentives in the past in the form of cash rebates to encourage replacement of old wood-burning appliances with more efficient fireplaces and stoves. These incentives are determined annually and are not necessarily offered each year.*

POSR-I-50 Use the SJVAPCD Guidelines for Assessing and Mitigating Air Quality Impacts for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents.

*The City will continue to cooperate with the SJVAPCD in the review of development proposals. The City will develop standard methods for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents and ensure that the SJVAPCD is on the distribution list for all CEQA documents. SJVAPCD will determine if a newer document supersedes GAMAQI.*

- C-I-13 Require traffic impact studies for all proposed new developments that will generate significant amounts of traffic (100 or more peak hour trips).

*Specific thresholds will be based on location and project type, and exceptions may be granted where traffic studies have been completed for adjacent development. The City's new traffic model developed for the 2030 General Plan will facilitate this analysis.*

- C-I-14 Establish a Transportation Performance Monitoring (TPM) program for the southern part of the Westside subarea to monitor and control traffic arising from new development. (See figure on page 103.)

*Development occurring within the TPM program area must submit data to the city traffic engineer to calculate the number of site trips generated per developable acre. As a starting guide, the maximum number of trips allowed in the subarea shall not exceed 33,500 daily or 3,200 during PM peak hours. No development would be allowed to generate traffic that directly or cumulatively would exceed this number. These trip limits then will maintain levels of service as established in the Land Use Element, with exceptions to be granted only for development for which the City Council makes a Statement of Overriding Considerations. The City will maintain a "trip ledger" showing all site trips that have been approved for each TAZ, with allocations made on the basis of receipt of a Certificate of Reservation of Site Trips or a building permit application. The City Council will periodically review the trip generation rates and allowable adjustments and exceptions established for the TPM program and the trip allocations by TAZ and allow for recalculation of the maximum number of site trips allowed based on approved changes in trip generation rates or other adjustment factors.*

- C-I-22 Establish bicycle lanes, bike routes and bike paths consistent with the General Plan.

As stated above, the City will implement a variety of policies designed to address air quality issues. Additionally, future project-specific compliance with SJVAPCD permitting would also help to reduce air quality emissions associated with individual projects. However, total air quality emissions associated with buildout of the proposed General Plan would still exceed daily SJVAPCD thresholds for NO<sub>x</sub> and ROG. Therefore, implementation of the proposed General Plan including the adoption of the policies listed above would still result in a significant impact. Because no additional, feasible, mitigation is currently available, this impact is considered significant and unavoidable.

### *Impact*

#### ***3.9-2 Implementation of the proposed Los Banos General Plan would expose sensitive receptors to substantial pollutant concentrations. (Significant and Unavoidable)***

Development (in particular infill development) resulting from buildout of the proposed Los Banos General Plan could place sensitive land uses near local intersections or roadways associated with air pollutant emissions that exceed State or federal ambient air quality standards. Similarly, existing sensitive land uses near local roadways that experience increased levels of traffic resulting from build out of the proposed Los Banos General Plan could be exposed to air pollutant emissions that exceed

State and/or federal ambient air quality standards. In addition to these air pollutant emissions, a variety of TAC emissions could also be released from various construction and operations (i.e., industrial activities) associated with the proposed General Plan. The California Air Resources Board has declared that diesel particulate matter from diesel engine exhaust is a TAC. Additionally, the California Office of Environmental Health Hazard Assessment (OEHHA) has determined that chronic exposure to DPM can cause carcinogenic and non-carcinogenic health effects.

CEQA documentation prepared for individual projects (resulting from implementation of the Los Banos General Plan) would have project-specific data and will be required to address, and to the extent feasible, mitigate any significant or potentially significant air quality impacts. Examples of mitigation that may be proposed include intersection/roadway capacity improvements or additional land use siting and required setbacks. However, it should be noted, the ability to mitigate these potential impacts is contingent on a variety of factors including the severity of the air quality impact, existing land use conditions and the technical feasibility of being able to implement any proposed mitigation measures (e.g., relocations, road widening, etc.).

Policies included as part of the proposed General Plan that would minimize this impact are listed below. However, even with implementation of these policies, this impact is still considered significant and unavoidable.

*Proposed General Plan Policies that Reduce the Impact*

Policies summarized under Impact 3.9-1 help to reduce this impact and thus are incorporated here by reference. No additional mitigation is deemed feasible, thus Impact 3.9-2 remains significant and unavoidable.

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### 3.10 FIRE HAZARDS AND HAZARDOUS MATERIALS

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This section discusses hazards and hazardous materials issues related to the implementation of the proposed Los Banos General Plan. Industrial or commercial operations that involve the use of hazardous materials are described, and the status of potential public health and environmental issues related to these uses are subsequently assessed and analyzed. Furthermore, portions of the Planning Area that may be vulnerable to the threat of fire and airport-related hazards are identified and addressed within this section. The proposed Los Banos General Plan's impact on the provision of adequate levels of emergency response services (i.e., law enforcement, fire protection service, etc.) is more fully described in Section 3.4 "Public Facilities and Utilities".

#### ENVIRONMENTAL SETTING

##### Physical Setting

###### *Hazardous Materials and Wastes*

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. The California Code of Regulation (CCR) defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). Hazardous materials have been and are commonly used in commercial, agricultural, and industrial applications and, to a limited extent, in residential areas.

Hazardous wastes are defined in the same manner. Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. Hazardous materials and hazardous wastes are classified according to four properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), and reactive (causes explosions or generates toxic gases) (CCR, Title 22, Chapter 11, Article 3).

Areas where historic or on-going activities have resulted in the known or suspected release of hazardous materials to soil and groundwater or to the air, as identified by the Central Valley Regional Water Quality Control Board and U.S. Environmental Protection Agency (U.S. EPA), are shown in **Figure 3.10-1** and listed in **Table 3.10-1**. These sites are designated as either Leaking Underground Fuel Tanks (LUFT) sites, SLIC (Spills, Leaks, Investigations, and Cleanups) sites, which are non-fuel contamination sites, or air emission sites. Included in **Table 3.10-1** are facilities that are registered hazardous materials handlers. Most of the contaminated sites within the Planning Area are largely associated with leaking underground storage tanks and are predominately clustered around the City's primary transportation corridors including Pacheco Boulevard, H Street, and 7<sup>th</sup> Street. These sites are predominately associated with retail and commercial uses (e.g., gas stations, convenience stores, car washes, etc.) while additional sites are associated with local industrial, dairy, and agricultural uses.

As shown in **Table 3.10-1**, there are 17 LUFT sites, 11 SLIC sites, 5 toxic air release sites, and 33 hazardous materials handling sites within the Planning Area.

**Table 3.10-1: Location of LUFT, Hazardous Material Handlers, SLIC, and Superfund Sites**

<i>Name</i>	<i>Location</i>
<b><i>LUFT sites<sup>1</sup></i></b>	
7-Eleven Store # 2243-2273(6)	603 Pacheco Blvd
Buy N Save Market	225 7th St
California Highway Patrol	706 West Pacheco Blvd
Chevron #9-0769	1164 Pacheco Blvd
Circle K Store 3614	403 Mercy Springs Road
Dutra's Exxon	850 Pacheco Blvd W
Larry's Shell Service	849 Pacheco Blvd
Menezes Brothers Inc.	2532 Pacheco Blvd
Merced Co Spring Fair	403 F St
Meza Brothers, Inc.	2657 Pacheco Blvd
Pacheco Oil Company	740 2nd St
Santos Texaco #2	1009 Pacheco Blvd E.
Tosco - Facility #03621	1704 Pacheco Blvd E
Tosco Bulk Plant #0382	101 H Street W.
Volta Service Station	23920 Ingomer Grade W
Wolfsen Feedlot	22338 Alvarado Trail
<b><i>Hazardous Material Handler Sites<sup>2</sup></i></b>	
Caltrans	1359 E Pacheco Blvd
Circle K Store #3614	403 Mercy Springs Rd
Circle K Store #3621	1704 E Pacheco
Deluxe Cleaner	1023 6th
Holt Brothers	3440 E Pacheco Blvd
Ingomar Packing Co	9950 South Ingomar Grade
Kings County Truck Lines	4395 Mercy Springs Rd
Larrys Pacheco Shell Service	849 West Pacheco Blvd
Lifetime Doors Inc	G Street
Los Banos Motors Inc	1209 6th Street
Los Banos Tire Inc	205 Pacheco Blvd
Mcelvany	13343 Johnson Rd
Memorial Hospital Los Banos	520 W I St
Meza Brothers Inc	2657 Pacheco Blvd
Mid Valley Aviation	1000 Airport Way
Monte Vista Trucking	1854 Pacheco Blvd
Morning Star Packing Co	13448 South Volta Road
Pacific Bell	5 West J Street
Paradiso	1160 I St

**Table 3.10-1: Location of LUFT, Hazardous Material Handlers, SLIC, and Superfund Sites**

<i>Name</i>	<i>Location</i>
PG&E Los Banos Service Center	940 I Street
Process Tube Lab	1004 I St
Process Tube Laboratory	25 G St
Ranchwood Transport	923 Pacheco Blvd Ste C
Ricks Auto Body	1339 Place Rd
Santos Ford Lincoln Mercury	617 W Pacheco Blvd
Tee-Dee-Us Automotive	447 Mercey Springs Road
Tim Marrison	17048 S Mercy Springs Rd
Tosco Bulk Plant No 0382	101 W H St
Tri Valley Growers Plant 5	12045 South Ingomar Grade
United Parcel Service Caban	2526 E Pacheco Blvd
Unocal Service Station 5509	250 West Pacheco Blvd
Vision Auto Body	2925 Pacheco Blvd
Wilbur-Ellis Co	11569 South Hereford Road
<b><i>Air Emissions<sup>3</sup></i></b>	
Morning Star Packing Co	13448 South Volta Road
Los Banos Rmc	22101 Sunset Ave
Tri Valley Growers Plant 5	12045 South Ingomar Grade
California Dairies Inc	1155 Pacheco Boulevard
Ingomar Packing Co	9950 South Ingomar Grade
<b><i>SLIC Sites<sup>4</sup></i></b>	
A&A Transport Co	1955 East Pacheco Boulevard
Becker Estate, Former Becker Oil Term., Los Banos	1330 Pacheco Pass Blvd.
Chevron, Los Banos Rail Corridor	Uprrr Row And H Street
Chevron Texaco, H Street, Los Banos	840 H St.
Lindemann Dairy Farms, Inc	22759 South Mercey Springs Road
Los Banos Airport	West I Street and Hwy 152
Streeter Flying Service	Ward St and Philips Rd
Tidewater Pipeline	101 H Street
Wilbur-Ellis Co./ B.F. Chemical	11609 South Hereford Road
David O. Ross	21425 Ingomar Rd.
Former Trent Pump Station	21425 Ingomar Rd.

<sup>1</sup> RWQCB listed Leaking Underground Fuel Tanks.

<sup>2</sup> Facilities regulated by the U.S. EPA that handle hazardous waste. (Not shown on figure)

<sup>3</sup> A site regulated by the U.S. EPA with which releases air emissions

<sup>4</sup> RWQCB listed Spills, Leaks, Investigations, and Cleanups sites.

Sources: SWRCB Geotracker website: <http://geotracker.swrcb.ca.gov>; EPA Enviro/RCRA website: <http://www.epa.gov/enviro/index.html>; Dyett & Bhatia. 2007.

### *Fire Hazards*

Both urban and wildland fire hazards exist in the Planning Area, creating the potential for injury, loss of life, and property damage. Urban fires primarily involve the uncontrolled burning of residential, commercial, or industrial structures due to human activities. Wildland fires affect grass, forest, and brushlands, as well as any structures on these lands. Such fires can result from either human-made or natural causes. The type and amount of fuel, topography, and climate are the primary factors influencing the degree of fire risk.

#### *Urban Fire Hazards*

Urban fires primarily involve the uncontrolled burning of residential, commercial, and industrial structures due to human-made causes. Factors that exacerbate urban structural fires include substandard building construction, highly flammable materials, delay in response time from emergency response providers, and inadequate fire protection services.

#### *Wildland Fire Hazards*

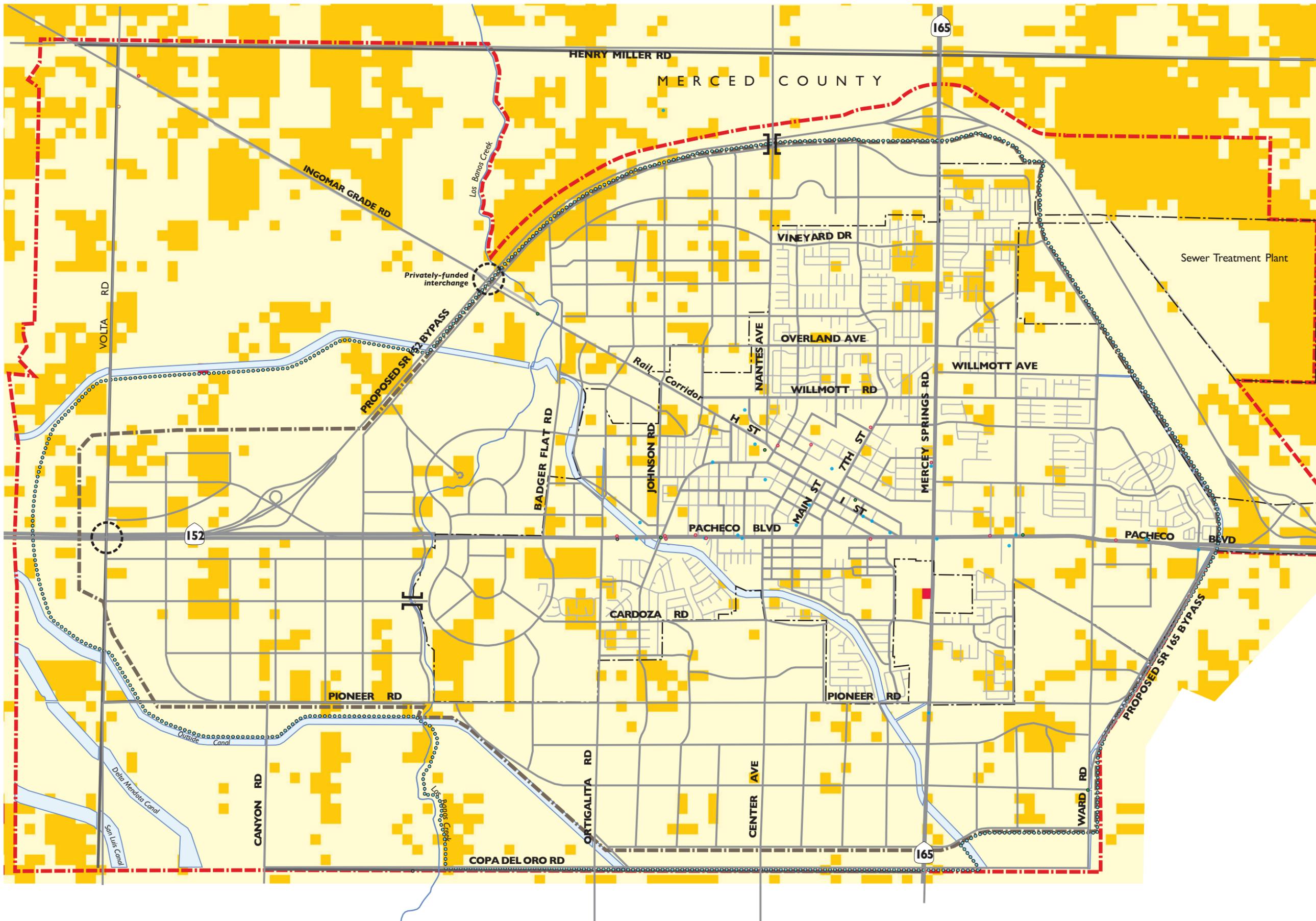
Throughout California, communities are increasingly concerned about wildfire safety as increased development occurs in rural areas (in particular foothill and mountain areas), and subsequent fire control measures have affected the natural cycle of the ecosystem. Suppression of natural fires allows the understory to become dense, creating the potential for larger and more intense wildland fires. Human activities such as smoking, debris burning, and equipment operation can also contribute to an increased level of risk.

According to the California Department of Conservation Fire and Resource Assessment Program (FRAP), fire threat is a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined to create the classes of fire risk, ranging from little or no threat to extreme threat. Climate and landscape characteristics are among the most important factors influencing hazard levels. Weather characteristics such as wind, temperature, humidity and fuel moisture content affect the potential for fire. Of these four, wind is the dominant factor in spreading fire since burning embers can easily be carried with the wind to adjacent exposed areas, starting additional fires. Landscape characteristics such as steep slopes also contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. The Planning Area is not characterized by substantial areas of steep slopes. Vegetation type influences wildfire hazard levels as well. For example, landscapes dominated by chaparral are more flammable than other vegetation types.

The Planning Area is not characterized by significant areas of terrain that can be prone to wildland hazards. Additionally, the topography of the Planning Area is relatively homogenous and steep slopes that could contribute to wildland fire hazards are not common. Data provided by FRAP indicates that a majority of the Planning Area is classified mainly as having “little or no threat”, with small areas listed as “moderate” threat (Figure 3.10-1). The riparian forest corridor to the west of Los Banos Creek represents the largest single risk due to the amount of tree cover and undergrowth. The size of the corridor, however, has decreased steadily over the years with the implementation of Los Banos Creek flood control measures. Wildfire hazards are moderate at the edge of the City where residential homes abut grassland or open space. As Los Banos continues to expand, more of these urban-rural interface areas will be created. Within the City, fuel loading is light and fire risk comes primarily from urban fires, not wildfires.

Figure 3.10-1 – Wildfire Risk and Hazardous Materials

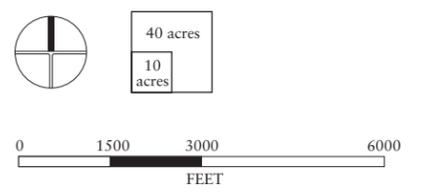
Figure 3.10-1  
**Wildfire and Hazardous Materials**



- LUFT - Leaking Underground Fuel Tank
- SLIC - Spills, Leaks, Investigations, and Clean-ups
- AIR EMISSIONS
- HAZARDOUS WASTE
- MULTI- HAZARD LOCATION

- Wildfire Hazard**
- Low
  - Moderate
  - High
- Potential New Interchange
  - ]] Grade/Creek Crossing
  - Planning Area
  - Sphere of Influence
  - Urban Growth Boundary
  - City Limits

Source:  
 CA Protection Agency, 2007  
 CA Dept. of Forestry and Fire Protection, 2004



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## REGULATORY SETTING

### Hazardous Materials Management

Laws and regulations require hazardous materials users to store these materials appropriately and to train employees to manage them safely. A number of agencies participate in enforcing hazardous materials management requirements. The Federal Emergency Planning and Community Right-to-Know Act (EPCRA), enacted as Title III of the Superfund Amendments and Reauthorization Act (SARA), requires facilities handling an excess of designated threshold quantities of hazardous materials to provide hazardous materials, hazardous waste, and emission information to public agencies, and to prepare emergency response plans for accidents or other unauthorized releases of designated threshold quantities of hazardous materials. In California, the requirements of SARA Title III are incorporated into the State's Hazardous Materials Release Response Plans and Inventory Law (California Health and Safety Code Section 25500, et seq).

#### *Federal*

The primary Federal agencies with responsibility for hazardous materials management include the US EPA, U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (DOT). The responsibilities of OSHA and DOT are further described below. US EPA was created to protect human health and to safeguard the natural environment — air, water, and land — and works closely with other Federal agencies, and state and local governments to develop and enforce regulations under existing environmental laws. Where national standards are not met, US EPA can issue sanctions and take other steps to assist the states in reaching the desired levels of environmental quality. US EPA also works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts.

#### *State*

In many cases, California law mirrors or is more restrictive than federal law, and enforcement of these laws has been delegated to the State or local agency. In January 1996, the California Environmental Protection Agency (Cal EPA) adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements: hazardous waste generators and hazardous waste onsite treatment; underground storage tanks; aboveground storage tanks; hazardous materials release response plans and inventories; risk management and prevention programs; and Unified Fire Code hazardous materials management plans and inventories. The plan is implemented at the local level. The local agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA). In Los Banos, the Merced County Division of Environmental Health is the designated CUPA.

The California Hazardous Materials Release Response Plans and Inventory Law of 1985, administered by Cal EPA through CUPA, require any business that handles hazardous materials above certain thresholds to prepare a Hazardous Materials Management Plan, which must include the following:

- Details of the facility and business conducted at the site;
- An inventory of hazardous materials that are handled or stored on site;

- An emergency response plan;
- A safety and emergency response training program for new employees with annual refresher courses.

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. One such site, Beckman Instruments, an electronic instruments manufacturing company, located at 167 West Poplar Avenue, in the central, industrial portion of the City, which is on the Cortese List, is a federal superfund site. Subsurface soils and groundwater were contaminated with lead and chlorinated solvents between 1975 and 1983. The contaminated soils were excavated and disposed of at an off-site Class I disposal facility in 1990. Groundwater remediation started in 1985 and continues to be monitored.<sup>13</sup> In 2005 the U.S. EPA Amended the Record of Decision for the site, changing the groundwater remedy from active pumping and treating to monitored natural attenuation.<sup>14</sup>

### **Hazardous Waste Handling**

The federal Resource Conservation and Recovery Act of 1976 (RCRA) created a major new federal hazardous waste “cradle-to-grave” regulatory program administered by U.S. EPA. Under RCRA, EPA regulates the generation, transportation, treatment, and disposal of hazardous waste, and the investigation and remediation of hazardous waste sites. Individual states may apply to EPA to authorize them to implement their own hazardous waste programs in lieu of RCRA, as long as the state program is at least as stringent as federal RCRA requirements. California has been authorized by EPA to implement its own hazardous waste program, with certain exceptions. In California, the Cal EPA Department of Toxic Substances Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste, and the investigation and remediation of hazardous waste sites. DTSC has established criteria for identifying, packaging, labeling, treating, storing, and disposing of hazardous wastes. These are supplemented by federal Hazardous and Solid Waste Amendments of 1984 requirements, which are not yet a part of the state’s authorized program. There are 33 hazardous waste handling sites dispersed throughout the Los Banos Planning Area. The majority of these sites are auto-oriented commercial uses.

### **Hazardous Materials Transportation**

The DOT regulates the transportation of hazardous materials between states and foreign countries. DOT regulations govern all means of transportation, except that the U.S. Postal Service regulations govern packages sent by mail. The State of California has adopted DOT regulations for the intrastate movement of hazardous materials. In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state. State regulations are contained

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<sup>13</sup> Department of Toxic Substances: [http://www.dtsc.ca.gov/SiteCleanup/Cortese\\_List.cfm](http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm). May 25, 2007.

<sup>14</sup> Edward Cargile, DTSC, Project Manager, pers. Comm. Status confirmation. May 29, 2007.

in Title 26 of the California Code of Regulations (26 CCR). Both regulatory programs apply in California.

The two state agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans).

The CHP enforces hazardous material and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the state that can respond quickly in the event of a spill. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the state.

### **Medical Waste**

The transportation and disposal of medical waste is regulated under the California Medical Waste Management Act (MWMA; Sections 117600 et seq. of the California Health and Safety Code). Within the statutory framework of the MWMA, the Medical Waste Management Program of the California Department of Health Services (DHS) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste generators, offsite treatment facilities, and transfer stations throughout the state. The DHS also oversees all medical waste transporters.

### **Occupational Safety**

Cal/OSHA and Fed/OSHA are the agencies responsible for ensuring worker safety in the handling and use of chemicals in the workplace. Within the State, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations. Cal/OSHA standards are generally more stringent than federal regulations.

Under the authority of the Occupational Safety and Health Act of 1970, Fed/OSHA has adopted numerous regulations pertaining to worker safety (29 CFR). These regulations set standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries. Some Fed/OSHA regulations contain standards relating to hazardous materials handling, including workplace conditions, employee protection requirements, first aid and fire protection, as well as material handling and storage. Because California has a federally-approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in 29 CFR.

Cal/OSHA regulations (8 CCR) concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. The hazard communication program also requires that Material Safety Data Sheets (MSDS) be available to employees and that employee information and training programs be documented. These regulations

also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

Both federal and State laws include special provisions for hazard communication to employees in research laboratories, including training in chemical work practices. The training must address methods of safe handling of hazardous materials, MSDSs, emergency response equipment and supplies, and building emergency response plans and procedures. Chemical safety information must be available. Specifically, more detailed training and monitoring is required for the use of carcinogens, ethylene oxide, lead, asbestos, and certain other chemicals listed in 29 CFR. Emergency equipment and supplies, such as fire extinguishers, safety showers, and eyewashes, must also be kept in accessible places.

Cal/OSHA and Fed/OSHA regulations (29 CFR and 8 CCR) include extensive, detailed requirements for worker protection applicable to any activity that could disturb asbestos-containing materials, including maintenance, renovation, and demolition. These regulations are designed to ensure that persons working near the maintenance, renovation, or demolition activity are not exposed to asbestos.

### **Emergency Response**

The Federal Emergency Planning and Community Right-to-Know Act of 1986 requires detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of to prevent or minimize adverse effects to human health or the environment in the event such materials are accidentally released. California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services, which coordinates the responses of other agencies, including Cal EPA, the CHP, the Department of Fish and Game, the Central Valley RWQCB, Merced County Fire Department, and the Merced County Division of Environmental Health.

### ***Aboveground and Underground Storage Tanks***

The State Water Resources Control Board (SWRCB) administers the aboveground storage tank (AST) program. The program covers facilities that store petroleum in a single tank, or multiple tanks with an aggregate capacity in excess of 1,320 gallons, and requires that tank owners or operators file a storage statement, pay a facility fee, and prepare and implement a federal SPCC Plan. The SPCC Plan must include procedures, methods, and equipment in place at the facility to prevent discharges of petroleum from reaching navigable waters.

The SWRCB also administers the underground storage tank (UST) program. State laws governing USTs specify requirements for permitting, construction, installation, leak detection monitoring, repairs, release reporting requirements, corrective actions, cleanup, and closure. The Merced County Division of Environmental Health enforces applicable regulations, which include permitting and inspection requirements.

Federal laws and regulations relating to underground storage tanks used to store hazardous materials (including petroleum products) require that underground storage tank owners and operators register their tanks with the Environmental Protection Agency (EPA) or delegated agencies. Federal

regulations require extensive remodeling and upgrading of underground storage tanks, including installation of leak detection systems. Tank removal and testing procedures are specified by the regulations.

State laws relating to underground storage tanks include permitting, monitoring, closure, and cleanup requirements. Regulations set forth construction and monitoring standards, release reporting requirements, and closure requirements. Old tanks must eventually be replaced. All new tanks must be double-walled, with an interstitial monitoring device to detect leaks. All soil and groundwater contamination must be cleaned up. The regulations for this program are contained in Chapter 6.7, Division 20 of the Health and Safety Code and Subchapter 16 of Title 23 of the California Code of Regulations, California Underground Storage Tank Regulations, and are implemented by the Regional Water Quality Control Board (RWQCB). Underground storage tank permitting is handled through local governmental agencies. There are 17 open Leaking Underground Fuel Tanks (LUFT) sites dispersed throughout the Planning Area (see Table 3.10-1).

#### *The Spills, Leaks, Investigations, and Cleanups (SLIC) Section*

The Spills, Leaks, Investigations, and Cleanups (SLIC) Section of the RWQCB oversees activities at non-UST sites where soil or groundwater contamination have occurred. Many of these sites are former industrial facilities and dry cleaners, where chlorinated solvents were spilled, or have leaked into the soil or groundwater. The SLIC Program is set up so that reasonable expenses incurred by the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) in overseeing water quality matters can be recovered from the responsible party. Facilities are assigned a site specific program cost account to track expenditures. There are 11 reported SLIC facilities in the Los Banos Planning Area.

#### *EPA's Aerometric Information Retrieval System (AIRS)*

The AIRS database is maintained by the EPA and provides information on facilities that produce and release air pollutants. The AIRS data comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, refineries, universities, and other facilities both large and small. Five facilities release air emissions in the Los Banos Planning Area.

#### *Polychlorinated Biphenyls*

PCBs are organic oils that were formerly placed in many types of electrical equipment, including transformers and capacitors, primarily as electrical insulators. Years after their widespread and commonplace installation, it was discovered that exposure to PCBs may cause various health effects, and that PCBs are highly persistent in the environment.

In 1979, EPA banned the use of PCBs in most new electrical equipment and began a program to phase out certain existing PCB-containing equipment. The use and management of PCBs in electrical equipment is regulated pursuant to the Toxic Substances Control Act (40 CFR). These regulations generally require labeling and periodic inspection of certain types of PCB equipment and set forth detailed safeguards to be followed in disposal of such items.

## **Pesticides**

Pesticides contain chemicals formulated specifically to be toxic to certain living things, which makes them a target for regulation. As the use of modern chemical-based pesticide products has grown, attention has been drawn to their potential adverse side effects. Legislative and regulatory efforts to regulate the use and application of pesticides have sought to retain the benefits while minimizing the potential harm to public health and the environment.

Pesticides are subject to federal and State legislation. Pesticide controls begin with a screening of the toxic ingredients on pesticides to ensure that they do not present undue hazards to human health or non-targeted species. After screening, the use of pesticides is regulated to ensure that workers are trained in proper application techniques, the pesticides are properly handled and stored and the location and content of chemicals is made known to workers, emergency response units, and medical personnel who may be exposed to the chemicals. The resulting array of license, permit, and registration requirements, together with the manifold restrictions on the application, use, and handling of pesticides, reflect a growing desire to evaluate environmental effects accurately and to oversee all pesticide-related activities. Because of the presence in groundwater and surface water and air, pesticides are regulated in California under federal and State water quality laws, safe drinking water laws, and air quality laws.

The following major federal and State statutes and regulations control pesticides:

- Federal Insecticide, Fungicide, and Rodenticide Act;
- Pesticide Contamination Prevention Act; and
- Birth Defects Prevention Act.

Other regulations cover pesticide registration, application, use, permitting, monitoring, storage, transportation and disposal.

## **Local**

### *Merced County Division of Environmental Health*

The Merced County Division of Environmental Health (MCDEH) is a Certified Unified Program Agency (CUPA). A CUPA is a single local agency designated by the California Environmental Protection Agency as having regulatory authority for the following environmental programs (Cal EPA, 2007):

- Hazardous Materials Release Response Plans and Inventories (Business Plans);
- California Accidental Release Prevention (CalARP) Program;
- Underground Storage Tank Program;
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control and Countermeasure (SPCC) Plans;
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs;

- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements.

#### *California Accidental Release Prevention Program (CalARP)*

The goal of the CalARP program is to reduce the likelihood and severity of consequences of extremely hazardous materials releases. Any business which handles Regulated Substances (including Federally listed Extremely Hazardous Substances and State listed Acutely Hazardous Materials) is required to prepare a Risk Management Plan. The Risk Management Plan describes current and past practices and releases, what the impact of releases may be, and what they do or plan to do to prevent releases and minimize their impact if one occurs.

#### *Hazardous Materials Business Plan Program*

State codes require all businesses to disclose the use, handling, or storage of hazardous materials, and/or waste. This information is essential to the City's fire fighters, health officials, planners, elected officials, workers, and their representatives so that they can plan for and respond to potential exposures to hazardous materials. In addition, it provides information to the community on chemical use, storage, handling, and disposal.

## **IMPACT ANALYSIS**

### **Significance Criteria**

Implementation of the proposed General Plan would have a potentially significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the Planning Area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the Planning Area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

## **Methodology and Assumptions**

The assessment of hazards and hazardous materials impacts is a qualitative review of the existing conditions applicable to the Planning Area and a determination of whether the proposed General Plan includes adequate provisions to address the potential impacts associated with local hazard conditions. The proposed General Plan would promote development and growth within Los Banos. Consideration is given to potential historic industrial activities affecting future construction workers and residents, specifically from soil and groundwater conditions in the Planning Area, in addition to an analysis of potential impacts on future occupants that may result from continuing industrial activities that involve hazardous materials. Furthermore, potential impacts on workers and residents resulting from fire hazards are also analyzed.

In order to reduce or mitigate potential impacts from a variety of hazards and hazardous materials conditions, the City ensures that development will continue to be completed in compliance with local, State, and federal regulations. These specific regulations are more fully described above under the “Regulatory Setting” section of this chapter.

## **Summary of Impacts**

Implementation of the Los Banos General Plan could result in the exposure of people or the environment to hazardous materials, hazardous waste, or fire hazards associated with future development and growth of the City’s population. However, to the extent feasible, proposed General Plan policies ensure that impacts are reduced to a level that is less than significant.

## **Impacts and Mitigation Measures**

### *Impact*

*3.10-1 The proposed Los Banos General Plan could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonable foreseeable upset and accident conditions involving the release of hazardous materials to the environment. (Less than Significant)*

The proposed Los Banos General Plan would result in development of sensitive uses, such as houses, schools, and day care centers on land that may have been contaminated by pesticides or petrochemicals. This new development may occur near buildings or locations that previously stored or used a variety of pesticides, dispensing of fuels, and maintenance of machinery. While concentrations of chemicals are likely to be higher in these locations, significant concentrations may be found in other locations. In addition, businesses such dry cleaners, gas stations, and the Los Banos Municipal Airport (Airport) could also be contaminated. Railroad rights-of-way typically have surface contamination due to the lubricating oil used on the wheels and the use of herbicides to help minimize weeds within these areas. Although a number of businesses within the Planning Area routinely store, handle and transport hazardous substances, the use of these hazardous materials is controlled and permitted by the City’s fire department which conducts Uniform Fire Code inspections of these facilities, regulates these facilities, and otherwise ensures that risks associated with the use of hazardous materials in the community area minimized. Lists of contaminated sites within the Planning Area are available through the Merced County Division of Environmental Health, the

Regional Water Quality Control Board, and the Department of Toxic Substance Control, and is summarized in Table 3.10-1.

Any new hazardous materials transportation, use, and disposal would be subject to State and federal hazardous materials laws and regulations. The transport of hazardous materials is regulated by the U.S. Department of Transportation. Hazardous materials use, storage, and disposal would be subject to hazardous materials programs administered by MCDEH. Future development under the General Plan would be subject to regulatory programs such as the Hazardous Materials Business Plan, aboveground and under-ground storage tank programs, and Resource Conservation and Recovery Act (RCRA) hazardous waste generator programs.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

S-I-19 Apply provisions of the Merced County Hazardous Waste Management Plan to decisions involving hazardous materials in Los Banos as appropriate.

S-I-20 Prohibit the location or expansion of businesses producing, utilizing or storing hazardous materials within a half mile of schools, hospitals, and residential neighborhoods.

*Where the location of such facilities cannot be feasibly avoided, effective mitigation measures will be implemented.*

S-I-21 Ensure that any proposed new development on identified or suspected hazardous materials sites address hazardous materials through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project.

*The City requires that recommendations to satisfy federal or State cleanup standards are implemented as part of the construction phase for each project.*

S-I-22 Require remediation and cleanup of sites contaminated with hazardous substances.

*The level of remediation and cleanup will be determined by the City based on the intended use and health risk to the public. At the minimum, remediation will be in compliance with federal and State standards. Clean-up shall be required in conjunction with new development, reconstruction, property transfer of ownership, and/or continued operation after the discovery of contamination.*

S-I-23 Coordinate enforcement of the Hazardous Material Disclosure Program with the Merced County Health Department to identify facilities producing, utilizing, or storing hazardous wastes.

*State and federal legislation requires every business that handles hazardous materials report their inventories to the local fire department. The program's primary function is to identify, monitor, and assist businesses using or storing hazardous materials and allow the City to handle emergency incidents more effectively. The City will maintain and share this information with police, fire, and emergency services.*

- S-I-24 Promote the reduction, recycling, and safe disposal of household hazardous wastes through public education and awareness.

*The City will: 1) Educate the public on the types of household hazardous wastes and their proper disposal methods, 2) Provide information on Merced County's waste collection program, including drop-off points and collection dates, and 3) Encourage citizen reporting of unlawful dumping activity.*

- S-I-25 Review, update, and implement the City's *Hazardous Materials Plan* on a continual basis.

*This will include preparing guidelines on transporting hazardous materials and the need for coordination with the California Highway Patrol.*

Compliance with State requirements and implementation of the proposed General Plan policies summarized above would reduce this impact to a level that is less than significant.

### ***Impact***

#### ***3.10-2 Facilities developed under the proposed Los Banos General Plan could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)***

Schools are one of several sensitive receptors that must be taken into consideration when the City is approving new land uses or transportation routes that may accommodate the production, storage, use, or transportation of hazardous materials and/or waste. Buildout of the proposed General Plan would result in increased population levels throughout the Planning Area and would increase the number of school-age children as well. A potential increase in levels of residential development throughout the central City and other portions of the Planning Area would generate an increase in the number of students (dependent upon future household sizes and make-ups), and would necessitate the need to construct additional school facilities. New school sites should be evaluated for their proximity and potential exposure to hazardous materials as they are proposed for development. Potential school sites should be selected to minimize their exposure to a variety of hazardous conditions. In addition to general CEQA requirements, school acquisition/development projects to be funded under the State School Facilities Program must also satisfy several specific requirements established under the California Education Code and California Code of Regulations. These regulations require that potential school hazards relating to soils, seismicity, hazards and hazardous materials, and flooding be addressed during the school site selection process.

*Proposed General Plan Policies that Reduce the Impact*

Policies summarized above in Impact 3.10-1 reduce this impact and thus are incorporated here by reference.

Continued compliance with all local, State and federal safety standards and implementation of the proposed General Plan policies summarized above would reduce this impact to a level that is less than significant.

*Impact*

***3.10-3 Development under the proposed Los Banos General Plan could be located on a site which is included on a list of hazardous materials sites compiled pursuant to government code section 65962.5 and, as a result, could create a significant hazard to the public or the environment. (Less than Significant)***

As more fully described under Impact 3.10-1, lists of contaminated sites within the Study Area are available through the MCDEH, the Regional Water Quality Control Board, and the DTSC, and are summarized in Table 3.10-1. Businesses such as dry cleaners, gas stations, and other auto oriented commercial uses are often contaminated. In addition, the removal of structures that contain hazardous business materials such as asbestos, lead-based paint, or PCBs could expose individuals to hazardous conditions during demolition.

Further, historic agricultural practices have occurred throughout most of the Los Banos Planning Area. While much of these agricultural lands have were developed as commercial and residential uses, considerable agricultural areas with active farming practices remain. As a result, the potential for agricultural chemical residues to be present in shallow soils exists within the Planning Area. As such, development under the general plan of these lands would be required to have soils analyzed for volatile and extractable hydrocarbons, volatile and extractable organics, pesticides, herbicides, and California Administrative Manual, Title 22 (CAM 17) metals.

Policies included as part of the proposed General Plan have been designed to minimize this impact and are summarized above in Impact 3.10-1. Development within Los Banos would be required to comply with Section 19827.5 of the California Health and Safety Code, which requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable Federal regulations regarding hazardous air pollutants, including asbestos. Also required is full compliance with Title 17 and Title 8 of the California Code of Regulations, which includes work practice standards related to the evaluation and abatement of lead in public and residential buildings; and covers construction work where an employee may be exposed to lead, including metallic lead, inorganic lead compounds, and organic lead, respectively.

*Proposed General Plan Policies that Reduce the Impact*

Policies S-I-17, S-I-18, S-I-19, S-I-20, S-I-21, S-I-22, S-I-21, and S-I-35 summarized above in Impact 3.10-1 reduce this impact and thus are incorporated here by reference.

Continued compliance with all local, State and federal safety standards and implementation of the proposed General Plan policies summarized above would reduce this impact to a level that is less than significant.

*Impact*

***3.10-4 Implementation of the proposed General Plan would result in development adjacent to the Los Banos Municipal Airport, potentially increasing safety hazards for people residing or working in the Planning Area. (Less than Significant)***

The Los Banos Municipal Airport is located in the western part of the City between SR-152 and Ingomar Grade Road. The Airport is a General Aviation Airport that is served by a 3,000' X 75' runway with a full return taxiway. There are currently 24 based aircraft at the Airport, and plans are in the works to expand the number of hangars by eight T-hangars, and one 120'x85' corporate hangar. The latest Airport Master Plan was completed in 1995 and covers the planned expansion, as well as, projected use of the Airport for a period of 20 years (1995/2015). Today, the City is considering the relocation of the airport to a site outside the Planning Area.

The Airport Land Use Commission (ALUC) was established to ensure that there are no direct conflicts with land uses, noise, or other issues that would impact the functionality and safety of airport operations. One of the key functions of the ALUC is to require that cities' and counties' general plans and zoning ordinances are consistent with Airport Environs Land Use Plans (AELUP's), which contain noise contours, restrictions for types of construction and building heights in navigable air space, as well as requirements impacting the establishment or construction of sensitive uses within close proximity to airports. Future development near the Airport may place people or structures at risk for a variety of airport-related hazards and result in inconsistencies with the land use policies adopted by the Merced County Airport Land Use Commission. However, the planned relocation of the airport would eliminate this potential impact.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

LU-I-7      Require preparation of developer master plans to guide future development in the following subareas:

- The Westside subarea;
- Airport subarea.

Both the Westside and Airport subareas area envisioned to become master-planned employment centers containing a mix of office parks, light industries, and R&D facilities.

LU-I-54      Until such a time as the airport is relocated, ensure that proposed residential, commercial, and industrial uses near the airport be consistent with Los Banos Municipal Airport Plan and the Merced County Airport Land Use Compatibility Plan.

- LU-I-62 Require developers to mitigate fully the environmental effects of development at or near the Airport site following the relocation of the airport, particularly the potential impacts to Los Banos Creek riparian corridor and the City's water supply, by clustering development to maximize open space.

*The areas around Los Banos Creek are considered major groundwater recharge areas for the City.*

- C-I-36 Initiate development feasibility and site planning for a new Airport location outside the urban area, with access to the State highway system, at a location that will minimize environmental impacts.

- C-I-37 Work with the County to ensure future development around the new Airport is compatible with Airport operations.

Continued compliance with all local, State and federal requirements and implementation of the proposed General Plan policies summarized above would reduce this impact to a level that is less than significant.

### *Impact*

#### ***3.10-5 Implementation of the proposed General Plan could interfere with adopted emergency response or emergency evacuation plans. (Less than Significant)***

As more fully described in Chapter 3.2, Transportation, of this EIR, implementation of the General Plan would increase the current number of vehicle trips and miles of vehicular travel within the Planning Area. Consequently, several local roadway facilities would experience deterioration in their level of service; however, with the planned roadway improvements under the proposed General Plan, these levels are anticipated to remain at an acceptable level of service standard. The proposed General Plan addresses these traffic impacts through a combination of policies and several physical roadway improvements identified in the Circulation Diagram (see Chapter 3.2, Transportation for additional information).

The City will further implement a variety of policies designed to address conformance with local emergency response programs and continued cooperation with emergency response service providers and are provided below. Implementation of the proposed General Plan would not physically impede the response times of emergency response vehicles or delay implementation of an evacuation plan.

#### ***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

- S-I-34 Prepare and adopt a Los Banos Natural Hazard Mitigation Plan (NHMP), consistent with guidelines of the Federal Emergency Management Agency (FEMA) and the Disaster Act of 2000.

*This plan will be prepared in consultation with City departments, community leaders, the Los Banos Unified School District, the Memorial Hospital, Emergency Services, PGandE, and relevant regional and State agencies.*

- S-I-35 Work with owners and operators of critical use facilities (i.e., hospitals, police stations, public assembly facilities, transportation services) to ensure that they can provide alternate sources of electricity, water, and sewerage in the event that regular utilities are interrupted in a disaster.

*Public utilities are lifeline services for Emergency Command Centers, public assembly buildings, and police and fire departments, as well as and hospitals. Keeping them open and operative is especially crucial in the 72 hours after a major disaster.*

- S-I-36 Maintain and improve current early warning systems and response facilities (Local E.O.C, National Warning System, Civil preparedness radio systems, etc).

- S-I-37 Coordinate regular emergency drills with City and County emergency service providers.

*To increase disaster preparedness, the City will conduct emergency drills involving City and County fire, police and emergency medical services for different emergency scenarios, and require all City staff to be adequately trained to handle these situations.*

Continued compliance with all local, State and federal requirements and implementation of the proposed General Plan policies summarized above would reduce this impact to a level that is less than significant.

### **Impact**

#### **3.10-6 The proposed Los Banos General Plan could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas. (Less than Significant)**

Wildland fires would continue to pose a threat to the people and structures of the Planning Area. Although the central portions of the Planning Area are highly urbanized, areas at the periphery of the Planning Area (especially those located to the east) are more susceptible to wildland fires due to potential fuel loads (grassland and other vegetation). One of the primary factors contributing to the effective control of a vegetation fire is the rapid response by local fire units. This is especially true during fire season, when fire units may be committed to other fires and are unavailable to respond as quickly. Policies contained within the proposed General Plan are sufficient to mitigate these impacts.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

S-I-16 Ensure Fire Department personnel are trained in wildfire prevention, response and evacuation procedures.

S-I-17 Create a public awareness and weed abatement program to highlight the dangers of open burning and how home owners can protect their properties from wildfires.

*This program will include training and information about fuel breaks, fuel reduction strategies, weed abatement, and the creation of buffer zones to minimize potential fire losses. Weed abatement activities will be conducted in a manner consistent with all applicable environmental regulations.*

S-I-18 Develop ways to update news media and city residents on current wildfire threat levels during drought periods.

S-I-30 Maintain fire department performance and response standards at Class 3 ISO rating or better.

S-I-31 Require adequate access for emergency vehicles in all new development, including adequate street width and vertical clearance on new streets.

S-I-32 Require sprinklers in all mixed use development to protect residential uses from non-residential uses, which typically pose a higher fire risk.

*Appropriate fire protection measures are necessary in mixed use developments, since residential units are typically in close proximity to higher fire load occupancies, such as retail stores, restaurants, etc.*

S-I-33 Maintain mutual aid agreements with Merced County, California Department of Forestry, and nearby cities.

Policies summarized under Impact 3.10-5 also help to reduce this impact and thus are incorporated here by reference.

Continued compliance with all local, State and federal requirements and implementation of the proposed General Plan policies summarized above would reduce this impact to a level that is less than significant.

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## 3.11 NOISE

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This section presents the environmental setting and impact assessment for noise in the Los Banos Planning Area.

### ENVIRONMENTAL SETTING

Noise is commonly defined as undesirable or unwanted sound. Noises vary widely in their scope, source, and volume, ranging from individual occurrences such as leaf blowers, to the intermittent disturbances of overhead aircraft, to the fairly constant noise generated by traffic on freeways. Noise can have real effects on human health, including hearing loss and the psychological effects or irritability from lack of sleep. Noise is primarily a concern with regard to noise-sensitive uses such as residences, schools, churches, and hospitals.

#### Measuring Sound

Sound is generated by sound waves traveling outward from a source; the sound waves exert a sound pressure level (commonly called "sound level"), measured in decibels (dB). In general, people can perceive a two- to three-dB difference in noise levels; a difference of 10 dB is perceived as a doubling of loudness. Environmental noise is usually measured in *A-weighted* decibels; a metric corrected for the variation in frequency response of the human ear. The A-weighted scale is used to describe all noise levels (db) discussed in this section.

Three aspects of community noise are used in assessing the noise environment:

- *Level* (e.g., magnitude or loudness) of sound. Sound levels are measured and expressed in decibels (dB) with 10 dB roughly equal to the threshold of hearing. **Figure 3.11-1** shows the decibel levels associated with different common sounds.
- *Frequency* composition or spectrum of the sound. Frequency is a measure of the pressure fluctuations per second, measured in units of hertz (Hz). The characterization of sound level magnitude with respect to frequency is the sound spectrum, often described in octave bands, which divide the audible human frequency range (e.g., from 20 to 20,000 Hz) into ten segments.
- *Variation* in sound level with time, measured as noise exposure. Most community noise is produced by many distant noise sources that change gradually throughout the day and produce a relatively steady background noise having no identifiable source. Identifiable events of brief duration, such as aircraft flyovers, cause the community noise level to vary from instant to instant. A single number called the equivalent sound level or  $L_{eq}$  describes the average noise exposure level over a period of time.

#### Reporting Noise Levels

Measuring and reporting noise levels involves accounting for variations in sensitivity to noise during the daytime versus nighttime hours. Noise descriptors used for analysis need to factor in human sensitivity to nighttime noise when background noise levels are generally lower than in the daytime and outside noise intrusions are more noticeable. Common descriptors include the Community Noise Equivalent Level (CNEL) and the Day-Night Average Level (DNL, symbol ( $L_{dn}$ )). Both reflect noise exposure over an average day with weighting to reflect the increased sensitivity to noise during

the evening and night. The two descriptors are roughly equivalent. The CNEL descriptor is used in relation to major continuous noise sources, such as aircraft or traffic, and is the reference level for the proposed 2030 General Plan Noise Element.

Knowledge of the following relationships is helpful in understanding how changes in noise and noise exposure are perceived:

- Except under special conditions, a change in sound level of 1 dB cannot be perceived;
- A 3 dB change is considered a just-noticeable difference;
- A 5 dB change is required before any noticeable change in community response would be expected. A 5 dB increase is often considered a significant impact; and
- A 10 dB increase is subjectively heard as an approximate doubling in loudness and almost always causes an adverse community response.

**Noise Sources in Los Banos**

The major noise sources of concern are SR-152 and SR-165, and the Los Banos Municipal Airport. Other vehicle traffic on arterial and collector streets are also a source of noise. The Union Pacific Railroad (UPRR) facilities are abandoned and no longer are a noise source of concern.

*Traffic Noise*

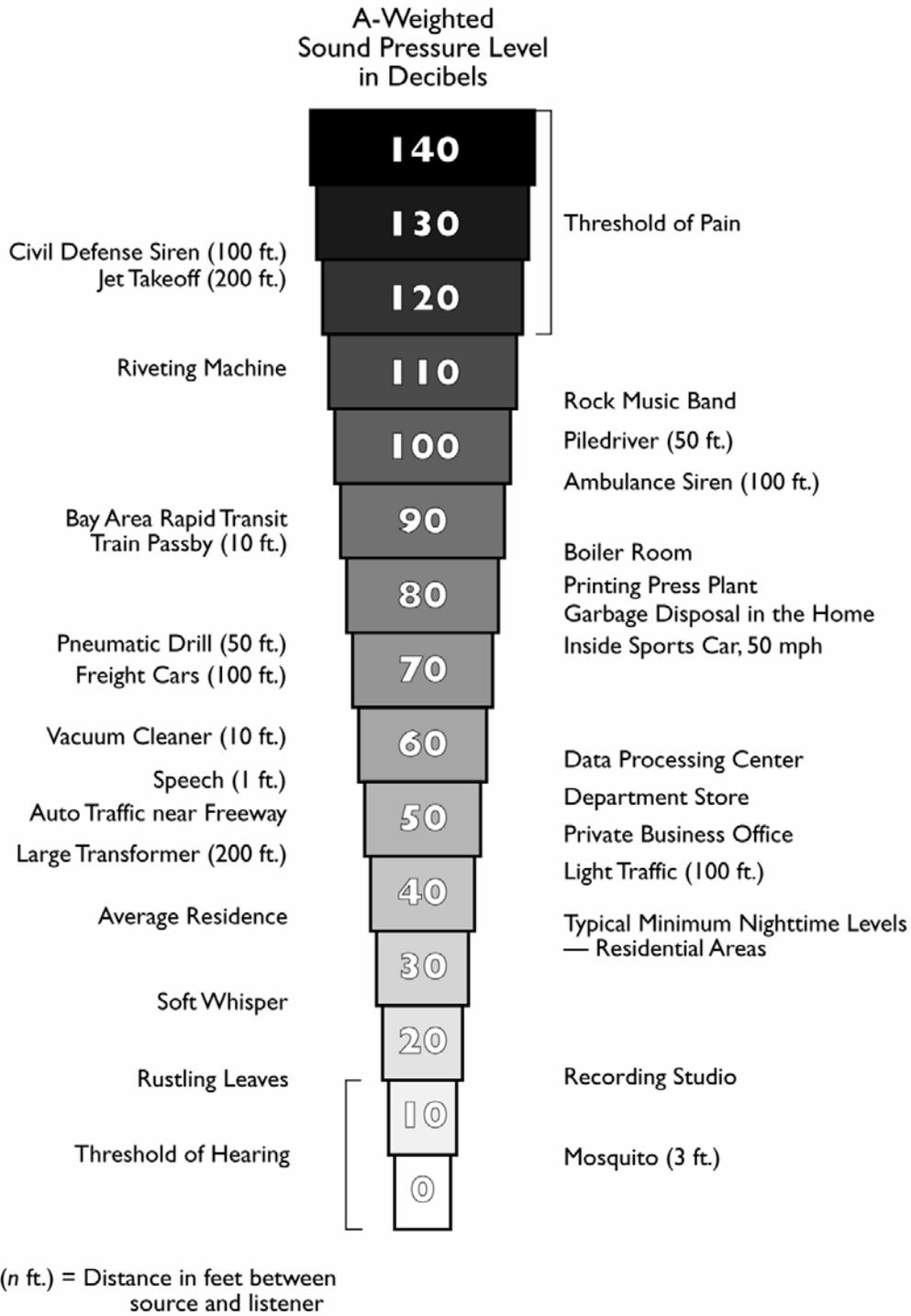
Traffic noise depends primarily on the speed of traffic and the percentage of truck traffic. Conversely, traffic volume does not have a major influence on traffic noise levels. The primary source of noise from automobiles is high frequency tire noise, which increases with speed. In addition, trucks and older automobiles produce engine and exhaust noise, and trucks also generate wind noise. While tire noise from autos is generally located at ground level, truck noise sources can be located as high as ten to fifteen feet above the roadbed due to tall exhaust stacks and higher engines; sound walls are not effective for mitigating such noise unless they are very tall. Table 3.11-1 shows the existing acreage by land use exposed to street noise contours of 55dB and 60dB.

**Table 3.11-1: Existing Land Use Acres by Traffic Noise Contour**

<i>Land Use</i>	<i>55dB</i>	<i>60dB</i>	<i>Grand Total</i>
Agriculture	752	372	1,125
Single Family Residential	221	112	333
Multi-family Residential	8	6	13
Commercial	55	82	138
Service Commercial	9	26	35
Neighborhood Commercial	19	16	36
Professional Office	2	4	6
Industrial	110	67	177
Public	59	46	105
Parks	12	8	20
Canal	23	9	32
Vacant	188	148	336
Other	3	60	62
<b>Grand Total</b>	<b>1,461</b>	<b>956</b>	<b>2,417</b>

Source: Dyett & Bhatia, 2007.

Figure 3.11-1: Typical Sound Levels



Under the existing General Plan noise standards, maximum allowable noise exposure to ground transportation is 60 dB CNEL for outdoor activity areas in residential, transient lodging, medical facilities, and church land uses. These land uses require a maximum allowable noise level of 45 dB CNEL for interior spaces. Playgrounds and neighborhood parks have a maximum allowable noise level of 70 dB CNEL, and office, school, library, and museum uses have an interior maximum allowable noise level of 45 dB CNEL. Theaters, auditoriums and music halls have an even lower maximum allowable interior noise level of 35 dB CNEL. Noise level performance standards are also given for new projects affected by or including non-transportation related noise sources.

### ***Arterial Streets***

Arterial streets with substantial noise levels include Ward Road from Pioneer to Henry Miller Road, Mercey Springs (SR-165), West I Street, south of Pacheco Boulevard, Badger Flat Road from Capri Avenue to Pioneer Road, H Street-Ingomar Grade Road west of 7th, I Street north of Pacheco Boulevard, Pacheco Boulevard, and Pioneer Road from Los Banos Creek to Ward Road. In general, auto traffic volumes will increase with future development and therefore traffic noise impact will increase.

### ***Los Banos Municipal Airport Noise***

The Los Banos Municipal Airport is located on the (present) eastern edge of town. The airport consists of a single 3,000 foot runway. Aircraft operations generally occur in a south to north direction with approximately 90 percent single engine, 7 percent twin engine, and 3 percent aerial application aircraft operations. In 2005, annual operations (takeoffs and landings) at Los Banos Municipal Airport were estimated at over 18,510, averaging approximately 51 flights per day. Year 2015 forecasts for the airport predict 21,210, averaging approximately 60 flights per day. While the State of California airport noise standards and Federal Aviation regulations (Part 150) establish a CNEL of 65 dBA as the maximum acceptable noise exposure for residential land uses, for typical general aviation airports and less noisy rural settings a 60 dB CNEL standard can be used. This is the standard for single family residential in the Noise Element of the existing General Plan.

There are plans underway to relocate the Los Banos Municipal Airport to a site south of the City at some future time. Until the airport is relocated, however, pursuant to the California Public Utilities Code Section 21676, local General Plans Elements (including noise) must be consistent with the adopted airport land use compatibility plans of the Merced County Airport Land Use Commission (ALUC). The current General Plan anticipates the relocation to occur before 2015. Until such a time, the City shall not permit non-compatible uses in the immediate vicinity of the airport.

[Figure 3.11-2: Los Banos Existing Noise Contours]



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## **REGULATORY SETTING**

Federal, State, and local agencies regulate different aspects of environmental noise. Generally, the federal government sets noise standards for transportation-related noise sources closely linked to interstate commerce. These include aircraft, locomotives, and trucks. The National Environmental Policy Act of 1969 and the Federal-Aid Highway Act of 1970 are examples of federal policies that form the basis for analyzing and abating highway traffic noise. The State government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. California counties that include an airport served by a scheduled airline or operated for the benefit of the general public must establish an airport land use commission. (California Public Utilities Code Section 21670). The State legislature's purpose in requiring these commissions was to "protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to the extent that these areas are not already devoted to incompatible uses." The commission's chief business is to prepare and enforce a land use plan for the area surrounding each airport in its jurisdiction. Finally, noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and General Plan policies.

## **IMPACT ANALYSIS**

### **Significance Criteria**

Implementation of the proposed General Plan would have a potentially significant impact if it would expose persons within the following land use areas of the City to exterior noise levels in excess of:

- 65 dB for low density single family, duplex, and mobile homes;
- 70 dB for residential multi-family and high density residential, mixed use, motels, and hotels;
- 75 dB for schools, libraries, churches, hospitals, nursing homes, playgrounds, neighborhood parks, and office buildings, business, commercial and professional uses; and
- 80 dB for golf courses, riding stables, water recreation, cemeteries, industrial, manufacturing utilities, and agriculture.

### **Methodology and Assumptions**

Noise exposure contours for the Los Banos Planning Area were modeled by Charles Salter Associates by applying the Federal Highway Administration's noise modeling procedure. These noise contours are conservative, meaning that the contours are modeled with minimal noise attenuation by natural barriers, buildings, etc. The noise level measured at a specific location may be lower than what is shown on the noise contour map. Airport noise in Los Banos was not modeled separately.

### **Summary of Impacts**

Implementation of the proposed General Plan will result in new roads and increased traffic volumes, thus increasing noise levels in some areas. The realignment of SR-152 will reduce the highway noise for many residents along the existing alignment, but add noise for residents on the north side of the city who will live adjacent to the SR-152 Bypass. Additionally, continued growth of the city—residential as well as commercial and industrial uses—will further increase traffic and noise levels on arterial roadways both leading to and crossing over SR-152 and 165. Sensitive receptors along

Pacheco Boulevard, Mercey Springs Road, Center Road, H Street and the perimeter road planned adjacent to SR-152 will be impacted by increased noise exposure. Future noise contours are illustrated in **Figure 3.11-3**.

The predominant noise source in Los Banos is motor vehicle and truck traffic, which currently crosses the city on north-south and east-west routes. When the SR-152 Bypass is completed on the north edge of the City the noise impact will likely be more significant there than on the south where transportation routes already exist. Increased traffic on SR-152 and 165 associated with future development can be expected to increase noise exposure for sensitive receptors along these thoroughfares.

The proposed General Plan anticipates the relocation of the airport and therefore does not allocate it as a future land use. Nonetheless, until the airport is in fact relocated its noise will impact future residents and businesses that locate nearby.

### **Impacts and Mitigation Measures**

#### *Impact*

#### ***3.11-1 New development under the proposed General Plan could expose persons to or generate noise levels in excess of 60dB as established in the existing General Plan. (Less than Significant)***

New development under the proposed 2030 General Plan will result in population and employment increases and more automobile and truck use. This activity will contribute to raising ambient noise levels to the levels shown on the future noise contours. However, the future noise contours suggest that even at buildout there is virtually no land, other than directly on the roadways, being exposed to noise levels above 60dB. In addition, use of noise attenuation measures such as increased screening, sound-proofing and double-glazing windows will help buffer or mask increases in ambient noise, thereby reducing potential impacts to levels that are not significant.

**Table 3.11-2** and **Figure 3.11-3** depict the proposed General Plan land use acreages that would be affected by future noise levels of 55 dB and 60 dB.

**Table 3.11-2: Proposed General Plan Land Use Acres by Traffic Noise Contour**

<i>Land Use</i>	<i>55dB</i>	<i>60dB</i>	<i>Total</i>	<i>Percent of Planning Area</i>
Agriculture/Rural	961	546	1,508	9
Low Density Residential	530	276	806	5
Medium Density Residential	85	58	144	1
High Density Residential	7	2	9	0
Commercial	328	233	561	3
Neighborhood Commercial	67	50	117	1
Office/Professional	88	58	146	1
Mixed Use	0	6	6	0
Employment Park	222	92	314	2
Industrial	72	40	112	1
Civic/Institutional	124	40	164	1
Parks, Trails, and Open Space	231	304	535	3
SR-152 Bypass Corridor	35	797	832	5
<b>Grand Total</b>	<b>2,751</b>	<b>2,503</b>	<b>5,254</b>	<b>30</b>

Source: Dyett & Bhatia, 2007.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would reduce this impact to a level that is less than significant:

N-I-1 Use the community noise level exposure standards, shown in Table 3.11-3 as review criteria for new land uses.

*These standards show noise levels that are “normally acceptable”, “conditionally acceptable”, and “normally unacceptable” and “clearly unacceptable” for different types of land use.*

N-I-2 Require a noise study and mitigation measures for all projects that have noise exposure greater than “normally acceptable” levels based on specific criteria and standards in the Zoning Ordinance. These measures may include, but are not limited to, the following actions:

- Screen and control noise sources, such as parking and loading facilities, outdoor activities and mechanical equipment;
- Increase setbacks for noise sources from adjacent dwellings;
- Retain fences, walls, and landscaping that serve as noise buffers;
- Use soundproofing materials and double-glazed windows; and
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.

*The need for mitigation of exterior noise exposure for other development will be evaluated on a case-by-case basis. Within urban residential neighborhoods where medium and high density residential development and mixed use development is planned, the City will balance the need for noise mitigation with urban design considerations, and may not require exterior walls along streets where an attractive pedestrian-oriented environment with porches and front stoops is desired.*

N-I-3 Promote the use of noise attenuation measures to improve the acoustic environment inside residences where existing single-family residential development is located on an arterial street.

*Open space, building orientation and design, and landscaping can be used to buffer or mask sound. The new Business Opportunity Area is an area where these techniques can be used.*

N-I-4 Do not permit sound walls, except along freeways. In all other instances, permit sound walls only upon finding that alternative noise attention measures are not available.

[Insert Future Noise Contours Figure]

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**Table 3.11-3: Land Use Compatibility For Community Noise Environments**

Land Use Category	Community Noise Exposure						
	$L_{dn}$ or CNEL, dB						
	55	60	65	70	75	80	85
Residential – Low Density Single Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Clearly Unacceptable
Residential – Multi Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Mixed-Use and High Density Residential	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging – Motels, Hotels	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concerts, Halls, Amphitheaters	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Area, Outdoor Spectator Sports	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Businesses Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable

Legend:

- Normally Acceptable
- Conditionally Acceptable
- Normally Unacceptable
- Clearly Unacceptable

Specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

New construction or development should not be undertaken.

Source: City of Los Banos, 2006.

- N-I-6 Protect especially sensitive uses, including schools, hospitals, and senior care facilities, from excessive noise.
- N-I-7 Require the use of Best Available Control Technology (BACT) to minimize noise from all stationary sources as well as mobile/temporary sources such as operation of construction equipment.

Implementation of the proposed policies summarized above will reduce Impact 3.11-1 to a level that is less than significant.

*Impact*

*3.11-2 The proposed General Plan would potentially expose existing noise-sensitive uses to construction-related noise related to groundborne vibration and ambient noise. (Less than Significant)*

Groundborne vibration may be incurred from construction of new development, transporting trucks, bulldozing, drilling etc. Ambient noise levels near areas of new development may temporarily increase. The General Plan proposes new development within the urban area and as infill development within the city. Surrounding land uses may be exposed to construction-related noise. Proposed General Plan policies require insulation in the form of soundproof materials, fences, walls, and landscaping that serve as noise buffers. Also, individual development projects will be subject to site-specific environmental review, which will necessitate identification of site-level mitigation if significant noise impacts are identified.

*Proposed General Plan Policies that Reduce the Impact*

Implementation of proposed policies N-I-2, N-I-6, and N-I-7 summarized under Impact 3.11-1 will reduce this impact to a level that is less than significant.

*Impact*

*3.11-3 Implementation of the proposed General Plan may expose people residing or working in the vicinity of the Los Banos Municipal Airport to aircraft noise. (Less than Significant)*

As compared to existing conditions at the time of the current General Plan, it is possible that the proposed General Plan will temporarily expose more people to airport-related noise sources because of increased residential and commercial development adjacent to the airport site. However, the City plans to move the airport in the medium-term and therefore noise from this facility will likely not increase over time, and may perhaps experience reductions as operations are phased to new facilities. While the proposed Plan acknowledges the impact of the airport on new development in the short term, it is expected that the existing Airport Plan and proposed General Plan policies will provide sufficient mitigation until the airport is relocated.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policy would help to reduce this impact to a level that is less than significant:

N-I-5      Minimize noise impacts of flight operations on existing noise-sensitive development.

*Until its relocation, the Los Banos Municipal Airport-Noise Contour Map will be used in conjunction with the noise contours for car and truck noise during the development review process.*

Implementation of this policy, in addition to policies N-I-1, N-I-2, N-I-3, N-I-6, and N-I-7 summarized under Impact 3.11-1, will reduce this impact to a level that is less than significant.

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## 3.12 CULTURAL RESOURCES

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This section presents the environmental setting and impact assessment for cultural resources in the Planning Area for the proposed Los Banos General Plan. The lands encompassed by the Planning Area have a long and rich history of human inhabitation, supported by archeological evidence of pre-historic cultures and small inventory of historic buildings. The existence of both archaeologically sensitive areas and historic buildings in the Planning Area requires the need for policies that preserve such aspects of the City's heritage.

### ENVIRONMENTAL SETTING

#### Definitions

Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. For analysis purposes, cultural resources may be categorized into three groups: archaeological resources, historic resources, and contemporary Native American resources.

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic resources are standing structures of historic or aesthetic significance. Architectural sites dating from the Spanish Period (1529-1822) through the post-World War II period (1945-1955) are generally considered for protection if they are determined to be historically or architecturally significant. Sites dating after the post-World War II period may also be considered for protection if they could gain significance in the future. Historic resources are often associated with archaeological deposits of the same age.

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values.

According to an inventory conducted by the Central California Information Center at California State University, Stanislaus, the Planning Area contains important historical resources, including various nationally and State registered historic sites as well as both prehistoric and historic archeological sites.

## Prehistoric Context

The San Joaquin Valley may have been inhabited by humans as early as 10,000 years ago; however, the evidence of early human use is mostly buried by alluvial deposits that have accumulated over the last several thousand years. The greatest exception to this has been the prolific discoveries at Tulare Lake<sup>15</sup>, which has yielded evidence of the earliest occupation of California. Nonetheless, later periods are better understood because there is more representation in the archaeological record.

Olsen and Payen devised a chronology for the San Joaquin Valley based on western valley sites in 1969, and proposed four temporally distinct complexes: Positas, Pacheco, Gonzaga, and Panoche. The earliest complex, the Positas Complex, dating between 3300 and 2600 B.C., is characterized by small, shaped mortars; short, cylindrical pestles; milling stones; perforated, flat cobbles; and spire-topped Olivella beads (Moratto 1984).

Some of the more current projects in central California, including the San Joaquin Valley, draw extensively on the findings of the vast New Melones Archaeological Project (NMAP) (Moratto, 2002). Based around New Melones Reservoir in the Sierra foothills, NMAP recorded and/or assessed nearly 300 prehistoric (and historic Indian) sites, of which 68 were subjected to subsurface testing. The sites reveal a temporal sequence from 8,000 years ago to the historic era. Of particular consequence are the suggestions that the region was subject to varying occupation intensities over time and that artifact assemblages and other factors (including mortuary practices) indicate a wide variation across cultures during this time period, with trade relationships occurring between the Delta groups, the Pacific Coast, the Sierra Nevada foothills, and the southern inland areas. Among the findings is a thinly distributed population at A.D. 500 to A.D. 1300, followed immediately by a rapid upsurge in regional population. This wave of immigrants—beginning at A.D. 1300—features a material culture assemblage that closely resembles the ethnographic Interior Miwok (Moratto, 2002).

### *Prehistoric Resource Sites*

The evidence from previous survey work and site investigations in the Planning Area would indicate that the prehistoric site types that may be encountered throughout un-surveyed portions of the Planning Area may encompass the following:

- Surface scatters of lithic artifacts and debitage with or without associated midden accumulations, resulting from short-term occupation, and/or specialized economic activities, or long-term occupation;
- Bedrock milling stations, including mortar holes and metate slicks, in areas where suitable bedrock outcrops are present;
- Occupation sites; or
- Isolated finds of cultural origin, such as lithic flakes and projectile points.

The existing General Plan identifies the Los Banos Creek area as a highly sensitive area in the City for potential archaeological sites. Based on the inventory conducted by the Central California

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<sup>15</sup> An example of the pluvial lakes and marshes (now dry) that covered much of the California interior during the late-Pleistocene and early Holocene (or between about 1 million and 10,000 years ago).

Information Center, the Planning Area has a moderate to high sensitivity for the possible discovery of previously unrecorded historical resources.

### **Ethnographic Setting**

Los Banos is located within the aboriginal territory of the Nopchinchi tribelet of the Northern Valley Yokuts, who lived in the San Joaquin Valley. Little is know of these inhabitants. Their aboriginal lifestyle disappeared in the early 19th Century when they changed from hunters and gathers to agricultural laborers who lived at the missions. Due to secularization of the mission by Mexico in 1834, most of the aboriginal population gradually moved to the ranches to work as manual laborers.

“Yokuts” is a term applied to a large and diverse number of peoples inhabiting the San Joaquin Valley and Sierra Nevada foothills of central California. Yokuts culture included three primary divisions: the Southern Valley Yokuts, Foothill Yokuts, and Northern Valley Yokuts. The Northern Valley Yokuts occupied the area encompassing the northern San Joaquin Valley from around Bear Creek north of Stockton to the bend in the San Joaquin River near Mendota (Kroeber 1976; Wallace 1978).

The Yokuts political organization centered on the tribelet, consisting of a large village and a few smaller surrounding villages. Larger villages and tribelets had a chief or headman, an advisory position that was passed down along male lineage (Wallace 1978). The Yokuts were seasonally mobile hunter-gatherers with semipermanent villages. Seasonal movements to temporary camps occurred to exploit food resources in other environmental zones. The North Valley Yokuts relied on acorns as a food staple, along with salmon and other fish.

The Yokuts first came into contact with Europeans in the late 1700s when Spanish explorers entered the area. Future interactions with the Spanish were the result of expeditions to recover neophytes who had escaped the coastal missions. The North Valley Yokuts were more affected by missions than the other Yokuts groups. The loss of their people to the missions, the influence of runaway neophytes, numerous epidemics during the nineteenth century, and the arrival of settlers and miners resulted in substantial damage to the Yokuts peoples and their culture. (Wallace 1978.)

### **Historic Context**

Europeans entered the Los Banos region in 1805 when Gabriel Moraga and his company rode through the area during his mission to explore the San Joaquin Valley. Crossing over Pacheco Pass, Moraga traveled over the area that Los Banos currently occupies. Los Banos, a Spanish place name meaning “the baths,” derives its name from the pools that occur near the source of the Los Banos Creek. In 1808, Franciscan monk Padre Felipe Arroyo de la Cuesta discovered the pools during a missionary trip to the San Joaquin Valley. Padre Arroyo de la Cuesta served at Mission San Juan Bautista until 1833 and would camp at the pools during his mission trips. Locals referred to the area as “El Arroyo de los Banos del Padre Arroyo,” which was eventually shortened to Los Banos Creek which would be the source of the name of the town (Hoover, 1966, 204-205; Gudde, 217).

American trappers entered into Merced County as early as 1827. Drawn by the beaver and game that occupied the area, trappers stayed in the area until the Gold Rush. The discovery of gold in California in 1848 drew incredible numbers of people to the State. The San Joaquin Valley was a source of cattle and sheep for hides, wool, meat and tallow for the incoming miners. The valley proved to be a source of much needed food and supplies for the miners and new settlers. The present town of Los Banos

originated in the Lone Willow Stage Station, built in 1858 on the west bank of what is now called Mud Slough. The stage station prospered as a part of the road between San Francisco and St Louis until 1861 when the stage stopped running, and then acted as a way station for following routes (Hoover, 1966: 204).

In 1865, Gustave Kreyenhagen opened a general store in the area, but moved to the junction of the state road and the Stockton-Visalia freight road for better trade. Kreyenhagen moved again in 1870 due to the arrival of Miller and Lux, this time to about two miles south of the present town of Volta. In 1873 an official post office was established in Kreyenhagen's store under the name Los Banos, after the nearby creek. Other businesses followed and soon Miller and Lux took over the settlement and, in 1889 with the arrival of the railroad, moved it five miles east to the tracks (Hoover, 1966: 204).

The story of Heinrich Kreiser, who would become Henry Miller of Miller and Lux, is important to the history of Los Banos. Kaiser arrived in New York from Germany in 1846 and a few years later bought a steamer ticket to California. In 1858 he officially changed his name to Henry Miller. He began as a butcher, but expanded his economic interests to include cattle and land for grazing, as well as irrigation to provide water to his interests. At one point Miller was the largest single landowner in the United States. At the time of his death in 1916 he left an estate valued at over \$46,000,000 and owned nearly one million acres of land in the San Joaquin Valley (Taper, "The King of Ranchers").

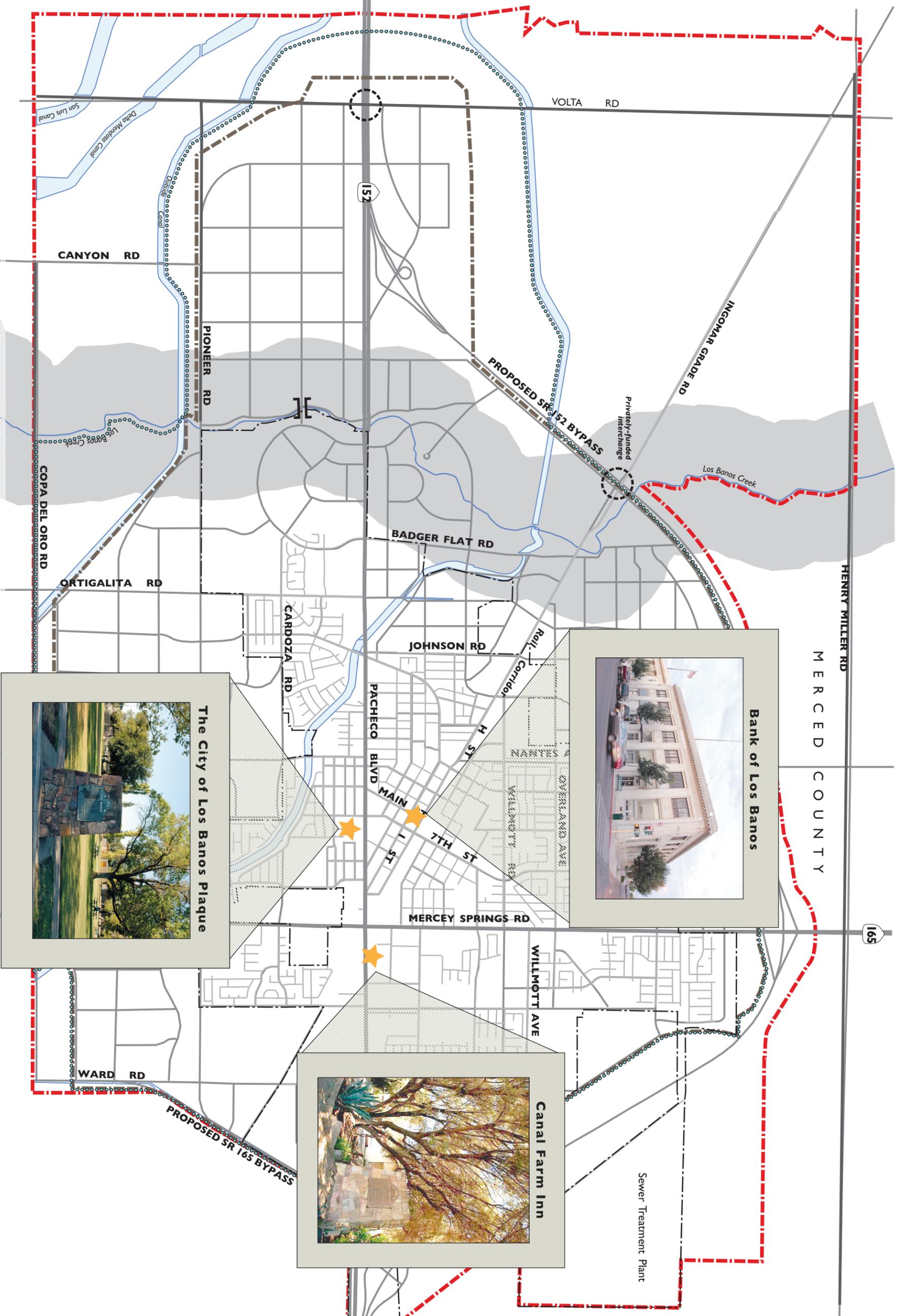
With the arrival of the railroad to the west side of the San Joaquin Valley in 1889, Miller was a driving force in the founding of Los Banos along the railroad tracks. Los Banos became the headquarters of Miller and Lux as early as 1873 at the Canal Farm. Miller invested enormously in the area: improving infrastructure, planting trees, laying out a city park, and establishing a hotel, bank and a company store for the community. Los Banos incorporated in 1907. Agriculture acted as the driving force of the economy for most of the twentieth century was largely dependent on the availability of water resources. The construction of the California Aqueduct and the San Luis Reservoir during the 1960s, for the Central Valley Project led to greater population density in the region (The City of Los Banos, "Local History").

### *Historic Resource Sites*

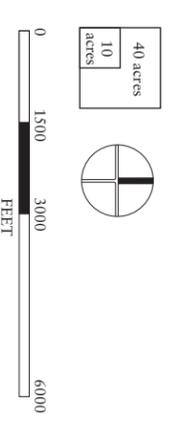
According to the records survey conducted at the Central California Information Center at California State University, Stanislaus, there are currently three National and three State registered historic buildings, structures, or objects within the Planning Area as listed in **Table 3.12-1**. Founded in 1889, the City of Los Banos (itself), Pacheco Pass, and the Canal Farm Inn, originally established by Henry Miller in 1873 as his San Joaquin Valley ranch headquarters, are listed as California Historic Landmarks. The Los Banos Bank Building, also known as the Old Bank Building, the Church of St. Joseph, and the San Luis Gonzaga Archeological District are listed in the National Register of Historic Places. The records search also identifies additional historic buildings, structures or objects within the Planning Area that have not been formally registered as historic sites. **Figure 3.12-1** presents an overview of the City and the location of several historic buildings within the Planning Area.

Figure 3.12-1: Cultural Resources Map

**Figure 3.12-1**  
**Historic and**  
**Archaeological Resources**



- Historic Sites
- Los Banos Creek Archaeological District
- Potential New Interchange
- Grade/Creek Crossing
- Planning Area
- Sphere of Influence
- Urban Growth Boundary
- City Limits



Sources:  
 California Office of Historic Preservation, 2006  
 California State University Stanislaus, 2005  
 Dyett & Bhatia, 2006

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**Table 3.12-1: Los Banos Designated Historic Sites and Structures**

<i>Site/Building</i>	<i>Location</i>	<i>Year Constructed</i>	<i>Historic Landmark Designation</i>	<i>National Register Status</i>
Bank of Los Banos Building	836 6 <sup>th</sup> Street	1923		Listed in NR
Bridge #39-200/ Delta Mendota Canal		1950		Individual property determined eligible for National Register
Church of St Joseph	1109 K Street	1923		Listed in NR
Delta Mendota Canal		1946		Individual property determined eligible for National Register
Los Banos	803 E Pacheco Boulevard		SHL 550	Needs to be reevaluated using current standards
Los Banos Creek			SPHI 002	Needs to be reevaluated using current standards
Miller and Lux Ranch Headquarters	East of Los Banos	1879	SHL 548	Needs to be reevaluated using current standards
Nes Canal		1896		Individual property determined eligible for National Register
Pacheco Pass	W SR-152		SHL 829	Listed in CR
Pagundas Barn	20180 S Mercey Springs Road	1926		Individual property determined eligible for National Register
San Joaquin and Kings Canal		1871		Individual property determined eligible for National Register
San Luis Gonzaga Archaeological District				Listed in NR
SR-152	637 Pacheco Highway			Individual property determined eligible for National Register

NR – National Register  
 SHL – State Historic Landmark  
 CR – California Register  
 SPHI – State Point of Historic Interest

Source: *Directory of Properties in the Historic Property Data File for Merced County, Office of Historic Preservation.*

**Historic Archaeological Resources**

The evidence from previous survey work and site investigations in the Planning Area would indicate that the historic archaeological site types that may be encountered throughout portions of the Planning Area may encompass one or more of the following:

- Historic artifact scatters and buried deposits of historic debris and artifacts;
- Building foundations and associated deposits;
- Levees and roads; or
- Remains of farms and ranches.

## **REGULATORY SETTING**

### **Federal Regulations**

#### *National Historic Preservation Act (NHPA)*

Most applicable federal regulations concerning cultural resources have been established to comply with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) of 1966, as amended. The NHPA established guidelines to “preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice.” The NHPA includes regulations specifically for federal land-holding agencies, but also includes regulations (Section 106) which pertain to all projects that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. All projects that are subject to NEPA are also subject to compliance with Section 106 of the NHPA and the NEPA requirements concerning cultural resources can be addressed through compliance with Section 106 of the NHPA process. Provisions of NHPA establish a National Register of Historic Places (The National Register) maintained by the National Park Service, the Advisory Council on Historic Preservation, State Offices of Historic Preservation, and grants-in-aid programs.

#### *American Indian Religious Freedom Act and Native American Graves and Repatriation Act*

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

#### *Other Federal Legislation*

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on federal land. New permits are currently issued under the Archeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance."

### **State Regulations**

#### *California Environmental Quality Act (CEQA)*

CEQA requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. This determination applies to those resources which meet significance criteria qualifying them as “unique,” “important,” listed on the California Register of Historical Resources (CRHR), or eligible for listing on the CRHR. If the agency determines that a project may have a significant effect on a significant resource, the project is determined to have a significant effect on the environment, and these effects must be addressed in the appropriate environmental document. If a cultural resource is found not to be significant or unique under the qualifying criteria, it need not be considered further in the planning process.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potential significant environmental effects resulting from projects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to reduce the impacts. In order to adequately address the level of potential impacts, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate potential impacts to cultural resources for the purposes of CEQA:

- identify cultural resources,
- evaluate the significance of the cultural resources found,
- evaluate the effects of the project on cultural resources, and
- develop and implement measures to mitigate the effects of the project on cultural resources that would be significantly affected.

#### *California Register of Historic Resources (CRHR)*

California State law also provides for the protection of cultural resources by requiring evaluations of the significance of prehistoric and historic resources identified in CEQA documents. Under CEQA, a cultural resource is considered an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. Criteria identified in the CEQA Guidelines are similar to those described under the NHPA. The State Historic Preservation Office (SHPO) maintains the CRHR. Historic properties listed, or formally designated for eligibility to be listed, on The National Register are automatically listed on the CRHR. State Landmarks and Points of Interest are also automatically listed. The CRHR can also include properties designated under local preservation ordinances or identified through local historical resource surveys.

#### *Tribal Consultation Guidelines*

Tribal Consultation Guidelines, enacted by the Senate in 2004, require local (city and county) governments to consult with California Native American tribes, when amending or adopting a general plan or specific plan, or designating land as open space, in order to aid in the protection of traditional tribal cultural places (“cultural places”). These Guidelines also require the Governor’s Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of the Guidelines is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code Section 65300 et seq.) and specific plans (defined in Government Code Section 65450 et seq.).

#### *State Laws Pertaining to Human Remains*

When an initial study identifies the existence, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials.

CEQA Guidelines Section 15064.5, subdivision (e) and Section 7050.5 of the California Health and Safety Code require that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner has been informed and has determined that no investigation of the cause of death is required; and, if the remains are of Native American origin,

- The descendants of the deceased Native Americans have made a timely recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98;
- The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission; or
- The landowner or his or her authorized representative rejects any timely recommendations of the descendent, and mediation conducted by the Native American Heritage Commission has failed to provide measures acceptable to the landowner.

CEQA Guidelines (Public Resources Code Section 5097) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the Native American Heritage Commission.

## **IMPACT ANALYSIS**

### **Significance Criteria**

CEQA offers directives regarding impacts on historical resources and unique archaeological resources. CEQA states that if implementation of a project would result in significant environmental impacts, then public agencies should determine whether such impacts can be substantially lessened or avoided through feasible mitigation measures or feasible alternatives. However, only significant cultural resources (e.g., “historical resources” and “unique archaeological resources”) need to be addressed. The CEQA Guidelines define a historical resource as, among other things “a resource listed or eligible for listing on the California Register of Historical Resources” (CRHR) (State CEQA Guidelines Section 15064.5(a)(i); Public Resources Code Section 5024.1, 21084.1). A historical resource may be eligible for inclusion on the CRHR, as determined by the State Historical Resources Commission or the lead agency, if the resource:

- is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- yielded, or may be likely to yield, information important in prehistory or history.

(CEQA Guidelines, Section 15064.5, subds. (a)(1), (a)(3).) In addition, a resource is presumed to constitute an “historical resource” if it is included in a “local register of historical resources” unless “the preponderance of evidence demonstrates that it is not historically or culturally significant.” (CEQA Guidelines, Section 15064.5, subd. (a)(2)).

In addition, the State CEQA Guidelines require consideration of unique archaeological sites (Section 15064.5) (see also Public Resources Code Section 21083.2). A “unique archaeological resource” is defined as:

an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information. (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type. (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person. (Public Resources Code, Section 21083.2, subd. (h))

If an archaeological site does not meet the criteria for inclusion on the CRHR but does meet the definition of a unique archeological resource as outlined in the Public Resource Code Section 21083.2, it is entitled to special protection or attention under CEQA. Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation.

For historical structures, Section 15064.5, subd. (b)(3), indicates that a project that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), shall mitigate impacts to a level of less than significant. Potential eligibility also rests upon the integrity of the resource. Integrity is defined as the retention of the resource’s physical identity that existed during its period of significance. Integrity is determined through considering the setting, design, workmanship, materials, location, feeling and association of the resource.

In light of this legal background, the project (or the project alternatives) would result in a significant impact if it would:

- Cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

CEQA Guidelines Section 15064.5, subd. (b)(1) defines “substantial adverse change” as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” Furthermore, Section 15064.5, subd. (b)(2) describes an historic resource being “materially impaired” when a project “demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for

inclusion in” either, the California Register of Historic Resources, a local register of historic resources, or an historical resources survey.

### **Methodology and Assumptions**

Information regarding known and recorded cultural resources within the Planning Area was identified through a records search of pertinent survey and site data at the Central California Information Center, California State University, Stanislaus, in October, 2005 [CCIC #5967I]. An inventory of properties listed in the National Register of Historic Places, the California Register of Historic Resources, the California Inventory of Historic Resources (1976), the California Historical Landmarks (1996), or the California Points of Historical Interest (1992 and updates) was also generated for the purposes of this report. Results of the historic properties listed by the Office of Historic Preservation are also provided. Due to the extensive number of surveys and archaeological sites in the project vicinity, a comprehensive listing of the reports is not included for the purposes of this EIR. Rather, an example of the types of studies and archaeological sites is provided.

Cultural resource identification inquiries also included a letter to the Native American Heritage Commission requesting a review of the sacred lands file in regards to the Planning Area along with a list of Native American contacts within the region. The Commission’s May 16, 2006 response stated that the sacred lands files did not contain cultural resources information for the immediate Planning Area, but cautioned that absence of specific site information does not indicate the lack of resources. The response also included seven contacts who have requested information on projects such as this and who may have knowledge of cultural resources within the Planning Area. On December 18, 2006, the City of Los Banos sent three letters to designated contacts (provided by the Native American Heritage Commission) with information about the proposed Los Banos General Plan and a request that they contact the City if there were any questions or concerns. On June 12, 2007, ESA sent follow up letters, but as of the date of this Draft EIR, no responses have been received.

The assessment of impacts to cultural resources is a qualitative review of the existing cultural/historic resource conditions within the Planning Area and a determination of whether the proposed Los Banos General Plan includes adequate provisions to ensure continued protection of these resources.

### **Summary of Impacts**

Implementation of the Los Banos General Plan could result in substantial adverse change in the significance of a historical resource or a unique archaeological resource due to future development and growth of the City’s population. An aggressive set of proposed General Plan policies have been developed to address these impacts and the new Downtown Development Plan and updated Design Guidelines currently being developed by Los Banos will include a Façade Improvement Program that further supports cultural resource preservation goals. The complete set of proposed policies is deemed sufficient to mitigate impacts to known historic resources, unique archeological resources, paleontological resources, and human remains.

## Impacts and Mitigation Measures

### *Impact*

#### **3.12-1 Implementation of the proposed Los Banos General Plan has the potential to cause a substantial adverse change in the significance of an existing or potential historical resource as defined in Section 15064.5. (Less than Significant)**

Identified historic structures and sites that are eligible for National Register of Historic Resources listing, particularly in the City's downtown area, may be vulnerable to development activities accompanying infill or redevelopment activities. In preparing the proposed Los Banos General Plan, the City has taken a key role in the preservation and enhancement of its historic resources with the development of a range of strong policies contained in both the Land Use and Parks, Open Space and Resources elements.

#### ***Proposed General Plan Policies that Reduce the Impact***

The following proposed policies, in conjunction with the completion of the new Downtown Plan, Design Guidelines, and Façade Improvement Program, will reduce this impact to a level than is less than significant:

- LU-I-10 Adopt design standards in the Zoning Ordinance to ensure that new and infill development and associated infrastructure are compatible in scale and character with existing uses and historic structures and neighborhoods.

*A design review process will be required for major projects and projects adjacent to designated historic resources. Aside from ensuring new design is compatible in scale and character with existing uses, the review also will be structured to allow sufficient creativity in residential and site design to avoid monotony. New development will incorporate designated historic resources into site and development planning. Rural, agrarian houses and structures of local or historical significance should be preserved and featured in site plans. Landscape, original roadways, sidewalks and other public realm features in historic neighborhoods shall be restored or repaired where ever possible.*

- LU-I-12 Promote pedestrian-oriented development in selected areas, including Downtown, neighborhood centers, and the Pacheco Boulevard corridor.

*Pedestrian friendly environments encourage browsing, social interaction and people watching reinforcing Los Banos' historical "small town" qualities and providing more opportunities for vibrant street life.*

- LU-I-13 Require street trees on all public street frontages, except local and industrial streets, and adopt street tree guidelines that specify preferred species, spacing requirements and planting guidelines in coordination with the Urban Tree Foundation.

LU-I-14 Establish a distinct design character for Pacheco Boulevard with signage or banners, landscaping, designer lighting poles, and other visual cues to provide a celebrated entrance into the City.

LU-I-16 To the extent possible, ensure that new public and private investment preserves, enhances, rehabilitates and celebrates local landmarks, buildings, neighborhoods, historic treasures, open spaces, cultures, and traditions that make Los Banos unique.

*Where applicable, preservation efforts shall conform to the current Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Building.*

LU-I-19 Continue to require undergrounding of utilities in all new development.

POSR-I-41 Require that new development analyze and avoid any potential impacts to archaeological, paleontological, and designated historic resources by:

- Requiring a record search at the Central California Information Center located at California State University Stanislaus and other appropriate historical repositories for development proposed in areas that are considered archaeologically sensitive;
- Studying the potential effects of development and construction (as required by CEQA);
- Requiring pre-construction field surveys (where appropriate) and monitoring during any ground disturbance for all development in areas of historical, archaeological, and paleontological sensitivity; and
- Implementing appropriate measures or project alternatives to avoid identified significant impacts to historical resources. Where such impacts are unavoidable, document the structure(s) in accordance with the National Park Service's Historic American Building Survey/Historic American Engineering Record (HABS/HAER). Such affects would still be considered significant.

*In the event that historical or archaeological resources are accidentally discovered during construction, the City will require that grading activity in the immediate area cease. A qualified archaeologist will then be required to make an immediate evaluation and recommend avoidance measures or appropriate mitigation. The State Office of Historic Preservation has issued recommendations for the preparation of Archeological Resource Management Reports that will be used as guidelines. Where applicable, preservation efforts shall conform to the current Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Building.*

POSR-I-42 Retain a qualified architectural historian to undertake an inventory of historic resources to determine sites or buildings of federal, State, or local historic significance.

*The City will use appropriate State and federal standards and inventory forms in evaluating the significance of historic resources that are identified by the city as part of the historic resources inventory, or as part of any other historic resource evaluation efforts that may be required by the City.*

POSR-I-43 Promote the registration of historic sites, buildings, and structures in the National Register of Historic Places, and inclusion in the California Inventory of Historic Resources.

POSR-I-44 Update the City's building regulations to implement the State Historic Building Code for alterations to designated historic properties.

*The history resources inventory will establish the basis for the designations and application of this Code.*

POSR-I-45 Require applicants of major development projects to consult with Native American representatives regarding cultural resources to identify locations of importance to Native Americans, including archeological sites and traditional cultural properties.

*Coordination with the Native American Heritage Commission should begin at the onset of a particular project. Infill development is excepted from this requirement.*

As stated above, the City will implement a variety of policies designed to enhance and preserve its historic districts, neighborhoods, and buildings. This EIR does not speculate on the specific impacts of future proposed project-level development in Los Banos, but rather evaluates the ability of the proposed General Plan and policies to provide the legal and regulatory setting within which future specific plans and projects are both required and facilitated to fully avoid significant impacts to historical resources. The policies above are deemed sufficient, assuming full implementation, to mitigate impacts to historic resources. A reasonable analysis also anticipates the challenges associated with enforcement and monitoring while maintaining an efficient development review process. This EIR, therefore, also recommends the creation and adoption of more detailed standards for monitoring the implementation of these policies. These standards may include specific site and design review checklists as well as clear reporting processes for developers and builders.

### **Impact**

***3.12-2 Implementation of the proposed Los Banos General Plan has the potential to cause a substantial adverse change in the significance of a unique archaeological resource as defined in Section 15064.5, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside of formal cemeteries. (Less than Significant)***

Archival research indicates that most prehistoric settlement in the area was focused along the Los Banos Creek watershed. Evidence from previous survey activities and site investigations of the Planning Area indicate that most prehistoric sites would consist of the following; bedrock milling stations, lithic flakes, and projectile points. Archaeological resources and/or human remains could be

damaged or inadvertently unearthed during ground-disturbing activities such as grading, trenching, or use of staging areas. In developing the proposed Plan, the City has taken a key role in addressing archaeological and paleontological resources with the development of several policies contained in the Land Use and Parks, Open Space and Conservation elements.

***Proposed General Plan Policies that Reduce the Impact***

The policies summarized under Impact 3.12-1 serve to reduce this impact to a level that is less than significant and thus are incorporated by reference here.

As stated above, the City will continue to ensure that a variety of preservation efforts are implemented under all future development projects to minimize impacts to archaeological resources (as defined in Section 15064.5), paleontological resources, or human remains. These impacts to non-historic resources can be fully mitigated through data recovery where avoidance or preservation is infeasible or unnecessary. Therefore, implementation of the proposed General Plan including the adoption of the policies listed above would result in less-than-significant impacts with respect to human remains and archaeological resources that do not qualify as historic resources.

### **3.13 VISUAL RESOURCES**

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This section presents the environmental setting and impact analysis for visual resources in the Los Banos Planning Area. It evaluates how implementation of General Plan policies will affect the city's visual and aesthetic character, including structures and landscapes within the urban core of the City as well as agricultural and wetland habitats at the periphery.

#### **ENVIRONMENTAL SETTING**

The City of Los Banos is located in the western portion of Merced County near the eastern foothills of the Coastal Range. The Planning Area is generally made up of flat, low-lying terrain, with creeks, canals, wetlands and grasslands. The Coastal Range is visible to the west, and on days with high visibility the Sierra Nevada is visible to the east. There is very little elevation change in the Planning Area, so visual resources are mostly vistas along straight roadways, views along the edges of the built area looking out to farmland and grassland, and views of notable or aesthetically pleasing architecture or neighborhoods within the city. Though there are watercourses within the city, there is presently little in the way of passive or active recreational facilities that take advantage of the potential aesthetic opportunities that the watercourses represent, save the completed section of HG Fawcett Parkway along the Central California Irrigation District (CCID) Main Channel.

#### **REGULATORY SETTING**

The National Environmental Policy Act of 1969 as amended establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S. Code 4331(b)(2)]. Likewise, CEQA establishes that it is the policy of the State to take all action necessary to provide the people of the state "with...enjoyment of aesthetic, natural, scenic, and historic environmental qualities." [California Public Resources Code Section 21001(b)]

The visual resources of the Coastal Range and Sierra Nevada are outside the jurisdiction of the City of Los Banos, as is much of the rural agricultural land that surrounds the city. Merced County retains sole jurisdiction outside the Los Banos Sphere of Influence, and within the city limits the City of Los Banos retains authority for land use decisions that could affect scenic views of particular parts of town or the countryside. Within the City the CCID (Main Channel) and Grasslands Water District (Santa Fe and San Luis canals) retain control over the land uses impacting their canals and therefore alternative uses must be negotiated with these authorities.

#### **IMPACT ANALYSIS**

##### **Significance Criteria**

Los Banos's General Plan would have a significant adverse effect on visual resources if it would cause one of more of the following:

- Have a substantial adverse effect on a scenic vista, which could be caused by blocking panoramic views or views of significant landscape features or landforms as seen from public viewing areas;
- Substantially degrade the existing visual character or quality of the study area and its surroundings; or

- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Generally, the greater the change from existing conditions, the more substantial the impact. For example, the construction of a new development on open rural land usually has a greater visual impact than redevelopment on infill land. Likewise, the construction of a new roadway generally has a greater visual impact than the widening of an existing one. New development and redevelopment can have significant local impacts where they would require the removal of trees and other important landscape buffers or other contrasting visual elements.

### **Methodology and Assumptions**

The analysis of visual resources relies on a qualitative assessment of impacts: of future development on presently agricultural or otherwise vacant land, of infill on views from existing development, and changes in the views at the edges of the existing built City.

A visual impact assessment was conducted by Caltrans in September of 2004 as part of the Environmental Impact Report for the proposed SR-152 Bypass. The visual impact assessment identified changes to the view from off site locations including “a slight decrease of intactness, unity and vividness because the roadway would bisect agricultural and other land uses,” and “a slight decrease in mid- to long-range views” caused by the elevated road. The present EIR incorporates this earlier Caltrans assessment by reference and assumes that the approval process for the bypass will mitigate significant visual impacts associated with that transportation improvement.

### **Summary of Impacts**

Changes to vistas to the west are expected as buildout of the Business Opportunity Area and the adjacent industrial land occurs. The relocation of the airport and subsequent redevelopment of the airport site will affect views from existing neighborhoods, schools, and commercial development. Various proposed General Plan policies are designed to regulate character in design of new development, as well as the relationship of new development to existing buildings and streetscapes. Preservation of mature trees and street improvements including shade tree planting, street lamps, sidewalks, green buffers and bikeways are expected to maintain, extend or improve the vistas along streets. However, intermittent construction activities associated with new developments and street improvements will temporarily degrade views along streets and through neighborhoods for the period of time that construction is under way. In addition, future development will likely be a new source of light or glare, diminishing to some extent nighttime views in the area. There are presently no State-designated scenic highways in the Planning Area.



Views of farmland on the southern side of the city and the hills to the west.



Entry to wildlife viewing area off Henry Miller Road.



New residential development on the city's eastside.



Canals traversing the city are important visual resource.



Security fencing along some waterways limits public access.



The Airport creates an open visual resource within the City.

## Impacts and Mitigation Measures

### *Impact*

#### **3.13-1 Implementation of the proposed General Plan has the potential to adversely affect scenic views of peripheral agricultural lands, grasslands, and wetlands as seen from public viewing areas. (Less than Significant)**

People traveling on public roadways or walkways at the periphery of the City today will likely have their agricultural and mountain views affected by the continued growth of the City. New development will reduce the short-, mid- and long-range views depending on its location in relation to the viewpoint. However, many policies in the proposed General Plan are designed to ensure that new development is implemented efficiently from the inside of the City outward and that new development blends well with the style of existing development and the vision residents have for Los Banos. Furthermore, policies are proposed to avoid undesirable and unnecessary visual obstructions such as utility lines. Implementation of the following proposed policies would reduce the impact to a level that is less than significant:

#### ***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would help to reduce this impact to a level that is less than significant:

LU-I-4 Require contiguous development within the SOI unless it can be demonstrated that development of property which is contiguous to urban development is unavailable or economically infeasible.

*The City desires to prevent leapfrog development where development skips over available land to outlying and isolated areas. Contiguous development will reduce sprawl, safeguard agriculture land, and reduce the cost of extending services.*

LU-I-19 Continue to require undergrounding of utilities in all new development.

POSR-I-16 Work with Grasslands Water District to create a greenbelt/open space buffer around the perimeter of the city that provides a clear sense of identity and also protects the Grassland Ecological Area.

POSR-I-17 Establish regulatory incentives for open space preservation, including density bonuses and provision for purchase of development rights (PDRs).

*A PDR program can create an incentive for preservation of large areas of open space by allowing the transfer of the development that otherwise would be permitted. A PDR program would require a public outlay for the purchase of development rights, but purchase of development rights also could be an option for an agricultural or open space lands trust.*

*Implementation regulations will need to ensure that once the development rights are purchased, the land would be preserved as permanent open space.*

POSR-I-19 Establish priorities for open space preservation and acquisition based on an evaluation of:

- Significant natural areas that are historically, ecologically, or scientifically unique or are outstanding, important or threatened;
- Wildlife habitats and fragile ecosystems in need of protection;
- Watersheds or significant water recharge areas;
- Lands suitable for recreation such as biking, photography or nature study; and
- Land suitable for agricultural production.

POSR-I-24 Establish and maintain a protection zone around wetlands, riparian corridors, and identified habit areas where development shall not occur, except as part of a parkway enhancement program (e.g., trails and bikeways).

*The City shall implement a 100 feet development-free buffer measured from the outer edge of the canopy of riparian trees, and a buffer of at least 50 feet around the San Luis Canal, the Mud Slough, waterways, and other wildlife corridors.*

Implementation of the policies summarized above would reduce potential Impact 3.13-1 to a level that is less than significant.

### ***Impact***

***3.13-2 Future development projects could be of different intensity, size, and character than existing development and could degrade the existing visual character of Los Banos. (Less than Significant)***

The aesthetic resources of the City could potentially be degraded by new development unless it is thoughtfully designed. Redevelopment or new development proposed on vacant sites within the City could alter the surrounding visual character by increasing densities and intensities. However, the proposed Los Banos 2030 General Plan contains several policies and programs designed specifically to minimize negative aesthetic impact. Implementation of the following proposed policies would reduce the impact to a level that is less than significant:

### ***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would help to reduce this impact to a level that is less than significant:

LU-I-10 Adopt design standards in the Zoning Ordinance to ensure that new and infill development and associated infrastructure are compatible in scale and character with existing uses and historic structures and neighborhoods.

*A design review process will be required for major projects and projects adjacent to designated historic resources. Aside from ensuring new design is compatible in scale and character with existing uses, the review also will be structured to allow sufficient creativity in residential and site design to avoid monotony. New development will incorporate designated historic resources into site and development planning. Rural, agrarian houses and structures of local or historical significance should be preserved and featured in site plans. Landscape, original roadways, sidewalks and other public realm features in historic neighborhoods shall be restored or repaired where ever possible.*

- LU-I-13 Require street trees on all public street frontages, except local and industrial streets, and adopt street tree guidelines that specify preferred species, spacing requirements and planting guidelines in coordination with the Urban Tree Foundation.

*Trees will be required separately as part of landscape or buffer requirements in Industrial Areas.*

- LU-I-16 To the extent possible, ensure that new public and private investment preserves, enhances, rehabilitates and celebrates local landmarks, buildings, neighborhoods, historic treasures, open spaces, cultures, and traditions that make Los Banos unique.

*Where applicable, preservation efforts shall conform to the current Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Building.*

- LU-I-22 Ensure that the scale, operation, location, and other characteristics of community facilities, including parks, schools, child care facilities, religious institutions, other public and quasi-public facilities, enhance the character and quality of neighborhoods.

- LU-I-23 Require new residential development adjacent to established neighborhoods provide a transition zone where the scale, architectural character, pedestrian circulation and vehicular access routes of both new and old neighborhoods are well integrated.

- LU-I-47 Establish design guidelines to assure high quality design and site planning at the Business Opportunity Area and the Airport site.

*Design guidelines will be comprehensive, covering topics ranging from site egress, view corridors, building orientation and building material, landscaping, buffering, parking, to use of permeable paving on walkway and parking lots, outdoor storage, anti-vandalism features, green building practices, a dark sky ordinance, etc. in addition to common standards such as scale and facade design.*

- POSR-I-40 Retain a qualified architectural historian to undertake an inventory of historic resources to determine sites or buildings of federal, State, or local historic significance.

*The City will use appropriate State and federal standards and inventory forms in evaluating the significance of historic resources that are identified by the city as part of the historic resources inventory, or as part of any other historic resource evaluation efforts that may be required by the City.*

POSR-I-41 Promote the registration of historic sites, buildings, and structures in the National Register of Historic Places, and inclusion in the California Inventory of Historic Resources.

Implementation of the policies summarized above would reduce potential Impact 3.13-2 to a level that is less than significant.

*Impact*

***3.13-3 Development under the proposed General Plan has the potential to adversely affect visual resources in the short term during periods of construction by blocking or disrupting views. (Less than Significant)***

Short term visual impacts resulting from development include blockage or disrupting of views by construction equipment and scaffolding, removal of vegetation, temporary route changes for transportation improvements, exposed excavation, and construction staging areas. Short term impacts are less than significant because they are temporary in nature and tend to only affect a localized area at any one time. In addition, there are policies in the proposed General Plan that would ensure that construction-related adverse impacts on visual resources are minimized and long-term adverse impacts of new development would not occur.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policy would help to reduce this impact to a level that is less than significant:

POSR-I-48 Require developers to implement Best Management Practices to reduce air pollutant emissions due to construction work and operation of equipments.

- During clearing, grading, earth-moving or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures;
- All materials excavated or graded shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All materials transported off-site shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All motorized vehicles shall have their tires watered before exiting a construction site.
- The area disturbed by demolition, clearing, grading, earth-moving, or excavation shall be minimized at all times;

- All construction-related equipment shall be maintained in good working order to reduce exhaust from these equipments.

Implementation of the policy summarized above would reduce potential Impact 3.13-3 to a level that is less than significant.

*Impact*

***3.13-4 Development under the proposed General Plan has the potential to create a new source of substantial light or glare which would adversely affect nighttime views in the area. (Less than Significant)***

While future development will likely be a source of new light or glare in Los Banos, policies within the proposed General Plan are designed to mitigate to the extent possible any negative lighting or glare impacts associated with new development, including impacts on the night sky generally, as well as on adjacent development specifically.

***Proposed General Plan Policies that Reduce the Impact***

Implementation of the following proposed General Plan policies would help to reduce this impact to a level that is less than significant:

- LU-I-30 Integrate standards for varying scales of commercial development including large-format regional centers, neighborhood-serving centers, and mixed-use Downtown into the zoning regulations.

*These standards will include height and scale requirements, setback provisions and standards for screening, lighting, landscaping and location of parking, loading, refuse collection, and recycling facilities.*

Policy LU-I-47 summarized under Impact 3.13-1 also helps to reduce this impact and thus is incorporated here by reference. Implementation of the policies summarized above would reduce potential Impact 3.13-4 to a level that is less than significant.

## 4 Analysis of Alternatives

CEQA mandates consideration and analysis of alternatives to the proposed General Plan. According to CEQA Guidelines, the range of alternatives “shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts” (Section 15126(d)(2)). The alternatives may result in new impacts that do not result from the proposed General Plan.

Case law suggests that the discussion of alternatives need not be exhaustive and that alternatives be subject to a construction of reasonableness. The impacts of the alternatives may be discussed “in less detail than the significant effects of the project proposed” (CEQA Guidelines Section 15126.6(d)). Also, CEQA Guidelines permit analysis of alternatives at a less detailed level for general plans and other program EIRs, compared to project EIRs. Quantified information on the alternatives is presented where available; however, in some cases only partial quantification can be provided because of data or analytical limitations.

### 4.1 BACKGROUND OF ALTERNATIVES DEVELOPMENT

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The alternatives considered in this analysis originate in the Sketch Plan Workbook, the second key step in the General Plan update process for Los Banos. The Sketch Plans were published and distributed to members of the General Plan Advisory Committee (GPAC) and to City Staff, then discussed at a community meeting on April 3, 2006. They present alternative approaches to accommodating continued growth in Los Banos, while protecting the quality of life and character of its existing neighborhoods, shopping areas, and Downtown. They formed the early foundation for what became, with community input, the Preferred Plan Concept and now the proposed General Plan.

#### ALTERNATIVES INITIALLY CONSIDERED

The Sketch Plans were created to illustrate ideas for the City’s future in the form of two schematic land use alternatives:

- *Sketch Plan A: Corridor and Core Focus*; and
- *Sketch Plan B: Neighborhoods and Mixed-Use Focus*

The two Sketch Plans, *Corridor and Core Focus* and *Neighborhood and Mixed-Use Focus*, share a common program. In general, both plans provide similar numbers of new housing units and employment opportunities, with Alternative A providing slightly greater overall development. Both schemes call for new trails, parks, and open space consistent with the City’s park planning and ongoing rails-to-trails planning efforts. Both schemes incorporate the proposed SR-152 Bypass north of the city.

The building block of both Sketch Plans is the neighborhood unit. This unit is designed to maintain the “small-town” character of Los Banos by providing walkable neighborhoods and neighborhood commercial centers near where residents live. Wherever possible, the core of the unit is a

combination of open space and public (elementary school) use. This combination of uses creates a center to the new neighborhoods.

Finally, the Sketch Plans have similar vehicular circulation systems, which connect to existing streets, facilitate an extension of the current system, and distribute traffic throughout the grid.

Adaptations of the Sketch Plans are described in the following section.

## 4.2 DESCRIPTION OF ALTERNATIVES

The following alternatives to the proposed General Plan are evaluated in this EIR:

- *Alternative A: Housing Focus;*
- *Alternative B: Greenbelt Constrained;* and
- *The No Project Alternative.*

For the purposes of EIR analysis both Sketch Plan alternatives were updated to reflect the most current knowledge of the orientation of the proposed SR-152 Bypass, as well as the same planning area boundary as the proposed General Plan. Alternative A is a version of Sketch Plan A, refined to incorporate proposals received from developers, mostly with a focus on strategies to increase housing supply and access to the proposed future SR-152-Bypass. Alternative B remains almost identical to Sketch Plan B. The proposed General Plan was prepared based on the responses of the community and policy direction from the GPAC after reviewing the original Sketch Plans. The No Project Alternative represents expected development patterns if no General Plan update occurred and instead the existing General Plan were to remain in effect to 2030.

Table 4.2-1 summarizes buildout projections under the proposed General Plan and each of the alternatives. It includes a comparison of the ratio of jobs to employed residents.

**Table 4.2-1: Summary of Buildout of Proposed General Plan and Alternatives**

<i>Alternative</i>	<i>Housing Units</i>	<i>Jobs</i>	<i>Households</i>	<i>Employed Residents</i>	<i>Jobs/Employed Residents Ratio</i>
Proposed General Plan	28,600	41,900	27,200	32,500	1.43
Alternative A	32,100	31,400	30,500	36,400	0.86
Alternative B	28,000	24,600	26,600	31,900	0.77
No Project	27,600	40,600	26,200	31,400	1.29

*Source: Dyett & Bhatia, 2007.*

### ALTERNATIVE A: HOUSING FOCUS

Alternative A, based on Sketch Plan A, proposes new growth that is similar in character to recent development in Los Banos. This alternative has larger neighborhood units consisting of low density single-family houses. Approximately 90 percent of the new housing units would be in the Very Low and Low Density categories. A mix of higher density housing and neighborhood supporting commercial uses are centered on new elementary and middle school sites. Alternative A has fewer schools and neighborhood centers than the existing General Plan, and fewer schools and fewer

centers than Alternative B; as a result the neighborhoods and schools are larger in size than Alternative B.

A second main component in Alternative A is the inclusion of parks, trails and open space in the neighborhood centers. Parks, trails, and open space are proposed along the creek corridors and along the full length of the abandoned rail right-of-way. Community and neighborhood parks are provided to balance out the current deficiency in acreage per thousand residents and bring the ratio to 6.2 by 2030. In general, these centers would be distributed along proposed arterials and evenly dispersed throughout the northward and southward extensions of the existing community. Additional arterials are proposed to connect the community to Pacheco Boulevard and Mercey Springs Road, which will connect to the SR-152 Bypass. Additional arterials are shown to carry traffic inside of the proposed bypass and connect through the south part of the new development.

New commercial and office development would be directed along the Pacheco Boulevard and SR-165 corridors. Employment centers are shown on the current airport site and on the western edge of town along the SR-152 corridor. This use is expected to support the need for significant new job growth in Los Banos during the next 25 years.

The changes that make Alternative A different from the original Sketch Plan consist of proposals made by developers to the GPAC that generally accommodate additional housing and some additional complementary commercial, civic and recreational uses. As compared to the proposed General Plan, the major differences are that Alternative A does not provide a Business Opportunity Area and thus both retains more agricultural land and provides for significantly fewer jobs, and the developer proposals that contribute to Alternative A result in development north of the proposed SR-152 Bypass. Alternative A is depicted in Figure 4.2-1.

## **ALTERNATIVE B: GREENBELT CONSTRAINED**

Alternative B is almost identical to Sketch Plan B presented earlier in the planning process. Environmental constraints were considered in the development of Alternatives A and B as well as the proposed General Plan, but Alternative B adheres to these constraints more consistently:

### **Sensitive Eco-Regions**

The City lies at the edge of the larger San Joaquin eco-region, with portions of the two key open space areas, the Grasslands Ecological Area and the Pacific Flyway, neighboring to the east. Alternative B attempts to preserve these valuable eco-regions by minimizing development to the east and limiting development north of the SR-152 Bypass.

### **Agricultural Land**

The City is surrounded by agricultural lands, with prime farmland surrounding the city on all sides. The Alternative B attempts to preserve these valuable farmlands by limiting development north of the SR-152 Bypass and south of the City.

Alternative B proposes new growth that is higher in density than recent developments in Los Banos. This alternative has smaller neighborhood units with a mix of low density single-family houses and medium density apartment complexes and multiple-unit homes. Alternative B focuses more higher

density housing around neighborhood centers near parks, elementary and middle schools. The schools in this plan are smaller in size and therefore support smaller neighborhood units.

Similar to Alternative A, parks, trails, and open space are proposed along the creek corridors and along the abandoned rail right-of-way. Parks are provided to balance out the current deficiency in acreage per thousand residents and bring the ratio to 7.2 by 2030.

New commercial and office development would be planned along the western edge of the existing downtown along the abandoned rail corridor. This is done to capitalize on the existing infrastructure improvements made along this corridor and to support mixed use development in downtown. An employment center is shown on the current airport site centered on the creek corridor.

A University Village is proposed as the western gateway of the community near the future site of the UC campus near the SR-152 Bypass and West Pacheco Boulevard interchange. This use is intended to support the campus community by providing an area where high density housing and office space can be combined with service retail common around college campuses.

Proposed development in Alternative B is ringed with a greenbelt that would accommodate recreational use and contain growth throughout the life of the plan, much like an urban growth boundary. This greenbelt is not included in either Alternative A or the proposed General Plan. In contrast, both Alternative A and the proposed General Plan permit more acres of farmland conversion, in the case of the General Plan to accommodate desired employment and business growth using the Business Opportunity Area, and in the case of Alternative A to accommodate proposals for more housing and greater accessibility to the proposed Bypass. Alternative B is depicted in Figure 4.2-2.

## **NO PROJECT ALTERNATIVE**

Consideration of the No Project Alternative is required by CEQA in all EIRs and represents the continuation of the current City of Los Banos 1999 General Plan land use designations. In the absence of the proposed General Plan, the existing General Plan and Zoning Ordinance would continue to guide development in the Planning Area. There are many differences between the proposed General Plan and the No Project Alternative. As compared to the proposed General Plan, the No Project Alternative:

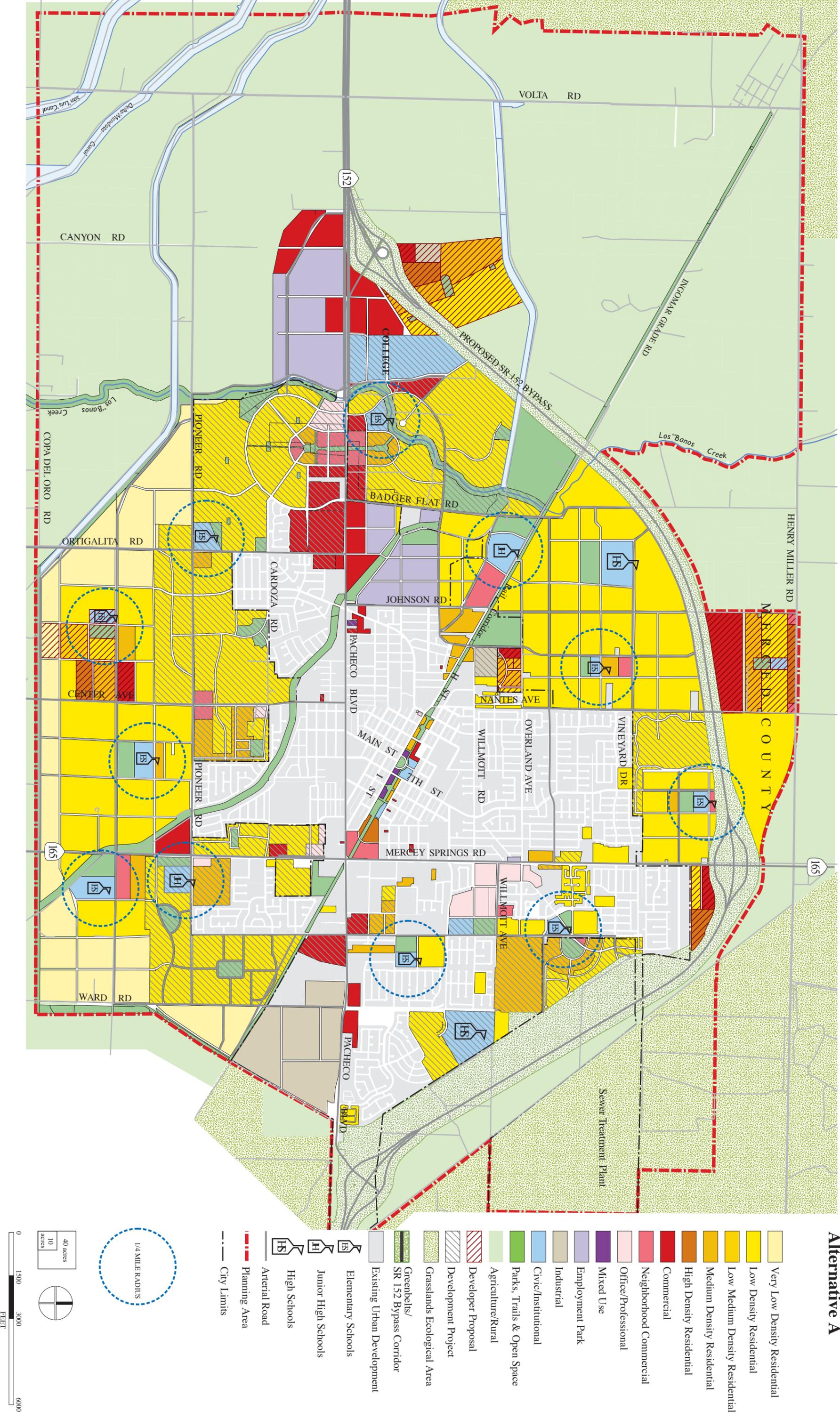
- Uses a different Planning Area,
- Does not recognize the current policy location of the proposed SR-152 Bypass,
- Provides no Business Opportunity Area,
- Does not create neighborhood centers focused on school and park combinations,
- Suggests a larger role for industrial development,
- Shows a different proposed location for the college, and
- Indicates a large recreational park area on the outskirts of the City instead of a green space network inside the City.

The No Project Alternative is illustrated in Figure 4.2-3.

Alternative A

Figure 4.2-1

**Alternative A**



Very Low Density Residential

Low Density Residential

Low Medium Density Residential

Medium Density Residential

High Density Residential

Commercial

Neighborhood Commercial

Office/Professional

Mixed Use

Employment Park

Industrial

Civic/Institutional

Parks, Trails & Open Space

Agriculture/Rural

Developer Proposal

Grasslands Ecological Area

Greenbelts/  
SR 152 Bypass Corridor

Existing Urban Development

Elementary Schools

Junior High Schools

High Schools

Arterial Road

Planning Area

City Limits

40 acres

10 acres

1/4 MILE RADIUS

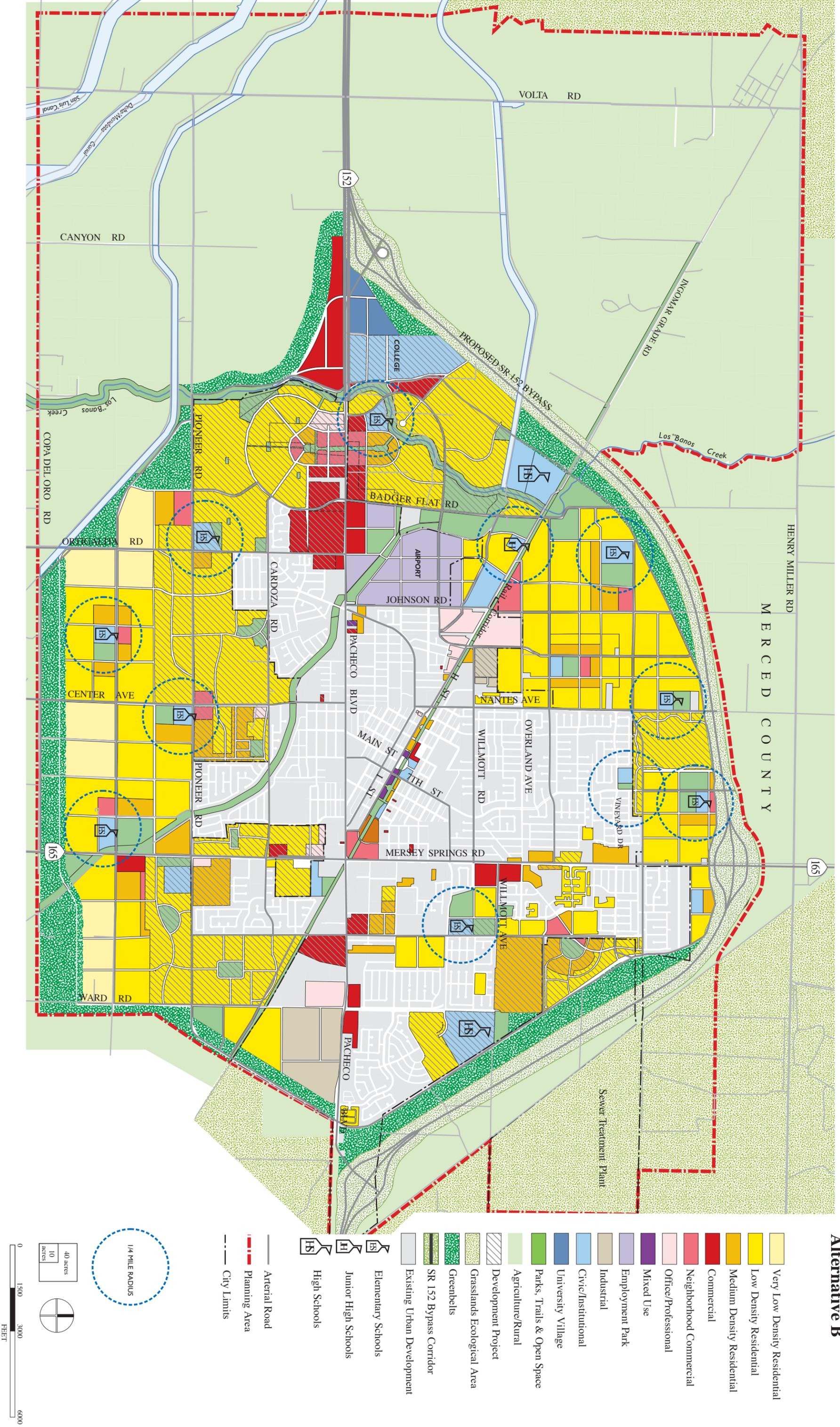
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Alternative A back

Alternative B

Figure 4.2-2

**Alternative B**



- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- Commercial
- Neighborhood Commercial
- Office/Professional
- Mixed Use
- Employment Park
- Industrial
- Civic/Institutional
- University Village
- Parks, Trails & Open Space
- Agriculture/Rural
- Development Project
- Grasslands Ecological Area
- Greenbelts
- SR 152 Bypass Corridor
- Existing Urban Development
- Elementary Schools
- Junior High Schools
- High Schools

Arterial Road  
 Planning Area  
 City Limits

1/4 MILE RADIUS

40 acres  
 10 acres

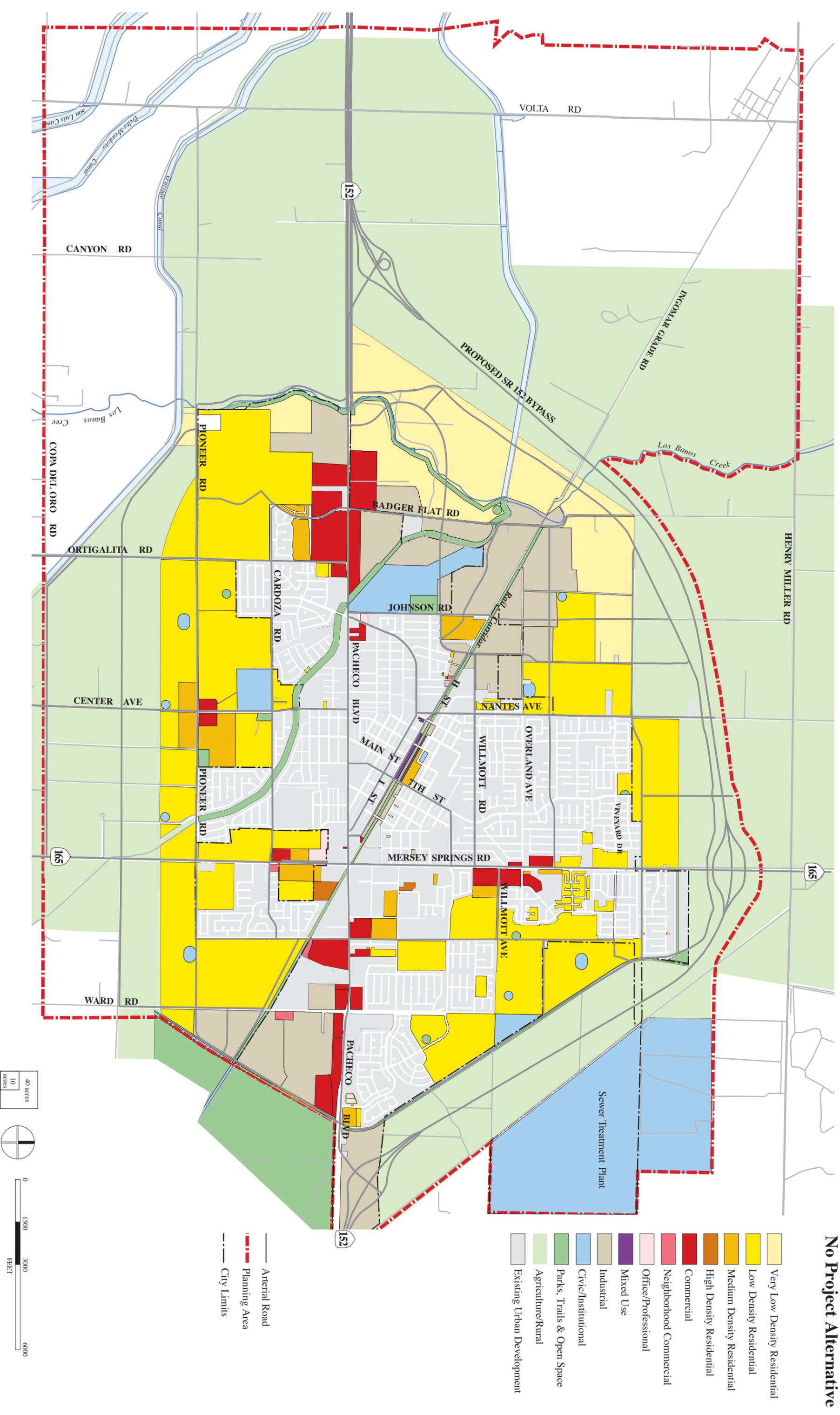
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Alternative B back

No Project Alternative

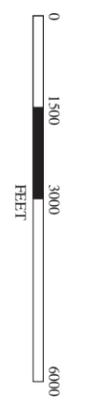
Figure 4.2-3

**No Project Alternative**



- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Neighborhood Commercial
- Office/Professional
- Mixed Use
- Industrial
- Civic/Institutional
- Parks, Trails & Open Space
- Agriculture/Rural
- Existing Urban Development

- Arterial Road
- Planning Area
- City Limits



back

**Table 4.2-2: Detailed Comparison of Buildout and Existing (2006) Conditions: Proposed General Plan and Alternatives**

	<u>Housing Units</u>			<u>Households</u>			<u>Population</u>			<u>Jobs</u>			<u>Employed Residents</u>		
	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>
Draft GP	10,710	28,660	17,950	10,170	27,230	17,060	34,220	90,520	56,300	4,540	46,460	41,920	11,100	32,600	21,500
Alternative A	10,710	32,060	21,350	10,170	30,460	20,290	34,220	101,180	66,960	4,540	31,400	26,860	11,100	36,400	25,300
Alternative B	10,710	28,040	17,330	10,170	26,640	16,470	34,220	88,580	54,360	4,540	24,630	20,090	11,100	31,900	20,800
No Project	10,710	27,610	16,900	10,170	26,230	16,060	34,220	87,220	53,000	4,540	40,550	36,010	11,100	31,400	20,300

Notes: Some numbers are rounded; numbers are only approximate projections. For projected buildout households equal 95 percent of the total housing units (assumes a 5 percent vacancy rate). Employed Residents assumed to be 36 percent of total population, based on 2000 Census. For alternative buildout numbers the existing condition was updated, the difference subtracted from additional, and the new additional and new existing generate the final buildout number. Housing Unit Buildout totals are housing units in the pipeline plus additional units attributable to each alternative.

Source: Dyett & Bhatia, 2007.

### 4.3 COMPARATIVE IMPACT ANALYSIS

This comparative analysis of alternatives evaluates impacts in the same environmental issue areas analyzed in Chapter 3 for the proposed General Plan. Alternatives are generally compared to the proposed General Plan and subject to the same significance criteria. It is assumed that Alternatives A and B would include the same policies providing protection for environmental resources as those defined for the proposed General Plan.

#### LAND USE, HOUSING, AND AGRICULTURE

Land use buildout comparisons for each alternative are provided in Section 4.2. Implementation of any of the alternatives would not create a land use pattern that physically divides an established community, nor would they displace substantial numbers of housing or people. Land use impacts of the alternatives, like the proposed General Plan, are focused on the potential conversion of farmlands in the event that the plan is fully built out.

A comparison of agricultural land conversion is provided in Table 4.3-1. As shown in the table, the proposed General Plan would result in slightly more agricultural land conversion than Alternatives A and B, primarily due to the addition of the business opportunity area on the west side of the city. The No Project involves the lowest amount of agricultural land conversion, but does not provide sufficient designated land to accommodate projected employment and population growth.

Of the 887 acres in existing Williamson Act contracts (agricultural preserves) in the Planning Area, Alternative A would result in the largest area of conversion (see Table 4.3-2).

**Table 4.3-1: Farmland Conversion Comparison**

<i>Farmland Type</i>	<i>Existing Acres</i>	<i>Converted in Proposed General Plan</i>	<i>Converted in Alt A*</i>	<i>Converted in Alt B</i>	<i>Converted in No Project</i>
Grazing Land	346	54	59	59	0
Farmland of Local Importance	858	54	43	42	3
Prime Farmland	6,195	2,959	2,875	2,452	669
Farmland of Statewide Importance	2,222	871	729	556	399
Unique Farmland	1,833	772	615	527	187
Other Land	641	244	168	125	181
<b>Total Converted</b>		<b>4,954</b>	<b>4,490</b>	<b>3,761</b>	<b>1,439</b>

\* Alternative A includes conversion of some lands outside of the proposed General Plan Planning Area.

Source: Dyett & Bhatia, 2007.

**Table 4.3-2: Williamson Act Lands Conversion Comparison\***

<i>Plan</i>	<i>Acres Converted at Buildout</i>
Proposed General Plan	198
Alternative A**	260
Alternative B	202
No Project Alternative	79

\*Williamson Act acreage is a subset of total farmland presented in Table 4.3-1 (Farmland Conversion Comparison).  
 \*\*Alternative A includes conversion of 29.4 acres outside of the proposed General Plan Planning Area.

Source: Dyett & Bhatia, 2007.

From an agricultural land conversion perspective, the existing General Plan (No Project Alternative) would result in the lowest impact. However, there are other land use factors to consider. It should be noted that the “Blueprint” for the valley identified Los Banos as a growth center, and the existing General Plan has little room for new employment/economic development. The proposed General Plan and Alternatives A and B would accommodate growth beyond the year of buildout of the existing General Plan. Also, the existing General Plan does not relate to the highway bypass. The proposed General Plan, and to a lesser extent the alternatives, would plan for efficient urban use south of the bypass and establish a permanent urban limit line, which was not in the existing GP.

Alternative A would include urban development north of the proposed SR-152 Bypass, extending the Planning Area northward. This would represent less efficient use of urban land than the proposed General Plan, as well as failing to provide a clear urban growth boundary for development. Alternative B would provide the least amount of new employment area (other than the No Project Alternative), so would not be able to accommodate as much growth as the proposed General Plan or Alternative A.

**TRANSPORTATION**

All of the alternatives include planned transportation improvements to serve expected travel demand. The same procedures, methodologies, and existing conditions were used to project vehicle trips and vehicle miles traveled under different conditions.

**Trip Generation and Vehicle Miles Traveled**

As Los Banos and surrounding communities along SR-152 and SR-165 experience rapid employment and housing growth, traffic is expected to increase in tandem. All of the alternatives considered the impact of regional growth and the potential impact brought about by the SR-152 Bypass. The proposed General Plan, Alternative A and Alternative B apply a neighborhood center concept that is designed to reduce the need for automobile travel. Of the four options, the proposed General Plan is expected to generate the highest vehicle miles traveled (VMT) due to its higher employment numbers and larger geographical coverage. A comparison of alternatives is presented in Table 4.3-3.

Alternative A is expected to generate the highest number vehicle trips at 387,700 and second highest VMT under full buildout conditions. This is largely due to its larger number of households compared with the other plans. Some of these vehicle trips may be attributed to proposed development north of the future SR-152 Bypass. Total VMT is approximately similar to that under the proposed General Plan.

Alternative B would generate 330,200 vehicle trips within the Planning Area under full buildout conditions. The compact nature of the plan and the low job numbers combine to create a lower VMT and total vehicle trips. Compared to Alternative A, this plan would generate 57,000 less vehicle trips and 12,000 less residents.

The No Project Alternative, which represents the conditions where the city is allowed to grow to its existing Planning Boundary, is expected to generate 329,400 vehicle trips by 2030 – the lowest of all alternatives. This option also has the lowest total population and VMT number. Its geographic coverage however, is potentially much larger than the other 3 alternatives due to differences in Planning Area boundaries, and may have a larger impact on road infrastructure.

**Table 4.3-3: Daily Vehicle Trips and Vehicle Miles of Travel For Buildout Conditions**

<i>Scenario</i>	<i>Daily Vehicle Trips</i>	<i>Daily VMT<sup>1</sup></i>
Proposed General Plan	370,000	1,277,600
Alternative 1	387,700	1,254,700
Alternative 2	330,200	1,083,000
No Project	329,400	1,022,900

<sup>1</sup>All figures are rounded to nearest hundred

Source: *Omni-Means, 2007.*

### **Roadway Level of Service**

Based upon the proposed land uses, Omni-Means conducted a roadway segment level of service (LOS) analysis for buildout of the current general plan (no project), the proposed general plan, and two additional alternatives (Alternative A and Alternative B). Various street segments were chosen to represent a variety of facilities, i.e., freeways, arterials, collectors, and local roads.

Based upon the LOS results presented in Table 4.3-4, the proposed General Plan forecasts six deficiencies, the existing General Plan forecasts nine deficient segments, and Alternatives A and B anticipate four and three deficient segments, respectively.

In general, the majority of the deficiencies for each roadway segment are forecasted to be on Old SR-152 (Pacheco Boulevard). In fact, five of the six deficient segments for the proposed general plan are on this corridor. Transportation system management (TSM) strategies, such as advance signal coordination and other operational improvements, would increase capacity thereby improve traffic flow on Pacheco Boulevard.

The remaining deficiencies are scattered throughout the city. Portions of 2<sup>nd</sup> Street and 7<sup>th</sup> Street in the downtown area have higher V/C ratios. This can be attributable to assigning lower capacities in the model to streets located in the downtown area. For example, some deficient links contain around 5,500 daily trips, which would normally be acceptable for other collector streets in other areas of the city.

In general, the proposed General Plan has roughly the same housing as the other land use alternatives, but it has the most employment out of all of them and therefore has the highest VMT.

**Table 4.3-4: Roadway Segment Level of Service**

Street Segment	<i>Proposed GP</i>			<i>Alt A</i>			<i>Alt B</i>			<i>No Project</i>		
	VIC	LOS	ADT	VIC	LOS	ADT	VIC	LOS	ADT	VIC	LOS	ADT
Badger Flat Road	1.275	F	39,920	0.925	E	29,600	0.824	D	26,210	0.440	A	13,940
I Street	1.273	F	40,700	0.989	E	31,730	0.967	E	30,830	1.230	F	39,260
4th Street	1.060	F	33,890	0.924	E	29,450	0.874	D	27,860	0.950	E	30,320
6th Street	0.937	E	29,950	0.838	D	26,630	0.824	D	26,280	0.880	D	28,020
I Street	0.809	D	25,850	0.727	C	23,170	0.715	C	22,810	0.810	D	25,870
SR-165	1.080	F	34,530	1.094	F	34,900	1.136	F	36,270	1.140	F	36,587
Ward Road	0.796	C	25,440	0.895	D	28,410	0.898	D	28,690	1.130	F	36,000
SR 152 FWY Bypass	0.603	B	19,210	0.678	B	21,630	0.743	C	23,720	0.610	B	19,490
SR-165	0.336	A	26,420	0.270	A	21,090	0.239	A	18,850	0.230	A	18,060
Old SR 152 - Pacheco	0.246	A	19,560	0.269	A	21,490	0.248	A	19,800	0.270	A	21,570
Pioneer Road	0.746	C	23,880	0.851	D	27,220	0.811	D	25,950	0.550	A	17,470
Scripps Drive	0.681	B	21,770	0.802	D	25,670	0.775	C	24,630	0.470	A	15,160
SR-152	0.863	D	27,600	0.821	D	26,270	0.814	D	25,890	0.880	D	28,260
B Street	0.683	B	21,830	0.706	C	22,570	0.745	C	23,820	0.820	D	26,230
Dove Street	0.721	C	23,000	0.687	B	22,020	0.693	B	22,130	0.840	D	27,000
Henry Miller Avenue	0.833	D	23,090	0.747	C	20,670	0.660	B	18,367	0.793	C	22,200
SR-165	0.114	A	1,350	0.128	A	1,530	0.130	A	1,550	0.130	A	1,500
Wisteria Street	0.199	A	2,390	0.246	A	2,860	0.174	A	2,080	0.180	A	2,130
San Juan Street	0.116	A	1,390	0.140	A	1,630	0.160	A	1,900	0.160	A	1,970
SR-165	0.418	A	5,000	0.184	A	2,180	0.209	A	2,490	0.150	A	1,770
2nd Street	0.508	A	14,220	0.598	A	16,710	0.591	A	16,540	0.350	A	9,720
3rd Street	0.578	A	16,170	0.656	B	18,350	0.636	B	17,820	0.470	A	13,180
4th Street	0.583	A	16,310	0.661	B	18,490	0.644	B	18,020	0.480	A	13,380
5th Street	0.592	A	16,560	0.672	B	18,800	0.679	B	18,970	0.470	A	13,120
SR-152	0.579	A	6,210	0.562	A	6,730	0.493	A	5,920	0.460	A	5,560

**Table 4.3-4: Roadway Segment Level of Service**

Street Segment	<i>Proposed GP</i>			<i>Alt A</i>			<i>Alt B</i>			<i>No Project</i>		
	VIC	LOS	ADT	VIC	LOS	ADT	VIC	LOS	ADT	VIC	LOS	ADT
L Street	0.745	C	10,420	0.648	B	8,970	0.608	B	8,510	0.640	B	8,900
6th Street	0.101	A	1,430	0.133	A	1,840	0.136	A	1,910	0.160	A	2,250
H Street	0.917	<b>E</b>	5,500	0.792	C	4,750	0.792	C	4,750	0.960	<b>E</b>	5,610
K Street	0.571	A	7,140	0.489	A	6,760	0.444	A	6,180	0.690	B	8,300
SR-152	0.153	A	1,690	0.248	A	2,990	0.220	A	2,470	0.190	A	2,260
K Street	0.099	A	1,180	0.136	A	1,610	0.147	A	1,770	0.090	A	1,080
G Street	0.811	D	9,720	0.888	D	10,540	0.904	<b>E</b>	10,790	1.020	<b>F</b>	12,240
E Street	0.702	C	8,420	0.757	C	9,020	0.755	C	9,010	0.670	B	10,410
Willmott Avenue	0.604	B	7,950	0.656	B	7,800	0.716	C	8,540	0.800	D	9,550
SR-152	0.189	A	2,210	0.309	A	3,700	0.256	A	3,070	0.350	A	4,220
Johnson Rd	0.369	A	5,300	0.316	A	4,590	0.345	A	4,870	0.404	A	5,630
2nd Street	0.395	A	5,410	0.459	A	6,390	0.437	A	6,130	0.350	A	5,220
3rd Street	0.490	A	5,760	0.531	A	6,330	0.544	A	6,560	0.290	A	3,470
Overland Avenue	0.159	A	2,220	0.202	A	2,810	0.224	A	3,130	0.720	C	10,000
Olivewood Drive	0.272	A	3,810	0.302	A	4,220	0.313	A	4,370	1.260	<b>F</b>	17,610
2nd Street	0.218	A	2,600	0.196	A	2,320	0.218	A	2,610	0.140	A	1,630
3rd Street	0.339	A	4,040	0.310	A	3,690	0.320	A	3,840	0.280	A	3,320
B Street	0.256	A	3,560	0.398	A	5,570	0.414	A	5,800	0.630	B	8,900
Ward Road	0.196	A	2,350	0.195	A	2,340	0.220	A	2,630	0.200	A	2,370
SR-165	0.259	A	3,010	0.258	A	3,020	0.267	A	3,190	1.490	<b>F</b>	17,810
Santa Barbara Street	0.083	A	1,150	0.127	A	1,760	0.067	A	930	0.610	B	8,520
SR-152	0.374	A	5,220	0.435	A	6,100	0.421	A	5,880	1.280	<b>F</b>	17,460
Zinfandel Street	0.131	A	1,450	0.127	A	1,480	0.131	A	1,550	0.630	B	7,590
SR-152	0.333	A	3,980	0.525	A	6,290	0.526	A	6,310	0.570	A	6,770

Note: Bold values indicate potential significant impacts

Source: *Omni-Means, 2007.*

**Public Transit Services**

With the implementation of various transit friendly policies under the proposed General Plan, transit ridership per capita is expected to increase in year 2030. As shown in Table 4.3-5, approximately 600,000 trips are expected to be on public transit under proposed General Plan conditions. A comparison of other alternatives is discussed below.

**Table 4.3-5: Bus Service Ridership for Alternatives**

<i>Scenario</i>	<i>Population</i>	<i>Projected Annual Ridership in 2030<sup>1</sup></i>
Proposed General Plan	90,520	600,000
Alternative A	101,180	737,700
Alternative B	88,580	587,100
No Project	87,220	520,300

<sup>1</sup>Ridership for all scenarios calculated by proportioning City to County population

Source: MCAG Regional Transportation Plan, 2007. Dyett & Bhatia, 2007.

Alternative A would result in the highest ridership numbers due to its greater residential to jobs ratio. Retirees and teenagers are expected to utilize public transit more than any other age group, and there would likely be more of them in a buildout population with a larger residential component. Furthermore, the presence of two proposed residential developments located north of the proposed SR-152 Bypass would necessitate extra bus routes to serve those areas. The impact on public transit services is therefore greatest in this scenario.

Alternative B is expected to generate less ridership than the proposed General Plan, but greater ridership than the No Project scenario. The compact nature of the plan will require the least number of bus routes and hence the least impact on transit services.

The No Project Alternative is expected to generate the smallest per capita demand on bus services compared with all other scenarios due to the lack of transit friendly policies. Its residential population is less than the proposed plan, and its total ridership is projected to be less than the proposed plan.

**PARKS, RECREATION, AND OPEN SPACE**

**Parkland Resources**

The proposed General Plan will require developers to provide parks at the existing ratio of 4.7 acres per 1,000 residents, and aims to further increase the functional park acreage through parkland acquisitions via city funds, grants, and other sources to reach a goal of 7.5 acres per 1,000 residents. Both Alternative A and B will also develop additional parks under their respective land use plans. Table 4.3-6 compares the park resources provided under each alternative.

**Table 4.3-6: Summary of Parkland Facilities for Alternatives**

<i>Land Use Alternatives</i>	<i>Proposed Park-land (Acres)</i>	<i>Park Acres per 1,000 residents</i>	<i>Increase Over No Project</i>
Proposed General Plan	683.3	7.5	2.8
Alternative A	631.8	6.2	1.5
Alternative B	633.7	7.2	2.5
No Project	409.9	4.7	-

Source: Dyett & Bhatia, 2007.

Alternative A creates the most number of households among all 4 options. Compared to the proposed General Plan, parks are fewer in number and further apart. The ratio of parkland to residents is estimated at 6.2 acres per 1,000 residents. This represents an increase of 1.5 acres per 1,000 residents over the No Project Alternative.

Alternative B focuses on preserving sensitive environmental resources and has more parks than Alternative A. The ratio of parkland to residents is estimated at 7.2 acres per 1,000 residents, slightly lower than the ratio achieved by the proposed General Plan but much higher than Alternative A.

Los Banos currently contains 159.3 acres of parkland. Assuming the City develops parkland at a ratio of 4.7 acres per 1,000 residents as required under the existing General Plan, a total of 409.9 acres of parkland will be provided in 25 years under the No Project Alternative.

### Open Space Resources

Under the proposed General Plan land use categories, trailways, greenbelts and an open space setback around the proposed SR-152 Bypass are classified as “Open Space” resources. Agriculture land is not included in this category as it is not publicly accessible open space. However, for purposes of comparison, agricultural land is included in the table as shown below.

**Table 4.3-7: Summary of Open Space Resources for Alternatives**

<i>Land Use Alternatives</i>	<i>Open Space</i>	<i>Agriculture Land</i>	<i>Total</i>
Proposed General Plan	760	7,840	8,600
Alternative A	1,710	8,640	10,350
Alternative B	2,610	8,930	11,540
No Project	1,300	11,990	13,290

Calculation of Open Space includes land use classified as trails, green belts, and SR-152 Bypass. In the No Project Alternative, this also includes land use classified as environmental reserve.

Source: Dyett & Bhatia, 2007.

Alternative A provides the second most amount of open space at around 1,700 acres. However, because it has a tighter urban form than the General Plan, it also reserves more agriculture land.

Alternative B provides the most amount of open space at around 2,600 acres and has the highest open space-to-development ratio among all 4 plans. This is largely due to a border of green-belt reserved around the City intended to limit development and protect environmental resources.

The No Project Alternative provides nearly 1,300 acres of open space and would have the least impact on agricultural land so it is the environmentally superior alternative for this issue area. This calculation includes an area southeast of the City classified as “environmental reserve” in the existing General Plan.

## **PUBLIC UTILITIES**

The comparison of impacts on public facilities is based on the demand on public school, water supply, wastewater treatment, and solid waste facilities and services. The proposed General Plan, the two “build” alternatives, as well as the No Project Alternative propose some increased demand for public service facilities and services at buildout. With the least new population added and the least new demand for public services and facilities generated, the No Project Alternative is the environmentally superior alternative in this issue area. However, policies in the proposed General Plan and all alternatives would ensure that new development contributes its fair share towards public service improvements needed to accommodate increased demand. Therefore, the differences among alternatives would not be substantive.

## **Schools**

The comparison of impacts on school facilities is based on the degree of increased student enrollment and demand for new school facilities. Both existing and proposed schools are critical in accommodating the new population growth from proposed residential development. Current enrollment figures are based upon 2006-2007 enrollment figures. Projected enrollment is based upon Los Banos Unified School District’s 2006 student generation rates. Table 4.3-8 shows the projected student enrollment and capacity characteristics for public schools under each alternative.

Alternative A provides a greater increase in student population than the proposed General Plan—adding an additional 15,770 students or a 150 percent increase to existing student levels. With 23 new schools needed, this alternative will have the greatest impact on the demand for land and investment for new schools.

Alternative B generates less new households than the proposed General Plan, resulting in less new students and demand on existing school facilities. This alternative would add an additional 12,830 students or a 145 percent increase to existing student levels. Other than the No Project Alternative, this alternative will result in the least potential impact on school facilities.

The No Project Alternative generates the least amount of new households, thus generating the least amount of new students. Nonetheless, schools will still need to be built since existing schools are already near capacity. This alternative would add an additional 11,838 students or a 134 percent increase above existing student levels.

The No Project Alternative is environmentally preferred for this issue area because it needs the fewest new schools.

**Table 4.3-8: Demand for Public Schools at Buildout for Alternatives**

<i>Alternative</i>	<i>New Housing</i>	<i>New Students</i>	<i>Demand Above Existing Capacity</i>	<i>Percent Increase</i>	<i>Additional Schools Needed</i>
Proposed General Plan	17,950	13,300	13,720	151	18
Alternative A	21,360	15,770	16,190	179	23
Alternative B	17,330	12,830	13,249	145	18
No Project	16,903	11,838	12,255	134	17

Assumes 0.439 elementary school, 0.124 middle school, and 0.175 high school students per single family household, and 0.552 elementary school, 0.146 middle school, and 0.250 high school students per multi family household. Assumes average school size of 650 students (grades K-5), 800 students (grades 6-8), and 1,650 students (grades 9-12). Number of schools needed is rounded up.

Source: Dyett & Bhatia, 2007.

### **Water Supply**

A city’s water usage is directly related to its population growth. Assuming water demand projections for 2030 is similar on a per capita basis for 2025 (provided by the 2005 Urban Water Management Plan), annual water demand for Los Banos can be projected for each alternative at buildout. A comparison of estimated water demand for Los Banos for each alternative is shown in Table 4.3-9. According to findings in the Urban Water Management Plan, no new water source is necessary for full implementation of the proposed General Plan or any of its alternatives. However, water filtration facilities will need to be constructed to maintain the quality of drawn water.

Alternative A would result in a demand of 20.8 million gallons per day (MGD). This alternative would increase average day demand by 206 percent from existing water demand—32 percent more than the proposed General Plan.

Alternative B would result in a demand of 18.2 MGD. This alternative would increase average day demand by 168 percent from existing water demand—6 percent less than the proposed General Plan.

The No Project Alternative would result in a demand of 17.9 MGD. This alternative would increase average day demand by 164 percent from existing water demand—10 percent less than the proposed General Plan. For this reason it is the environmentally preferred alternative for this issue area.

**Table 4.3-9: Projected Water Demand for Alternatives**

	<i>Buildout Population</i>	<i>Water Demand (MGD)</i>	<i>Percent Increase from Existing Water Demand</i>
Proposed General Plan	90,520	18.6	174
Alternative A	101,180	20.8	206
Alternative B	88,580	18.2	168
No Project	87,220	17.9	164

Water estimate for 2030 based on per capita ratio of 0.23 AFY, from 2005 Urban Water Management Plan estimate for 2025.

Source: Dyett & Bhatia, 2007.

**Wastewater Treatment**

New development and intensification under the General Plan or other alternatives would result in an increase in demand for wastewater treatment facilities. The comparison of impacts due to increases in wastewater treatment demand is based on estimated base wastewater flows at buildout. Typically mixed-use, commercial, and industrial development demand more wastewater treatment capacity than residential uses. However, the city will need to expand its wastewater treatment plant (WWTP) beyond its current 4.9 MGD capacity regardless of which alternative the City pursues.

Alternative A would generate more households but less jobs than anticipated under the proposed General Plan. Therefore, the demand for wastewater treatment is expected to be less than under the proposed General Plan. Since wastewater treatment policies and mitigation measures under the proposed General Plan are applied to Alternative A, the impact from increased wastewater treatment demand would become insignificant.

Alternative B would create a lower demand for wastewater treatment facilities, as the number of households and jobs would be less than all other options. Since wastewater treatment policies and mitigation measures under the proposed General Plan are applied to Alternative B, the impact from increased wastewater treatment demand would become insignificant and this alternative is environmentally preferred for this issue area.

The No Project Alternative would lead to fewer additional households and jobs than the proposed General Plan, but more jobs than either Alternative A or Alternative B. As a result, the demand for wastewater treatment facilities is expected to be moderate—higher than Alternatives A and B but lower than the proposed General Plan.

**Solid Waste**

Currently, solid waste disposal in Los Banos is handled by Merced County Association of Governments. All solid waste in the city is brought to the Billy Wright Landfill. Since this landfill has a lifespan through 2010, expansion plans are currently being developed. Merced County will need to source for a new solid waste facility regardless of which alternative is adopted.

Alternative A results in more new housing units but fewer new jobs than the proposed General Plan. Accordingly, this alternative places less demand on solid waste facilities from non-residential development, but more from residential development, in relation to the proposed General Plan.

Alternative B results in significantly fewer new housing units and jobs than the proposed General Plan, thus placing less demand on solid waste services and facilities. Compared with the rest, this alternative would result in the lowest levels of future solid waste generation and demand on facilities.

The No Project Alternative would result in more jobs than either Alternative A or B. Geographically, this option will also have a larger urban limit line. As a result, more dump trucks would be required to service the area.

**Public Safety and Emergency Preparedness**

Population and job growth under all alternatives will result in an increased need for public safety and emergency preparedness personnel and facilities. The need for new police officers and stations would be based upon maintaining the current ratio of 1.34 officers per 1,000 residents, while the need for new fire service personnel would be based upon maintaining the goal of 1 officer to 1,000 residents. Table 4.3-10 shows new demand for personnel under each alternative. Additionally, the need for new fire and police stations would be based upon the need for new development to fall within a 1.5 mile response radii of a station.

**Table 4.3-10: Demand for Police and Fire Personnel for Alternatives**

<i>Land Use Alternatives</i>	<i>New Residents</i>	<i>Additional Police Needed<sup>1</sup></i>	<i>Additional Fire Service Officers Needed<sup>2</sup></i>
Proposed General Plan	56,300	75	56
Alternative A	66,960	90	67
Alternative B	54,360	73	54
No Project	53,000	71	53

<sup>1</sup> Additional police officers calculated to maintain a ratio of 1.34 officers to 1,000 residents

<sup>2</sup> Additional firemen calculated to maintain a ratio of 1 to 1,000 residents

Source: Dyett & Bhatia, 2007.

Alternative A, with more housing units and population than the General Plan, will place a greater demand for both police and fire service personnel as well as facilities.

Alternative B, with less new housing units and jobs than the proposed General Plan, will place slightly less demand on police and fire service personnel.

With fewer housing units and fewer jobs than the proposed General Plan, the No Project Alternative will place a smaller demand on police and fire service personnel.

**ENERGY USE AND CLIMATE CHANGE**

Compared to the proposed General Plan, alternatives A and B can be expected to generate lower rates of electricity consumption because they offer significantly fewer acres of non-residential uses, and those are the ones consuming 80 percent of all electricity in the County. In contrast, while the No Project Alternative would result in fewer new residents, it would propose non-residential land similar to the proposed General Plan. Therefore it could be expected to result in similar amounts of electricity consumption and related emissions.

In terms of transportation-related energy use and GHG emissions, Alternative B and the No Project Alternative (and to a lesser extent Alternative A) perform better than the proposed General Plan, primarily because the proposed General Plan offers a combination of higher job numbers and more new housing, thereby generating trips from both new residents and new jobs. The No Project Alternative is the 2030 scenario that would result in the least vehicle miles traveled and thus the least vehicle-related fuel consumption, carbon dioxide emissions, and total annual carbon dioxide equivalent emissions of methane and nitrous oxide. Table 4.3-11 below summarizes the transportation-related GHG impacts of all four alternatives.

**Table 4.3-11: Transportation Energy and Greenhouse Gas Emissions Comparison**

	<i>Annual Vehicle Miles Traveled</i>	<i>Annual Fuel Consumption (at 25.4 miles/gallon)</i>	<i>Carbon Dioxide Emissions (metric tons)</i>	<i>Annual CO<sub>2</sub> Equiv. of CH<sub>4</sub> Emissions</i>	<i>Annual CO<sub>2</sub> Equiv. of N<sub>2</sub>O Emissions</i>	<i>Total Annual CO<sub>2</sub> Equiv.</i>	<i>Change from 2006 to 2030</i>
Proposed General Plan	466,308,305	18,358,595	263,464	490	7,228	271,182	271,182
Alternative A	457,965,500	18,030,138	258,751	481	7,098	266,330	266,330
Alternative B	395,288,430	15,562,537	223,338	415	6,127	229,880	29,880
No Project	373,369,815	14,699,599	210,954	392	5,787	217,133	217,133

Source: Dyett & Bhatia, 2007.

## **GEOLOGY, SOILS, AND SEISMICITY**

Alternative A proposes development that is similar in nature to that anticipated under the proposed General Plan. Current State and federal regulations require specific engineering and design criteria to minimize impacts related to geologic, soils, and seismic hazards, which would apply to local geologic/soil conditions under each of the alternatives and the proposed General Plan. Policies and implementation measures included as part of the proposed General Plan incorporate all applicable regulations to minimize these impacts. For this reason, geologic and soils impacts under Alternative A are considered similar to those of the proposed General Plan.

Alternative B proposes development that is similar in nature to that anticipated under the proposed General Plan, but less land would be urbanized. For this reason, geologic and soils impacts under Alternative B are considered less than those of the proposed General Plan.

The No Project Alternative proposes development that is more limited in scope than that anticipated under the proposed General Plan. Although the No Project Alternative does not include the full range of policies designed to address geologic and soil issues, current State and federal regulations require specific engineering and design criteria to avoid impacts related to geologic, soils, and seismic hazards, which would apply to both the No Project Alternative and the proposed General Plan. For this reason, geologic and soils impacts under the No Project Alternative are considered to be similar to but somewhat less extensive than those of the proposed General Plan.

## **BIOLOGICAL RESOURCES**

Although Alternative A proposes development that is similar in nature to that anticipated under the proposed General Plan, build-out of this alternative would not include development of a Business Opportunity Area which would convert fewer acres of agricultural land to developed uses.

Development proposed under Alternative A would also include additional amounts of planned parks, trails, and open space areas which would result in the enhancement or preservation of additional open space areas (including wetlands, riparian areas) above those that would be preserved under the proposed General Plan. However, as with the proposed General Plan, this alternative would also result in significant and unavoidable impacts to biological resources, because future growth would occur over several hundred acres of currently undeveloped land (in particular to the west of the existing City limits) and would result in the overall reduction of a plant or wildlife species or habitat.

Alternative B also proposes development that is similar in nature to that anticipated under the proposed General Plan. However, this alternative proposes new growth that is considered higher in density than previously proposed development within the City. Like the proposed General Plan, this alternative proposes to preserve valuable agricultural land by limiting development north of the SR-152 Bypass and south of the City. This alternative also acknowledges the sensitivity of the GEA and the Pacific Flyway by minimizing development to the east. Minimizing growth adjacent to or within these ecologically sensitive areas limits the amount of open space land converted to developed uses and reduces the potential for habitat fragmentation issues associated with future development in the Planning Area. Unlike the proposed General Plan, Alternative B provides a greenway buffer around the entire Planning Area, and no Business Opportunity Area encroaches on agricultural land or habitats to the west. However, as with the proposed General Plan, this alternative would also result in significant and unavoidable impacts to biological resources because future growth would occur over several acres of currently undeveloped land (in particular to the west of the existing City Limits) and would result in the overall reduction of a plant or wildlife species or habitat.

The No Project Alternative would result in development that is similar in nature to that anticipated under the proposed General Plan. Although the No Project Alternative does not include the full range of policies designed to address biological issues, current State and federal regulations have specific requirements designed at avoiding impacts related to biological resources, which would apply to both the No Project Alternative and the proposed General Plan. For this reason, biological impacts under the No Project Alternative are considered to be similar to those of the proposed General Plan.

## **HYDROLOGY**

Development proposed under Alternative A would be fairly similar to that identified under the proposed Los Banos General Plan with the exception that Alternative A would not include establishment of a Business Opportunity Area. Without the Business Opportunity Area, fewer agricultural lands would be converted to a developed use. As with the proposed General Plan, the creation of additional impervious surfaces associated with urbanization would increase the amount of runoff, which could similarly affect water quality and affect groundwater recharge potential compared to that anticipated under the proposed Los Banos General Plan. As with the proposed General Plan, the entire Planning Area is located within Zone X, which is outside any flood prone areas according to FEMA. Consequently, flooding impacts are also expected to be similar. Overall, similar levels of development would require similar levels of water/drainage infrastructure to those anticipated under the proposed General Plan; many of which, their construction or operation could cause significant environmental effects. For these reasons, hydrologic and water quality impacts under Alternative A are considered similar to those of the proposed General Plan.

Under Alternative B, development would be of a similar type but would convert less open space land to an urban use as that anticipated under the proposed General Plan. As with the proposed General

Plan, the creation of impervious surfaces associated with urbanization would increase the amount of runoff, which could affect water quality. An increase in impervious surfaces could also reduce groundwater recharge potential. However, because land conversion would be less than the proposed General Plan, fewer impervious surfaces would be developed. As with the proposed General Plan, the entire Planning Area is located within Zone X, which is outside any flood prone areas according to FEMA. Consequently, flooding impacts are also expected to be similar. Overall, development under Alternative B would require similar levels of water/drainage infrastructure to those anticipated under the proposed General Plan. For these reasons, hydrologic and water quality impacts under Alternative B are considered similar to those of the proposed General Plan.

Under the No Project Alternative, buildout of the existing General Plan area would convert the least amount of open space land to urban uses. Since land conversion would be less than the proposed General Plan, relatively fewer impervious surfaces would be developed. For this reason, hydrologic and water quality impacts under the No Project Alternative are considered less than those of the proposed General Plan.

### **AIR QUALITY**

Development under Alternative A would result in slightly more dwelling units and residents, and significantly fewer jobs than the proposed General Plan. Although there is a reduction in jobs under this alternative, the additional dwelling units and other types of development to accommodate the increase in population would result in increased levels of both mobile and stationary sources of air quality emissions, toxic air contaminants, and the potential for odor emissions. Consequently, development proposed under Alternative A would also result in a significant and unavoidable air quality impact because this additional growth would also contribute to air quality emissions that would exceed the annual SJVAPCD thresholds for NO<sub>x</sub> and ROG.

Development under Alternative B would result in slightly fewer dwelling units and residents, and significantly fewer jobs than the proposed General Plan. These reductions in dwelling units and other types of development would result in reduced levels of both mobile and stationary sources of air quality emissions, toxic air contaminants, and the potential for odor emissions. However, development proposed under Alternative B would also result in a significant and unavoidable air quality impact because growth would still contribute to air pollutant emissions that would exceed the annual SJVAPCD thresholds for NO<sub>x</sub> and ROG.

Under the No Project Alternative, the City would continue to function under the direction of the existing General Plan. Consequently, build out under the existing General Plan would result in fewer jobs, dwelling units, and residents than the proposed General Plan. These reductions in dwelling units and other types of development would result in reduced levels of both mobile and stationary sources of air quality emissions and toxic air contaminants. However, implementation of the No Project Alternative would still result in a significant and unavoidable impact because growth would still contribute to air pollutant emissions that could exceed the annual SJVAPCD thresholds for NO<sub>x</sub> and ROG. Table 4.3-12 summarizes the comparison of operational emissions across all four alternatives.

**Table 4.3-12: Comparison of Vehicle Emissions in 2030 for Alternatives**

Pollutant	Unmitigated Operation Emissions (tons/year) <sup>a</sup>				
	SJVAPCD Thresholds	Proposed General Plan <sup>1</sup>	Alternative A <sup>2</sup>	Alternative B <sup>2</sup>	No Project <sup>2</sup>
ROG	10	<b>37.57</b>	<b>34.45</b>	<b>30.60</b>	<b>28.90</b>
NO <sub>x</sub>	10	<b>265.50</b>	<b>250.56</b>	<b>216.27</b>	<b>204.28</b>
PM-10	N/A	381.63	360.16	310.87	293.63
CO	N/A	586.99	553.97	478.15	451.64
CO <sub>2</sub>	N/A	264,308.50	249,438.42	215,300.32	203,361.99

<sup>1</sup> Emission factors were generated by the Air Resources Board EMFAC 2007 computer model (version 2.3) for the San Joaquin Valley Air Basin.  
<sup>2</sup> Bold values are in excess of the applicable standard. The SJVAPCD established thresholds for ROG and NO<sub>x</sub> are 10 tons per year whereas CO and PM10 do not have an established emissions threshold of significance.

Source: Dyett & Bhatia, 2007.

### FIRE HAZARDS AND HAZARDOUS MATERIALS

Alternative A proposes development that is similar in nature to that anticipated under the proposed General Plan. Development proposed under this alternative would affect a variety of agricultural lands surrounding the existing City limits. Similar to the proposed General Plan, implementation of this alternative would involve a decrease in the use of pesticides, herbicides, and other hazardous materials used for agricultural practices. Although hazards related to agricultural uses would be reduced, potential new commercial and industrial uses may introduce new sources of hazardous materials. However, hazardous materials generation, storage and clean-up are heavily regulated by federal, State and local regulations that would apply to both Alternative A and the proposed General Plan. For this reason, hazards and hazardous materials impacts under Alternative A are considered to be similar to those of the proposed General Plan.

Alternative B proposes development that is similar in nature to that anticipated under the proposed General Plan. Development proposed under this alternative would affect a variety of agricultural lands surrounding the existing City Limits. Similar to the proposed General Plan, implementation of this alternative would involve a decrease in the use of pesticides, herbicides, and other hazardous materials used for agricultural practices. Although hazards related to agricultural uses would be reduced, potential new commercial and industrial uses may introduce new sources of hazardous materials. However, hazardous materials generation, storage and clean-up are heavily regulated by federal, State and local regulations that would apply to both Alternative B and the proposed General Plan. For this reason, hazards and hazardous materials impacts under Alternative B are considered to be similar to those of the proposed General Plan.

The No Project Alternative proposes development that is similar in nature to that anticipated under the proposed General Plan. The No Project Alternative would not include the additional hazardous materials and public safety policies and implementation measure contained as part of the proposed General Plan. However, hazardous materials generation, storage and clean-up are heavily regulated by federal, State and local regulations that would apply to both the No Project Alternative and the proposed General Plan. For this reason, hazards and hazardous materials impacts under the No Project Alternative are considered to be similar to those of the proposed General Plan.

## **NOISE**

Noise impacts are based on traffic modeling projections because roadways are the major noise generators in Los Banos. Noise will be highest at roadway segments and intersections with the highest usage, and impacts will be more significant for sensitive receptors than for other land uses.

The proposed General Plan and Alternatives A and B will result in similar noise impacts in Los Banos due to the similarity in buildout acreages by land use type and the overall traffic levels generated (See traffic impact analysis and alternatives comparison). The additional greenway bordering the SR-152 Bypass in Alternative B would likely reduce noise impacts from the bypass on those living closest to it, as compared to the proposed General Plan and Alternative A. However, since the future noise contours for the proposed General Plan suggest that most of the city at buildout would not be subject to unacceptable levels of noise, it is reasonable to infer the same conclusion for Alternatives A and B overall.

Under the No Project Alternative, buildout of the existing General Plan would result in similar total housing units and population to that projected for the proposed General Plan, however, with different planning area boundaries it may be expected that development would be less dense and extend farther away from the existing City Limits. Less dense development would result in lower average noise exposure per person or household relative to the proposed General Plan and Alternatives A and B because traffic is dispersed over more miles of roadway. The No Project Alternative also does not assume that plans move forward for relocating the Municipal Airport. Furthermore, the No Project Alternative does not benefit from the updated and comprehensive noise policies contained in the proposed General Plan and Alternatives A and B. In particular, it is possible that without upgrading the General Plan policies, the existing General Plan could result in more exposure of sensitive receptors to noise than that which would be permitted in the proposed General Plan and Alternatives A and B.

## **CULTURAL RESOURCES**

Under Alternative A, land that has been used for various types of agricultural or open space uses that do not require extensive excavation and/or grading activities may be more likely to contain previously undiscovered cultural resources, particularly near local waterways. Urbanized areas may also contain a variety of historic resources (i.e., buildings, bridges, etc.).

Although not as extensive as the proposed General Plan, development proposed under this alternative would focus new growth within existing open space areas, which could result in similar impacts to cultural resources. Similar to the proposed General Plan, urbanization associated with future growth could damage or destroy a variety of cultural resources during various construction-related activities.

Under Alternative B, development would be of a similar type but would convert less open space land to an urban use when compared to that anticipated under the proposed General Plan, in particular those areas designated as Greenbelt areas. Although not as extensive as the proposed General Plan, development proposed under this alternative would focus some new growth within existing open space areas, which could result in similar impacts to cultural resources. Similar to the proposed General Plan, urbanization associated with future growth could damage or destroy a variety of cultural resources during various construction-related activities.

The No Project Alternative proposes development that is less in geographic scope than that anticipated under the proposed General Plan. However, the existing General Plan does not have the full range of policies designed to address cultural resources. The existing General Plan includes some policy guidance with respect to cultural resources; however, the proposed goals and policies provided as part of the proposed General Plan are considerably more comprehensive and detailed, including, in particular, those related to historic resources. Similar to the proposed General Plan, urbanization associated with future growth could damage or destroy a variety of cultural resources during various construction-related activities.

## **VISUAL RESOURCES**

The proposed General Plan and Alternatives A and B will result in similar impacts to visual resources. Overall, development types, densities, and uses are similar across these three alternatives, and would therefore result in similar increases in light and glare from existing conditions. Development as a result of these three alternatives would be subject to the same set of new policy controls and thus would likely attain the same outcomes in terms of blending with existing development, maintaining small town character, protecting historic resources, reducing light and glare, and managing the impacts of construction-related visual disruption. One significant difference is the residential development in Alternative A that would occur north of the SR-152 Bypass, changing the visual character of this area.

The No Project Alternative would result in less development overall than the proposed General Plan, Alternative A, or Alternative B. It follows that the No Project Alternative will produce fewer view obstructions, fewer sources of light and glare, and less construction activity. However, without the benefit of new and updated policies, the No Project Alternative may result in less contiguous development with the potential for more conflicts with the character of existing development. In particular, since the No Project Alternative allows for more jobs in the industrial sector, this could result in more industrial development that is less appealing and less conforming than that which is proposed in the other three buildout alternatives.

## **4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

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CEQA Guidelines require the identification of an environmentally superior alternative along the alternatives analyzed in an EIR. The Guidelines also require that if the No Project Alternative is identified as the environmentally superior alternative, then another environmentally superior alternative must be identified.

Based on the important roles of reducing agricultural land conversion, protecting habitats and wildlife corridors, and reducing vehicle miles traveled in this impact analysis, Alternative B appears to be the environmentally superior alternative. Though the No Impact Alternative converts fewer acres of agricultural land for urban uses, the existing General Plan does not provide adequate policies to control the quantity, type or direction of future growth. Alternative B provides an extensive greenway buffer system that the proposed General Plan and Alternative A do not offer, thus reducing the likelihood and severity of indirect impacts of development on biological resources. Furthermore, Alternative B proposes fewer jobs and people overall than all but the No Project Alternative, which should result in the least vehicles, vehicle miles traveled, as well as the least electricity use and resulting GHG emissions. A summary of the environmental impact of each alternative for all issue areas is provided in Table 4.4-1.

However, there are tradeoffs associated with Alternative B. The development potential of Alternative B does not meet the City's long term economic development needs, a factor that inspired the creation of the Business Opportunity Area for the proposed General Plan. Fewer jobs in Alternative B also means that this alternative is less likely to achieve efficiencies that are possible with a jobs-housing balance, wherein people may live and work in the same city, or closer to their jobs.

**Table 4.4-1: Comparison of Impacts**

	<i>Proposed GP</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
<b>Land Use</b>				
3.1-1. Buildout of the proposed General Plan would convert substantial amounts of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.	SU	SU	SU	SU
<b>Transportation</b>				
3.2-1. Implementation of the proposed General Plan would generate increased traffic congestion but not unacceptable LOS Standards on State Highways.	LTS	LTS	LTS	LTS
3.2-2. Implementation of the proposed General Plan would generate increased traffic congestion but not unacceptable LOS Standards on local roadways.	LTS	LTS	LTS	LTS
3.2-3. Implementation of the proposed General Plan would increase traffic affecting high intersection operations during a.m. and p.m. peak hours.	LTS	LTS	LTS	LTS
3.2-4. Implementation of the proposed General Plan would result in greater demand for transit service.	LTS	LTS	LTS	LTS
3.2-5. Implementation of the proposed General Plan will result in improved pedestrian and bicycle circulation.	BEN	BEN	BEN	na
3.2-6. Implementation of the proposed General Plan will increase the demand for general aviation services and facilities.	LTS	LTS	LTS	LTS
3.2-7. Implementation of the proposed General Plan will consolidate truck operations onto specified truck routes and increase volumes on these routes.	LTS	LTS	LTS	LTS
<b>Parks, Open Space and Recreation</b>				
3.3-1. Buildout of the proposed General Plan will increase the ratio of parkland from the existing 4.7 acres per thousand residents but still fall short of the City's goal of 7.5 acres per thousand residents.	LTS	LTS	LTS	LTS
3.3-2. Buildout of the General Plan will result in the increase in use of existing parks such that substantial physical deterioration of the facility would occur or be accelerated.	LTS	LTS	LTS	LTS
3.3-3. Expansion and construction of new trails along waterways or canals as shown in the proposed General Plan Diagram will negatively impact the environment.	LTS	LTS	LTS	LTS
3.3-4. Implementation of the proposed General Plan will increase the percentage of residents living within ½ square mile of a community park and ¼ square mile of neighborhood or	BEN	BEN	BEN	na

**Table 4.4-1: Comparison of Impacts**

	<i>Proposed GP</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
pocket park.				
<b>Public Facilities and Utilities</b>				
3.4-1. Implementation of the proposed General Plan will increase demand for school facilities.	LTS	LTS	LTS	LTS
3.4-2. Implementation of the proposed General Plan will increase demand for public water to 18.5 mgd in 2030 and require new filtration facilities and distribution facilities.	LTS	LTS	LTS	LTS
3.4-3. Implementation of the proposed General Plan will generate wastewater flows that exceed the treatment and collection capacity of the existing Wastewater Treatment Plant.	LTS	LTS	LTS	LTS
3.4-4. Implementation of the proposed General Plan will generate additional amounts of solid waste that exceed available disposal capacity.	LTS	LTS	LTS	LTS
3.4-5. Solid waste diversion levels are in non-compliance with the California Public Resources Code 41780A2 50 percent diversion rates.	LTS	LTS	LTS	LTS
3.4-6. Implementation of the proposed General Plan will increase the urban area that would be exposed to the risk of wildland fire hazards, and increased density under the Plan will lead to a higher risk of structural fire.	LTS	LTS	LTS	LTS
3.4-7. Implementation of the proposed General Plan will place a higher demand on available police and fire protection services.	LTS	LTS	LTS	LTS
<b>Energy Use and Climate Change</b>				
3.5-1. New development under the proposed General Plan is anticipated to result in a substantial increase in total Vehicle Miles Traveled (VMT) as well as an increase in VMT per capita. This could result in an increase in the per capita generation of greenhouse gases.	LTS	LTS	LTS	LTS
3.5-2. New development under the proposed General Plan will result in a substantial increase in the energy consumed by residential and non-residential users in Los Banos.	LTS	LTS	LTS	LTS
<b>Seismic and Geologic Hazards</b>				
3.6-1. Implementation of the proposed Los Banos General Plan has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death resulting from fault rupture, ground-shaking, seismic related ground failure, landslides or liquefaction.	LTS	LTS	LTS	LTS
3.6-2. Implementation of the proposed Los Banos General Plan has the potential to result in substantial soil erosion or the loss of topsoil.	LTS	LTS	LTS	LTS

**Table 4.4-1: Comparison of Impacts**

	<i>Proposed GP</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
3.6-3. Implementation of the proposed Los Banos General Plan has the potential to create structural damage from placing development on a potentially unstable geologic unit or soil.	LTS	LTS	LTS	LTS
3.6-4. Implementation of the proposed Los Banos General Plan may have the potential to create risk to life or property by placing development on expansive soils.	LTS	LTS	LTS	LTS
<b>Hydrology and Water</b>				
3.7-1. New urban land uses and increased intensity of urban land uses could increase stormwater runoff rates, overwhelming storm drain capacity, decreasing groundwater recharge, and causing flooding in downstream receiving waters.	LTS	LTS	LTS	LTS
3.7-2. New and increased intensity of urban land uses could result in increased levels of nonpoint source pollutants in stormwater runoff, adversely affecting water quality in receiving water bodies.	LTS	LTS	LTS	LTS
3.7-3. The proposed Los Banos General Plan would not result in development within a 100 or 500 year flood zone.	LTS	LTS	LTS	LTS
<b>Biological Resources</b>				
3.8-1. Implementation of the proposed Los Banos General Plan would have a substantial adverse effect, either directly or through habitat modifications, on any officially designated species identified as an endangered, threatened, candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	SU	SU	SU	SU
3.8-2. Implementation of the proposed Los Banos General Plan would have a potentially substantial adverse effect on identified riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	LTS	LTS	LTS	LTS
3.8-3. The proposed General Plan would have a substantial adverse effect on "federally protected" wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means.	LTS	LTS	LTS	LTS
3.8-4. The proposed General Plan would interfere substantially with the movement of any	SU	SU	SU	SU

**Table 4.4-1: Comparison of Impacts**

	<i>Proposed GP</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.				
<b>Air Quality</b>				
3.9-1. Implementation of the proposed Los Banos General Plan would result in a cumulatively considerable net increase of criteria pollutants. Future growth in accordance with the Plan and traffic associated with the Plan would generate emissions exceeding the annual SJVAPCD thresholds for NOx and ROG.	SU	SU	SU	SU
3.9-2. The proposed General Plan would expose sensitive receptors to substantial pollutant concentrations.	SU	SU	SU	SU
<b>Fire Hazards and Hazardous Materials</b>				
3.10-1. The proposed General Plan could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonable foreseeable upset and accident conditions involving the release of hazardous materials to the environment.	LTS	LTS	LTS	LTS
3.10-2. The proposed General Plan could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LTS	LTS	LTS	LTS
3.10-3. Development under the proposed General Plan could be located on a site which is included on a list of hazardous materials sites compiled pursuant to government code section 65962.5 and, as a result, could create a significant hazard to the public or the environment.	LTS	LTS	LTS	LTS
3.10-4. The proposed General Plan would result in development located within an airport land use plan area or and could result in a safety hazard for people residing or working in the Planning Area.	LTS	LTS	LTS	LTS
3.10-5. The proposed General Plan could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	LTS	LTS	LTS
3.10-6. The proposed General Plan could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	LTS	LTS	LTS	LTS

**Table 4.4-1: Comparison of Impacts**

	<i>Proposed GP</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
<b>Noise</b>				
3.11-1. New development under the proposed General Plan could expose persons to or generate noise levels in excess of 60dB as established in the existing General Plan.	LTS	LTS	LTS	LTS
3.11-2. The proposed General Plan would potentially expose existing noise-sensitive uses to construction-related noise related to ground-borne vibration and ambient noise.	LTS	LTS	LTS	LTS
3.11-3. The proposed General Plan may cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	LTS	LTS	LTS	LTS
3.11-4. The proposed General Plan, within two miles of the Los Banos Municipal Airport, may expose people residing or working in the project area to excessive noise levels.	LTS	LTS	LTS	LTS
<b>Cultural Resources</b>				
3.12-1. Implementation of the proposed Los Banos General Plan has the potential to cause a substantial adverse change in the significance of an existing or potential historical resource as defined in Section 15064.5.	LTS	LTS	LTS	LTS
3.12-2. Implementation of the proposed Los Banos General Plan has the potential to cause a substantial adverse change in the significance of a unique archaeological resource as defined in Section 15064.5, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside of formal cemeteries.	LTS	LTS	LTS	LTS
<b>Visual Resources</b>				
3.13-1. Implementation of the proposed General Plan has the potential to adversely affect scenic views of peripheral agricultural lands, grasslands, and wetlands as seen from public viewing areas.	LTS	LTS	LTS	LTS
3.13-2. Future development projects could be of different intensity, size, and character than existing development and could degrade the existing visual character of Los Banos.	LTS	LTS	LTS	LTS
3.13-3. Development under the proposed General Plan has the potential to adversely affect visual resources in the short term during periods of construction by blocking or disrupting views.	LTS	LTS	LTS	LTS

**Table 4.4-1: Comparison of Impacts**

	<i>Proposed GP</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
3.13-4. Development under the proposed General Plan has the potential to create a new source of substantial light or glare which would adversely affect nighttime views in the area.	LTS	LTS	LTS	LTS

*Source: Dyett & Bhatia, 2007; Environmental Science Associates, 2007.*

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## **5 CEQA-Required Conclusions**

This section summarizes significant, unavoidable, irreversible, growth-inducing, and cumulative impacts as required by California Environmental Quality Act (CEQA) Guidelines. Significant and unavoidable adverse impacts of the proposed General Plan are described in more detail in Chapter 3.

### **5.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS**

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According to CEQA Guidelines 15126(b), this EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed General Plan. Also, this EIR must discuss why the Plan is being proposed, notwithstanding such impacts. The proposed policies of the General Plan summarized in Chapter 3 would avoid or eliminate most of the potentially significant impacts. However, significant impacts are expected in the areas of agricultural land conversion, special status species and their habitats, and air quality and there are no feasible mitigation options available to reduce these impacts to levels that are less than significant. These impacts are identified in Chapter 3 and summarized below.

#### **AGRICULTURAL LAND CONVERSION**

Approximately 2,960 acres of Prime Farmland soils would be converted to urban uses as a result of full buildout of the proposed General Plan. Substantial amounts of Farmland of Statewide Importance and Unique Farmland soils would also be converted. All told, 198 of these converted acres are in Williamson Act contracts (agricultural preserves). Though the proposed General Plan provides policies to minimize the extent of growth/sprawl associated with future development, and though the City of Los Banos is designated a regional growth center for the Valley under the County's General Plan, this agricultural land conversion is considered a significant and unavoidable impact.

#### **SPECIAL STATUS SPECIES AND HABITATS**

With buildout of the proposed General Plan, the resulting agricultural land conversion will also impact known special status species in the Planning Area because it will cause the conversion of or encroachment on their habitats. While the proposed Plan specifically avoids physical encroachment on the Grasslands Ecological Area (GEA) to the east, the additional noise, light, glare, stormwater runoff, and general human activity associated with population growth elsewhere in Los Banos has the potential to reduce the suitability and attractiveness off nearby wildlife environments for habitat uses. While the construction of the proposed SR-152 Bypass, outside the scope of this EIR, poses perhaps a more significant impact on potential wildlife corridors in the region, nonetheless the substantial agricultural land conversion and resulting impact on species and habitats constitute a significant and unavoidable impact.

#### **AIR QUALITY AND EMISSIONS**

Buildout of the proposed General Plan will result in an unavoidable and significant increase in emissions associated with vehicle miles traveled (VMT) and electricity use, directly related to population growth. Any plan designed to accommodate population growth as this plan is designed to do would result in this unavoidable significant impact.

The proposed General Plan is being offered despite these significant impacts because the City is in need of an updated land use plan that can thoughtfully and creatively accommodate projected population growth, as well as provide for jobs and economic development over the next 23 years. The current General Plan is no longer practical for Los Banos because stronger growth management is necessary and the current Plan neither provides for a balance of jobs and housing nor offers adequate, concrete policies to control the character of new neighborhoods, promote walkability, and minimize the impacts of growth. The proposed General Plan is consistent with the Merced County General Plan “Urban Centered Concept” in which urban development is directed toward designated existing urban centers in order to avoid the urbanization of rural agricultural land. The proposed General Plan overall seeks to achieve this goal through growth management tools and policies that give high priority to density, connectivity, jobs-housing balance, and preserving prime agricultural land and ecological areas. The significant impacts related to the proposed General Plan would not be considerably different under any other likely growth scenario for Los Banos that accommodates planned approved residential and non-residential development proposed for the city.

## **5.2 IRREVERSIBLE ENVIRONMENTAL CHANGES**

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This EIR must also examine irreversible changes to the environment caused by full implementation of the proposed General Plan. More specifically, CEQA Guidelines require the EIR to consider whether “uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely” (CEQA Guidelines Section 15126.2(c)). “Non-renewable resource” in this instance refers to the physical features of the natural environment in Los Banos, such as land, air, waterways, etc.

### **OPEN SPACE**

Development under the proposed General Plan would result in the permanent conversion of just under 5,000 acres of agricultural open space to urban uses. This conversion has a wide array of impacts, ranging from habitat modifications to visual disruptions to new noise sources and stormwater drainage constraints. Overall, this represents a significant and irreversible environmental change.

### **WATER CONSUMPTION**

New development under the proposed General Plan will increase the demand for public water. The pace of growth in Los Banos is in large part dependent on its ability to provide adequate public facilities and services. Additional population and employment growth—even with proposed policies to reduce water use and increase water reuse—will result in a permanent increase in water consumption, which represents an irreversible environmental change.

### **ENERGY USE**

New development under the proposed General Plan would result in the commitment of existing and planned sources of energy which would be necessary for the construction and daily use of new buildings and for transportation associated with new population. Residential and non-residential development use electricity, natural gas, and petroleum products for power, lighting, heating, cooling, and other indoor and outdoor services, while cars and trucks use both oil and gasoline. Use of these types of energy for new development—even in the decreased quantities associated with full implementation of proposed Plan policies and compliance with stricter State regulations—would

result in overall increased use of nonrenewable energy resources. This represents an irreversible environmental change.

### **CONSTRUCTION-RELATED IMPACTS**

Irreversible environmental changes could also occur during the course of constructing development projects made possible by the proposed General Plan. Beyond the energy, fuel and water consumption impacts of construction described separately above, new construction would also result in the consumption of building materials, many of which are still made from non-renewable resources.

## **5.3 GROWTH INDUCING IMPACTS**

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This EIR must examine the growth-inducing impacts of the proposed General Plan. More specifically, CEQA Guidelines require that the EIR “discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly” (CEQA Guidelines Section 15126.2(d)). This analysis must also consider the removal of obstacles to population growth, such as improvements to the regional transportation system.

### **PROJECTING GROWTH**

Growth-inducing impacts over an extended time period are difficult to assess with precision, since future economic and population trends may be influenced by unforeseeable events, such as natural disasters and business and development cycles. Moreover, long term changes in economic and population growth are often regional in scope; they are not influenced solely by changes or politics within Los Banos. Business trends are influenced by economic conditions throughout the state and the country, as well as around the world. Despite these limitations on the analysis, it is still possible to assess some general potential growth-inducing impacts of the proposed General Plan.

Previous population projections made by the 1988 General Plan and 2001 County Transportation Plan, using annual population growth rates of 4.0 and 3.9 percent per year respectively, underestimated the actual population growth that took place from 1990 to 2000. The county currently expects that Los Banos will continue to grow at an average of 3.0 percent per year. However, over the last 50 years, annual growth rates have ranged from 1.2 to 5.9 percent, with the 1990-2000 period experiencing the most significant rates of growth. The State Department of Finance estimated a population growth rate in Los Banos of 4.6 percent over the last five years. The proposed General Plan accommodates a population growth rate of just over 4 percent per year, which falls between the county future estimate and the State Department of Finance estimate for the past five year trend. Overall, the proposed General Plan is likely to accommodate growth rather than stimulate new growth.

### **JOBS/HOUSING BALANCE**

Los Banos has fewer jobs in the City than there are employed residents, by a ratio of 0.41 jobs per employed resident, meaning that people commute to jobs outside the City. The proposed General Plan at full buildout can accommodate an additional 41,700 jobs. This employment growth would require a 10.2 percent per year growth rate, which may not be achievable. Based on historical trends, a more probable job growth rate is 6.3 percent reflecting the Plan’s economic development initiatives. At this rate, complete buildout of employment-related land should be reached around 2055. The

General Plan, therefore, provides for more employment-related land than is needed for employment at 2030. This gives the City more flexibility and a longer horizon when planning for economic development. The jobs/employed residents ratio is expected to reach 0.63:1 by 2030 and 1.43:1 at full buildout. The extensive provision of employment related land uses may encourage people to move to Los Banos for these jobs, while providing opportunities for existing residents to work closer to home. Overall, providing jobs at a hypothetical 10.2 percent growth rate would stimulate new growth, but this is not likely to occur.

## **5.4 CUMULATIVE IMPACTS**

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CEQA requires that this EIR examine cumulative impacts. As discussed in CEQA Guidelines section 15130(a)(1), a cumulative impact “consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” The analysis of cumulative impacts need not provide the level of detail required of the analysis of impacts from the project itself, but shall “reflect the severity of the impacts and their likelihood of occurrence” (CEQA Guidelines Section 15130(b)).

In order to assess cumulative impacts, the EIR must analyze either a list of past, present, and probable future projects or a summary of projections contained in an adopted general plan or related planning document. The Bibliography contains a comprehensive list of documents utilized for the purposes of analysis for this EIR, including documents relating existing conditions and future projections pertinent to each EIR issue area.

It is important to note that the proposed General Plan is essentially a set of projects, representing the cumulative development scenario for the reasonably foreseeable future in the Los Banos Planning Area, which includes the City and surrounding areas that would be affected by the proposed General Plan. Therefore, the analysis presented in Chapter 3 represents a cumulative analysis of the Planning Area over the General Plan time horizon to 2030. Cumulative effects are summarized below.

### **HYDROLOGY AND WATER QUALITY**

An increase in development resulting from implementation of the proposed General Plan along with similar County-wide growth would create additional demand for safe drinking water as the City’s population increases. Regional development would also increase the amount of impervious surfaces resulting in a greater chance of flood and potential impacts to water quality. As mentioned in section 3.7, existing regulations and proposed General Plan policies would reduce the cumulative risks to hydrology and water quality associated with increasing development within the City to a less-than-significant level.

### **BIOLOGICAL RESOURCES**

Development associated with implementation of the proposed General Plan would contribute to the ongoing loss of natural and agricultural lands in Merced County, which currently provide habitat for a variety of federal and State listed special status species, as well as other wildlife and plant resources. Development under the proposed General Plan would result in the conversion of existing habitats to urban uses. As more fully described in Section 3.8, policies in the proposed General Plan as well as regional, State and federal regulations are available to mitigate impacts to biological resources at a project specific level. Development outside of the City in Merced County would also be subject to the

same regional, State and federal regulations addressing sensitive species. However, since the County is projected to continue to urbanize at a steady rate, the loss of open space areas and habitats as a result of the proposed General Plan would contribute considerably to a significant and unavoidable cumulative impact to biological resources.

## **AIR QUALITY**

Cumulative air quality impacts were considered in terms of the various land uses proposed under the proposed Los Banos General Plan and the traffic projections generated by a cumulative traffic model (see Section 3.2). The traffic model considered growth under the proposed Los Banos General Plan in conjunction with projected regional growth for Merced County. As more fully described in Section 3.9, due to the existing and projected air quality issues in the San Joaquin Valley Air Basin, the proposed Los Banos General Plan would contribute considerably to a significant and unavoidable cumulative air quality impact.

## **HAZARDS AND HAZARDOUS MATERIALS**

The increase in local population and employment under the proposed General Plan would result in the increased use of hazardous household, commercial and industrial materials. In addition, there would be an increase in population that could be exposed to potential wildland fires and hazards associated with aircraft operations at the Airport. Similarly, as growth occurs in Merced County, additional people would be exposed to risks associated with hazardous materials, wastes, wildland fires and airport operations. However, City, State, and federal regulations, such as those that control the production, use, and transportation of hazardous materials and waste and control the location of incompatible land uses in airport hazard areas would apply to development countywide, thereby reducing the potential for cumulative impacts associated with hazards and hazardous materials to a less-than-significant level. The project's incremental contribution to these impacts will be less than cumulatively considerable.

## **CULTURAL RESOURCES**

As stated in Section 3.12, the City will continue to ensure that a variety of preservation efforts are implemented under all future development projects to minimize impacts to archaeological resources (as defined in Section 15064.5), paleontological resources, or human remains. Under CEQA, however, any "substantial adverse change in the significance of an historical resource" (e.g., the destruction of such a resource) is considered a significant environmental effect as a matter of law. Because the accommodation of future growth also constitutes a likelihood that future development will encounter challenges associated with known and unknown historic resources, the City cannot be sure that impacts on all such historical resources can be mitigated to less than significant levels. Consequently, the proposed General Plan has the potential to contribute to cumulative impacts to these historic resources. However, similar considerations do not apply to unique archaeological resources or paleontological resources, which can be fully mitigated through data recovery where avoidance or preservation is infeasible or unnecessary. Therefore, implementation of the proposed General Plan would reduce the potential cumulative impact to a less-than-significant level with respect to human remains and archaeological resources that do not qualify as historical resources.

## **5.5 IMPACTS FOUND NOT TO BE SIGNIFICANT**

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CEQA requires that an EIR provide a brief statement indicating why various possible significant impacts were determined to be not significant and were not discussed in detail. Chapter 3 of this EIR discusses all potential impacts, regardless of their magnitude. A similar level of analysis is provided for impacts found to be less than significant as impacts found to be significant. The significance of an impact is assessed in relation to the criteria provided in each section in Chapter 3. A summary of all impacts is provided in the Executive Summary of this EIR.

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## 7 Glossary

**Acres, Gross:** A measure of total land area of any lot including streets, parks and other land dedications.

**Acres, Net:** The gross area of a site excluding all public and private streets; streets which provide primary and direct access to a public street; land which has been determined to be hazardous or unbuildable; land within any existing or planned drainage easement; and land required to be dedicated for school and park or other facility dedicated for public use.

**Affordable Housing:** Housing capable of being purchased or rented by a household with very low, low, or moderate income, based on a household's ability to make monthly payments necessary to obtain housing. Housing is considered affordable when a household pays less than 30 percent of its gross monthly income (GMI) for housing, including utilities.

**Agency:** The governmental entity, department, office, or administrative unit responsible for carrying out regulations.

**Agricultural Preserve:** Land designated for agriculture or conservation. (See "Williamson Act.")

**Agriculture:** Use of land for the production of food and fiber, including the growing of crops and/or the grazing of animals on natural prime or improved pasture land.

**Air Pollution:** Concentrations of substances found in the atmosphere that exceed naturally occurring quantities and are undesirable or harmful in some way.

**Ambient:** Surrounding on all sides; used to describe measurements of existing conditions with respect to traffic, noise, air and other environments.

**Aquifer:** An underground, water-bearing layer of earth, porous rock, sand, or gravel, through which water can seep or be held in natural storage. Aquifers generally hold sufficient water to be used as a water supply.

**Archaeological:** Relating to the material remains of past human life, culture, or activities.

**Army Corps of Engineers:** A federal agency responsible for the design and implementation of publicly supported engineering projects. Any construction activity that involves filling a watercourse, pond, lake (natural or man-made), or wetlands (including seasonal wetlands and vernal pools), may require an ACOE permit.

**Arterial:** A major street carrying volumes of relatively high speed traffic from local and collector streets to and from freeways and other major streets. These streets have controlled intersections and generally provide limited direct access to abutting properties.

**Attainment Area:** An area considered to have air quality as good as or better than federal or State air quality standards as defined in the federal Clean Air Act or the California Clean Air Act. An area may be an attainment area for one pollutant and a non-attainment area for others.

**Base Flood:** A 100-year flood event; having a 1 percent likelihood of occurring in any given year.

**Best Available Control Technology (BACT):** The most stringent emission limit or control technique that has been achieved in practice that is applicable to a particular emission source.

**Best Management Practices (BMPs):** The combination of conservation measures, structure, or management practices that reduces or avoids adverse impacts of development on adjoining site's land, water, waterways, or water bodies.

**Bicycle Class I Facility (Bicycle Path):** A paved route not on a street or roadway and expressly reserved for bicycles traversing an otherwise unpaved area. Bicycle paths may parallel roads but typically are separated from them by landscaping.

**Bicycle Class II Facility (Bicycle Lane):** A corridor expressly reserved for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles.

**Bicycle Class III Facility (Bicycle Route):** A facility shared with motorists and identified only by signs, a bicycle route has no pavement markings or lane stripes.

**Bikeways:** A term that encompasses bicycle lanes, bicycle paths and bicycle routes.

**Buffer Zone:** An area of land separating two distinct land uses which acts to soften or mitigate the effects of one land use on the other.

**Building:** Any structure having a roof supported by columns or walls for the housing or enclosure of persons, animals, or property of any kind.

**Buildout:** That level of urban development characterized by full occupancy of all developable sites in accordance with the General Plan; the maximum probable level of development envisioned by the General Plan under specified assumptions about densities and intensities. Buildout does not assume that each parcel is developed to include all floor area or housing units possible under zoning regulations.

**Business Services:** A subcategory of commercial land use which permits establishments primarily engaged in rendering services to other business establishments on a fee or contract basis, such as advertising and mailing; building maintenance; personnel and employment services; management and consulting services; protective services; equipment rental and leasing; photo finishing; copying and printing; travel; office supply; and similar services.

**Capital Improvement Program (CIP):** A program, administered by the City which schedules permanent improvements, usually for a minimum of five years into the future, to fit the projected fiscal capability of the City. The program generally is reviewed annually, for conformance to and consistency with the General Plan.

**Carbon Dioxide (CO<sub>2</sub>):** A colorless, odorless, non-poison gas that is a normal part of the atmosphere.

**Carbon Monoxide (CO):** A colorless, odorless, highly poisonous gas produced by automobiles and other machines with internal combustion engines that imperfectly burn fossil fuels such as oil and gas.

**Circulation Element:** One of seven State-mandated elements of a local general plan, it contains adopted goals, policies, and implementation programs for the planning and management of existing and proposed thoroughfares and transportation routes correlated with the Land Use Element of the General Plan.

**City:** In this document, City with a capital “C” refers to the City of Los Banos; when used with a lower case “c” it refers to the geographic area of the city, not the governmental organization.

**Clustered Development:** Development in which a number of dwelling units are placed in closer proximity than typically permitted with the purpose of minimizing grading and retaining open space areas.

**Collector Street:** A type of street serving traffic movements between arterial and local streets, generally providing direct access to abutting properties.

**Commercial:** A land use classification which permits facilities for the buying and selling of commodities and services.

**Community Noise Equivalent Level (CNEL):** A 24-hour energy equivalent level derived from a variety of single-noise events, with weighing factors of 5 and 10 dBA applied to the evening (7:00 p.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) periods, respectively, to allow for the greater sensitivity to noise during these hours. (See “Ldn.”)

**Community Park:** A park or facility developed primarily to meet the requirements of a large portion of the City. The size is generally from 10 to 20 acres.

**Conservation:** The management of natural resources to prevent waste, destruction or neglect.

**Consistent:** Free from variation or contradiction. Programs in the General Plan are to be consistent, not contradictory or preferential. State law requires consistency between a General Plan and implementation measures such as the Zoning Ordinance.

**Covenants, Conditions, and Restrictions (CC&Rs):** A term used to describe restrictive limitations which may be placed on property and its use, and which usually are made a condition of holding title or lease.

**Creek:** A natural stream of water normally smaller than and often tributary to a river.

**Cul-de-sac:** A short street or alley with only a single means of ingress and egress at one end and with a large turnaround at its other end.

**Cumulative Impact:** As used in CEQA, the total impact resulting from the accumulated impacts of individual projects or programs over time.

**dB:** Decibel; a unit used to express the relative intensity of a sound as it is heard by the human ear.

**dBA:** The “A-weighted” scale for measuring sound in decibels; weighs or reduces the effects of low and high frequencies in order to simulate human hearing.

**Day-Night Average Sound Level (Ldn):** The A-weighted average sound level in decibels during a 24-hour period with a 10 dB weighing applied to nighttime sound levels (10 p.m. to 7 a.m.). This exposure method is similar to the CNEL, but deletes the evening time period (7 p.m. to 10 p.m.) as a separate factor.

**Dedication:** The turning over by an owner or developer of private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used.

**Dedication, In lieu of:** Cash payments which may be required of an owner or developer as a substitute for a dedication of land, usually calculated in dollars per lot, and referred to as in lieu fees or in lieu contributions.

**Density:** The number of residential dwelling units per acre of land.

**Density Bonus:** The allocation of development rights that allow a parcel to accommodate additional square footage or additional residential units beyond the maximum for which the parcel is zoned, usually in exchange for the provision or preservation of an amenity at the same site or at another location.

**Design Review:** The comprehensive evaluation of a development and its impact on neighboring properties and the community as a whole, from the standpoint of site and landscape design, architecture, materials, colors, lighting, and signs, in accordance with a set of adopted criteria and standards.

**Detention Basin/Pond:** Facilities classified according to the broad function they serve, such as storage, diversion, or detention.

**Developer:** An individual who, or business which, prepares raw land for the construction of buildings or builds or causes to be built physical building space for use primarily by others, and in which the preparation of the land or the creation of the building space is in itself a business and is not incidental to another business or activity.

**Development:** The physical extension and/or construction of urban land uses. Development activities include but are not limited to: subdivision of land; construction or alteration of structures, roads, utilities, and other facilities; installation of septic systems; grading; deposit of refuse, debris, or fill materials; and clearing of natural vegetation cover (with the exception of agricultural activities). Routine repair and maintenance activities are not considered as “development.”

**Development Fee:** See “Impact Fee.”

**Development Rights:** The right to develop land by a landowner who maintains fee-simple ownership over the land or by a party other than the owner who has obtained the rights to develop. Such rights usually are expressed in terms of density allowed under existing zoning. For example, one development right may equal one unit of housing or may equal a specific number of square feet of gross floor area in one or more specified zone districts.

**Dwelling Unit:** One or more rooms with a single kitchen, designed for occupancy by one family for living and sleeping purposes.

**Easement:** The right to use property owned by another for specific purposes or to gain access to another property.

**Easement, Conservation:** A tool for acquiring open space with less than full-fee purchase, whereby a public agency buys only certain specific rights from the land owner. These may be positive rights (providing the public with the opportunity to hunt, fish, hike, or ride over the land) or they may be restrictive rights (limiting the uses to which the land owner may devote the land in the future).

**Easement, Scenic:** A tool that allows a public agency to use land for scenic enhancement, such as roadside landscaping or vista preservation.

**Emission Standard:** The maximum amount of pollutant legally permitted to be discharged from a single source, either mobile or stationary.

**Endangered Species:** A species of animal or plant whose prospects for survival and reproduction are in immediate jeopardy from one or more causes.

**Environment:** The physical conditions in an area, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance, which will be affected by a proposed project. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

**Environmental Impact Report (EIR):** A report that assesses all the environmental characteristics of an area and determines what effects or impacts will result if the area is altered or disturbed by a proposed action.

**Equivalent Noise Level (Leq):** Also known as the energy equivalent level, defined as the average sound level on the basis of sound energy (or sound pressure squared). The Leq is a "dosage" type measure and is the basis for the descriptions used in current standards, such as the 24-hour CNEL used by the State of California. It is a single-number representation of the fluctuating sound level in decibels over a specified period of time.

**Erosion:** The loosening and transportation of rock and soil debris by wind, rain, or running water.

**Exaction:** A contribution or payment required as an authorized precondition for receiving a development permit; usually refers to mandatory dedication (or fee in lieu of dedication) requirements found in many subdivision regulations.

**Expansive Soils:** Soils which swell when they absorb water and shrink as they dry.

**Family:** An individual or a group of persons living together who constitute a housekeeping unit in a dwelling unit, not including a fraternity, sorority, club, or other group of persons occupying a hotel, lodging house or institution of any kind.

**Fault:** A fracture in the earth's crust forming a boundary between rock masses that have shifted. An "active" fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A "potentially active" fault is one that shows evidence of surface displacement during Quaternary time (the last 2 million years).

**Federal Candidate Species, Category 1 (Candidate 1):** Species for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened.

**Federal Candidate Species, Category 2 (Candidate 2):** Species for which existing information indicates that these species may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

**Federal Emergency Management Agency (FEMA):** A federal agency that provides disaster relief when cities, counties, or the State cannot respond.

**Federal Flood Insurance:** Affordable flood insurance offered by the federal government to property owners whose communities participate in the National Flood Insurance Program.

**Finding(s):** The result(s) of an investigation and the basis upon which decisions are made. Findings are used by government agencies and bodies to justify action taken by the entity.

**Fire-resistant:** Able to withstand specified temperatures for a certain period of time, such as a one-hour fire wall; not fireproof.

**Flood, 100-Year:** The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or 1 percent, chance of occurring in any given year.

**Flood Insurance Rate Map (FIRM):** For each community, the official map on which the Federal Insurance Administration has delineated areas of special flood hazard and the premium risk zones applicable to that community.

**Flood Plain:** The relatively level land area on either side of the banks of a stream regularly subject to flooding. That part of the flood plain subject to a one percent chance of flooding in any given year, is designated as an area of special flood hazard by the Federal Insurance Administration.

**Floor Area, Gross:** The total horizontal area in square feet of all floors within the exterior walls of a building, but not including the area of unroofed inner courts or shaft enclosures.

**Floor Area Ratio (FAR):** The net floor area of a building or buildings on a lot divided by the lot area or site area.

**Geologic Review:** The analysis of geologic hazards, including all potential seismic hazards, surface ruptures, liquefaction, landsliding, mudsliding, and the potential for erosion and sedimentation.

**Geological:** Pertaining to rock or solid matter.

**Grasslands:** Land reserved for pasturing or mowing, in which grasses are the predominant vegetation.

**Groundwater:** Water under the earth's surface, often confined to aquifers capable of supplying wells and springs.

**Groundwater Recharge:** The natural process of infiltration and percolation of rainwater from land areas or streams through permeable soils into water-holding rocks which provide underground storage (“aquifers”).

**Guidelines:** General statements of policy direction for which specific details may be later established.

**Habitat:** The physical location or type of environment in which an organism or biological population lives or occurs.

**Handicapped:** A person determined to have a mobility impairment or mental disorder expected to be of long or indefinite duration. Many such impairments or disorders are of such a nature that a person’s ability to live independently can be improved by appropriate housing conditions.

**Hazardous Material:** Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. The term includes, but is not limited to, hazardous substances and hazardous wastes.

**Hazardous Waste:** Waste which requires special handling to avoid illness or injury to persons or damage to property. Includes, but is not limited to, inorganic mineral acids of sulfur, fluorine, chlorine, nitrogen, chromium, phosphorous, selenium and arsenic and their common salts; lead, nickel, and mercury and their inorganic salts or metallo-organic derivatives; coal, tar acids such as phenol and cresols and their salts; and all radioactive materials.

**High Occupancy Vehicle (HOV):** Any vehicle other than a driver-only automobile (e.g., a vanpool, a bus, or two or more persons to a car).

**Impact:** The effect of any man-made actions or indirect repercussions of man-made actions on existing physical, social, or economic conditions.

**Impact Fee:** A fee, also called a development fee, levied on the developer of a project by a city, county, or other public agency as compensation for otherwise-unmitigated impacts the project will produce. California Government Code Section 54990 specifies that development fees shall not exceed the estimated reasonable cost of providing the service for which the fee is charged. To lawfully impose a development fee, the public agency must verify its method of calculation and document proper restrictions on use of the fund.

**Impervious Surface:** Surface through which water cannot penetrate, such as roof, road, sidewalk, and paved parking lot. The amount of impervious surface increases with development and establishes the need for drainage facilities to carry the increased runoff.

**Implementation:** Actions, procedures, programs, or techniques that carry out policies.

**Improvement:** The addition of one or more structures or utilities on a vacant parcel of land.

**Industrial:** The manufacture, production, and processing of consumer goods. Industrial is often divided into “heavy industrial” uses, such as construction yards, quarrying, and factories; and “light industrial” uses, such as research and development and less intensive warehousing and manufacturing.

**Infill Development:** Development of vacant land (usually individual lots or left-over properties) within areas which are already largely developed.

**Infiltration:** The introduction of underground water, such as groundwater, into wastewater collection systems. Infiltration results in increased wastewater flow levels.

**Intersection Capacity:** The maximum number of vehicles that has a reasonable expectation of passing through an intersection in one direction during a given time period under prevailing roadway and traffic conditions.

**Infrastructure:** Public services and facilities, such as sewage-disposal systems, water-supply systems, other utility systems, and roads.

**Intermittent Stream:** A stream that normally flows for at least 30 days after the last major rain of the season and is dry a large part of the year.

**Jobs-Housing Balance:** Total jobs divided by total housing units. A more appropriate measure is the jobs/employed resident ratio, which divides the number of jobs in an area by the number of employed residents (i.e. people who live in the area, but may work anywhere). A ratio of 1.0 typically indicates a balance. A ratio greater than 1.0 indicates a net in-commute; less than 1.0 indicates a net out-commute.

**Landmark:** A building, site, object, structure, or significant tree, having historical, architectural, social, or cultural significance and marked for preservation by the local, State, or federal government; A visually prominent or outstanding structure or natural feature that functions as a point of orientation or identification.

**Landscaping:** Planting, including trees, shrubs, and ground covers, suitably designed, selected, installed, and maintained permanently to enhance a site or roadway.

**Landslide:** A general term for a falling mass of soil or rocks.

**Land Use:** The occupation or utilization of land or water area for any human activity or any purpose defined in the General Plan.

**Ldn:** Day-Night Average Sound Level. The A-weighted average sound level for a given area (measured in decibels) during a 24-hour period with a 10 dB weighing applied to night-time sound levels. The Ldn is approximately numerically equal to the CNEL for most environmental settings.

**Lease:** A contractual agreement by which an owner of real property (the lessor) gives the right of possession to another (a lessee) for a specified period of time (term) and for a specified consideration (rent).

**Leq:** The energy equivalent level, defined as the average sound level on the basis of sound energy (or sound pressure squared). The Leq is a “dosage” type measure and is the basis for the descriptions used in current standards, such as the 24-hour CNEL used by the State of California. It is a single-number representation of the fluctuating sound level in decibels over a specified period of time.

**Level of Service (LOS):** A qualitative measure describing operational conditions within a traffic stream, as perceived by motorists. The conditions are generally described in terms of factors such as speed, delay, freedom to maneuver, comfort, convenience, and safety. Six levels of service are defined with letter designations from A to F, with A representing the optimal condition and F representing the worst.

**Liquefaction:** The transformation of loose, water-saturated, granular materials (such as sand or silt) from a solid into a liquid state; a type of ground failure that can occur during an earthquake.

**Local Street:** A street which primarily serves as access to abutting properties characterized by traffic with low speeds, low volumes and relatively short trip lengths.

**Median Strip:** The dividing area, either paved or landscaped, between opposing lanes of traffic on a roadway.

**Mitigation:** A specific action taken to reduce environmental impacts. Mitigation measures are required as a component of an environmental impact report (EIR) if significant measures are identified.

**Mitigation Measures:** Action taken to avoid, minimize, or eliminate environmental impacts. Mitigation includes: avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance during the life of the action; and compensating for the impact by repairing or providing substitute resources or environments.

**Mobile Sources:** A source of air pollution that is related to transportation vehicles, such as automobiles or buses.

**National Ambient Air Quality Standards:** The prescribed level of pollutants in the outside air that cannot be exceeded legally during a specified time in a specified geographical area.

**National Flood Insurance Program:** A federal program which authorizes the sale of federally subsidized flood insurance in communities where such flood insurance is not available privately.

**National Historic Preservation Act:** A 1966 federal law that established a National Register of Historic Places and the Advisory Council on Historic Preservation, and which authorized grants-in-aid for preserving historic properties.

**National Register of Historic Places:** The official list of sites, districts, buildings, structures, and objects significant in the nation's history or whose artistic or architectural value is unique, established by the National Historic Preservation Act.

**Neighborhood Park:** A park or playground developed primarily to serve the recreation needs of a small portion of the City. The location serves the area within one half mile radius of the park. The park improvements are usually oriented toward the recreation needs of children. The site is generally from two to nine acres depending on the nature of the service area.

**Nitrogen Dioxide (NO<sub>2</sub>):** A reddish brown gas that is a byproduct of the combustion process and is a key to the ozone production process.

**Nitrogen Oxide(s):** A reddish brown gas that is a byproduct of combustion and ozone formation processes. Often referred to as NOX, this gas gives smog its “dirty air” appearance.

**Noise:** Any sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. Noise is simply “unwanted sound.”

**Noise Attenuation:** Reduction of the level of a noise source using a substance, material, or surface, such as earth berms and/or solid concrete walls.

**Noise Contour:** A line connecting points of equal noise level as measured on the same scale. Noise levels greater than the 60 Ldn contour (measured in dBA) require noise attenuation in residential development.

**Non-attainment:** The condition of not achieving a desired or required level of performance. This term is frequently used in reference to air quality.

**Non-point Source:** A pollutant source introduced from dispersed points and lacking a single, identifiable origin. Examples include automobile emissions or urban run-off.

**Open Space:** Any parcel or area of land or water which is essentially unimproved and devoted to an open space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety.

**Overlay:** A land use designation on the Land Use Map, or a zoning designation on a zoning map, which modifies the basic underlying designation in some specific manner.

**Ozone:** A tri-atomic form of oxygen (O<sub>3</sub>) created naturally in the upper atmosphere by a photochemical reaction with solar ultraviolet radiation. In the lower atmosphere, ozone is a recognized air pollutant that is not emitted directly into the environment, but is formed by complex chemical reactions between oxides of nitrogen and reactive organic compounds in the presence of sunlight, and becomes a major agent in the formation of smog.

**PM-10 and PM-2.5:** The current standard for measuring the amount of solid or liquid matter suspended in the atmosphere ("particulate matter including dust"). PM-10 and PM-2.5 refers to the amount of particulate matter smaller than 10 micrometers and 2.5 micrometers in diameter respectively. The smaller PM-2.5 particles penetrate to the deeper portions of the lung, affecting sensitive population groups such as children and people with respiratory diseases.

**Paratransit:** Refers to transportation services which operate vehicles, such as buses, jitneys, taxis, and vans, for senior citizens and/or mobility-impaired persons.

**Parking Area, Shared:** A public or private parking area used jointly by two or more uses.

**Parking Area, Public:** An open area, excluding a street or other public way, used for the parking of automobiles and available to the public, whether for free or for compensation.

**Parks:** Open space lands whose primary purpose is recreation. (See “Community Park” and “Neighborhood Park.”)

**Peak Hour/Peak Period:** For any given roadway, a daily period during which traffic volume is highest, usually occurring in the morning and evening commute periods. Where “F” Levels of Service are encountered, the “peak hour” may stretch into a “peak period” of several hours duration.

**Performance Standards:** Zoning regulations that permit uses based on a particular set of standards of operation rather than on particular type of use. Performance standards provide specific criteria limiting noise, air pollution, emissions, odors, vibration, dust, dirt, heat, fire hazards, wastes, traffic impacts, and visual impact of a use.

**Planning Area:** The land area addressed by the General Plan, including land within and outside of the Urban Growth Boundary.

**Point Source:** A source of pollutants which may be traced to a discrete point of emission.

**Policy:** A specific statement of principle or of guiding or implementing actions which implies clear commitment.

**Pollutant:** Any introduced gas, liquid, or solid that makes a resource unfit for its normal or usual purpose.

**Pollution:** The presence of matter or energy whose nature, location, or quantity produces undesired environmental effects.

**Preserve:** An area in which beneficial uses in their present condition are protected; for example, a nature preserve or an agricultural preserve.

**Rare or Endangered Species:** A species of animal or plant listed in: Sections 670.2 or 670.5, Title 14, California Administrative Code; or Title 50, Code of Federal Regulations, Section 17.11 or Section 17.2, pursuant to the Federal Endangered Species Act designating species as rare, threatened, or endangered.

**Reactive Organic Gases (ROG):** Classes of hydrocarbons (olefins, substituted aromatics, and aldehydes) likely to react with ozone and nitrogen dioxide in the atmosphere to form photochemical smog.

**Reclamation:** The reuse of resources, usually those present in solid wastes or sewage.

**Recreation, Active:** A type of recreation or activity which requires the use of organized play areas including, but not limited to, softball, baseball, football, and soccer fields, tennis and basketball courts and various forms of children’s play equipment.

**Recreation, Passive:** Type of recreation or activity which does not require the use of organized play areas.

**Recycle:** The process of extraction and reuse of materials from waste products.

**Regional:** Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad homogeneous area.

**Residential:** Land designated in the General Plan and Zoning Ordinance for buildings consisting of dwelling units. May be vacant or unimproved. (See “Dwelling Unit.”)

**Richter Scale:** A measure of the size or energy release of an earthquake at its source. The scale is logarithmic; the wave amplitude of each number on the scale is 10 times greater than that of the previous whole number.

**Right-of-way:** The strip of land over which certain transportation and public use facilities are built, such as roadways, railroads, and utility lines.

**Riparian Lands:** Lands which are comprised of the vegetative and wildlife areas adjacent to perennial and intermittent streams. Riparian areas are delineated by the existence of plant species normally found near fresh water.

**Riparian Vegetation:** Vegetation associated with any water-course which requires or tolerates moisture in excess of that available in adjacent uplands.

**Runoff:** That portion of rain or snow which does not percolate into the ground and is discharged into streams instead.

**Scenic Highway Corridor:** The visible area outside of a highway’s right-of-way, generally described as “the view from the road.”

**Scenic Highway/Scenic Route:** A highway, road, or street which, in addition to its transportation function, provides opportunities for the enjoyment of natural and man-made scenic resources and access or direct views to areas or scenes of exceptional beauty or historic or cultural interest. The aesthetic values of scenic routes often are protected and enhanced by regulations governing the development of property or the placement of outdoor advertising. Until the mid-1980s, general plans in California were required to include a Scenic Highways Element.

**Sedimentation:** Process by which material suspended in water is deposited in a body of water.

**Seismic:** Caused by or subject to earthquakes or earth vibrations.

**Sensitive Receptors:** Members of the population who are most sensitive to air quality include children, the elderly, the acutely ill, and the chronically ill. The term "sensitive receptors" can also refer to the land use categories where these people live or spend a significant amount of time. Such areas include residences, schools, playgrounds, child-care centers, hospitals, retirement homes, and convalescent homes.

**Septic System:** A sewage-treatment system that includes a settling tank through which liquid sewage flows and in which solid sewage settles and is decomposed by bacteria in the absence of oxygen. Septic systems are often used for individual-home waste disposal where an urban sewer system is not available. (See “Sanitary Sewer.”)

**Settlement:** The drop in elevation of a ground surface caused by settling or compacting. Differential settlement is uneven settlement.

**Significant Effect:** A beneficial or detrimental impact on the environment. May include, but is not limited to, significant changes in an area's air, water, and land resources.

**Siltation:** (1) The accumulating deposition of eroded material, or (2) the gradual filling in of streams and other bodies of water with sand, silt, and clay.

**Single-family Dwelling, Attached:** A building containing two dwelling units with each unit having its own foundation on grade.

**Single-family Dwelling, Detached:** A building containing one dwelling unit on one lot.

**Site:** A parcel of land used or intended for one use or a group of uses and having frontage on a public or an approved private street. A lot.

**Slope:** Land gradient described as the vertical rise divided by the horizontal run, and expressed in percent.

**Soil:** The unconsolidated material on the immediate surface of the earth created by natural forces that serves as the natural medium for growing land plants.

**Solid Waste:** Any unwanted or discarded material that is not a liquid or gas. Includes organic wastes, paper products, metals, glass, plastics, cloth, brick, rock, soil, leather, rubber, yard wastes, and wood. Organic wastes and paper products comprise about 75 percent of typical urban solid waste.

**Specific Plan:** A plan that provides detailed design and implementation tools for a specific portion of the area covered by a general plan. A specific plan may include all regulations, conditions, programs, and/or proposed legislation which may be necessary or convenient for the systematic implementation of any general plan element(s).

**Sphere of Influence:** The probable ultimate physical boundary and service area of a local agency (city or district) as determined by the Local Agency Formation Commission (LAFCo) of the County.

**Storm Runoff:** Surplus surface water generated by rainfall that does not seep into the earth but flows overland to flowing or stagnant bodies of water. Also referred to as "urban runoff."

**Structure:** Anything constructed or erected which requires a location on the ground, including a building or a swimming pool, but not including a fence or a wall used as a fence, if the height does not exceed six feet, or access drives or walks.

**Subdivision:** The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed. Subdivision includes a condominium project as defined in Section 1350 of the California Civil Code.

**Subsidence:** The gradual sinking of land as a result of natural or artificial causes. (See "Settlement.")

**Sulfur Dioxide (SO<sub>2</sub>):** A heavy, pungent, colorless air pollutant formed primarily by the combustion of fossil fuels. It is a respiratory irritant, especially for asthmatics and is the major precursor to the formation of acid rain.

**Threatened Species:** A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

**Transportation Demand Management (TDM):** A strategy for reducing demand on the road system by reducing the number of vehicles using the roadways and/or increasing the number of persons per vehicle. TDM attempts to: (1) reduce the number of persons per vehicle; (2) reduce the number of persons who drive alone on the roadway during the commute period; and (3) increase the use of carpools, vanpools, buses and trains, and walking and biking. TDM can be an element of TSM (see below).

**Trip:** A one-way journey that proceeds from an origin to a destination via a single mode of transportation; the smallest unit of movement considered in transportation studies. Each trip has one “production end” (origin, often from home, but not always), and one “attraction end” (destination). (See “Traffic Demand Forecasting Model.”)

**Trip Generation:** The dynamics that account for people making trips in automobiles or by means of public transportation. Trip generation is the basis for estimating the level of use of a transportation system and the impact of additional development or transportation facilities on an existing, local transportation system. Trip generations of households are correlated with destinations that attract household members for specific purposes.

**Undevelopable:** Specific areas where topographic, geologic, and/or sub-surface soil conditions indicate a significant danger to future occupants and a liability to the City, and are thus designated as undevelopable by the City.

**Uniform Building Code:** A national, standard building code which sets forth minimum standards for construction.

**Uniform Housing Code:** State housing regulations governing the condition of habitable structures with regard to health and safety standards and which provide for the conservation and rehabilitation of housing in accordance with the Uniform Building Code (UBC).

**Urban Services:** Utilities (such as water, gas, electricity, and sewer) and public services (such as police, fire, schools, parks, and recreation) provided to an urban area.

**Use:** The purpose for which a lot or structure is or may be leased, occupied, maintained, arranged, designed, intended, constructed, erected, moved, altered, and/or enlarged as per the City’s Zoning Ordinance and General Plan land use designation.

**Use Permit:** The discretionary and conditional review of an activity or function or operation on a site or in a building or facility.

**Utility Corridors:** Right-of-way or easements for utility lines on either publicly or privately owned property. (See “Right-of-way” or “Easement.”)

**Vacant:** Lands or buildings which are not actively used for any purpose.

**View Corridor:** The line of sight (identified as to height, width, and distance) of an observer looking toward an object that is significant to the community (e.g., ridgeline, river, historic building, etc.); the route that directs the viewer’s attention.

**Viewshed:** The area within view from a defined observation point.

**Volume-to-Capacity Ratio:** A measure of the operating capacity of a roadway or intersection, in terms of the number of vehicles that theoretically could pass through when the roadway or intersection is operating at its designed capacity. Abbreviated as  $v/c$ . At a  $v/c$  ratio of 1.0, the roadway or intersection is operating at capacity. If the ratio is less than 1.0, the traffic facility has additional capacity. Although ratios slightly greater than 1.0 are possible, it is more likely that the peak hour will elongate into a “peak period.” (See “Peak Hour” and “Level of Service.”)

**Watercourse:** Natural or once natural flowing (perennially or intermittently) water including rivers, streams, and creeks. Includes natural waterways that have been canalized, but does not include manmade channels, ditches, and underground drainage and sewer systems.

**Watershed:** The total area above a given point on a watercourse that contributes water to its flow; the entire region drained by a waterway or watercourse which drains into a lake, reservoir, bay or ocean.

**Wetlands:** Transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water.

**Wildlife Corridors:** A natural corridor, such as an undeveloped ravine, that is frequently used by wildlife to travel from one area to another.

**Williamson Act:** Known formally as the California Land Conservation Act of 1965, it was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. The program entails a ten-year contract between an owner of land and (usually) a county whereby the land is taxed on the basis of its agricultural use rather than the market value. The land becomes subject to certain enforceable restrictions, and certain conditions need to be met prior to approval of an agreement.

**Zone, Traffic:** In a traffic model, land areas are divided into zones, with each zone treated as producing and attracting trips. The production of trips by a zone is based on the number of trips to or from work or shopping, or other trips produced per dwelling unit.

**Zoning:** The division of a city by legislative regulations into areas, or zones, which specify allowable uses for real property and size restrictions for buildings within these areas; a program that implements policies of the General Plan.

**Zoning District:** A designated section of the City for which prescribed land use requirements and building and development standards are uniform.

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## 8 List of Acronyms

af/y: acre feet/year

ADT: Average daily traffic

ADWF: Average Dry Weather Flow

AIRS: Aerometric Information Retrieval System

BACT: Best Available Control Technology

BMP: Best Management Practice

CALTRANS: California Department of Transportation

CARB: California Air Resources Board

CalEPA: California Environmental Protection Agency

CC&Rs: Covenants, Conditions, and Restrictions

CCID: Central California Irrigation District

CCR: California Code of Regulations

CDFFP: California Department of Forestry and Fire Prevention

CDFG: California Department of Fish and Game

CEQA: California Environmental Quality Act

CERCLA: Comprehensive Environmental Responsibility, Compensation, and Liability Act

CESA: California Environmental Species Act

CFR: Code of Federal Regulations

CIP: Capital Improvement Program

CNDDDB: California Natural Diversity Data Base, Department of Fish and Game

CNEL: Community Noise Equivalent Level

CNPS: California Native Plant Society

CO: Carbon Monoxide

dB: Decibel

dBA: Decibel A-Weighted

DEIR: Draft Environmental Impact Report

DNL: Day-Night Average Noise Level

DOF: Department of Finance

DTSC: Department of Toxic Substances Control, State of California

DU: Dwelling Unit

**EIR:** Environmental Impact Report  
**EMF:** Electric and Magnetic Field  
**FAR:** Floor Area Ratio  
**FEIR:** Final Environmental Impact Report (CEQA)  
**FEMA:** Federal Emergency Management Act  
**FESA:** Federal Endangered Species Act  
**FIRM:** Flood Insurance Rate Map  
**gpd:** Gallons per day  
**gpm:** Gallons per minute  
**GEA:** Grasslands Ecological Area  
**GHG:** Greenhouse Gasses  
**GPAC:** General Plan Advisory Committee  
**GROC:** Grasslands Resources Overlay Zone  
**GWD:** Grasslands Water District  
**HC:** Hydrocarbons  
**HCM:** Highway Capacity Manual  
**HCP:** Habitat Conservation Plan  
**HHW:** Household Hazardous Waste  
**HHWE:** Household Hazardous Waste Element  
**ISO:** National Insurance Service Office  
**IWMP:** Integrated Waste Management Plan  
**kV:** Kilovolt  
**kW:** Kilowatt  
**kWh:** Kilowatt-hour  
**LAFCO:** Local Agency Formation Commission  
**LBUSD:** Los Banos Unified School District  
**Ldn:** Day-Night Average Sound Level  
**Leq:** Equivalent Noise Level  
**LOS:** Level of Service  
**LUST:** Leaking Underground Storage Tanks (Case List)  
**MBR:** Membrane Bi-reactor  
**MCAG:** Merced County Association of Governments  
**MOU:** Memorandum of Understanding

*List of Acronyms*

**MWMA:** California Medical Waste Management Act  
**NCCP:** Natural Communities Conservation Plan  
**NEPA:** National Environmental Policy Act  
**NFIP:** National Flood Insurance Program  
**NOP:** Notice of Preparation (CEQA)  
**NO<sub>2</sub>:** Nitrogen Dioxide  
**NO<sub>x</sub>:** Nitrogen Oxides  
**NPDES:** National Pollutant Discharge Elimination System  
**NPPA:** Native Plant Protection Act  
**NRHP:** National Register of Historic Places  
**O<sub>3</sub>:** Ozone  
**Pb:** Lead  
**PG&E:** Pacific Gas and Electric Company  
**PM-10:** Suspended particulate matter 10 microns or less in diameter  
**PM-2.5:** Suspended particulate matter 2.5 microns or less in diameter  
**ppb:** Parts per billion  
**ppm:** Parts per million (10<sup>6</sup>) by volume or weight  
**PWD:** Public Works Department  
**ROG:** Reactive Organic Gases  
**RTIP:** Regional Transportation Improvement Plan  
**SIP:** State Implementation Plan  
**SJVAPCD:** San Joaquin Valley Air Pollution Control District  
**SJVAB:** San Joaquin Valley Air Basin  
**SOI:** Sphere of Influence  
**SOV:** Single Occupant Vehicles  
**SO<sub>2</sub>:** Sulfur Dioxide  
**Sq. Ft.:** Square Feet  
**SR:** State Route  
**SRRE:** Source Reduction and Recycling Element  
**SWRCB:** State Water Resources Control Board  
**TACs:** Toxic Air Contaminants  
**TCE:** Trichloroethylene  
**TDM:** Transportation Demand Management

**TDR:** Transfer of Development Rights

**USDA:** United States Department of Agriculture

**U.S. EPA:** United States Environmental Protection Agency

**USFWS:** United States Fish and Wildlife Service

**USGS:** United States Geologic Survey

**UST:** Underground Storage Tank

**V/C:** Volume to Capacity Ratio

**VMT:** Vehicle Miles Traveled

**VOC:** Volatile Organic Compounds

**VPD:** Vehicles per day

**WWTP:** Wastewater Treatment Plant

## 9 Report Authors

This Draft EIR has been prepared by:

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## **10 Persons and Organizations Consulted**

### **CITY OF LOS BANOS**

John LeVan, Los Banos Planning Manager (multiple dates and times)

Dwayne Chisam, Los Banos Public Works Director (multiple dates and times)

Chris Gallagher, Police Chief of Los Banos, January 5, 2007

Chet Guintini, Fire Chief of Los Banos Fire Department, January 4, 2007

Dennis Garcia, PG and E Land Agent, Merced County, May 4, 2007

Peggy Stanfill, Los Banos Parks and Recreation Department

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Dean Bubar, Assistant Superintendent, Los Banos Unified School District, January 3, 2007

# CITY OF LOS BANOS GENERAL PLAN UPDATE

## NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)

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**Date:** December 12, 2006

**To:** Responsible Agencies, and Interested Parties and Organizations

**Subject:** Notice of Preparation (NOP) of Draft Environmental Impact Report (EIR)  
for the City of Los Banos General Plan Update

**Location:** City of Los Banos, California

The City of Los Banos is preparing a General Plan update, and has determined that an Environmental Impact Report (EIR) will be necessary pursuant to the California Environmental Quality Act (CEQA). The City requests your input on how the General Plan update may affect the environment. More specifically, input is being solicited regarding the scope and content of environmental analysis that is relevant to your respective agency's statutory/regulatory responsibilities in order to ascertain potential impacts of the proposed project.

Although specific proposals and revisions for the Los Banos General Plan update have not yet been determined, we are soliciting your concerns now. This will allow your input to be taken into consideration during formulation of new goals, policies, and programs for the General Plan update, as well as issues to be addressed in the EIR. A description of the proposed action, location map, and preliminary identification of the potential environmental effects are contained in the attached materials.

If your agency is a responsible agency as defined by Section 15381 of the State CEQA Guidelines, your agency will need to use the environmental documents prepared by the City of Los Banos when considering your permit or other approval for the action.

Due to the time limits mandated by State law, your comments should be submitted by the earliest possible date, but not later than 30 days after your receipt of this notice per CEQA Guidelines Section 15082(b). Please send your written response, with the name of your agency contact person, to: John LeVan, Department of Community Development, City Hall, 520 J Street, Los Banos, CA 93635.

A Scoping Meeting for the EIR will be conducted on January 22, 2007 at 4:00 pm at the Police Annex located at 545 "J" Street. If you have questions regarding this NOP or the Scoping Meeting, you can call John LeVan at (209) 827-7000 x114.

---

John LeVan, Planner Manager  
City of Los Banos

## **PROJECT TITLE**

City of Los Banos General Plan Update

## **LEAD AGENCY**

Community Development Department  
City of Los Banos  
City Hall  
520 J Street  
Los Banos, CA 93635

## **CONTACT PERSON**

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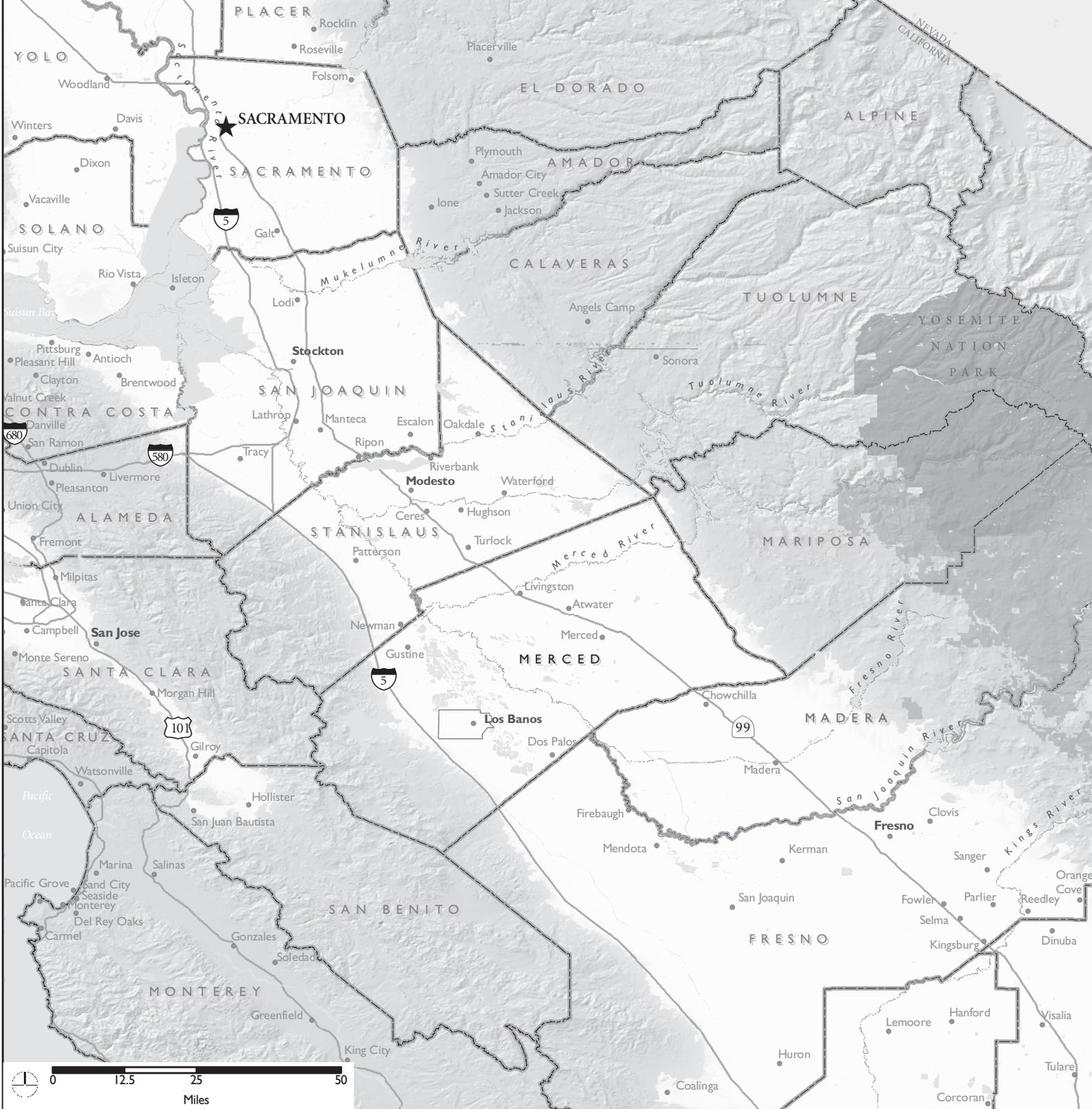
## **PROJECT LOCATION AND BOUNDARIES**

### **Location**

The City of Los Banos is situated within the western portion of Merced County, in the northern portion of the San Joaquin Valley (see Figure 1). The City is located in the center of California, near the junction of California State Route 152 and Interstate 5, approximately 120 miles southeast of San Francisco, 83 miles northeast of Monterey, and 72 miles northwest of Fresno. Los Banos is the second largest city in the county and borders the communities of Dos Palos, Gustine, Volta, and Santa Nella. The San Luis Reservoir State Recreation Area is located to the north of the Planning Area. Various State and Federal Wildlife Areas and Refugees surround the Planning Area including the Volta State Wildlife Area to the north, the Los Banos Wildlife Area to the west and north, and the North Grassland Wildlife Area to the northwest.

### **Planning Boundaries**

The Planning Area boundaries for the 2030 General Plan are illustrated in Figure 2. The Planning Area boundaries, modified from the 1999 General Plan, cover 33.5 square miles. Specifically, the proposed Planning Area extends out to Henry Miller Road on the north, the Wastewater Treatment Plant to the east, Sunset and Copa de Ora Avenue to the south, and Volta Road to the west. The Planning Area has been defined with the intention of focusing future growth on land contiguous to the City and preventing scattered development on adjacent farmlands and includes land that is of interest for long-term planning, including hillsides and surrounding agricultural land. Being included in the Planning Area does not necessarily mean that the City is considering annexation.

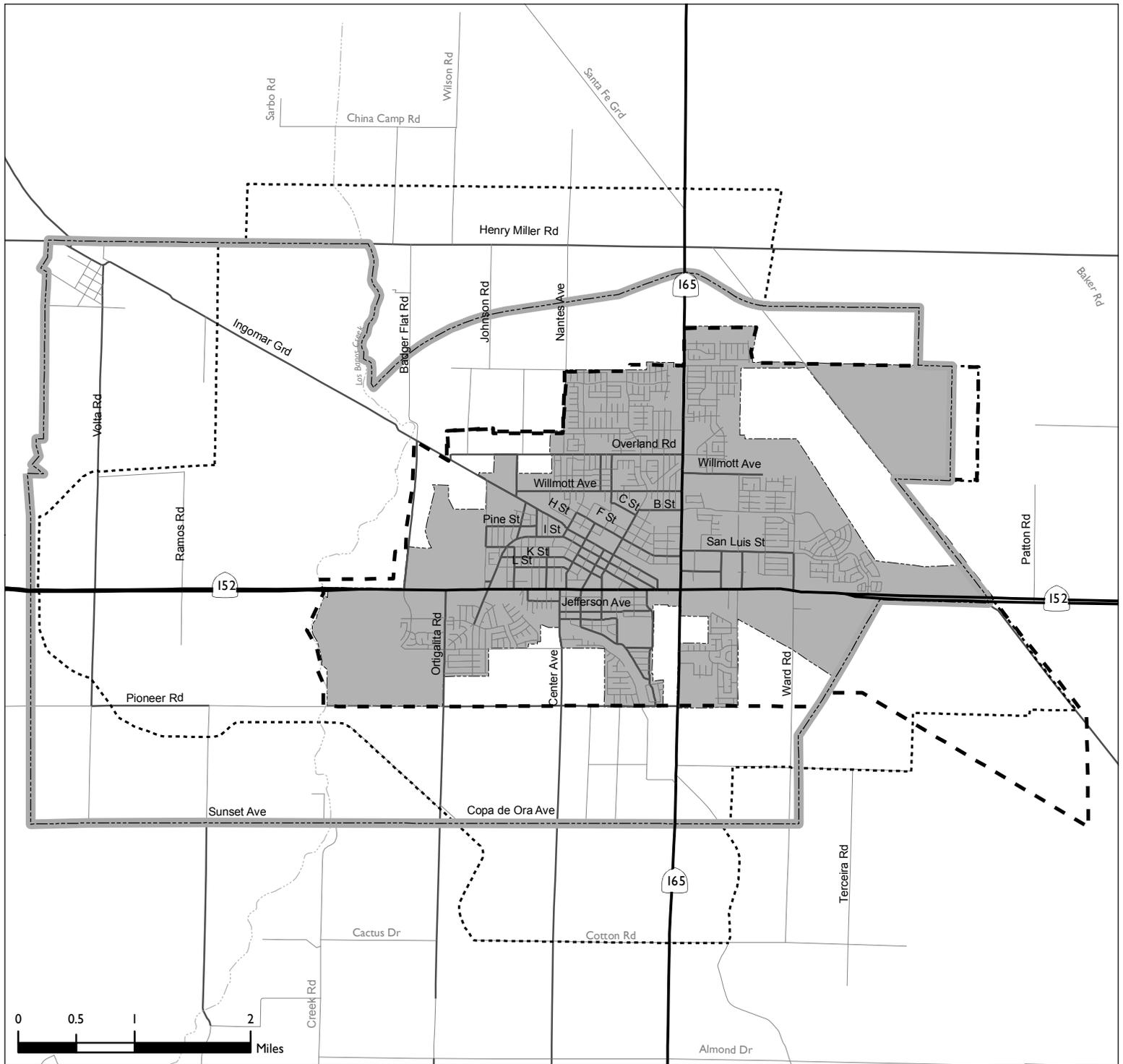


November 28, 2005

Source: Dyett & Bhatia 2005.

- City
- Major Transportation Routes
- ▭ Proposed Planning Boundary
- ▭ National Park
- ▭ National Forest





December 8, 2006

Source: Dyett & Bhatia

- 1999 General Plan Area of Interest
- Proposed Planning Boundary
- - - - Sphere of Influence
- City Limits



The Sphere of Influence and the existing City Limit boundaries are all contained within the Planning Area. The Sphere of Influence encompasses an area of 11,134 acres (17.4 square miles) and includes incorporated and unincorporated territory that is envisioned to be the City's ultimate service area. The current City Limits include an area of 6,346 acres (9.9 square miles). The boundaries of the Sphere of Influence and the City Limits may change as a result of the General Plan update.

## **DESCRIPTION OF PROJECT**

The State of California requires every city and county to have a comprehensive general plan that serves as a constitution for long-term physical development. The State mandates that the general plan identify current and future needs in areas such as economic development, land use, circulation, noise, open space and conservation, public services, safety and environmental quality. The general plan also provides a basis for local government decision-making and gives citizens the opportunity to participate in the planning and decision-making processes of their communities.

The current City of Los Banos General Plan was last updated in 1999, and while many of its policies may still be relevant, Los Banos is a rapidly growing community that is anticipating substantial growth over the next 25 years. Specifically, Los Banos' population is projected to increase, at a minimum, by approximately 52 percent, while the number of jobs is projected to increase by approximately 63 percent over the next 25 years.<sup>1</sup> These growth prospects require adequate planning for new facilities and future services to enable Los Banos to grow without adversely affecting the quality of life for existing residents. The City of Los Banos has initiated an update of its General Plan with the purpose of outlining a comprehensive range of policies related to its growth and conservation. The update will also provide the community with an opportunity to clarify its vision and establish priorities for future development patterns, transportation systems, economic development opportunities, and conservation of natural resources while accommodating the anticipated growth.

The Draft General Plan that results from the update process will contain background information, goals, and policies addressing the following topics (that may be combined or may be stand-alone elements):

- Land Use;
- Circulation;
- Noise;
- Open Space and Conservation;
- Safety;
- Public Facilities and Services; and
- Air Quality

The Housing Element update was adopted ahead of the remainder of the General Plan in December 2003. Upon completion of the General Plan update the two documents will be reviewed for internal consistency, and the Housing Element may be amended.

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<sup>1</sup> City of Los Banos, *Los Banos General Plan Update Map Atlas*, November 22, 2005.

## **BACKGROUND STUDIES AND PUBLIC PARTICIPATION**

In November 2005, the City published a *Map Atlas*, which contained a series of maps documenting existing land uses, development potential, cultural resources, and environmental conditions within Los Banos. Following the *Map Atlas*, a community workshop was held on December 6, 2005, to identify the planning issues to be addressed by the General Plan, and discuss successes and failures in planning since adoption of the 1999 General Plan.

Public participation is an integral part of the General Plan update and the City has established a series of workshops to solicit public input throughout the process. The first public workshop, following publication of the *Map Atlas*, occurred on December 6, 2005, to discuss community visioning and challenges. Another public workshop will take place to discuss planning alternatives and a public hearing will be held following publication of the Draft General Plan and the Draft General Plan EIR.

## **OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED**

No other public agency is required to approve the Los Banos General Plan. Development under the Plan, however, may require approval of State, federal and responsible trustee agencies that may rely on this EIR for information relative to their area of expertise and jurisdiction.

## **POTENTIAL ENVIRONMENTAL IMPACTS TO BE CONSIDERED**

Preliminary topic areas to be addressed in the EIR include:

- Land Use;
- Parks, Open Space, and Recreation Facilities;
- Public Facilities and Services;
- Traffic and Transportation;
- Biological Resources;
- Agricultural and Mineral Resources;
- Fire Hazards;
- Air Quality;
- Noise;
- Energy;
- Seismic and other Geologic Hazards;
- Hydrology;
- Hazardous Materials;
- Cultural Resources; and
- Visual Quality

In addition to the potential environmental effects listed above, the EIR will evaluate potential cumulative effects of the proposed Los Banos General Plan update as well as alternatives to the proposed General Plan. The No Project alternative will evaluate the impacts resulting from continued implementation of existing plans, policies, and regulations that govern the City. As appropriate, other alternatives that would avoid or lessen environmental effects related to the proposed Los Banos General Plan will be discussed. Referring to General Plan policies, the Draft EIR will also recommend measures to mitigate environmental impacts.

**GENERAL PLAN EIR SCOPE OF WORK**

The attached scope of work for the General Plan Update (see Attachment A) describes in more detail the analysis of potential environmental impacts to be undertaken. Comments on the list of topics for the EIR and the proposed scope of work will help the City focus the analysis of critical environmental issues, alternatives that should be considered and potential mitigation that can be incorporated into the General Plan as policies or implementation actions.

## Attachment A: Scope of Work for the Draft EIR

### Environmental Setting and Impact Analysis.

- A. **Land Use.** Analyze sites where land use changes would occur under the project. Identify potential conflicts between existing and proposed uses, and determine alternative or supplementary policy mitigation measures that could minimize impacts.
- B. **Parks, Open Space, and Recreation Facilities.** Using level of service standards as significance criteria, assess the impacts of buildout conditions on use of existing parks, open space, and recreation facilities. Assess impacts of proposed additions to the City's Parks and Open Space System.
- C. **Public Facilities and Services.** Assess the impact of proposed changes in the General Plan on public services, including public schools, police and fire protection. Water, wastewater, and storm drain impacts will also be studied. The water supply analysis will address effects of land use changes and future development on water resources both in terms of quantity (acre-feet available from various sources) and quality (the potential to release contaminants to surface and groundwater). The adequacy of long-term water supplies will be addressed. For most water quality issues, mitigation measures are present in regulatory and review programs that are already in place. The EIR will identify these programs and the point at which they apply to different types of projects plus any additional mitigation required.
- D. **Traffic and Transportation.** Evaluate the change in traffic that would be generated by land uses under the Draft Land Use Element, comparing the added or lessened traffic to the available capacity, and noting locations of capacity shortages. Evaluate improvements recommended in the Circulation Element in terms of physical impacts as well as effects on traffic-carrying capacity and level of service. Potential impacts to various travel modes, including impacts to bicyclists and pedestrians, will be included in this analysis. In addition, a qualitative analysis of potential parking impacts, if applicable, will be included.
- E. **Biological Resources.** Assess the potential for impacts to special status species at buildout. Describe the potential impacts to biological resources related to land uses that may permanently impair or preclude resource development. Identify alternative or supplementary policy mitigation measures that could minimize impacts to biological resources. Review of the California Natural Diversity Database and other literature searches, as well as interviews with state and federal regulatory staff, and other organizations to identify biological resources (special status species and habitats) with the potential to occur in the project study area will be used in this analysis. Field verification of habitat and gross vegetation mapping will be undertaken. No protocol level field surveys for special status plant and wildlife species are included as part of this scope of work.
- F. **Agricultural and Mineral Resources.** Analyze the impact of Land Use and Circulation Element changes on agricultural and mineral resources in and near Los Banos. Consistency of the Draft Land Use Element with farmland classification policies will be identified, as well as compatibility issues.
- G. **Fire Hazards.** Identify and characterize areas at the urban fringe that are particularly vulnerable to the threat of fire. Identify fuel reduction methods and techniques

- consistent with protection of special status species and habitats. Identify any restrictions on land uses and intensities appropriate for areas identified as susceptible to fire hazard.
- H. ***Air Quality***. Describe the types of emissions sources that would be associated with development under the Land Use and Circulation Element Update. Assess the consistency of the Draft Elements with the regional Clean Air Plan with reference to population and employment forecasts as well as trends in vehicle miles traveled (VMT). Qualitatively assess the capability of policies of the Draft Elements, including the new Air Quality Element, to prevent exposure of people to substantial sources of construction dust, toxic air contaminants, or odorous emissions.
- I. ***Noise***. Establish noise contours for the City based on updated information related to traffic, aircraft, and industrial facilities. Describe the types of noise sources that would be associated with development under the General Plan Update. Assess the adequacy of the policies to avoid future noise incompatibility for existing and future land uses.
- J. ***Energy***. Describe the types of energy that would be consumed by development under the project. Assess the consistency of the General Plan with state and national energy goals and programs. Based on information from provider, evaluate the capability of the existing utility infrastructure to meet future demand for electricity and natural gas.
- K. ***Seismic and other Geologic Hazards***. Recognizing that the Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side, identify and describe the major earthquake fault systems in the region and their distance to the City, and update their general potential to affect the City. Identify capacities of the City's emergency preparedness and response program to deal with a major earthquake scenario. Evaluate how the Land Use and Circulation Element Update will affect exposure to potential hazards and/or increase risk of hazard event. This section will also describe other geological characteristics of regional and site-specific soils, including composition, liquefaction, and erosion potential.
- L. ***Hydrology***. Discuss the hydrological setting of the City, including position within the regional watershed system. Describe urban water pollutant types and their sources. Discuss potential flooding hazards, general management practices, and mitigation measures to reduce the effects of stormwater runoff. Using published reports, summarize general groundwater conditions in the Plan area. Discuss use of groundwater, trends and general aquifer conditions. Assess the manner in which land use and development under the new General Plan may affect groundwater conditions and uses of the resource and the role of policies in the Conservation Element to mitigate impacts.
- M. ***Hazardous Materials***. Review available database information on location and transport of hazardous materials. Discuss the general constraints that contaminated soils and groundwater may pose to development and all applicable federal, state, and local regulations with regard to contamination management and clean up.
- N. ***Cultural Resources***. Although a full cultural/historic resource survey of the entire study area is not considered feasible for the proposed project, a sensitivity analysis would be possible and appropriate. Conduct a sensitivity analysis based on a review of records maintained at the Northeast Information Center of the California Historical Resources Inventory System (located at California State University, Chico), and published research papers. Document any historic resources that are currently listed on the National Register of Historic Places and reference materials from the Directory

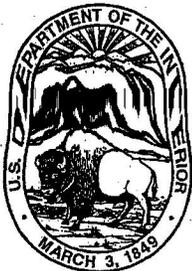
of Properties in the Historic Data File for Merced County, which is maintained by the State Office of Historic Preservation. Evaluate how the Land Use and Circulation Element Update will affect or disrupt the preservation of historic, cultural, and archaeological resources.

- O. **Visual Quality.** Apply significance criteria that have been derived from CEQA Guidelines, which include view obstruction, or degradation, creation of an aesthetically offensive site, impairment of an object having aesthetic significance, conflict with adopted environmental plans and goals, or production of new light or glare. Assess how future development under the new elements may affect city view sheds, particularly views from public viewpoints (roads, parks, etc.).

**Mitigation Measures.** Practical, feasible mitigation measures that will reduce the environmental impacts of implementation of the Draft General Plan will be identified during impact analysis. It will be determined whether mitigation measures would reduce impacts below a level of significance, identify the parties who would be responsible for implementing each measure, and incorporate them as policies into the Plan.

**CEQA-Required Impact Analysis.** As required by CEQA Guidelines, the following types of impacts need to be assessed, in addition to the detailed analysis of impacts, by topic area:

- A. **Growth-Inducing Impacts** (potential for the project to cause additional population or job growth or housing demand);
- B. **Significant Environmental Effects of the Proposed Project** (including significant unavoidable effects);
- C. **Significant Irreversible Environmental Changes;** and
- D. **Effects Found Not to Be Significant.**
- E. **Project Alternatives.** The alternatives considered in preparation of the Draft General Plan will be the basis for this section. It will also include analysis of the No Project Alternative. The relative merits and disadvantages of the alternatives will be assessed and compared with the proposed Elements, and an “environmentally superior” alternative will be identified. The alternatives analysis, as discussed in the CEQA Guidelines, may be less detailed than the analysis of the proposed project.



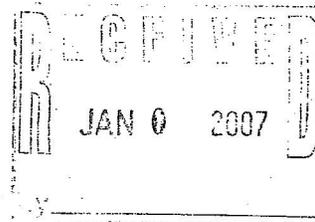
# United States Department of the Interior



FISH AND WILDLIFE SERVICE

San Luis National Wildlife Refuge Complex  
Post Office Box 2176  
Los Banos, California 93635

03 January 2006



Mr. John LeVan, Planning Manager  
City of Los Banos  
520 "J" Street  
Los Banos, CA 93635

Dear John:

Thank you for the opportunity to comment on the Notice of Preparation for the *City of Los Banos General Plan Update*. In preparing the environmental impact report (EIR) for the City's new General Plan, the City should carefully consider environmental impacts associated with the City's close proximity to the Grasslands Ecological Area (GEA). In particular, potential impacts on the natural resources of the GEA associated with the City's growth plans should be considered. Such impacts would include noise, light and glare, and interference with bird flight patterns.

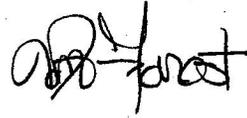
I have also reviewed the draft preferred land use plan available on the City's website. In general, the land use plan shows that the City will not encroach further into GEA resources as the City grows. I have the following comments on the land use plan, for the City's consideration:

- I am glad to see the northern boundary of the "Proposed Planning Boundary" is now south of the "1999 General Plan Area of Interest" and south of Henry Miller Road.
- I am wondering why there is a large spur of the "Sphere of Influence" projecting off to the southeast, and appearing to include the California Department of Fish and Game's Gadwall Unit. This should be pulled in to match the "Proposed Planning Boundary".
- I believe the City should consider pulling the northwest corner of the "Proposed Planning Boundary" back to follow the general footprint of the Highway 152 Bypass – with the idea of planning for development only to the south of the Bypass, as discussed in meetings -- with a "business opportunity area" at the western intersection of the Bypass and existing Highway 152. As discussed, we are concerned with the possibility of Los Banos and Volta merging into one city. These two communities should continue to be separate and distinct.

The City's General Plan is very important to the GEA, and the abundant natural resources enjoyed by the community. We can minimize wildlife/wildlands impacts caused by urban development with well-considered land use planning. As a member of the Grasslands Regional Resources Working Group, I look forward to providing further input to the City as the planning process proceeds.

Again, thank you for the opportunity to comment. If you have any questions, please contact me (209/826-3508).

Sincerely,



Kim Forrest

Wildlife Refuge Manager

Cc: Osha Meserve, Counsel; Adams, Broadwell, Joseph, and Cardozo  
Don Marciochi, Manager; Grassland Water District  
Julie Vance, Senior Environmental Scientist; Julie Vance, Sr. Environmental Scientist; CDFG  
John Beam, Wildlife Management Supervisor; CDFG  
Bill Cook, Wildlife Habitat Supervisor II; CDFG

## PUBLIC UTILITIES COMMISSION

VAN NESS AVENUE  
FRANCISCO, CA 94102-3298



January 11, 2007

John LeVan  
City of Los Banos  
520 J Street  
Los Banos, CA 93635

RE: City of Los Banos General Plan Update, SCH# 2006121055

Dear Mr. LeVan:

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the County be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way. Any project that includes a modification to an existing crossing or proposes a new crossing is legally required to obtain authority to construct from the Commission. If the project includes a proposed new crossing, the Commission will be a responsible party under CEQA and the impacts of the crossing must be discussed within the environmental documents.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the County.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,

A handwritten signature in black ink, appearing to read "Kevin Boles".

Kevin Boles  
Environmental Specialist  
Rail Crossings Engineering Section  
Consumer Protection and Safety Division



DEPARTMENT OF PUBLIC WORKS  
Road Division

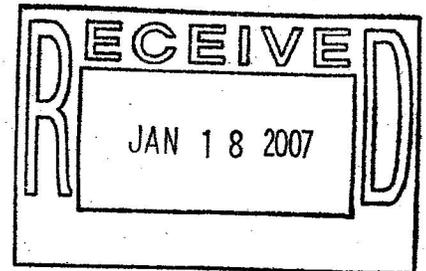
Paul A. Fillebrown  
Director

345 West 7th Street  
Merced, CA 95340  
Phone: (209) 385-7601  
Fax: (209) 722-7690  
[www.co.merced.ca.us](http://www.co.merced.ca.us)

Equal Opportunity Employer

January 11, 2007

John LeVan  
City of Los Banos  
520 J Street  
Los Banos, CA 93635



SUBJECT: NOTICE OF PREPARATION OF A DRAFT EIR  
CITY OF LOS BANOS GENERAL PLAN UPDATE

Dear John:

The Merced County Department of Public Works is quite interested in reviewing and commenting on the Draft EIR for the proposed City of Los Banos General Plan Update. Of course our primary concern is how it may affect County roadways. Of particular interest are impacts to Henry Miller Avenue, Ingomar Grade, Pioneer Road, and Volta Road. Please include us on all transmittals.

If you have any questions, please contact me (209)385-7601.

Sincerely,

Stephen E. Lyon  
Senior Engineering Associate

SEL:krm



**PLANNING AND COMMUNITY  
DEVELOPMENT DEPARTMENT**

**Robert A. Lewis**  
Director

2222 "M" Street  
Merced, CA 95340  
(209) 385-7654  
(209) 726-1710 Fax  
www.co.merced.ca.us

Equal Opportunity Employer

January 12, 2007

**City of Los Banos**

John LeVan, Planning Manager  
520 J Street  
Los Banos, CA 93635

**Subject:** Notice of Preparation, City of Los Banos General Plan Update

Dear Mr. LeVan:

This letter is in response to the Notice of Preparation of the Los Banos General Plan Update. Merced County Planning and Community Development staff appreciates the opportunity to review and comment on this major City Planning project.

The County of Merced is committed to cooperating with the City in the preparation of its General Plan. Providing clear disclosure of areas of analysis will ensure that many areas of concern to the County will be included in the Draft EIR and lead to the identification of appropriate policies or mitigation measures for identified impacts.

Merced County is also in the beginning phases of updating our General Plan and is also committed to working with adjoining jurisdictions to identify areas of mutual concern or potential impacts.

**Land Use**

**Agricultural Impact and Loss-** Merced County has ordinances and policies, including the Williamson Act, to ensure the continued agricultural use of the rural areas around proposed urban development. The City's General Plan Update will lead to the conversion of agricultural lands and we feel that the City should recognize a method exists for the partial mitigation of the loss of agricultural lands by requiring future project applicants to acquire conservation easements on agricultural land of similar quality as exists within the development site. Although this has not been adopted as formal policy, it was the subject of discussions between the County and the Cities within the County as part of the CAPS committee work.

**Buffers-** The proposed plan would potentially result in incompatibility with surrounding uses including agriculture and open space. Mitigation measures should be provided to ensure the surrounding agricultures uses are adequately protected. We recommend the City of Los Banos contact the Merced County Agricultural Commissioner's Office or UC Cooperative Extension to seek information and concepts to provide adequate buffers to protect the surrounding agricultural operations. The buffers for adjacent farming operations should be clearly identified and described in detail plan policies or in mitigation measures to ensure impacts to

adjoining agriculture operations are minimized.

#### **Air Quality**

Air quality incompatibility between existing agriculture operations and future urban land uses needs to be evaluated. Mitigation measures should be implemented to minimize exposure of people to substantial sources of construction dust, agricultural dust and pesticide use and odorous emissions.

#### **Noise**

Traffic on area roads created by this expanded boundary and future construction noise will impact the surrounding rural-residents. Mitigation measures should be identified, including, but not limited to setbacks or noise barriers, to decrease the noise levels created by traffic. Measures should also be identified to reduce impacts from noise generated from adjoining agricultural operations on new urban areas.

#### **Transportation**

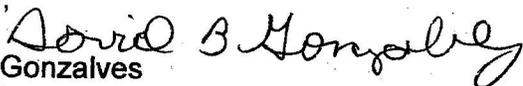
Merced County has adopted Level-of-Service standards for roadways within the County. Transportation and circulation impacts will result from the growth projected in the General Plan. Proposed transportation and circulation improvements should be adequate to mitigate the impact of this growth to less than significant levels. Further information and coordination should be shared with the County of Merced Department of Public Works as plans and traffic studies are prepared. A separate letter addressing these transportation concerns is being sent from Public Works.

#### **Utilities and Service Systems**

It is our understanding that the Los Banos Sewer Plant is a regional facility which could also provide wastewater treatment services to communities or projects outside the city limits. The EIR should clearly indicate what capacity is needed to serve the planned growth and any identified adjacent communities or projects. The EIR should also address the possible growth inducing potential of any proposed sewer line expansions.

The County of Merced is committed to cooperating with the City of Los Banos and we look forward to working with staff on this project. Please do not hesitate to contact me if I can assist you in any way.

Sincerely,



David B. Gonzalves  
Assistant Development Service Director

Cc: Merced County Public Works Department  
Robert A. Lewis, Development Services Director

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF AERONAUTICS – M.S.#40

1120 N STREET

P. O. BOX 942873

SACRAMENTO, CA 94273-0001

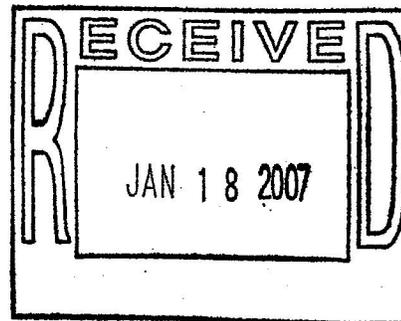
PHONE (916) 654-4959

FAX (916) 653-9531

TTY (916) 651-6827



*Flex your power!  
Be energy efficient!*



January 12, 2007

**Mr. John LeVan**

City of Los Banos  
520 J Street  
Los Banos, CA 93635

Dear Mr. LeVan:

Re: City of Los Banos' Notice of Preparation of a Draft Environmental Impact Report for the City of Los Banos General Plan Update; SCH# 2006121055

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public and special use airports and heliports. The following comments are offered for your consideration.

The proposal is for an update to the City of Los Banos General Plan. Los Banos Municipal Airport is located within the City of Los Banos "Proposed Planning Boundary". There are plans to relocate the airport at some future time. Until the airport is relocated, however, pursuant to the California Public Utilities Code (PUC) Section 21676, local General Plans and any amendments must be consistent with the adopted airport land use compatibility plans developed by the Merced County Airport Land Use Commission (ALUC). An ALUC consistency review is required. This requirement is necessary to ensure that general plan policies and recommendations for noise impact assessment and land use densities are appropriate, given the nature of airport operations. The proposal should also be coordinated with Los Banos Municipal Airport staff to ensure its compatibility with future as well as existing airport operations.

PUC Section 21676, et seq., requires that Caltrans review and comment on the specific findings a local government intends to use when proposing to overrule an ALUC. Caltrans specifically looks at the proposed findings to gauge their relationship to their overrule. Also, pursuant to the PUC 21670 et seq., findings should show evidence that the city is minimizing "...the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses."

General plans and elements must clearly demonstrate intent to adhere to ALUC policies to ensure compliance with compatibility criteria. Direct conflicts between mapped land use designations in a General Plan and the ALUC criteria must be eliminated. A General Plan needs to include (at the very least) policies committing the county to adopt compatibility criteria essential to ensuring that such conflicts will be avoided. The criteria do not necessarily need to be spelled out in the General Plan. There are a number of ways for a city or county to address the airport consistency issue, including:

- Incorporating airport compatibility policies into the update
- Adopting an airport combining zoning ordinance
- Adopting an 'Airport Element' into the General Plan
- Adopting the Airport Compatibility Plan as a 'stand alone' document or as a specific plan

The General Plan must acknowledge that until ALUC compatibility criteria are incorporated into the General Plan, proposals within the airport influence area must be submitted to the ALUC for review. These provisions must be included in the General Plan at a minimum for it to be considered consistent with the airport compatibility land use plan.

In accordance with CEQA, Public Resources Code 21096, the Caltrans Airport Land Use Planning Handbook (Handbook) must be utilized as a resource in the preparation of environmental documents for projects within airport land use compatibility plan boundaries or if such a plan has not been adopted, within two nautical miles of an airport. The Handbook is a resource that should be applied to all public use airports. The Handbook provides a "General Plan Consistency Checklist" in Table 5A and a "Possible Airport Combining Zone Components" in Table 5B. The Handbook is published on-line at <http://www.dot.ca.gov/hq/planning/aeronaut/documents/ALUPHComplete-7-02rev.pdf>.

Allowing new residential within a "noise problem" airport's 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour is inconsistent with Public Utilities Code (PUC) 21670 (a)(1) and the Airport Noise Standards (California Code of Regulations, Title 21, Chapter 6, Section 5000 et seq.). PUC 21670 (a)(1) states that it is in the public interest "to promote the overall goals and objectives of the California airport noise standards...and to prevent the creation of a new noise...problems." The Noise Standards, in part, state that the "standard for the acceptable level of aircraft noise for persons living in the vicinity of airports is hereby established to be a community noise equivalent level of 65 decibels."

Federal and State regulations regarding aircraft noise do not establish mandatory criteria for evaluating the compatibility of proposed land use development around airports (with the exception of the 65 dB CNEL "worst case" threshold established in the State Noise Standards for the designated "noise problem" airports). For most airports in California, 65 dB CNEL is considered too high a noise level to be appropriate as a standard for land use compatibility planning. This is particularly the case for evaluating new development in the vicinity of the airport. The 60 dB CNEL, or even 55 dB CNEL, may be more suitable for new development around most airports. For a further discussion of how to establish an appropriate noise level for a particular community, please refer to Chapter 7 of the Caltrans Handbook.

Sound insulation, buyer notification and avigation easements are typical noise mitigation measures. These measures, however, do not change exterior aircraft noise levels. It is likely that some future homeowners and tenants will be annoyed by aircraft noise in this area. Noise mitigation measures are not a substitute for good land use compatibility planning for new development.

Consideration should also be given to cumulative noise impacts associated with the project site's proximity to roadways and railway lines.

The planned height of buildings, antennas, and other objects should be checked with respect to Federal Aviation Regulation (FAR) Part 77 criteria if development is close to the airport, particularly if situated within the runway approach corridors. General Plans must include policies restricting the heights of structures to protect airport airspace. To ensure compliance with FAR Part 77, "Objects Affecting Navigable Airspace," submission of a Notice of Proposed Construction or Alteration (Form 7460-1) to the Federal Aviation Administration (FAA) may be required. For further technical information, please refer to the FAA website at <http://www1.faa.gov/ats/ata/ATA400/oeaaa.html>.

Education Code, Section 17215 requires a school site investigation by the Division prior to acquisition of land for a proposed school site located within two miles of an airport runway. The Division's recommendations are submitted to the State Department of Education for use in determining acceptability of the site. This should be a consideration prior to designating residential uses in the vicinity of an airport.

Section 11010 of the Business and Professions Code and Sections 1102.6, 1103.4, and 1353 of the Civil Code (<http://www.leginfo.ca.gov/calaw.html>) address buyer notification requirements for lands around airports. Any person who intends to offer land for sale or lease within an *airport influence area* is required to disclose that fact to the person buying the property.

Land use practices that attract or sustain hazardous wildlife populations on or near airports can significantly increase the potential for wildlife-aircraft collisions. The Federal Aviation Administration (FAA) recommends that landfills, wastewater treatment facilities, surface mining, wetlands and other uses that have the potential to attract wildlife, be restricted in the vicinity of an airport. FAA Advisory Circular (AC150/5200-33) entitled "Hazardous Wildlife Attractants on or Near Airports" and AC 150/5200-34 entitled "Construction or Establishment of Landfills Near Public Airports" address these issues. For further information, please refer to the FAA website [http://wildlife-mitigation.tc.faa.gov/public\\_html/index.html](http://wildlife-mitigation.tc.faa.gov/public_html/index.html).

Aviation plays a significant role in California's transportation system. This role includes the movement of people and goods within and beyond our State's network of over 250 airports. Aviation contributes nearly 9% of both total State employment (1.7 million jobs) and total State output (\$110.7 billion) annually. These benefits are discussed in the "Aviation in California: Benefits to Our Economy and Way of Life" available at <http://www.dot.ca.gov/hq/planning/aeronaut/>. Aviation improves mobility, generates tax revenue, saves lives through emergency response, medical and fire fighting services, annually transports air cargo valued at over \$170 billion and generates over \$14 billion in tourist dollars, which in turn improves our economy and quality-of-life.

The protection of airports from incompatible land use encroachment is vital to California's economic future. Los Banos Municipal Airport is an economic asset that should be protected through effective airport land use compatibility planning and awareness. Although the need for compatible and safe land uses near airports in California is both a local and a state issue, airport land use commissions and airport land use compatibility plans are key to protecting an airport and the people residing and

Mr. John LeVan  
January 12, 2007

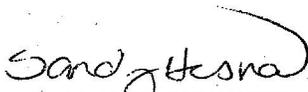
Page 4

working in the vicinity of an airport. Consideration given to the issue of compatible land uses in the vicinity of an airport should help to relieve future conflicts between airports and their neighbors.

These comments reflect the areas of concern to the Division with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our district office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314.

Sincerely,



SANDY HESNARD  
Aviation Environmental Specialist

c: State Clearinghouse, Los Banos Municipal Airport, Merced County ALUC



# DEPARTMENT OF CONSERVATION

## DIVISION OF LAND RESOURCE PROTECTION

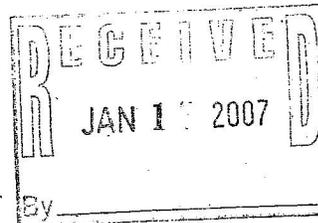
801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0860 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEBSITE [conservation.ca.gov](http://conservation.ca.gov)

January 16, 2007

**VIA FACSIMILE (209) 827-7000**

John LeVan, Planner Manager  
Los Banos Community Development Department  
City Hall  
520 J Street  
Los Banos, CA 93635



**Subject:** Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the City of Los Banos General Plan Update (GPU)  
**SCH# 2006121055**

Dear Mr. LeVan:

The Department of Conservation's Division of Land Resource Protection (Division) monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. The Division has reviewed the above NOP and offers the following recommendations for the DEIR with respect to the project's potential impacts on agricultural land.

The proposed project involves a comprehensive update of the City's 1999 General Plan to provide for substantial growth in the next 25 years. The NOP notes that the DEIR would analyze the impact of Land Use and Circulation Element changes on agricultural resources. Therefore, the Division recommends that the following issues be discussed in the DEIR to provide an adequate discussion of potential project impacts on agricultural land and agricultural activities.

### Agricultural Setting of the Project

The DEIR should describe the project setting in terms of the actual and potential agricultural productivity of the land. The Division's Merced County Important Farmland Map, which defines farmland according to soil attributes and land use, can be used for this purpose. In addition, we recommend including the following information to characterize the agricultural land resource setting of the planning area.

- Current and past agricultural use of the project area. Include data on the types of crops grown, and crop yields and farmgate sales values

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*The Department of Conservation's mission is to protect Californians and their environment by:  
Protecting lives and property from earthquakes and landslides; Ensuring safe mining and oil and gas drilling;  
Conserving California's farmland; and Saving energy and resources through recycling.*

- To help describe the full agricultural resource value of the soils in the area, we recommend the use of economic multipliers to assess the total contribution of potential or actual agricultural production to the local, regional and state economies. State and Federal agencies such as the UC Cooperative Extension Service and USDA are sources of economic multipliers.

#### Project Impacts on Agricultural Land

- Type, amount, and location of farmland conversion resulting directly and indirectly (growth-inducement) from project implementation.
- Impacts on current and future agricultural operations; e.g., land-use conflicts, increases in land values and taxes, vandalism, etc.
- Incremental project impacts leading to cumulatively considerable impacts on agricultural land. This would include impacts from the proposed project as well as impacts from past, current and probable future projects.

Impacts on agricultural resources may also be quantified and qualified by use of established thresholds of significance (California Code of Regulations Section 15064.7). The Division has developed a California version of the USDA Land Evaluation and Site Assessment (LESA) Model, a semi-quantitative rating system for establishing the environmental significance of project-specific impacts on farmland. The model may also be used to rate the relative value of alternative project sites. The LESA Model is available on the Division's website noted later in this letter.

#### Williamson Act Lands

A project is deemed to be of statewide, regional or area-wide significance if it will result in cancellation of a Williamson Act contract for a parcel of 100 or more acres [California Code of Regulations Section 15206(b)(3)]. Since lands under Williamson Act contract and in agricultural preserves exist in the planning area, the Department recommends that the following information be provided in the DEIR:

- A map detailing the location of agricultural preserves and contracted land within each preserve. The DEIR should also tabulate the number of Williamson Act acres, according to land type (e.g., prime or non-prime agricultural land), which could be impacted directly or indirectly by the project.
- A discussion of Williamson Act contracts that may be terminated in order to implement the project. The DEIR should discuss the impacts that termination of Williamson Act contracts would have on nearby properties also under contract; i.e., growth-inducing impacts (in the sense that the removal of contract protection not only lifts a barrier to development, but results in higher property taxes, and thus, an incentive to shift to a more intensive land use, such as urban development.)

As a general rule, land can be withdrawn from Williamson Act contract only through the nine-year nonrenewal process. Immediate termination via cancellation is reserved for "extraordinary", unforeseen situations (See Sierra

John LeVan, Planner Manager  
January 16, 2007  
Page 3 of 5

Club v. City of Hayward (1981) 28 Cal.3d 840, 852-855). The City or County of jurisdiction must approve a request for contract cancellation, and base that approval on specific findings that are supported by substantial evidence (Government Code Section 51282). When Williamson Act contract cancellation is proposed, we recommend that a discussion of the findings be included in the DEIR. Finally, the notice of the hearing to approve the tentative cancellation, and a copy of the landowner's petition, must be mailed to the Director of the Department of Conservation ten (10) working days prior to the hearing. (The notice should be mailed to Bridgett Luther, Director, Department of Conservation, c/o Division of Land Resource Protection, 801 K Street MS 18-01, Sacramento, CA 95814-3528.)

- Pursuant to Government Code Section 51243, if a city annexes land under Williamson Act contract, the city must succeed to all rights, duties and powers of the county under the contract unless conditions in Section 51243.5 apply to give the city the option to not succeed to the contract. Although a city may have protested a contract and although LAFCO may have upheld the protest, conditions in Section 51243.5 may not have been met to give the city the option to not succeed to the contract. A LAFCO must notify the Department within 10 days of a city's proposal to annex land under contract (Government Code Section 56753.5). A LAFCO must not approve a change to a sphere of influence or annexation of contracted land to a city unless specified conditions apply (Government Code Sections 51296.3, 56426, 56426.5, 56749 and 56856.5).
- If portions of the planning area are under Williamson Act contract, and are to continue under contract after project implementation, the DEIR should discuss the proposed uses for those lands. Uses of contracted land must meet compatibility standards identified in Government Code Sections 51238 - 51238.3. Otherwise, contract termination (see paragraph above) must occur prior to the initiation of the land use.
- An agricultural preserve is a zone authorized by the Williamson Act, and established by the local government, to designate land qualified to be placed under the Act's 10-year contracts. Preserves are also intended to create a setting for contract-protected lands that is conducive to continuing agricultural use. The uses of agricultural preserve land must be restricted by zoning or other means so as not to be incompatible with the agricultural use of contracted land within the preserve (Government Code Section 51230). Therefore, the DEIR should also discuss any proposed general plan designation or zoning within agricultural preserves affected by the project.

#### Mitigation Measures and Alternatives

Feasible alternatives to the project's location or configuration that would lessen or avoid farmland conversion impacts should be considered in the DEIR. Similarly, while the

John LeVan, Planner Manager  
January 16, 2007  
Page 4 of 5

direct conversion of agricultural land is often deemed to be an unavoidable impact by California Environmental Quality Act (CEQA) analyses, mitigation measures must nevertheless be considered.

The Division recommends that the purchase of agricultural conservation easements on land of at least equal quality and size be considered as partial compensation for the direct loss of agricultural land, as well as for the mitigation of growth inducing and cumulative impacts on agricultural land. We highlight this measure because of its growing acceptance and use by lead agencies as mitigation under CEQA. Mitigation using conservation easements can be implemented by at least two alternative approaches: the outright purchase of conservation easements tied to the project, or via the donation of mitigation fees to a local, regional or statewide organization or agency, including land trusts and conservancies, whose purpose includes the purchase, holding and maintenance of agricultural conservation easements. For example, the California Farmland Conservancy Program is authorized to accept donations of funds if the Department of Conservation is the designated beneficiary and it agrees to use the funds for purposes of the program in a county specified by the donor. Whatever the approach, the conversion of agricultural land should be deemed an impact of at least regional significance and the search for mitigation lands conducted regionally, and not limited strictly to lands within the Los Banos area or within Merced County.

Information about conservation easements is available on the Division's website, or by contacting the Division at the address and phone number listed below. The Division's website address is:

<http://www.conservation.ca.gov/DLRP/>

Of course, the use of conservation easements is only one form of mitigation that should be considered. The following mitigation measures could also be considered:

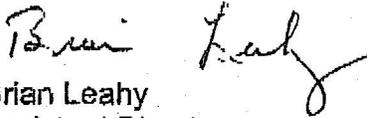
- Increasing home density or clustering residential units to allow a greater portion of the development site to remain in agricultural production.
- Protecting nearby farmland from *premature* conversion through the use of less than permanent long-term restrictions on use such as 20-year Farmland Security Zone contracts (Government Code Section 51296) or 10-year Williamson Act contracts (Government Code Section 51200 et seq.).
- Establishing buffers such as setbacks, berms, greenbelts, and open space areas to separate farmland from incompatible urban uses.
- Investing in the commercial viability of the remaining agricultural land in the project area through a mitigation bank which invests in agricultural infrastructure, water supplies and marketing.

John LeVan, Planner Manager  
January 16, 2007  
Page 5 of 5

The Department believes that the most effective approach to farmland conservation and impact mitigation is one that is integrated with general plan policies. For example, the measures suggested above could be most effectively applied as part of a comprehensive agricultural land conservation element in the City's general plan. Mitigation policies could then be applied systematically toward larger goals of sustaining an agricultural land resource base and economy. Within the context of a general plan mitigation strategy, other measures could be considered, such as the use of transfer of development credits, mitigation banking, and economic incentives for continuing agricultural uses.

Thank you for the opportunity to comment on the NOP. If you have questions on our comments, or require technical assistance or information on agricultural land conservation, please contact the Division at 801 K Street, MS 18-01, Sacramento, California 95814; or, phone (916) 324-0850.

Sincerely,



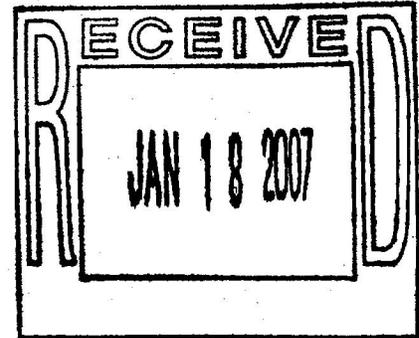
Brian Leahy  
Assistant Director

cc: Los Banos RCD  
745 West J Street  
Los Banos, CA 93635



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



JAN 17 2007

John LeVan  
City of Los Banos  
City Hall, Department of Community Development  
520 J Street  
Los Banos, Ca 93635

Project: General Plan Update

Subject: CEQA comments regarding General Plan Update

District Reference No: **C200602773**

Dear Mr. LeVan:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above and offers the following comments:

### Findings of Significance

The entire San Joaquin Valley Air Basin (SJVAB) is designated non-attainment for ozone and particulate matter (PM10 and PM2.5). This project will contribute to the overall decline in air quality due to construction activities, increases in motor vehicle traffic and other operational emissions associated with new development such as space heating, fireplaces, and the use of landscape maintenance equipment. The build-out of the general plan will make it more difficult to meet mandated emission reductions and air quality standards. A concerted effort should be made to reduce project-related emissions as outlined below:

AB 170 (Reyes) requires cities and counties in the San Joaquin Valley to include an air quality element or air quality implementation strategies in their general plans. The District prepared the Air Quality Guidelines for General Plans (Guidelines) to assist in addressing this new requirement. The city is required to forward the air quality element or its equivalent to the District for review. Contact the District to obtain a copy of the Guidelines.

Seyed Sadredin  
Executive Director/Air Pollution Control Officer

Northern Region  
4800 Enterprise Way  
Modesto, CA 95356-8718

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District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. If you have any questions or require further information, please call Peter Biscay at (559) 230-5842 and provide the reference number at the top of this letter.

Sincerely,

David Warner  
Director of Permits Services

*Peter Biscay for:*

Arnaud Marjollet  
Permit Services Manager

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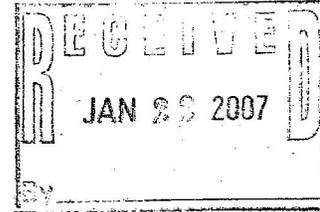
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January 22, 2007

**VIA EMAIL AND U.S. MAIL**

John LeVan  
City of Los Banos Planning Manager  
City Hall  
520 J Street  
Los Banos, CA 93635



Re: Los Banos General Plan Notice of Preparation

Dear Mr. LeVan:

This firm represents the Grassland Water District ("GWD") and the Grassland Resource Conservation District ("GRCD") (collectively, "Districts"). The Districts received the Notice of Preparation ("NOP") for the General Plan Environmental Impact Report ("EIR") being prepared pursuant to the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq. ("CEQA")). The Districts provide the following NOP comments regarding the scope and content of the environmental information that should be included in the EIR.

**I. BACKGROUND INFORMATION**

GWD is a California Water District that provides water to wildlife refuges, duck clubs and some agricultural lands in Merced County. GWD contains approximately 60,000 acres of privately owned wetlands located north, east and south of the City of Los Banos. GWD is charged under state law and federal contract with the responsibility to manage water resources and carry out conservation programs in order to preserve and protect this

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January 22, 2007  
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resource, primarily as habitat for waterfowl from around the globe and other local wildlife species.

Land within the Districts, in combination with state and federal refuges and other privately held wetlands, comprise the approximately 230,000-acre<sup>1</sup> Grassland Ecological Area ("GEA") designated by the United States Fish and Wildlife Service ("FWS"). The GEA boundary is a non-jurisdictional boundary designated by FWS as priority lands for purchase of public easements to preserve and enhance wetlands. Easement lands are managed as habitat for migratory waterfowl, shorebirds and other wildlife.

The wetlands of western Merced County are a critical component of the remaining Central Valley wetlands and constitute the most important waterfowl wintering area on the Pacific Flyway. The 1999 Los Banos General Plan acknowledges these wetlands as providing valuable wildlife and vegetation habitats (see, e.g., p. OCR-7), and international treaties recognize the habitat as a resource of international significance. The Convention on Wetlands (also known as the Ramsar Convention) also designated the GEA as a "Wetland of International Importance" in 2005. The GEA is one of only four such sites in California, and twenty-two sites in the country.

A study commissioned by the Packard Foundation, the Great Valley Center and GWD in 2001 found that wetlands within the GEA provide substantial direct economic contributions to the local and regional economies. The GEA receives over 300,000 user visits per year for hunting, fishing and non-consumptive wildlife recreation. Recreational and other activities related to habitat values within the GEA contribute \$41 million per year to the Merced County economy, and account for approximately 800 jobs. Agricultural lands within the GEA also account for approximately five percent (5%) of Merced County's \$1.45 billion agricultural economy.

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<sup>1</sup> A 50,000-acre expansion of the GEA that extended the GEA eastward (south of the City of Merced) became final in 2006.

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The Districts have a longstanding interest in the City's long-term land use planning because of the City's adjacency to the GEA, and the potential for City's land use decisions to impact GEA resources. Generally, the Districts are pleased with the Draft Preferred Land Use Plan posted on the City's website. (Available at: [http://www.losbanos.org/pdf/los\\_banos\\_pref\\_plan\\_10\\_20\\_06.pdf](http://www.losbanos.org/pdf/los_banos_pref_plan_10_20_06.pdf).) As explained in the October 26, 2006 comment letter of the Grasslands Regional Working Group ("GRRWG"),<sup>2</sup> a few areas of concern remain. These concerns include the need to: (1) further promote the greenbelt/open space buffer concept, especially in the area generally north of the proposed State Route 152 Bypass ("SR 152"); (2) limit commercial development near the GEA, especially in the proposed future State Route 152/Highway 165 interchange; and (3) clearly demarcate the intercanal area as a permanent agricultural/open space area.

As the City continues its planning process, the Districts urge the City to include a full analysis of all potential impacts on GEA resources and identify feasible mitigation to reduce those impacts to less than significant levels in the EIR. This letter provides information for the City's use during development of the General Plan EIR. The Districts and the GRRWG are also available for ongoing consultation as this process moves forward.

## II. GENERAL CEQA CONSIDERATIONS

CEQA has two basic purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.<sup>3</sup> "Its purpose is to inform the public and its responsible

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<sup>2</sup> GRRWG is an alliance of stakeholders working to ensure that grassland resource concerns are incorporated into local land use planning processes, including the Los Banos General Plan update process. GRRWG includes representatives from the U.S. Fish and Wildlife Service, California Department of Fish and Game, Grassland Water District and Ducks Unlimited. GRRWG meetings also include local government planning staff at appropriate junctures.

<sup>3</sup> 14 Cal. Code Regs. ("CEQA Guidelines"), § 15002, subd. (a)(1).

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officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'"<sup>4</sup>

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures.<sup>5</sup> If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible."<sup>6</sup> Furthermore, any unavoidable significant effects on the environment must be "acceptable due to overriding concerns" specified in CEQA section 21081.<sup>7</sup>

In order for the EIR to satisfy these basic purposes, it must include: (1) an accurate and complete description of the project setting, including a description of the existence and importance of internationally significant wetlands habitat and wildlife within the GEA; (2) identification of all potential environmental impacts of the General Plan on the wetlands habitat and wildlife within the GEA; (3) identification of feasible measures to mitigate potential impacts on the GEA; and (4) identification of the environmentally superior alternatives supported by findings regarding significance of environmental impacts, feasibility of mitigation and feasibility of alternatives.

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<sup>4</sup> *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.

<sup>5</sup> CEQA Guidelines, § 15002, subds. (a)(2)&(3); *see also, Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal.3d 376, 400.

<sup>6</sup> CEQA Guidelines § 15092, subd. (b)(2)(A).

<sup>7</sup> CEQA Guidelines § 15092, subd. (b)(2)(B).

### **III. SPECIFIC NOP COMMENTS**

#### **A. Aesthetics**

The EIR for the General Plan should address potential impacts associated with light and glare from areas designated for urban development during the General Plan's planning horizon. Light and glare travel long distances across the relatively flat topography of the area. Wildlife and habitat values within the GEA may be adversely impacted by increases in light and glare emanating from the City.

#### **B. Biological Resources**

The EIR for the General Plan should address direct and indirect impacts associated with development of the land uses proposed in the General Plan on the many biological resources of the GEA. The GEA provides habitat for more than 550 species of plants and animals, including 47 plant and animal species that are endangered, threatened or candidate species under state or federal law.<sup>8</sup> Special status species of note include the Giant garter snake, San Joaquin kit fox and the Riparian brush rabbit. In addition to special status species, millions of migratory waterfowl and a wide variety of shorebirds and other water-related birds visit the GEA or live permanently in the GEA.

The eastern side of the City, in particular, is nearly contiguous with the GEA boundary. The portion of the GEA east of the City in the vicinity of the current SR 152 provides a critical biological corridor between the north and south Grasslands. Potential impacts of any new land uses along the City's eastern border, such as further disruptions of movement corridors, should be

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<sup>8</sup> Grassland Water District, Land Use and Economics Study: Grasslands Ecological Area (July 2001), at p. 2 ("Land Use and Economics Study"). The Land Use and Economics Study was funded jointly by GWD, the Packard Foundation and the Great Valley Center.

examined carefully. The EIR should also provide appropriate mitigation to eliminate or minimize these impacts.

With respect to protection of Giant garter snake habitat in the canals adjacent to the City (primarily the San Luis Canal), the Districts recommend consideration of an increased buffer between new development projects and the canal. While the 1999 General Plan discusses a minimum of a 50-foot buffer to protect the Giant garter snake in Program OCR 7.3-F, the Districts recommend a wider buffer wherever possible (i.e. in areas that are not yet developed).<sup>9</sup>

### C. Agricultural Resources

Continued development within the area designated for development during the General Plan horizon will continue to convert agricultural land to urban uses. As a result, agricultural productivity will be reduced and the open space, habitat and other values of these lands will be lost.<sup>10</sup> Additionally, agriculture is compatible with the biological functions of the GEA and serves as a resource neutral buffer between the GEA and urbanized areas within the City. The EIR should analyze significant environmental changes that could result from conversion of these lands to urban uses.

The Districts' 2001 *Land Use and Economics Study* examined a buffer zone around the GEA and determined that it is essential that this band contain only resource beneficial or resource neutral uses to protect the integrity of the interior of the refuge complex as a whole. A key point of the 2001 land use study is that agriculture and wetlands are compatible uses to

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<sup>9</sup> With the likely construction of the northern SR 152 Bypass in the intercanal area, a wider buffer could also ameliorate eventual road noise impacts to the nearby residential areas.

<sup>10</sup> Agricultural lands also provide the following services: climate regulation; water regulation and flood control; scenic views; recreation; and food/fiber. (Machado, E.A. et al., *Prioritizing farmland preservation cost-effectively for multiple objectives*, *Journal of Soil and Water Conservation*, Vol. 61, No. 6 (2006), 250, 252.)

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each other. Maintaining agriculture around the GEA is a productive use that protects the core area from the effects of urban encroachment.

As the City grows, it is imperative that an agricultural/open space buffer between the City and the GEA be retained. Because conversion of agricultural land within the City's Planning Area is a significant effect under CEQA, feasible mitigation and alternatives that would lessen or eliminate impacts must be considered.<sup>11</sup> Under CEQA, mitigation may compensate for the impact by "replacing or providing substitute resources or environments."<sup>12</sup> Moreover, CEQA requires that agencies ensure that the environmental effects of agricultural conversions are carefully considered in the environmental review process.<sup>13</sup>

To mitigate for impacts to agricultural resources, the Districts urge the City to develop an agricultural mitigation program. Current General Plan Objective LU 16 directs the City to "[b]uffer long-term viable agricultural land and sensitive ecological areas including major wetlands and significant wildlife habitats from urban encroachment." Moreover, under Program LU 16.2-A, the City "will develop a program that sets the procedures for obtaining, valuation, adoption, administration and cancellation of agricultural easements." To the Districts' knowledge, however, the City has not yet developed such a program.

Requiring purchase of conservation easements is feasible mitigation for conversion of farmland. Indicative of this feasibility is the fact that many jurisdictions now require a 1:1 or greater mitigation ratio for conversion of agricultural land.<sup>14</sup> For instance, the San Joaquin County Board of

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<sup>11</sup> See Pub. Resources Code, § 21002; CEQA Guidelines, §§ 15126.4, subd. (a), 15126.6, subd. (b).

<sup>12</sup> CEQA Guidelines, § 15370, subd. (e).

<sup>13</sup> See, e.g., Pub. Resources Code, § 21095, subd. (a).

<sup>14</sup> Several land trusts are active in the Merced County area that could likely assist in implementing a mitigation program, including: The American Farmland Trust, Merced County Farmlands and Open Space Trust and the Central Valley Farmland

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Supervisors recently adopted a 1:1 in-kind mitigation requirement for all conversion of farmland in that County.<sup>15</sup> Further indicating feasibility, many jurisdictions are requiring mitigation in the form of conservation easements on a project-by-project basis, even in the absence of local ordinances.<sup>16</sup>

In the case of Los Banos, creation of an agricultural mitigation program could help jump-start the creation of a permanent buffer of agricultural/open space land uses between the proposed northern SR 152 Bypass and the GEA. Combining funds or in-kind grants of conservation easements with other available resources would help ensure that the new highway route creates an urban edge, rather than drawing new development projects even nearer to GEA resources. It is appropriate and feasible for projects that permanently convert agricultural land to urban uses to include mitigation for the resulting significant effects.

#### **D. Water Resources and Water Quality**

GWD provides storm water drainage services to the City for much of the City's storm water runoff. GWD is currently in negotiations with the City

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Trust, among others. The Great Valley Center's Agricultural Transaction Program and California Department of Conservation's California Farmland Conservancy Program have also promoted and funded farmland easement programs in Merced County.

<sup>15</sup> San Joaquin County Code, § 9-1080; see also Davis Municipal Code, § 40A.03.030 (requiring 2:1), Yolo County Code, § 8-2.2416 (requiring 1:1).

<sup>16</sup> For instance, a Hilmar residential subdivision in 2002 was conditioned on providing agricultural conservation easements for, or in-lieu fees to purchase, an equal number of acres of equivalent farmland converted from agricultural use as a result of the project. (See Merced County Planning and Community Development Department Staff Report and Recommendation, p. 9, condition 8 (December 18, 2002).) Mitigation in the form of conservation easements will also be required for conversion of agricultural lands exceeding 20 acres within the Delhi Community Plan area. (See Delhi Community Plan Draft EIR, p. 4.1-33, Implementation Measure OS 3.2a.)

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to increase contracted flows, as contemplated in the City's 2003 Master Storm Water Plan.

Receiving water bodies for the City's storm water are listed as impaired under Section 303(d) of the Clean Water Act. Urban storm water runoff can contain a variety of constituents that would not normally be associated with runoff from the irrigated wetlands contained within the District. Pollutants associated with urban runoff generally include: solids, oxygen-demanding substances, nitrogen and phosphorus, pathogens, petroleum hydrocarbons, metals and synthetic organics.<sup>17</sup>

Discharges to GWD-operated facilities are subject to the Coalition Group Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R-5-2006-053) ("Conditional Waiver"). GWD is a self-funded managed wetlands subgroup of the Westside San Joaquin River Watershed Coalition. The Conditional Waiver requirements are complex and require significant compliance efforts.

As the acreage of impervious surfaces increases, flows will also increase, along with the potential of contamination. There are many effective mitigation measures to reduce the potentially significant effects associated with storm water pollution. Effective measures include: storm drain stenciling programs, recognition of businesses that take steps to reduce or eliminate storm water pollution and school/public employee education programs. Given the sensitivity of the receiving waters for the City's storm water, the Districts urge the City to incorporate these and other feasible mitigation measures into the General Plan EIR.

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<sup>17</sup> US EPA, Preliminary Data Summary of Urban Storm Water Best Management Practices, EPA-821-R-99-012 (August 1999) at p. 4-1.

### E. Land Use and Planning

A lead agency must identify, discuss and analyze the growth-inducing impacts of a proposed project.<sup>18</sup> A project must be analyzed to determine if it will facilitate and encourage population growth, economic growth or changes in land use and development patterns.<sup>19</sup> Significant impacts related to that growth include: increased traffic; increased pollution; increased demand for services and infrastructure; accelerated and increased loss of open space; and agricultural and habitat land. The EIR must also examine what the impact of this induced growth may be on the environment.<sup>20</sup> The lead agency must never assume that growth in an area is necessarily beneficial or of little significance environmentally, but must make its judgment in this regard only after open-minded analysis.<sup>21</sup>

The Draft Preferred Land Use Plan initially included a very large "Planning Area" northwest of the City and extending toward the community of Volta. Though this area was shown as "agricultural rural," inclusion of this area on the City's maps indicated a future intent to make this area part of the City. Given the amount of land available in close proximity to the currently developed footprint of the City, the Districts questioned the inclusion of this area in its planning maps.<sup>22</sup>

The Districts have long been concerned about maintaining a clear separation between the City and the community of Volta.<sup>23</sup> Volta lies

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<sup>18</sup> CEQA Guidelines, § 15126.2, subd. (d).

<sup>19</sup> CEQA Guidelines, § 15126.2, subd. (d)

<sup>20</sup> CEQA Guidelines, § 15126.2, subd. (d)

<sup>21</sup> CEQA Guidelines, § 15126.2, subd. (d)

<sup>22</sup> Most of the area designated for future growth in the Draft Preferred Land Use Diagram is "low density residential" -- higher density land uses would be a better option than overextending the City's Planning Area.

<sup>23</sup> The Districts also have a longstanding concern regarding the appropriate scale of development in Volta, given its proximity to GEA resources. The Districts are working with the County in its General Plan update process to redesignate Volta as

adjacent to the Volta State Wildlife Area, which would be adversely affected by incursion of additional urban land uses. The Districts' studies have also shown that a land use buffer of agriculture/open space around the GEA is the most effective way to protect the GEA.

The latest version of the Draft General Plan Land Use Diagram contracts the Planning Area inward to exclude the area to the northwest of the City. The Districts appreciate this change. A large commercially designated area, however, continues to be shown in the southern half of the future SR 152 Bypass/Highway 165 interchange. Because of the close proximity of sensitive GEA resources, such as the Los Banos Wildlife Area, the Districts believe that the size of this commercial area should be reduced.

If the City includes land uses in the General Plan that could lead to further urban encroachment near the GEA, the growth inducing impacts of those actions must be considered. Impacts of urban development adjacent to the GEA may include: (1) a reduction in habitat value of the entire interior of the wetlands complex; (2) chemical disruption including the introduction of fertilizers and toxic chemicals in drainage water; (3) introduction of non-native species of both plants and animals; (4) noise disruption; (5) visual disruption caused by removal of trees and shrubs around the wetlands; (6) interruption of water deliveries for wildlife uses; (7) the competition for the water supply that supports the wetland habitat; and (8) interference with the biological corridor between the north and south grasslands.<sup>24</sup> Specific mitigation measures, such as urban growth boundaries, agricultural/open space conservation easement programs and housing density changes, would also need to be considered to mitigate these significant growth-related impacts.

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an Agricultural Service Center, rather than a Specific Urban Development Plan area. This change is recommended in the County's current General Plan.

<sup>24</sup> See Thomas Reid Associates, *Grassland Water District Land Planning Guidance Study* (1995), Appendix A (Noss, R.F., *Translating Conservation Principles to Landscape Design for the Grassland Water District* (1994)).

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**F. Recreation**

The Districts are pleased that the City is including an economic element in the new General Plan. Developing recreational opportunities in the grasslands should be a major component of this new element. The concentration of wetlands and wildlife is a unique feature of the area, attracting hunters and other recreational visitors who make significant contributions to the local economy. The Districts believe that much more can be done to draw visitors to the GEA, and that the City is the natural gateway for those visits. Developing these opportunities will enhance the economy of the local area and direct additional resources toward preservation of this resource for future generations.

\* \* \*

The Districts look forward to working with the City to ensure that the EIR accurately analyzes environmental impacts associated with implementing the City's new General Plan. Please contact me if you have any questions about the information in this letter.

Very truly yours,



Osha R. Meserve

ORM:cnh

cc: Michael Dyett, Dyett & Bhatia  
Grassland Water District  
Grassland Resource Conservation District  
Grassland Regional Resources Working Group

1124-511d



# City of Los Banos – Citywide Traffic Model Update

## Final Report

Prepared For  
**Dyett & Bhatia**  
and  
**City of Los Banos**

Prepared By:



**CITY OF LOS BANOS –  
CITYWIDE TRAFFIC MODEL UPDATE**

**FINAL REPORT**

**Prepared For  
Dyett & Bhatia  
and  
City of Los Banos**

**Prepared By**

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**December 2006**

**55-2818-02  
(R941TS001.DOC)**

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# CHAPTER 1

## 1.1 INTRODUCTION

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In 2005, the City of Los Banos retained Dyett & Bhatia (D&B) to undertake a General Plan update and prepare an EIR. As D&B's subcontractor, OMNI-MEANS is responsible for the transportation circulation analysis and development of the first City of Los Banos Citywide Traffic Model. The currently used City of Los Banos traffic model is a "nested" traffic model within the larger Merced County Association of Governments (MCAG) regional travel demand forecast model. The MCAG model was originally developed in the 1980s utilizing the DOS-based MINUTP transportation planning software. The currently used traffic model had essentially been developed by disaggregating land uses and refining street circulation network within the City of Los Banos Planning area, from the original MCAG model representations.

From the time the current MCAG traffic model was created in the 1980s, the model had been utilized as a planning analysis tool on a variety of traffic impact/circulation studies as part of several larger land developments and corridor studies completed for the City. However, through the 1990's, significant technological advancements have occurred in transportation planning software applications. A popular, technologically advanced (or "next-generation") version of the MINUTP software technology, known as TP+/Viper, is now being utilized by the updated MCAG regional travel demand forecast model as well as by other traffic models in the Central Valley.

The City's General Plan as well as the City's land uses and street circulation have continuously evolved over the past several years and it is warranted that the City develop a traffic model that is consistent with the most recent existing and projected future travel/traffic conditions. For these reasons, the City has desired to develop their own traffic model. OMNI-MEANS has been retained by D&B and the City to provide assistance with their traffic model development effort. The new traffic model uses the Windows-based TP+/Viper transportation planning software.

The development of a new "Existing Conditions" traffic model, calibrated to 2004-05 conditions, forms the basis on which an updated "future conditions model" has been developed in order to test alternative land use and circulation alternatives and to help assess the need, nature, and timing of future circulation improvements required within the Los Banos planning area. Additional applications, including updating and revising traffic impact mitigation fees, could also result from the development of the existing and future conditions' traffic models.

This Draft Report first summarizes the background data and information compiled by OMNI-MEANS towards the development of the City of Los Banos Traffic Model. This report then describes the technical components of the traffic model development process and presents the products created with the completion of individual model development tasks. This report is organized into the following Chapters.

- Chapter 1 – Introduction
- Chapter 2 – Background Conditions
- Chapter 3 – Traffic Model Development and Base-Year Model Calibration
- Chapter 4 – Build-Out Traffic Model Development

It should be noted that this report specifically focuses on the citywide traffic model development/update process only. Future year traffic forecasts will be developed following the selection of the preferred land use alternative, which has yet to be determined.

# CHAPTER 2

## 2.1 BACKGROUND CONDITIONS

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In order to develop the Los Banos Citywide Traffic Model, OMNI-MEANS first needed to obtain a comprehensive understanding of the most recent existing transportation system, land developments, and other background information pertaining to existing and future land development and travel throughout the City. To this end, OMNI-MEANS collected available transportation and land use information that would be useful in obtaining an understanding of existing “baseline” travel patterns within and through the City.

Available sources of transportation and land use information pertinent to the City of Los Banos that were reviewed included the following:

- *City of Los Banos Land Use Element, 1999.*
- *City of Los Banos Circulation and Transportation Element, 1999.*
- Final Environmental Assessment Expanded Initial Study Los Banos Airport (October 1996).
- Los Banos Rail Corridor Master Plan (April 2005).
- Los Banos Bypass Environmental Impact Statement/Environmental Impact Report and Section 4(f) Evaluation (February 2005).
- Los Banos Home Depot Initial Study (April 2005).
- Merced County Circulation Element.
- City of Los Banos Commuter Bike Plan (October 2006).
- 2004 MCAG Regional Transportation Plan.
- Draft Los Banos Capital Facilities Fee Nexus Study (August 2005).
- MCAG Regional Traffic Model.
- Assessor Parcel based land use database (in digital format) for parcels within the City of Los Banos Planning area, obtained from the Merced County Assessor’s Office.
- GIS database from the City that contained Assessor’s Parcel mapping, General Plan land uses, City limit line information, etc.
- Several recently completed traffic impact studies for the City.
- Available aerial mapping within the City.
- Field survey of land development and travel conditions, along with photographs of street system.
- US Census Bureau, Census 2000 Data (in GIS format) for the City of Los Banos and Merced County.

### EXISTING TRANSPORTATION SYSTEM

The City of Los Banos is centrally located in Merced County, where State Route 152 intersects with State Route 165. Los Banos residents benefit from two major north-south transportation corridors: Interstate 5 to the west and State Route 99 to the east. Accessing these routes, Los Banos is

approximately 120 miles southeast of San Francisco and 120 miles south of Sacramento; the county seat, Merced, is located approximately 35 miles via automobile (State Route 152 to State Route 59) to the northeast.

Positioned in one of the most productive agricultural regions in the world, Los Banos economy has traditionally been dominated by agriculture and agriculturally based industries. Adding to the economic base are many highway-commercial land uses along the State Route 152 corridor through central Los Banos. State Route 152 is the route of choice for many travelers going to/from the Central Valley to the Bay Area and other coastal communities. Figure 1 illustrates the City of Los Banos regional map. The following roadways provide primary circulation within the Los Banos Planning area.

**State Route 165** also known as **Mercey Springs Road**, is a regional State Highway that provides north-south travel through Los Banos. State Route 165 is a two-lane arterial from Interstate 5 to the south through Los Banos and into Turlock to the north. State Route 165 is also a designated truck route with 9.1% trucks in Los Banos.

**State Route 152** also known as **Pacheco Boulevard**, is a regional State Highway that provides for east-west travel within and through Los Banos. State Route 152 begins at State Route 99 to the east and continues to US 101 in Gilroy in Santa Clara County. State Route 33 and State Route 152 run concurrently through Los Banos.

Within Los Banos, State Route 152 is a four-lane undivided arterial from the west of Badger Flat Road to Ward Road and a four-lane divided expressway with limited access east and west of Los Banos. Also a designated truck route, State Route 152 carries 10.0% trucks in Los Banos.

**I Street** is a two-lane roadway that provides access to residential and commercial areas in central Los Banos. This roadway generally extends from Sandra Street north to SR 152 then curves east-west through downtown Los Banos where it intersects with SR 152, approximately  $\frac{1}{4}$  mile west of the intersection at SR 165.

**Ward Road** is two/four-lane roadway that provides north-south circulation in eastern Los Banos. Currently, as development is taking place on Ward Road north of State Route 152, portions of the roadway have been widened to accommodate four lanes. Ward Road primarily serves residences to the north of State Route 152 and agricultural and industrial uses to the south.

**Badger Flat Road** is two-lane roadway that provides north-south access for Los Banos residents and has full access at State Route 152. Badger Flat Road primarily serves agriculture uses west of the airport and commercial and residential uses south of State Route 152.

**H Street-Ingomar Grade** is a two-lane roadway that generally provides for east-west regional travel throughout the City of Los Banos. Ingomar Grade runs in a northwest-southeast diagonal from Henry Miller Road where eventually transitions into H Street in downtown Los Banos. In the downtown core area, H Street primarily serves industrial and commercial uses.

**Pioneer Road** is a two-lane roadway that provides east-west circulation in and around south Los Banos from just east of Interstate 5 to Ward Road. Pioneer Road generally serves agricultural uses to the west and existing and new residential developments in south Los Banos.



## EXISTING DAILY TRAFFIC COUNTS

For purposes of understanding existing travel conditions as well as for developing the Citywide traffic model, existing daily traffic counts were desired at certain key locations within the City's planning area, where recently completed traffic counts may not have been already available.

On State Routes 152 and 165, daily traffic counts were obtained from the Caltrans website. Daily traffic counts were conducted by the City of Los Banos through KD Anderson Transportation Engineers in 2003 and 2004 at the following locations:

- B Street – just east of State Road 165
- B Street – just west of State Road 165
- Birchwood Avenue – just east of Nantes Avenue
- Center Avenue – just south of State Route 152
- 11th Street – just south of State Route 152
- G Street – just west of 7th Street
- G Street – just west of State Road 165
- H Street – just west of 4th Street
- H Street – just east of 4th Street
- H Street – just west of 2nd Street
- H Street – just east of 2nd Street
- I Street – just west of 6th Street
- I Street – just north of State Route 152
- West I Street – just south of State Route 152
- Nantes Avenue – just north of Overland Avenue
- Overland Avenue – just east of 2nd Street
- Overland Avenue – just west of 2nd Street
- Overland Avenue – just north of H Street
- Place Road – just south of B Street
- San Luis Street – just west of Ward Road
- Santa Barbara Drive – just west of State Road 165
- 2nd Street – just south of H Street
- 7th Street – just south of Willmott Road
- 7th Street – just north of F Street
- 7th Street – just north of G Street
- 7th Street – just north of State Route 152
- 7th Street – just south of State Route 152
- 6th Street – just north of State Route 152
- Stonewood Drive – just north of Overland Avenue
- Stonewood Drive – just south of Overland Avenue
- Ward Road – just south of State Route 152
- Willmott Road – just west of 2nd Street
- Willmott Road – just west of 3rd Street

The daily traffic counts at the above listed locations were recorded over a continuous 24-hour period. The traffic counts from the above listed locations were supplemented with other locations' daily and peak hour traffic counts available from recently completed traffic studies and from the city's traffic count database. Figure 2 shows the existing ADT volumes at roadway segment locations where traffic counts were available (2003-2004 data).



## LEVEL-OF-SERVICE METHODOLOGY

Existing conditions traffic operations have been quantified through the determination of “Level of Service” (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade “A” through “F” is assigned to an intersection or roadway segment representing progressively worsening traffic conditions.

Roadway segment levels of service were estimated utilizing average daily traffic (ADT) based LOS thresholds. Table 1 shows the ADT-based roadway segment LOS thresholds utilized in this study.

**Table 1 Level-of-Service (LOS) Criteria for Roadway Segments**

<i>Roadway Segment Type</i>	<i>Total Two-way Average Daily Traffic (ADT)</i>				
	<i>LOS A</i>	<i>LOS B</i>	<i>LOS C</i>	<i>LOS D</i>	<i>LOS E</i>
4-Lane Undivided Arterial (no left-turn lane)	18,000	21,000	24,000	27,000	30,000
2-Lane Arterial (with left-turn lane)	11,000	12,500	14,500	16,000	18,000
2-Lane Arterial (no left-turn lane)	9,000	10,500	12,000	13,500	15,000
2-Lane Collector/Local Street	6,000	7,500	9,000	10,500	12,000
2-Lane Rural Highway	2,400	4,800	7,900	13,500	22,900

## EXISTING TRAFFIC OPERATIONS – ROADWAY SEGMENTS

Existing roadway segment operations (including freeway mainline operations) were first quantified utilizing the LOS thresholds indicated in Table 1. The resulting ADT-based LOS estimates for critical study segments within the City of Los Banos planning area are presented in Table 2.

As shown in Table 2, all study roadway segments, with the exception for two segments along State Route 152, are currently operating at ADT-based LOS “C” conditions or better. The two segments along State Route 152 are operating at LOS “D” conditions. According to the current Circulation and Transportation Element, temporary LOS “D” conditions for peak afternoons at some intersections are permissible.

**Table 2 Existing Roadway Segment Level-of-Service**

<i>Roadway Segment</i>	<i>From</i>	<i>To</i>	<i>Roadway Segment Type</i>	<i>Lanes</i>	<i>ADT03<sup>2</sup></i>	<i>ADT04<sup>2</sup></i>	<i>LOS</i>
State Route 152	Volta Road	Badger Flat Road	Four-lane Undivided Arterial	4	-	19,800	C
State Route 152	Badger Flat Road	I Street	Four-lane Undivided Arterial	4	-	27,000	C
State Route 152	I Street	4th Street	Four-lane Undivided Arterial	4	-	29,500	D
State Route 152	4th Street	6th Street	Four-lane Undivided Arterial	4	-	31,500	D
State Route 152	6th Street	I Street	Four-lane Undivided Arterial	4	-	33,500	D
State Route 152	I Street	State Route 165	Four-lane Undivided Arterial	4	-	28,500	D
State Route 152	State Route 165	Ward Road	Four-lane Undivided Arterial	4	-	31,000	D
State Route 152	Ward Road	Study Area Boundary	Four-lane Undivided Arterial	4	-	31,000	D
State Route 165	Study Area Boundary	Pioneer Road	Two-lane Arterial	2	-	6,200	C
State Route 165	Pioneer Road	Scripps Drive	Two-lane Arterial	2	-	8,300	A
State Route 165	Scripps Drive	State Route 152	Two-lane Arterial	4	-	16,600	A
State Route 165	State Route 152	B Street	Two-lane Arterial	2	-	12,600	D
State Route 165	B Street	Dove Street	Two-lane Arterial	2	-	10,700	C
State Route 165	Dove Street	Henry Miller Avenue	Two-lane Collector	2	-	4,700	B
B Street	Santa Ana Street	State Route 165	Two-lane Collector	2	-	2,750	A
B Street	State Route 165	Wisteria Street	Two-lane Collector	2	-	4,100	A
G Street	7th Street	San Juan Street	Two-lane Local	2	-	2,930	A
G Street	San Juan Street	State Route 165	Two-lane Local	2	-	2,450	A
H Street	Nevada Avenue	2nd Street	Two-lane Collector	2	-	4,060	A
H Street	2nd Street	3rd Street	Two-lane Collector	2	-	4,930	A
H Street	3rd Street	4th Street	Two-lane Collector	2	-	5,830	A
H Street	4th Street	5th Street	Two-lane Collector	2	-	5,920	A
I Street	Hawthorne Drive	State Route 152	Two-lane Local	2	-	6,660	A
I Street	State Route 152	L Street	Two-lane Collector	2	-	7,790	A
I Street	5th Street	6th Street	Two-lane Collector	2	2,600	-	A
2nd Street	I Street	H Street	Two-lane Local	2	4,510	-	A
6th Street	State Route 152	K Street	Two-lane Local	2	4,500	-	A
7th Street	Washington Avenue	State Route 152	Two-lane Local	2	2,330	-	A
7th Street	State Route 152	K Street	Two-lane Local	2	-	2,910	A
7th Street	H Street	G Street	Two-lane Collector	4	-	13,150	A
7th Street	G Street	E Street	Two-lane Collector	2	-	7,290	A
7th Street	E Street	Willmott Avenue	Two-lane Collector	2	5,980	-	A

<i>Roadway Segment</i>	<i>From</i>	<i>To</i>	<i>Roadway Segment Type</i>	<i>Lanes</i>	<i>ADT03<sup>2</sup></i>	<i>ADT04<sup>2</sup></i>	<i>LOS</i>
11th Street	Washington Avenue	State Route 152	Two-lane Collector	2	1,380	4,390	A
Overland Avenue	H Street	Santa Lucia Ave	Two-lane Collector	2	1,800	-	A
Overland Avenue	1st Street	2nd Street	Two-lane Collector	2	-	2,470	A
Overland Avenue	2nd Street	3rd Street	Two-lane Collector	2	-	3,100	A
Stonewood Drive	Rhoda Avenue	Overland Avenue	Two-lane Collector	2	5,470	-	A
Stonewood Drive	Overland Avenue	Olivewood Drive	Two-lane Collector	2	-	4,240	A
Willmott Road	1st Street	2nd Street	Two-lane Collector	2	1,400	-	A
Willmott Road	2nd Street	3rd Street	Two-lane Collector	2	2,380	-	A
Place Road	San Luis Street	B Street	Two-lane Collector	2	-	660	A
San Luis Street	Park Warren Drive	Ward Road	Two-lane Local	2	-	1,120	A
Santa Barbara Drive	Santa Venetia	State Route 165	Two-lane Local	2	2,100	-	A
Nantes Avenue	Overland Avenue	Santa Barbara Street	Two-lane Collector	2	-	1,750	A
Ward Road	Technology Drive	State Route 152	Two-lane Collector	2	670	-	A
Birchwood Avenue	Nantes Avenue	Zinfandel Street	Two-lane Local	2	-	739	A
Center Avenue	Washington Avenue	State Route 152	Two-lane Collector	2	2,280	2,180	A

## EXISTING TRAFFIC VOLUMES – INTERSECTIONS

As part of the traffic model update process, traffic counts from two-way stop-controlled, all-way stop-controlled and signalized intersections were collected from the City of Los Banos (KD Anderson Transportation Engineers) for the PM peak hour and are presented in this report. Typically, the PM peak hour is defined as the one-hour period of peak traffic flow counted between 4:00 and 6:00 PM. Intersection counts include the total number of turning movements, by direction, during a 1-hour period. Existing weekday PM peak-hour traffic counts were identified at the following 17 locations:

- State Route 152 (Pacheco Boulevard)/11<sup>th</sup> Street
- State Route 152 (Pacheco Boulevard)/Miller Lane
- State Route 152 (Pacheco Boulevard)/Place Road
- State Route 152 (Pacheco Boulevard)/Nickel Street
- State Route 152 (Pacheco Boulevard)/Ward Road
- San Luis Street/Ward Road
- B Street/State Route 165 (Mercey Springs Road)
- B Street/Ward Road
- Overland Road/Ingomar Grade/H Street
- Overland Road/Nantes Avenue
- Overland Road/Cabernet Street
- Overland Road/Stonewood Drive

- Overland Road/ State Route 165 (Mercey Springs Road)
- Vineyard Drive/Nantes Avenue
- Dove Street/State Route 165 (Mercey Springs Road)
- Henry Miller Avenue/Nantes Avenue
- Henry Miller Avenue/ State Route 165 (Mercey Springs Road)

Figure 3 shows the existing PM peak hour intersection traffic volumes and Figure 4 identifies existing lane geometrics and control at the study intersections.

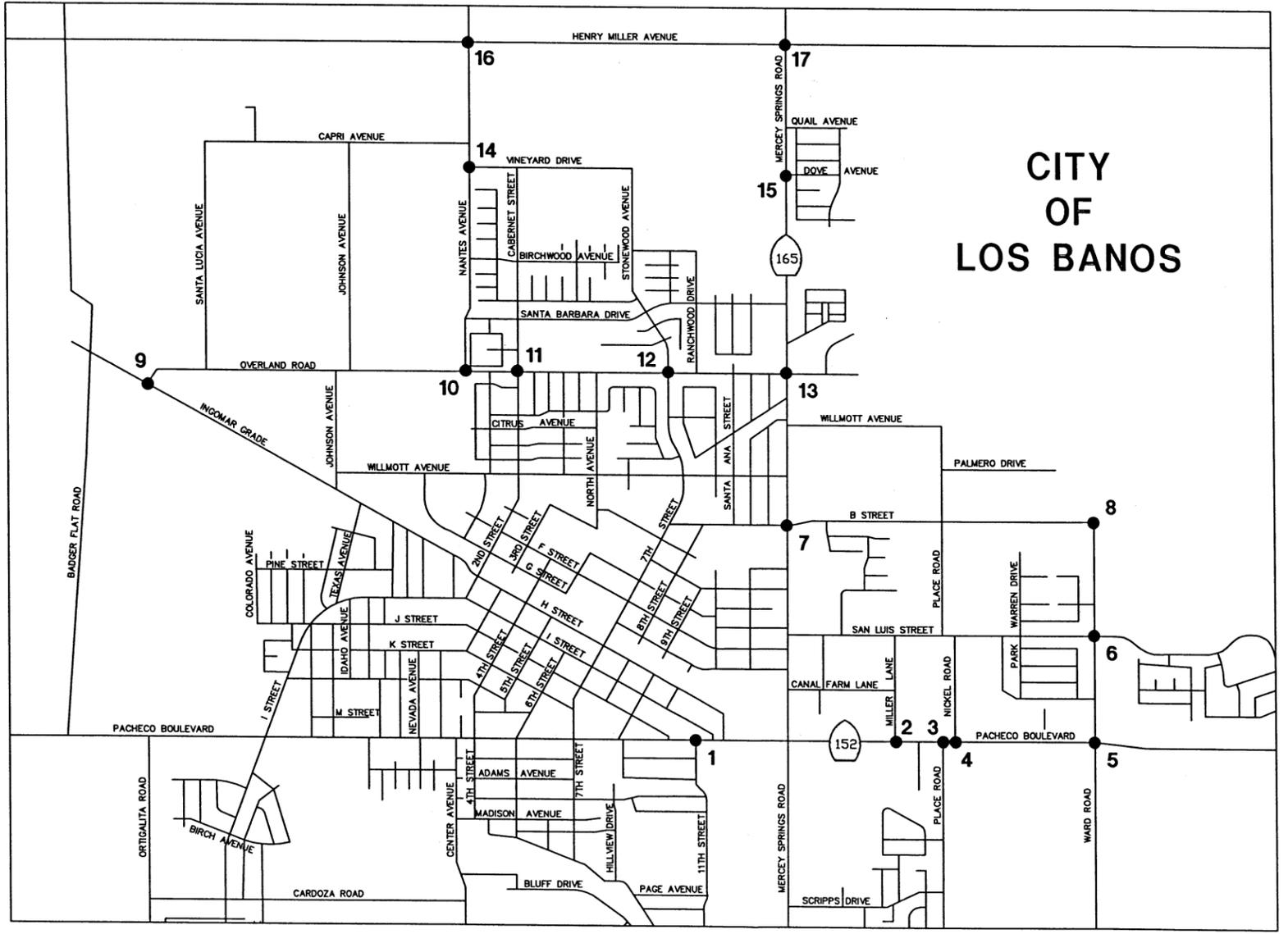
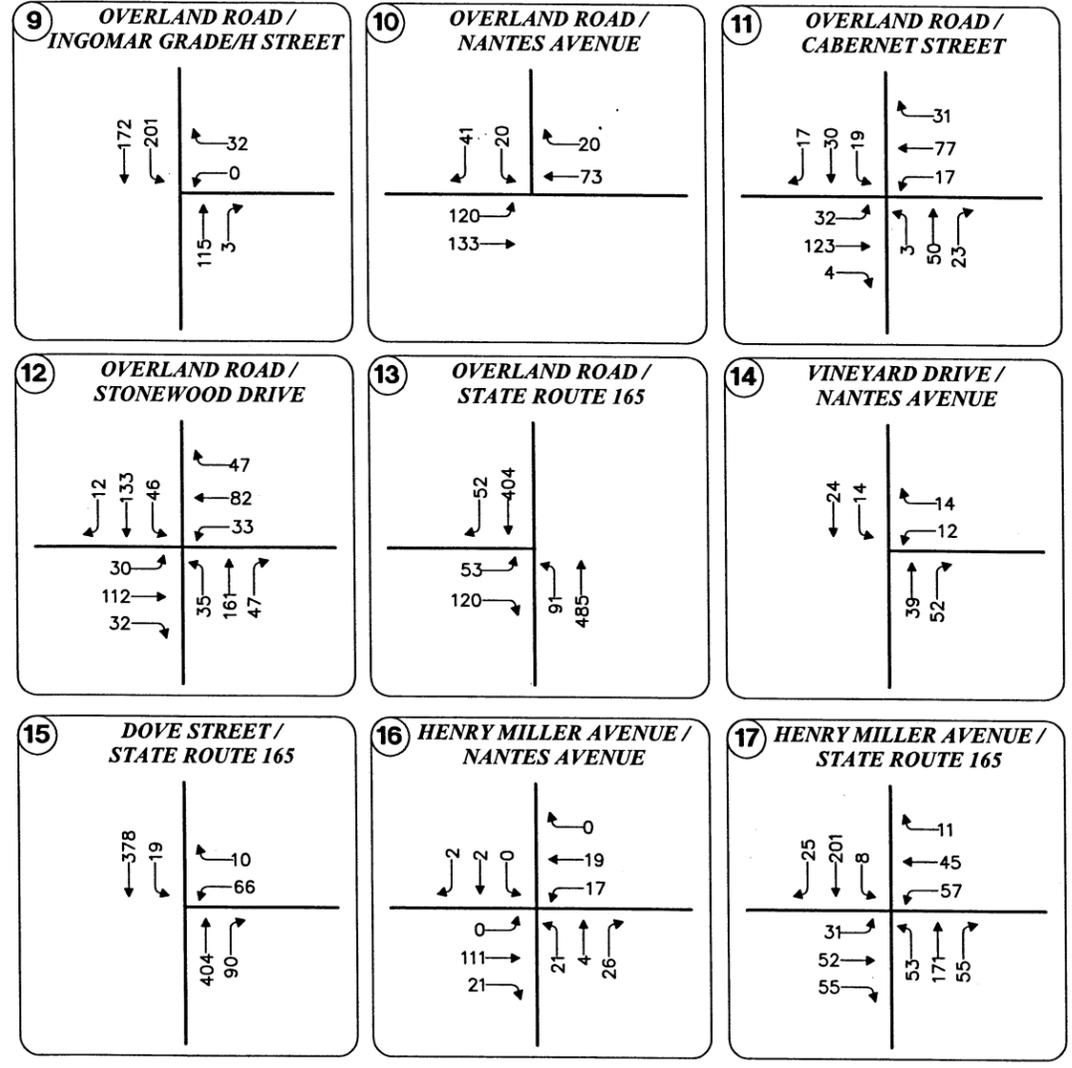
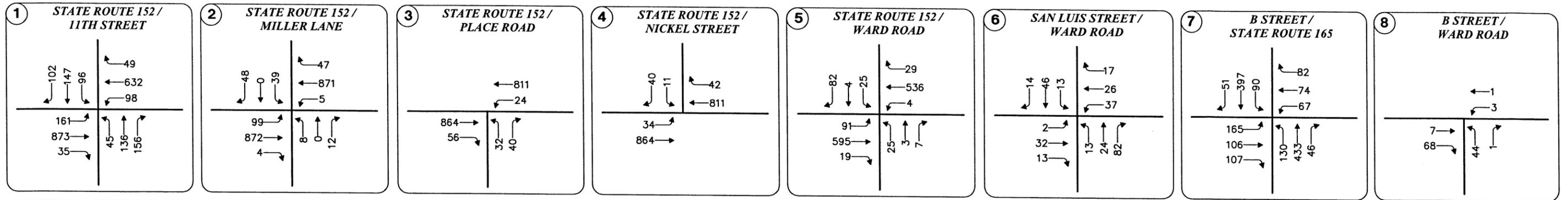
### **LEVEL OF SERVICE METHODOLOGY**

Traffic operations have been quantified through the determination of “Level of Service” (LOS). LOS is a qualitative measure of traffic operating conditions, whereby a letter grade “A” through “F” is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. LOS was calculated for different intersection control types using the methods documented in the Highway Capacity Manual 2000 (HCM 2000). LOS definitions for different types of intersection controls are outlined in Table 3.

Table 3 Level-of-Service Criteria for Intersections

Level of Service	Type of Flow	Delay	Maneuverability	Stopped Delay/Vehicle (Sec)		
				Signalized	Unsignalized	All-Way Stop
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10.0	≤ 10.0	≤ 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20.0	> 10 and ≤ 15.0	> 10 and ≤ 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	> 20 and ≤ 35.0	> 15 and ≤ 25.0	> 15 and ≤ 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	> 35 and ≤ 55.0	> 25 and ≤ 35.0	> 25 and ≤ 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	> 55 and ≤ 80.0	> 35 and ≤ 50.0	> 35 and ≤ 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0	> 50.0	> 50.0

References: Highway Capacity Manual 2000

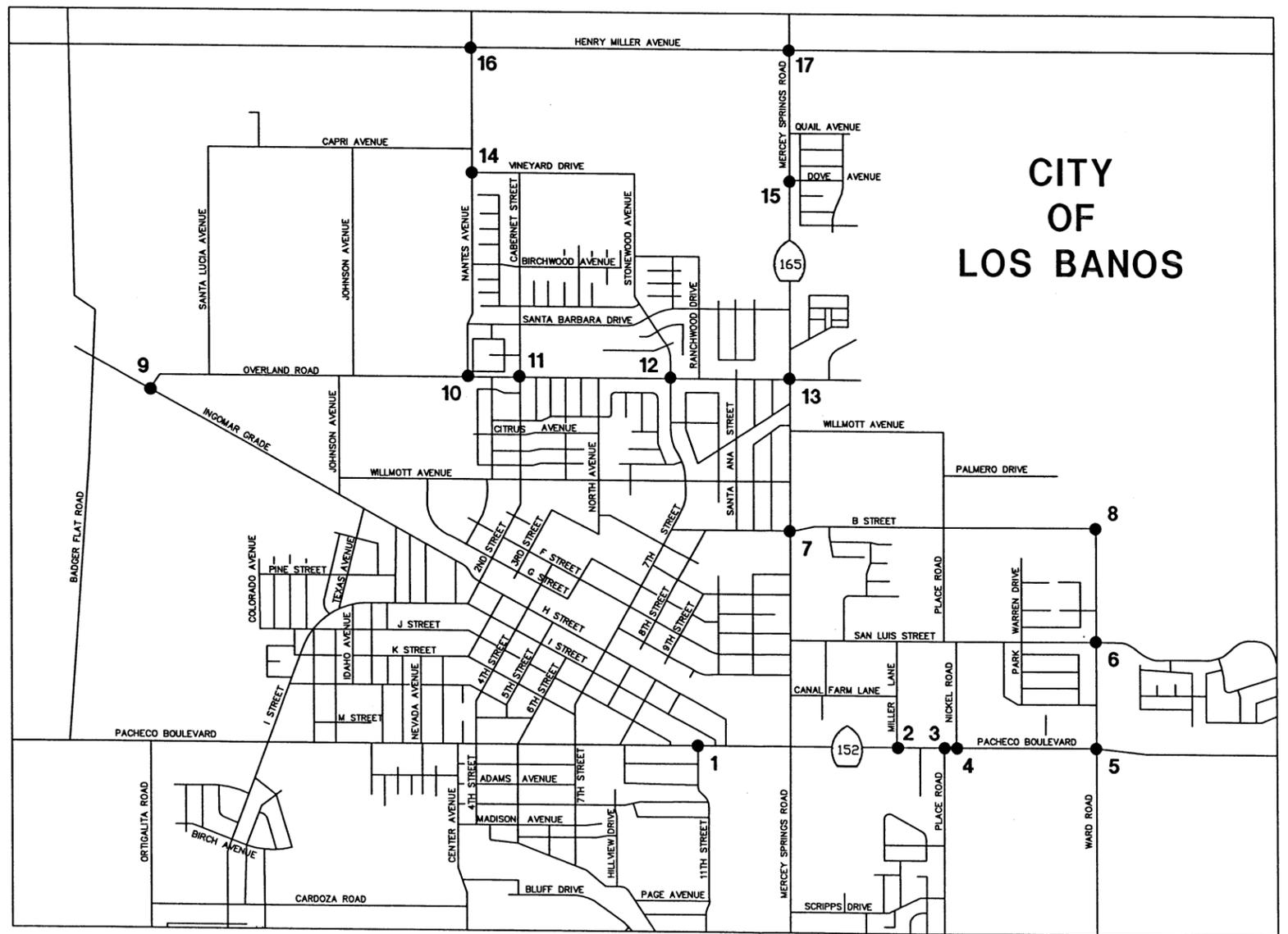
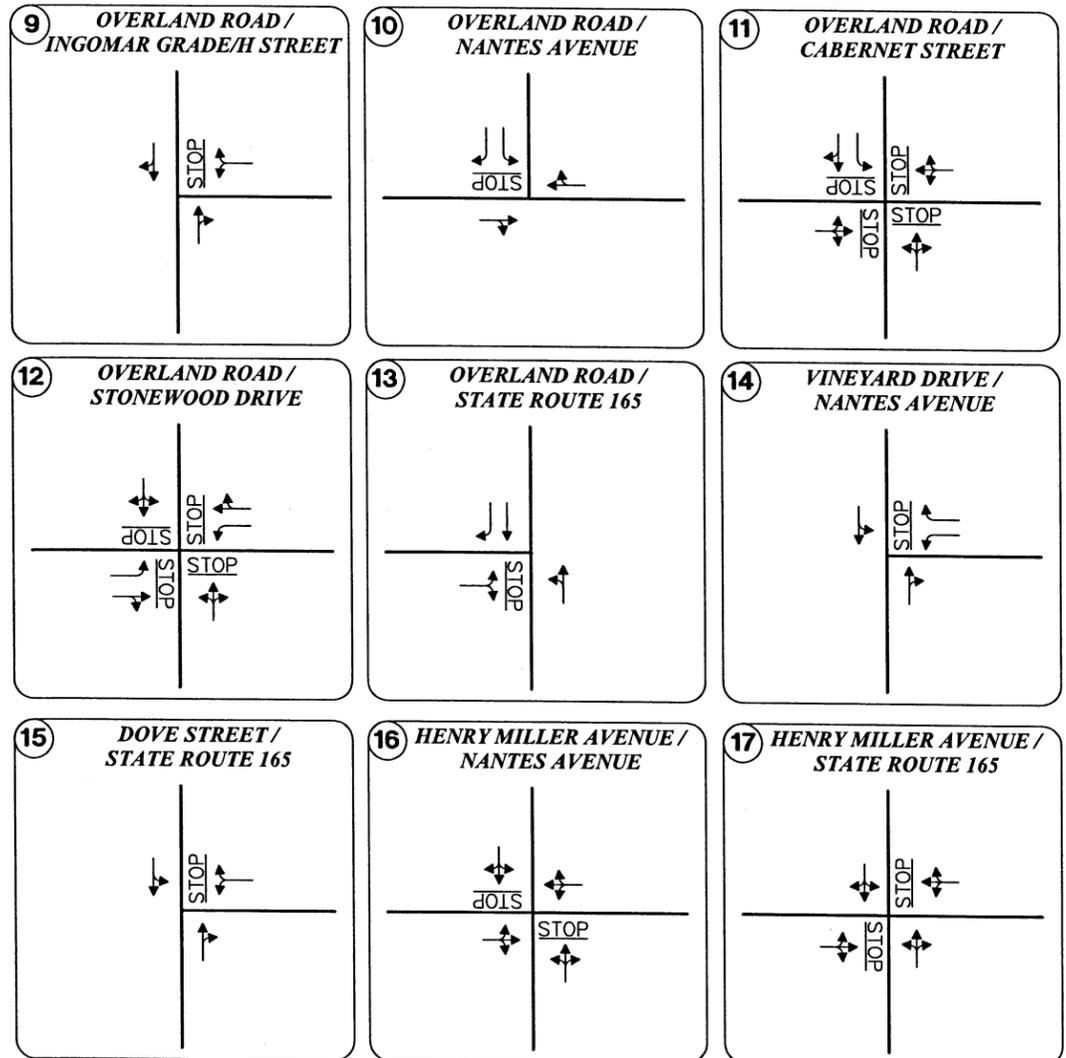
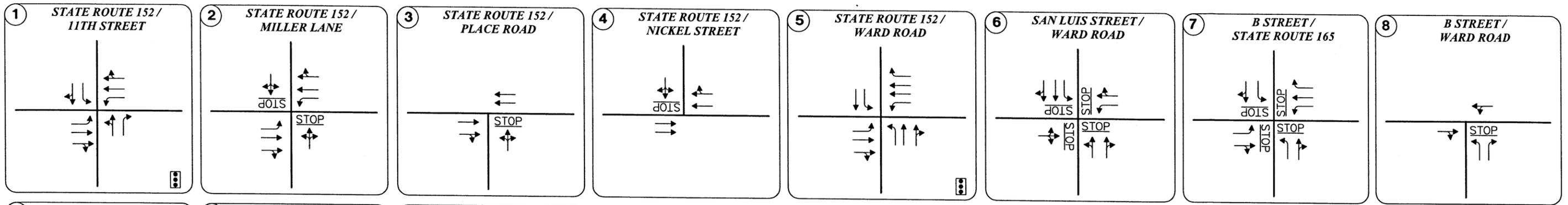


Los Banos Citywide Traffic Model

**Existing Traffic Volumes**

Figure 3





Los Banos Citywide Traffic Model

Figure 4

# Existing Lane Geometrics and Control



The City of Los Banos General Plan Circulation and Transportation Element has designated LOS “C” as the minimum acceptable LOS standard on City facilities in general with the exception of LOS “D” at some intersections during the afternoon peak period. In this report, a peak-hour of LOS “C” is taken as the threshold for acceptable traffic operations at all study intersections. All intersection turning movement volumes and LOS worksheets are contained in the Appendix.

Although Caltrans has not designated a LOS standard, Caltrans’ *Guide for the Preparation of Traffic Impact Studies (June 2001)* indicates that when the LOS of a State highway facility falls below the LOS “C/D” cusp in rural areas and the LOS “D/E” cusp in the Urban Areas, any additional traffic may have a significant impact. When existing State highway facilities are operating at higher levels of service than noted above, 20-year forecasts or general plan build-out analysis for the facility should be considered to establish equitable project contributions to local development impact fee programs that address cumulative traffic impacts.

To determine whether “significance” should be associated with unsignalized intersection level of service, a supplemental traffic signal warrant analysis was also performed. The signal warrant criteria employed for this study are presented in the Caltrans *Traffic Manual*. Specifically, this study utilized the Peak-Hour-Volume Warrant 11 (Urban Areas). Though utilization of this warrant may indicate that signalization would be required, the final decision to provide this improvement should be based on further studies utilizing the additional warrants presented in Caltrans *Traffic Manual*. It should be noted that the Peak-Hour-Volume Warrant 11 (Urban Areas) was only applied when the LOS was “D” or worse. Therefore, there may be instances when the unsignalized intersection operates at an acceptable LOS “C” conditions or better but still meets Warrant 11 (Urban Areas).

The analysis presented in this report generally provides a “planning level” evaluation of traffic operating conditions, which is considered sufficient for California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA) purposes. This planning level evaluation has, however, incorporated actual heavy-vehicle adjustment factors, peak hour factors, and signal lost-time factors and reports the resulting intersection delays and LOS as estimated using HCM-2000 methodologies. In this study, a general Peak Hour Factor (PHF) of 0.92 has been applied to the analysis of all study intersections under all analysis scenarios. The HCM-recommended suburban traffic signal default cycle length of 100 seconds has been used for analysis of future signalized intersections, with 4 seconds of “lost time” per critical signal phase. The *Traffix 7.7* integrated computer software program has been utilized to implement the HCM-2000 analysis methodologies.

## **EXISTING TRAFFIC OPERATIONS – INTERSECTIONS**

“Existing” peak-hour intersection traffic operations were quantified applying existing traffic volumes (shown on Figure 3) and existing intersection lane geometrics and control (shown on Figure 4). Table 4 presents the “Existing” peak hour intersection levels of service.

**Table 4 Existing Conditions: Intersection Level-of-Service**

No	Intersection	Control Type	PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?
1	State Route 152 (Pacheco Boulevard)/11th Street	Signal	26.2	C	--
2	State Route 152 (Pacheco Boulevard)/Miller Lane	TWSC	OVRFL	F	No
3	State Route 152 (Pacheco Boulevard)/Place Road	TWSC	32.5	D	No
4	State Route 152 (Pacheco Boulevard)/Nickel Street	TWSC	42.0	E	No
5	State Route 152 (Pacheco Boulevard)/Ward Road	Signal	16.4	B	--
6	San Luis Street/Ward Road	AWSC	8.0	A	No
7	B Street/State Route 165 (Mercey Springs Road)	AWSC	56.1	F	No
8	B Street/Ward Road	AWSC	7.3	A	No
9	Overland Road/Ingomar Grade/H Street	TWSC	9.0	A	No
10	Overland Road/Nantes Avenue	TWSC	10.1	B	No
11	Overland Road/Cabernet Street	AWSC	8.4	A	No
12	Overland Road/Stonewood Drive	AWSC	10.5	B	No
13	Overland Road/ State Route 165 (Mercey Springs Road)	TWSC	23.5	C	No
14	Vineyard Drive/Nantes Avenue	TWSC	8.9	A	No
15	Dove Street/State Route 165 (Mercey Springs Road)	TWSC	20.7	C	No
16	Henry Miller Avenue/Nantes Avenue	TWSC	10.1	B	No
17	Henry Miller Avenue/ State Route 165 (Mercey Springs Road)	TWSC	19.8	C	No

Legend: TWSC = Two-Way-Stop Control. AWSC = All-Way Stop Control.  
 Average Delay = Average Intersection Delay for Signalized Intersections.  
 Average Delay = Worst-Case Intersection Movement Delay for TWSC Intersections.  
 LOS = Average Intersection Level-of-Service for Signalized Intersections.  
 LOS = Worst-Case Movement's Level-of-Service for TWSC Intersections.  
 Warrant = MUTCD Peak-Hour Warrant-3.  
 OVRFL = Over flow conditions (> 100 seconds delay).

As indicated in Table 4, all study intersections, except for the intersections at State Route 152 (Pacheco Boulevard)/Miller Lane, State Route 152 (Pacheco Boulevard)/Place Road, State Route 152 (Pacheco Boulevard)/Nickel Street, and B Street/State Route 165 (Mercey Springs Road), are currently

operating at LOS “C” conditions or better during the PM peak hour period. None of the study intersections currently meet the MUTCD Peak-Hour Warrant 3 under “Existing” PM peak hour traffic volumes.

# CHAPTER 3

## 3.1 TRAFFIC MODEL DEVELOPMENT AND BASE YEAR MODEL CALIBRATION

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This chapter represents the supporting technical documentation for the City of Los Banos' new Citywide traffic model development.

### CHOICE OF MODEL SOFTWARE – TP+/VIPER

The integrated urban transportation planning software package called *TP+/Viper* (copyright *Citilabs*) was the modeling software of choice for the City of Los Banos traffic model. The *TP+/Viper* package represents a powerful and widely known modeling environment that provides a Windows-based implementation of the traditional “four-step” urban transportation planning methodology. *TP+* (acronym for Transportation Planning Plus) also represents an advanced, next-generation version of the popular DOS-based *MINUTP* planning software package. *TP+* is the underlying modeling “engine” that performs all of the model computations. *Viper* (acronym for Visual Planning Environment) represents a graphical user interface that works seamlessly with the *TP+* system, processing input as well as output data needed/generated by *TP+*. OMNI-MEANS utilized the latest available (as of October 2003) version of *TP+/Viper* (Version 3.1.2) for the City of Los Banos traffic model. *Citilabs* (formerly Urban Analysis Group), who are the developers and vendors of the *TP+/Viper* package, should be contacted by the model user to obtain a licensed copy of the software and detailed description on the full technical capabilities of the software.

While the new Los Banos Citywide traffic model uses regional traffic-related assumptions consistent with the MCAG regional travel demand forecast model, it should be noted that the new Citywide model has been essentially designed to run independently as a “stand-alone” model, outside of the MCAG model. This is mainly because the new Citywide model is a “focused” traffic model that basically uses assessor's parcel-based land use information and digital parcel mapping based street network component, which together yield a relatively higher degree of resolution and accuracy in the traffic modeling process, compared to the larger census-tract based regional land use and network assumptions used by the MCAG regional model. In other words, the new Citywide model may be regarded as being relatively more Geographic Information Systems (GIS) compatible. Therefore, for technical reasons that involve higher model accuracy and efficiency, the Citywide traffic model was created as a stand-alone model outside of the MCAG regional model. The following steps describe how the basic components of the model were developed.

### CREATION OF TAZ MAP

The first modeling step was the creation of a land use database that can be read by the model. The land use information, as read by the model, is organized into discrete traffic generating units referred to as “Traffic Analysis Zones” (TAZ's). A TAZ is defined as an area that comprises of contiguous land development (parcels, subdivisions etc.) aggregated into a “traffic shed” for modeling purposes. Each TAZ would have one or more “connectors” feeding traffic generated from that TAZ on to the adjacent street system at logical but schematic access points. The TAZ definitions were developed using closed boundaries contained within natural geographic barriers like rivers, creeks etc., as well as “man-made” barriers like major street right-of-ways, railroads etc., and taking into account how traffic generated from localized development would logically “shed” to the adjacent street system.

Utilizing the City's parcel mapping database (in GIS format) in conjunction with the U.S. Census 2000 based Census tract and block-group boundaries within the Los Banos planning area, a “TAZ Map” that

consists of a system of TAZ's for the Los Banos planning area was developed using both *AutoCAD Map* and *ArcView GIS* software programs. Generally, the existing census block/block-group boundaries were utilized; however, block group definitions were segregated/aggregated in defining TAZs, when found necessary from a logical traffic shedding perspective.

For the entire Los Banos planning area, a total of 197 TAZs were defined (not including 14 gateways, or external TAZs). A TAZ numbering scheme was developed for computational advantages as well as to have the ability to expand the TAZ definitions later if found necessary. For purposes of creating a TAZ numbering scheme, the City was divided into four quadrants with State Route 152 and 165 defining the boundaries. Although each quadrant has 200 potential TAZs, not all were utilized. The TAZ numbering scheme is listed as follows:

- TAZs in the northwest quadrant of the City have been numbered in the 100s and 200s.
- TAZs in the northeastern quadrant of the City have been numbered in the 300s and 400s.
- TAZs in the southwestern quadrant of the City have been numbered in the 500s and 600s.
- TAZs in the southeastern quadrant of the City have been numbered in the 800s and 900s.

Figure 5 shows the City of Los Banos Traffic Model's TAZ Map with the TAZ numbers posted.

## LAND USE –TAZ INTEGRATION

Land use information represents the primary basis for generating vehicular trips that would be loaded onto the model's street network. Therefore, land use data, represented basically in terms of residential and non-residential uses, is included in each TAZ in order to provide a basis for estimating zonal trip productions and attractions.

In order to develop existing land use data to be integrated into the TAZs, OMNI-MEANS extensively utilized the Merced County Assessor's Office data. The County Assessor's Office had provided assessor's parcel numbers (APN) and associated data in digital format for parcels within the City's Planning area. The assessor's data contained information such as parcel number, parcel size (in acreage/square feet), assessed parcel value, and existing land use codes on the parcels. In all, the APNs contained 22 land use codes ranging from single-family dwelling units to retail uses to agricultural uses. The assessor's land use codes also indicated which parcels were considered currently "vacant" or undeveloped.

The TAZ map was created as a "shape-file" using *ArcView GIS* software. By geographically overlaying the TAZ map on top of the assessors' parcel database, a "TAZ attribute" was added to the parcel database and a TAZ-wise breakdown of existing land uses was prepared. The integrated TAZ and land use layer (in shape-file format) were exported (in DBF format) from *ArcView* for subsequent use with the model. The existing conditions land use database summarized by TAZ is included in the Appendix.

## NETWORK CREATION

The next step was the creation of a street network system that the model would utilize to distribute and assign trips generated by the land uses. The model's street network was created by editing and manipulating MCAG's Regional Network within the City of Los Banos Planning area, using both *TP+/Viper* and *ArcView GIS*. Each "node" in the network represents an intersection or some other intermediate point on the street system. Each "link" represents a roadway segment connecting between two nodes.



The next step was the integration of TAZ's into the street network. Using an "overlay" of the TAZ Map on top of the street network, additional nodes that represent "TAZ centroids" and additional links that represent "centroid connectors" were defined. The TAZ centroid is a logical point within a TAZ where all land development contained within that TAZ may be assumed to be concentrated. The centroid connectors are schematic links that carry traffic (in both directions) between the TAZ centroids and the adjacent street system. Special zones known as "gateways" were also coded in order that the terminal links of the model can be connected to "external" sources of traffic generation. The TAZ centroids, centroid connectors, and gateway zones and links were all integrated into the network shape file.

Using *ArcView*, a database (in DBF format) of records containing "attributes" of each link was then coded and attached to the network shape file. The link attributes coded include start and end node numbers, length of link segment, link travel speeds, speed class, capacity class, number of lanes per direction, flag variable indicating one-way/two-way link directionality, street name, and two-way daily traffic counts at critical locations where count data was obtained/available. The network link attribute database is listed in the Appendix.

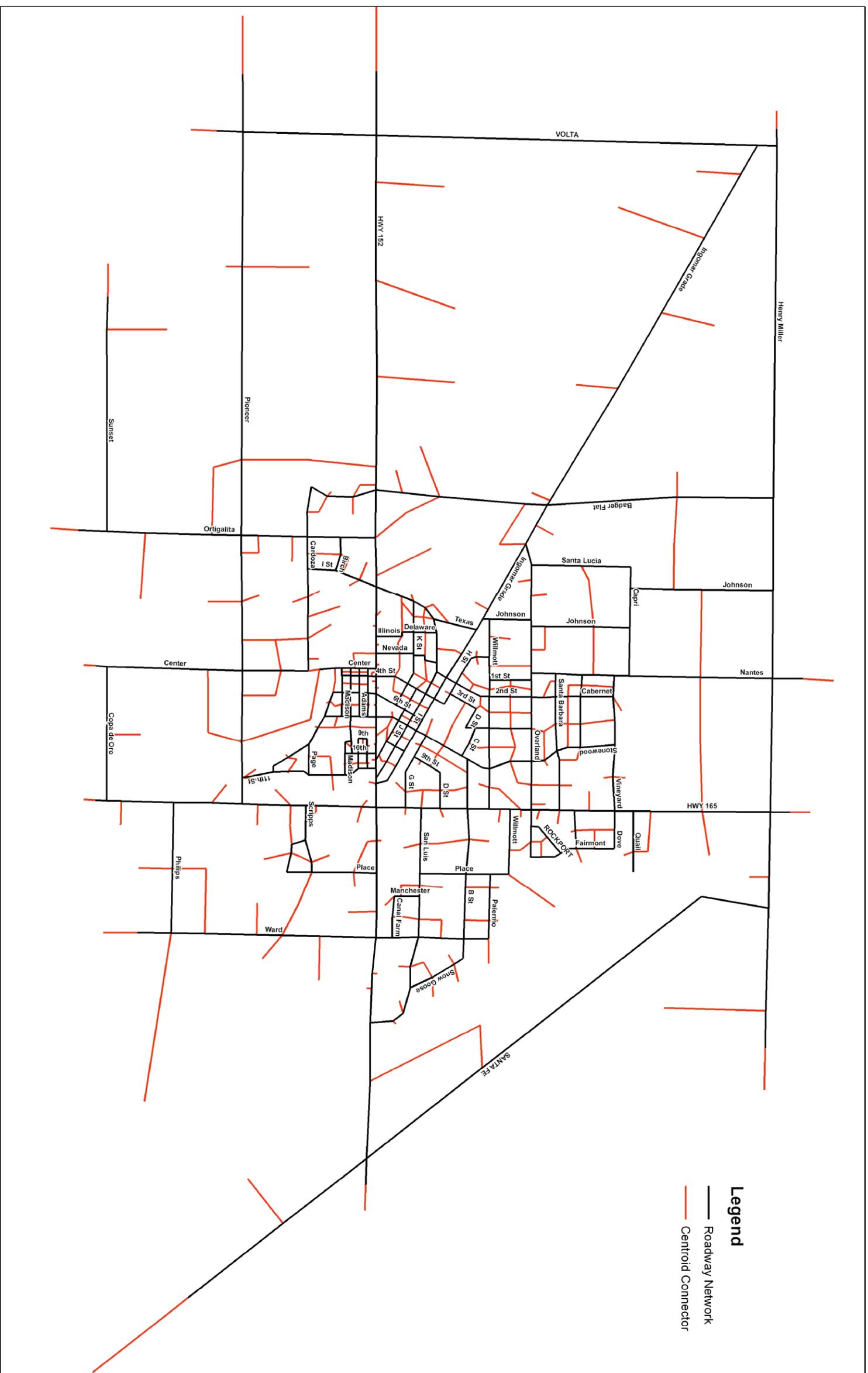
Using the *GIS Tools* capability offered by *TP+/Viper*, the integrated GIS database of network shape-file and attached attribute file was imported into *Viper* and converted into a *TP+/Viper* network file for use with the model. The GIS approach in the creation of the *Viper* network represents a significant improvement over the traditional "stick figure" type representation of the street network. The GIS approach resulted in a relatively more accurate modeling of link distances because of the ability to replicate the curvi-linearities in the street system. Figure 6 shows the City of Los Banos' Existing Conditions *Viper* street network used in the model.

## MODEL JOB-STREAM CREATION

The next step in the creation of the model was the coding of the *TP+* "job-stream" script file. The term "job-stream" refers to the computer file that contains the basic set of "instructions" issued to the *TP+* modeling engine as to how to perform model tasks and which methodologies, parameters, adjustments and assumptions to apply in individual tasks. The job-stream file was written using the *TP+* scripting language syntax and contains the following modules.

### Trip Generation

As a "pre-processor" to the trip generation module, the land use quantities already summarized by TAZ were first grouped into broader categories for trip generation purposes. These include "trip production" categories that include single-family and multi-family residential dwelling units and mobile homes, and "trip attraction" categories that broadly include retail, office, industrial, educational, governmental/ public, parks/recreational, and other miscellaneous types. Within the pre-processor (which can be run using spreadsheet software like *Excel*), the individual land use quantities were multiplied by the trip generation rates and grouped in the above categories in order to obtain an estimate of total daily trip generation by TAZ, by land use type. The U.S. Census 2000 based zonal "occupancy rates" (defined as "number of occupied dwelling units divided by the total number dwelling units") were also incorporated into the trip generation estimation process. The trip generation rates were obtained using standard reference sources like Institute of Transportation Engineers (ITE) Publication *Trip Generation (Sixth Edition)*. Since the City of Los Banos traffic model was not envisioned to have a separate transit component, generic "vehicular trip generation rates" were used.



Los Banos Citywide Traffic Model

# Viper Street Network

Figure 6



The daily trip generation tables prepared using the pre-processor were imported into *TP+Viper* in DBF format. The *TP+* trip generation module performs trip generation by invoking the “tripgen” command function of *TP+*. The trip generation module disaggregated the individual TAZ trip generation by “trip purpose”. The City of Los Banos traffic model utilizes five basic trip purposes. Home-based Work (HBW), Home-based Shopping (HBS), Home-based Other (HBO), Work-based Other (WBO), and Other-based-Other (OBO) trips were defined. For each TAZ, trip “productions” and trip “attractions” were estimated by trip purpose. Finally, a “production controlled” trip total adjustment was performed such that the trip attractions totals were adjusted to match trip productions totals for each trip purpose.

The Appendix contains a listing of the existing conditions’ land use database by model land use category by TAZ and the trip generation volumes by model land use category by TAZ.

## **Trip Distribution**

In order to initiate the trip distribution process, an inter-zonal matrix of travel times between all pairs of zones was built. Special adjustments to gateway-to-gateway impedances were performed so that gateway productions and attractions would be matched internally as either internal-external (I-X) or external-internal (X-I) trips. A “friction factor” file that specifies impedance factors as a function of travel time was built for use with the trip distribution equations. A matrix of special zone-to-zone adjustment factors (referred to as “K factors”) was also built so that inter-zonal travel characteristics, which cannot be solely explained using link impedances, can be accounted for.

The trip distribution module performs trip distribution by invoking the “tripdist” command function of *TP+*. In this model, the conventional “gravity-based” trip distribution model was applied. The gravity-model assumes that the trips between two zones are directly proportional to the number of trips produced by the production zone and the number of trips attracted by the attraction zone and inversely proportional to the impedance (travel time, travel distance, travel cost, etc.) on the travel paths between the two zones. The travel time matrices, friction factors and K-factors were incorporated in the trip distribution process. As an end product of the trip distribution process, a production-attraction trip matrix between all zone pairs was created for each trip purpose.

## **Trip Balancing**

The trip matrices in “production-attraction” format were converted to “origin-destination” format by using a symmetrical matrix transpose operation, by invoking the “matrix” command function of *TP+*. Finally, the gateway-to-gateway “through” (or external-external, X-X) trips were superimposed over the origin-destination trip matrix. This final trip matrix was then used for trip assignment.

## **Trip Assignment**

The final trip matrix was assigned to the street network using the “hwyload” command function of *TP+*. The Equilibrium assignment procedure was used. Capacities for network links were computed incorporating capacity class definitions as well as number of travel lanes on the facilities. Capacity-specific congested travel time expressions for each capacity class were utilized in the trip assignment process. “Turn” restrictions and impedances at specific nodes (intersections) were incorporated where needed. The assigned daily trip volumes were “loaded” on to the street network as a new attribute computed by the *TP+* program.

It should be noted that the City of Los Banos traffic model uses a “two-step” iterative trip distribution-assignment process. In the first step, “free-flow” (or un-congested) travel times are utilized to compute preliminary estimates of inter-zonal trip distribution. The initial trip distribution is then utilized to perform a preliminary trip assignment in order to estimate “congested” travel times on the street

network. In the second and final step, a final trip distribution is estimated utilizing the congested inter-zonal travel times, which is then used to perform the final trip assignment to create the final loaded network.

## MODEL CALIBRATION AND POST-CALIBRATION ANALYSES

The steps described above represent the creation of a complete but “un-validated” base year model. For “calibrating” the model to available field data, several model runs with different parameter adjustments were tested in order that average daily traffic (ADT) forecasts at critical locations and screenline analyses yielded satisfactory levels of accuracy. Localized adjustments that included trip generation adjustments for specific zones, refinement of link speeds and capacities, adjustment of congested travel time expressions etc., were tested until realistic and acceptable forecasts were obtained.

To help with post-assignment calibration procedure, a module was included in the job-stream to compute the percentage deviations between model forecasts and ground counts at locations where daily traffic counts were available. Model forecasts were regarded as being acceptable if percentage deviations fell within *Root Mean Square Error* (RMSE) target ranges set by roadway type. The RMSE is a type of generalized standard deviation, regarded as an industry standard for model calibration. The RMSE-based calibration method provides for a stricter calibration standard on high-capacity, high-volume facilities like arterial streets, while allowing for larger margins of error on low-capacity, low-volume facilities like collectors and local streets. However, given modeling limitations, it is often possible to exceed the RMSE standard on low-volume, low capacity facilities without significantly affecting level of service or improvement thresholds established for these low-volume street segments. Therefore, a difference of less than 1,000 vehicles per day in the absolute magnitude of variation is regarded as acceptable for most low-volume facilities. Conversely, on high-volume, high capacity facilities it is possible to meet the RMSE target even when absolute magnitude of variation is well over 1,000 vehicles per day. Therefore, often a combination of RMSE standards and absolute magnitude of variation best meets model calibration target requirements.

Table 5 presents an Existing Conditions model calibration summary that basically shows three types of calibration:

- **Point Calibration** – is the most basic and strictest calibration method, where the existing ground counts at critical “spot” locations, and model forecasted traffic volumes at those locations are directly compared, and acceptability of model forecasts at those locations is determined. As indicated in Table 5, at the spot locations, the model forecasts were regarded as being satisfactory if the ADT forecasts fall within the RMSE target established by facility type, and/or the absolute ADT difference is less than 1,000 vehicles per day.
- **Corridor-level Calibration** – where general traffic volume flows along a travel corridor are investigated by summing (or “smoothing”) traffic counts through locations where counts are available along the travel corridor. As also indicated in Table 5, for travel corridors the model forecasts were regarded as being satisfactory if the total corridor ADT forecasts fall within the RMSE target established by corridor capacity, and/or the absolute total ADT difference is less than 1,000 vehicles per day.
- **Screenline Calibration** – is a calibration method whereby travel/traffic demands are investigated over a set of parallel travel routes or corridors as opposed to just individual routes or corridors. A “screenline corridor” is defined as a set of individual; generally parallel roadway facilities which, between them, address the total travel demand across an imaginary line drawn perpendicular to those facilities. As also indicated in Table 5, for screenline corridors the model forecasts were regarded as being satisfactory if the total screenline ADT forecasts fall within the RMSE target established by screenline capacity type, and/or the absolute total ADT

difference is less than 1,000 vehicles per day.

A copy of the calibrated Existing Conditions model forecasted ADT plot is included in the Appendix.

As shown in Table 5, all of the roadway segments, with the exception of State Route 152 between H Street and State Route 165, are forecasted within satisfactory. As indicated on the Caltrans website, this traffic count is 28,500 for an average month and 35,000 for the peak month. The traffic model is forecasting approximately 35,900, which exceeds the average and peak months. OMNI-MEANS will likely obtain a 24-hour traffic count at this location prior to developing Year 2030 traffic forecasts.

**Table 5 Existing Conditions Traffic Model – ADT Calibration Comparison**

Roadway Segment	ADT Count Year	Two-Way ADT Count	Model Forecasted ADT	ADT Diff.	Percent Diff.	RMSE Target % (+/-)	RMSE Target Met ?	Model Forecast Satisfactory ?
<b>Four-lane Undivided Arterial</b>								
SR 152 (Ward Road to Study Area Boundary)	2004	20,400	19,171	-1,229	-6.0	15.0	Yes	Yes
SR 152 (SR 165 to Ward Road)	2004	31,000	32,620	1,620	5.2	15.0	Yes	Yes
SR 152 (H Street to SR 165)	2004	28,500	35,926	7,426	26.1	15.0	No	No
SR 152 (7th Street to 9th Street)	2004	33,500	32,950	-550	-1.6	15.0	Yes	Yes
SR 152 (7th Street to 6th Street)	2004	31,500	31,482	-18	-0.1	15.0	Yes	Yes
SR 152 (I Street to Maryland Street)	2004	29,500	29,314	-186	-0.6	15.0	Yes	Yes
SR 152 (Ortigalita to I Street)	2004	27,000	28,974	1,974	7.3	15.0	Yes	Yes
SR 152 (Badger Flat to Ortigalita)	2004	19,800	18,460	-1,340	-6.8	15.0	Yes	Yes
<b>Total</b>		<b>221,200</b>	<b>228,897</b>					
<b>Two-lane Arterial</b>								
SR 165 (Study Area Boundary to Pioneer Rd)	2004	6,200	5,590	-610	-9.8	15.0	Yes	Yes
SR 165 (Scripps Rd to Pioneer Rd)	2004	8,300	7,702	-598	-7.2	15.0	Yes	Yes
SR 165 (SR 152 to Scripps Rd)	2004	16,600	15,542	-1,058	-6.4	15.0	Yes	Yes
SR 165 (B St to D St)	2004	12,600	12,066	-534	-4.2	15.0	Yes	Yes
SR 165 (Dove to Regency)	2004	10,700	11,459	759	7.1	15.0	Yes	Yes
<b>Total</b>		<b>54,400</b>	<b>52,359</b>					
<b>Two-lane Collector</b>								
6th Street (SR 152 to K Street)	2003	4,500	4,988	488	10.8	25.0	Yes	Yes
7th Street (H Street to G Street)	2004	13,150	10,297	-2,853	-21.7	25.0	Yes	Yes
7th Street (F Street to E Street)	2004	7,290	6,078	-1,212	-16.6	25.0	Yes	Yes
7th Street (Willmott to B Street)	2003	5,870	6,333	463	7.9	25.0	Yes	Yes
11th Street (SR 152 to Washington)	2004	4,390	5,262	872	19.9	25.0	Yes	Yes
B Street (SR 165 to Santa Ana)	2004	2,750	2,126	-624	-22.7	25.0	Yes	Yes
B Street (SR 165 to Wisteria)	2004	4,100	4,533	433	10.6	25.0	Yes	Yes
Center (SR 152 to Adams)	2004	2,180	1,560	-620	-28.4	25.0	No	Yes
H Street (2nd Street to Nevada)	2004	4,060	4,268	208	5.1	25.0	Yes	Yes
H Street (2nd Street to 3rd Street)	2004	4,930	4,603	-327	-6.6	25.0	Yes	Yes
H Street (4th Street to 3rd Street)	2004	5,830	4,834	-996	-17.1	25.0	Yes	Yes
H Street (4th Street to 5th Street)	2004	5,920	5,365	-555	-9.4	25.0	Yes	Yes

Roadway Segment	ADT Count Year	Two-Way ADT Count	Model Forecasted ADT	ADT Diff.	Percent Diff.	RMSE Target % (+/-)	RMSE Target Met ?	Model Forecast Satisfactory ?
SR 165 (Henry Miller to St Francis)	2004	4,700	4,389	-311	-6.6	25.0	Yes	Yes
I Street (SR 152 to L Street)	2004	7,790	6,858	-932	-12.0	25.0	Yes	Yes
I Street (6th Street to 5th Street)	2003	2,600	3,339	739	28.4	25.0	No	Yes
Nantes (Overland to Santa Barbara)	2004	1,750	1,838	88	5.0	25.0	Yes	Yes
Overland (2nd Street to 1st Street)	2004	2,470	2,906	436	17.7	25.0	Yes	Yes
Overland (2nd Street to 3rd Street)	2004	3,100	3,600	500	16.1	25.0	Yes	Yes
Overland (H Street to Santa Lucia)	2003	1,800	819	-981	-54.5	25.0	No	Yes
Place (B Street to San Luis)	2004	660	1,082	422	63.9	25.0	No	Yes
Stonewood (Overland to Olivewood)	2004	4,240	4,852	612	14.4	25.0	Yes	Yes
Stonewood (Overland to Rhoda)	2003	5,470	5,414	-56	-1.0	25.0	Yes	Yes
Ward (SR 152 to Technology)	2003	670	899	229	34.2	25.0	No	Yes
Willmott (2nd Street to 1st Street)	2003	1,400	1,757	357	25.5	25.0	No	Yes
Willmott (2nd Street to 3rd Street)	2003	2,380	2,473	93	3.9	25.0	Yes	Yes
<b>Total</b>		<b>104,000</b>	<b>100,473</b>					
<b>Two-lane Local Street</b>								
2nd Street (I Street to H Street)	2004	4,510	3,587	-923	-20.5	25.0	Yes	Yes
7th Street (SR 152 to Washington)	2003	2,330	2,503	173	7.4	25.0	Yes	Yes
7th Street (SR 152 to K Street)	2003	2,910	2,725	-185	-6.4	25.0	Yes	Yes
Birchwood (Nantes to Zinfandel)	2004	740	590	-150	-20.3	25.0	Yes	Yes
G Street (SR 165 to Santa Rita)	2004	2,450	2,182	-268	-10.9	25.0	Yes	Yes
G Street (7th Street to 8th Street)	2004	2,930	2,275	-655	-22.4	25.0	Yes	Yes
I Street (SR 152 to Hawthorne)	2004	6,660	7,300	640	9.6	25.0	Yes	Yes
San Luis (Ward to Park Warren)	2004	1,120	1,110	-10	-0.9	25.0	Yes	Yes
Santa Barbara (SR 165 to Santa Venetia)	2003	2,100	1,583	-517	-24.6	25.0	Yes	Yes
<b>Total</b>		<b>25,750</b>	<b>23,855</b>					

# CHAPTER 4

## 4.1 BUILD-OUT TRAFFIC MODEL DEVELOPMENT

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The creation of the General Plan buildout traffic forecast model for the City of Los Banos basically involved the following steps.

### CREATION OF BUILD-OUT CONDITIONS LAND USE DATABASE

The buildout conditions land use database was essentially created by assuming existing uses on currently developed lands and buildout per the City's General Plan (version as reviewed by City Staff in 2002) land uses on "currently vacant/underdeveloped" lands.

City staff had provided a GIS inventory (in *ArcView* format) of parcels within the City's planning area that could be considered "vacant" (or "underdeveloped") from a traffic forecasting standpoint. According to City staff, the vacant/underdeveloped lands database was current as of December 2002. OMNI-MEANS overlaid the General Plan land use designations on these "vacant/undeveloped" parcels and applied appropriate General Plan based densities and floor area ratios in order to project incremental future development potential within the City's planning area through full buildout. For all parcels considered already "developed", existing land use data as obtained from the County Assessor APN database were retained. The buildout land use database was thus derived by TAZ, by adding up existing uses on currently developed parcels and General Plan based uses on vacant/underdeveloped parcels.

### YEAR 2030 AS THE FUTURE FORECAST YEAR

The City's current General Plan 1992-2012 document (last reviewed 2002), Section 2.2 states the following:

*"At General Plan buildout, the City will accommodate 85,190 residents almost doubling the 42,198 residents counted by the 1990 census. The time at which full development ("buildout") consistent with Plan policies will occur is not specified."*

In this analysis, for traffic modeling purposes, "Year 2030" was used as the horizon year for the cumulative traffic forecast model. Year 2030 is consistent with the "design year" used for projecting future traffic demands in recently completed conceptual State Route 99 interchange modification studies for Caltrans District 10 and the City. Year 2030 is also consistent with the long-range forecast year for the Countywide/Regional travel demand forecast model being maintained by StanCOG. The growth from approximately 59,400 population in 2001-02 to 85,190 in Year 2030 would represent an approximate 1.5% annual growth rate in population over existing conditions over the next 24 years.

The City's planning area currently (as of 2002) has a total of approximately 21,000 total dwelling units (14,500 single-family units, 5,400 multi-family units and 1,100 mobile homes) per Merced County assessor's parcel land use data. The total population within the City's current planning area is approximately 61,000, per US Census 2000 data. This yields an approximate average current household occupancy of 2.90 persons per dwelling unit. OMNI-MEANS' buildout land use estimates have projected that the City's planning area could accommodate approximately 30,200 total dwelling units (21,900 single-family units, 7,200 multi-family units, and 1,100 mobile homes) by Year 2030, if full build-out were to occur consistent with the current General Plan. (*Note:* The above population figures do include "assumable" development levels on "Urban Reserve" lands, as provided by City staff.)

Using current average household occupancy rates, the 30,200 dwelling unit figure could support a buildout population upwards of 87,580, by Year 2030 within the Los Banos planning area. The increase in dwelling units from 21,000 to 30,200 within the Los Banos planning area, represents a residential growth rate of 1.5% per year, or an approximate average absorption rate of 400 dwelling units per year, through Year 2030.

The Year 2030 traffic model assumes buildout within the City's planning sphere by year 2012 per the current General Plan (1992-2012) and some absorption of "Urban Reserve" (UR) lands beyond 2012 through 2030. Per City staff direction, the following UR lands absorption has been assumed for the Year 2030 model.

- Approximately 200 acres of UR lands on the northeast portion of town, all to be developed as very low density residential (VLDR) by 2030.
- Approximately 450 acres of UR lands on the southeast portion of town, all to be developed by 2030 per the "Southeast Specific Plan" uses.
- Approximately 2,650 acres of UR lands in the southwest portion of town (located south of the Westside Industrial Specific Plan area, Industrial uses likely) are all assumed to remain essentially *undeveloped* through Year 2030
- Out of the approximately 1,400 acres of UR lands on the northwest portion of town (located west of the Northwest Triangle Specific Plan and north of the Westside Industrial Specific Plan areas), approximately 350 acres of Community Commercial (CC) and 300 acres of Industrial are projected to be absorbed by Year 2030. Industrial (I) and Industrial Business Park (IBP) uses are likely on the remaining 750 acres of UR lands, but are assumed to remain essentially *undeveloped* through Year 2030.

In summary, approximately 1,300 acres out of the total 4,700 acres of UR lands within the City's planning area (that have I/IBP development potential) are assumed to be absorbed through Year 2030.

It may be noted that the Year 2030 model-projected population of 87,580 is only 2,390 more people than the year 2012 population of 85,190 projected by the current General Plan (last reviewed 2002). This is because of the relatively small levels of residential growth assumptions on UR lands, as outlined above.

## **PREPARATION OF THE YEAR 2030 TRAFFIC FORECAST MODEL**

The City of Los Banos Year 2030 "base" traffic forecast model assumes Year 2030 land uses under the General Plan circulation system, as presented on *Figure 5-1* of the General Plan, 1992-2012 document (last reviewed 2002) in place. The modeling of this base condition provides a reasonable basis for identifying street corridors within the City that would likely warrant roadway circulation and/or capacity improvements through Year 2030, above and beyond the General Plan circulation improvements.

Towards the development of the Year 2030 traffic forecast model, the Year 2030 land use database was generally multiplied with the calibrated existing conditions model-based zonal trip generation rates and with further trip rate adjustments as found necessary. Growth in gateway trip productions and attractions were projected consistent with the StanCOG regional traffic forecast model and the prior (*MINUTP*-based) version of the City of Los Banos traffic model. The new gateway production-attraction file was incorporated into the Year 2030 traffic model. The existing conditions street network was modified to create a General Plan circulation system network, which was used as the "base" network on which the forecasted Year 2030 trips were assigned. The calibrated base-year model-based congested travel time computations were used in the Year 2030 model. The calibrated base year model "job-stream" setups were adjusted to reflect appropriate projected growth in external-external

(X-X) traffic through the City's planning area. Consistent with the background traffic growth rates projected by the StanCOG regional traffic model and the prior Citywide traffic models, the Year 2030 model assumes approximately 60% increase over existing conditions in the external-external (X-X) background through traffic volumes on the State Route 99 corridor traversing through the Los Banos planning area.

The Year 2030 model trip generation rates by TAZ and the Year 2030 trip generation volumes by TAZ and by model land use category are shown in the Appendix. The Appendix also includes a plot of the Year 2030 base traffic model estimated ADT forecasts.

## APPENDIX 1

### EXISTING CONDITIONS MODEL LAND USES BY TAZ

APPENDIX TABLE 1  
EXISTING CONDITIONS MODEL LAND USES BY TAZ

TAZ	HI-										Misc/ Other (Acres)				
	Single- Family (DUs)	Multi- Family (DUs)	Mobile Homes (DUs)	generating Retail (Acres)	Low-generating Retail (Acres)	General Office (Acres)	Med Office (Acres)	Light Industrial (Acres)	Heavy Industrial (Acres)	Schools (Acres)		Govt/Public (Acres)	Churches (Acres)	Parks/ Recreational (Acres)	Agri (Acres)
100	0	0	0	0.0	0.0	0.0	0.0	0.0	30.6	0.0	0.0	0.0	0.0	24.8	0.0
101	201	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102	51	14	0	0.7	2.3	0.0	0.0	0.0	0.0	3.6	0.3	0.0	0.0	0.0	0.0
103	99	96	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.1	0.0	0.0	0.0
104	101	101	0	0.0	3.1	3.4	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
105	31	28	0	0.0	0.6	0.0	0.0	1.3	0.0	0.0	36.9	0.3	0.0	0.0	0.4
106	1	30	0	5.2	1.7	0.1	0.5	0.0	0.0	10.1	1.9	0.0	0.0	0.0	0.0
107	17	6	0	0.0	0.0	0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108	42	20	0	5.5	3.5	0.0	0.0	2.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0
109	25	67	0	2.0	0.0	1.2	0.4	0.0	0.0	0.0	0.4	1.6	0.0	0.0	0.0
110	28	122	0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	2.0	0.8	0.0	0.0	0.4
111	61	38	0	0.0	0.8	0.0	0.2	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
112	11	4	0	0.3	1.1	0.2	0.0	0.1	1.4	0.0	0.0	0.0	0.0	0.0	0.4
113	0	0	0	1.5	4.0	0.0	0.0	15.8	1.8	0.0	3.5	0.0	0.0	0.0	0.0
114	22	28	0	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	1	0	0	1.5	0.5	0.6	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0
116	2	0	0	0.0	5.7	0.0	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117	12	16	0	0.8	0.3	0.0	0.2	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0
118	9	12	0	0.6	2.2	0.2	0.1	0.3	0.0	0.0	0.0	0.5	0.0	0.0	0.0
119	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0	0	0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	18.3	0.0	0.0	632.6	0.0
121	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	667.2	0.0
122	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	148.9	0.0
123	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	113.0	0.0
124	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0
125	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0	0.0	129.5	0.0
126	3	0	0	0.0	0.0	0.0	0.0	0.0	22.3	0.0	12.8	0.0	0.0	457.2	13.2
127	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	142.2	0.0	0.0	39.2	0.0
128	58	0	0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.0	0.0
129	69	6	0	0.0	1.2	1.7	0.0	0.0	0.0	6.4	0.2	3.7	0.0	0.0	0.5
130	76	4	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131	88	37	0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.0	0.0	0.0
133	126	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0
134	59	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
135	114	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136	185	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137	86	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138	149	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	4.3	0.0	0.0	0.0
139	143	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
140	232	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
141	69	12	0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
142	63	32	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.1
143	101	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144	254	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0
145	89	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146	199	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
147	0	0	0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.7	0.0	0.0	29.0	0.0
148	15	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0

APPENDIX TABLE 1  
EXISTING CONDITIONS MODEL LAND USES BY TAZ

TAZ	HI-											Misc/ Other (Acres)			
	Single-Family (DUs)	Multi-Family (DUs)	Mobile Homes (DUs)	generating Retail (Acres)	Low-generating Retail (Acres)	General Office (Acres)	Med Office (Acres)	Light Industrial (Acres)	Heavy Industrial (Acres)	Schools (Acres)	Govt/Public (Acres)		Churches (Acres)	Parks/Recreational (Acres)	Agri (Acres)
149	101	14	0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.7	0.8	0.0	0.0	0.0
150	19	2	0	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3
151	3	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
152	174	19	0	0.2	0.2	3.3	2.2	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.5
153	116	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154	57	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155	2	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	7.3	0.0
156	112	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157	0	0	0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158	116	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159	131	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	2	0	0	0.8	1.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161	1	0	0	1.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162	1	0	0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.2
163	9	2	0	1.1	4.1	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
164	0	2	0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
165	0	0	0	0.0	1.3	0.0	0.0	1.8	15.4	0.0	1.4	0.0	0.0	62.5	0.0
166	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	76.4	0.0
167	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168	10	25	0	0.2	1.4	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
169	35	19	0	0.9	0.6	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.6
170	12	0	0	0.6	1.0	0.2	0.0	0.0	0.6	0.0	0.4	0.0	0.0	0.0	0.3
171	0	0	0	1.1	0.9	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
172	2	4	0	1.6	0.8	0.2	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0
173	0	0	0	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
174	0	24	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
175	0	0	0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	6.1	0.0	0.0	0.0	0.0
176	0	0	0	0.0	0.6	0.0	0.0	0.8	2.9	0.0	7.9	0.0	0.0	0.0	0.0
177	2	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	317.4	0.0
178	14	4	0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
179	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0	589.5	0.0
180	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.2	0.0	0.0	439.2	0.0
181	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	17.2	0.0
182	1	2	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	232.3	0.0
183	1	7	0	0.0	0.0	0.0	0.0	0.0	67.2	0.0	13.5	0.0	0.0	697.3	0.0
184	3	0	0	0.0	0.0	0.0	0.0	0.0	64.4	0.0	0.0	0.0	0.0	82.6	4.5
185	6	0	0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1109.6	0.0
186	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	587.5	0.0
187	1	2	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	432.8	0.0
300	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
301	1	0	0	0.0	19.11660856	0.0	0.0	0.0	0.0	0.0	0.4	0.0	49.5	186.6	0.0
302	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.7	0.0
303	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.9	0.0	0.0	11.2	0.0
304	73	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	54.5	0.0
305	122	34	0	0.0	5.9	0.0	0.0	0.0	0.0	28.3	2.8	0.0	10.7	0.7	0.0
306	27	50	0	2.6	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2	0.0
307	0	0	0	0.0	2.0	0.0	0.0	3.0	3.9	0.0	0.0	0.0	0.0	22.1	0.0

APPENDIX TABLE 1  
EXISTING CONDITIONS MODEL LAND USES BY TAZ

TAZ	Single-Family (DUs)			Multi-Family (DUs)		Mobile Homes (DUs)	Hi-generating										Misc/Other (Acres)	
	Single-Family (DUs)	Multi-Family (DUs)	Mobile Homes (DUs)	Low-generating Retail (Acres)	General Office (Acres)	Med Office (Acres)	Light Industrial (Acres)	Heavy Industrial (Acres)	Schools (Acres)	Govt/Public (Acres)	Churches (Acres)	Parks/Recreational (Acres)	Agri (Acres)					
308	3	2	0	9.5	3.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	0.0
309	19	0	0	5.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310	104	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
311	199	0	0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	1.2
312	93	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
313	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
314	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0
315	34	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
316	148	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
317	36	10	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
318	187	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
319	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.6	0.0
320	249	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
321	65	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
322	67	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
323	145	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
324	97	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
325	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
326	0	0	117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
327	81	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
328	77	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
329	358	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330	203	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0
331	24	48	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
332	0	0	0	0.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
333	69	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
334	114	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
335	20	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
336	9	8	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
337	0	0	0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
338	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
339	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
500	11	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
501	0	0	0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
502	25	2	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
503	20	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
504	2	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
505	391	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
506	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
507	10	0	0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
508	5	4	0	4.8	16.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
509	0	0	0	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
510	82	28	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
511	20	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
512	17	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
513	7	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
514	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
515	4	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**APPENDIX TABLE 1  
EXISTING CONDITIONS MODEL LAND USES BY TAZ**

TAZ	Single-Family (DUs)	Multi-Family (DUs)	Mobile Homes (DUs)	Hi-generating Retail (Acres)	Low-generating Retail (Acres)	General Office (Acres)	Med Office (Acres)	Light Industrial (Acres)	Heavy Industrial (Acres)	Schools (Acres)	Govt/Public (Acres)	Churches (Acres)	Parks/Recreational (Acres)	Agri (Acres)	Misc/Other (Acres)
	516	2	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	245.6
517	12	2	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	26.4	0.0
518	3	2	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	107.7	0.0
519	20	0	0	0.0	0.0	0.0	0.0	0.0	0.0	40.8	0.0	0.0	0.0	0.0	0.0
520	13	2	0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.5
521	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## APPENDIX 2

### EXISTING CONDITIONS MODEL TRIP GENERATION VOLUMES BY LAND USE CATEGORY BY TAZ

APPENDIX TABLE 2 - EXISTING CONDITIONS MODEL TRIP GENERATION VOLUMES BY TAZ

TAZ	SFDU0_T	SFDU1_T	SFDU2_T	MFDU0_T	MFDU1_T	MFDU2_T	MH DU0_T	MH DU1_T	MH DU2_T	SFDU_T	MFDU_T	MH DU_T	HI_RETAIL_T	LO_RETAIL_T	G_OFFICE_T	M_OFFICE_T	L_INDSTR_T	H_INDSTR_T	EDUC_T	GOVT_T	Chur_T	Park_T	Agri_T	MISC_T	OTHER_T
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	300	0	0	0	0	5	0	5
101	27	447	1,373	0	0	0	0	0	0	1,847	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	7	114	348	8	44	34	0	0	0	469	86	0	257	465	0	0	0	0	447	0	0	0	0	0	0
103	13	220	676	56	301	231	0	0	0	909	588	0	0	0	0	0	0	0	0	3	10	0	0	0	10
104	14	225	690	59	317	243	0	0	0	929	619	0	0	637	413	2,848	0	0	0	0	0	0	0	1	1
105	4	69	212	16	88	67	0	0	0	285	171	0	0	122	0	0	16	0	0	37	2	0	0	0	2
106	0	2	7	18	94	72	0	0	0	9	184	0	1,829	352	9	204	0	0	1,266	2	0	0	0	0	0
107	2	38	116	4	19	14	0	0	0	156	37	0	0	0	0	315	2	0	0	0	0	0	0	0	0
108	6	93	287	12	63	48	0	0	0	386	123	0	1,929	705	0	0	28	0	0	1	0	0	0	0	0
109	3	56	171	39	210	161	0	0	0	230	410	0	696	0	146	158	0	0	0	0	15	0	0	0	15
110	4	62	191	71	383	293	0	0	0	257	747	0	0	0	0	448	0	0	0	2	7	0	0	0	7
111	8	136	417	22	119	91	0	0	0	561	232	0	0	167	0	68	0	0	0	1	0	0	0	0	0
112	1	24	75	2	13	10	0	0	0	100	25	0	121	231	21	0	2	14	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	541	803	0	0	203	18	0	3	0	0	0	0	0
114	3	49	150	16	88	67	0	0	0	202	171	0	0	122	0	68	0	0	0	0	0	0	0	0	0
115	0	2	7	0	0	0	0	0	0	9	0	0	539	95	69	0	0	0	1,035	0	0	0	0	0	0
116	0	4	14	0	0	0	0	0	0	18	0	0	0	1,150	0	135	9	0	0	0	0	0	0	0	0
117	2	27	82	9	50	38	0	0	0	111	97	0	281	62	0	72	0	0	1,254	0	0	0	0	0	0
118	1	20	61	7	38	29	0	0	0	82	74	0	226	448	21	50	3	0	0	0	5	0	0	0	5
119	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	127	0	127
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	0	18	0	0	0	133	0	133
121	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	30	0	30
122	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	23	0	23
123	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9
124	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	26	0	26
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	91	0	91
126	0	7	20	0	0	0	0	0	0	27	0	0	0	0	0	0	0	219	0	13	0	0	17	13	30
127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142	0	0	8	0	8
128	8	129	396	0	0	0	0	0	0	533	0	0	0	770	0	0	0	0	0	0	0	2	0	0	2
129	9	154	471	4	19	14	0	0	0	634	37	0	0	249	206	0	0	0	803	0	33	0	0	0	33
130	10	169	519	2	13	10	0	0	0	698	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	12	196	601	22	116	89	0	0	0	809	227	0	0	51	0	0	0	0	0	0	7	0	0	0	7
133	17	280	861	0	0	0	0	0	0	1,158	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
134	8	131	403	0	0	0	0	0	0	542	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	15	254	779	0	0	0	0	0	0	1,048	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
136	25	412	1,264	0	0	0	0	0	0	1,701	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	12	191	587	0	0	0	0	0	0	790	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	20	332	1,018	0	0	0	0	0	0	1,370	0	0	0	0	0	0	0	0	0	10	39	0	0	0	39
139	19	318	977	0	0	0	0	0	0	1,314	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
140	31	516	1,585	0	0	0	0	0	0	2,132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	9	154	471	7	38	29	0	0	0	634	74	0	0	35	0	0	0	0	0	0	0	0	0	0	0
142	9	140	430	19	100	77	0	0	0	579	196	0	0	0	0	0	0	0	0	10	0	0	0	0	0
143	14	225	690	0	0	0	0	0	0	929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	34	565	1,735	0	0	0	0	0	0	2,334	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14
145	12	198	608	0	0	0	0	0	0	818	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	27	443	1,359	0	0	0	0	0	0	1,829	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	928	0	0	0	2	0	0	6	0	6
148	2	33	102	0	0	0	0	0	0	137	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
149	14	225	690	8	44	34	0	0	0	929	86	0	0	205	0	0	0	0	0	2	7	0	0	0	7
150	3	42	130	1	6	5	0	0	0	175	12	0	0	105	0	0	2	0	0	1	0	0	0	0	0
151	0	7	20	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
152	24	387	1,189	11	60	46	0	0	0	1,600	117	0	59	45	399	881	0	0	0	1	0	0	0	1	1
153	16	258	792	0	0	0	0	0	0	1,066	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
154	8	127	389	0	0	0	0	0	0	524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	4	14	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	1	8	0	1	0	0	9
156	15	249	765	0	0	0	0	0	0	1,029	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157	0	0	0	0	0	0	0	0	0	0	0	0	607	0	0	0	0	0	0	0	0	0	0	0	0
158	16	258	792	0	0	0	0	0	0	1,066	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	18	292	895	0	0	0	0	0	0	1,205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX TABLE 2 - EXISTING CONDITIONS MODEL TRIP GENERATION VOLUMES BY TAZ

TAZ	SFDU0_T	SFDU1_T	SFDU2_T	MFDU0_T	MFDU1_T	MFDU2_T	MH DU0_T	MH DU1_T	MH DU2_T	SFDU_T	MFDU_T	MH DU_T	HI_RETAIL_T	LO_RETAIL_T	G_OFFICE_T	M_OFFICE_T	L_INDSTR_T	H_INDSTR_T	EDUC_T	GOVT_T	Chur_T	Park_T	Agri_T	MISC_T	OTHER_T
160	0	4	14	0	0	0	0	0	0	18	0	0	293	382	46	0	0	0	0	0	0	0	0	0	0
161	0	2	7	0	0	0	0	0	0	9	0	0	377	178	0	0	0	0	0	0	0	0	0	0	0
162	0	2	7	0	0	0	0	0	0	9	0	0	0	1,503	0	0	0	0	0	1	0	0	0	1	1
163	1	20	61	1	6	5	0	0	0	82	12	0	374	842	0	0	0	6	0	0	0	0	0	0	0
164	0	0	0	1	6	5	0	0	0	0	12	0	0	0	0	0	0	59	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	273	0	0	23	151	0	1	0	0	0	0	0
166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	13
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	15
168	1	22	68	15	79	60	0	0	0	91	154	0	80	280	10	0	0	0	0	1	0	0	0	0	0
169	5	78	239	11	60	46	0	0	0	322	117	0	302	122	0	0	0	0	0	1	0	0	0	2	2
170	2	27	82	0	0	0	0	0	0	111	0	0	211	207	21	0	0	6	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	392	192	0	0	0	0	0	1	0	0	0	0	0
172	0	4	14	2	13	10	0	0	0	18	25	0	558	163	21	0	0	0	0	2	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	272	105	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	14	75	58	0	0	0	0	147	0	0	0	0	0	0	0	0	3	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0	11	29	0	8	0	0	0	0	0
177	0	4	14	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	63	0	63
178	2	31	96	2	13	10	0	0	0	129	25	0	0	203	0	0	0	0	0	0	0	0	0	2	2
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	118	0	118
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	88	0	88
181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3
182	0	2	7	1	6	5	0	0	0	9	12	0	0	0	0	0	0	0	0	3	0	0	46	0	46
183	0	2	7	4	22	17	0	0	0	9	43	0	0	0	0	0	0	659	0	13	0	0	139	0	139
184	0	7	20	0	0	0	0	0	0	27	0	0	0	0	0	0	0	631	0	0	0	0	17	5	22
185	1	13	41	0	0	0	0	0	0	55	0	0	0	235	0	0	0	0	0	0	0	0	222	0	222
186	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	118	0	118
187	0	2	7	1	6	5	0	0	0	9	12	0	0	0	0	0	0	0	0	5	0	0	87	0	87
300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
301	0	2	7	0	0	0	0	0	0	9	0	0	0	3,883	0	0	0	0	0	0	0	113	37	0	150
302	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20
303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	0	0	2	0	2
304	10	162	499	0	0	0	0	0	0	671	0	0	0	0	0	0	0	0	0	1	0	0	11	0	11
305	17	272	833	20	107	82	0	0	0	1,122	209	0	0	1,191	0	0	0	0	3,546	3	0	24	0	0	24
306	4	60	184	29	157	120	0	0	0	248	306	0	926	397	0	0	0	0	0	0	0	3	0	0	3
307	0	0	0	0	0	0	0	0	0	0	0	0	0	405	0	0	39	39	0	0	0	0	4	0	4
308	0	7	20	1	6	5	0	0	0	27	12	0	3,346	635	105	0	0	0	0	0	0	0	2	0	2
309	3	42	130	0	0	0	0	0	0	175	0	0	1,764	118	0	0	0	0	0	0	0	0	0	0	0
310	14	231	710	0	0	0	0	0	0	955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
311	27	443	1,359	0	0	0	0	0	0	1,829	0	0	0	971	0	0	0	0	0	1	0	9	0	1	10
312	13	207	635	0	0	0	0	0	0	855	0	0	0	0	0	0	0	0	0	3	0	0	0	2	2
313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
314	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	1
315	5	76	232	0	0	0	0	0	0	313	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0
316	20	329	1,011	0	0	0	0	0	0	1,360	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
317	5	80	246	6	31	24	0	0	0	331	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0
318	25	416	1,277	0	0	0	0	0	0	1,718	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	8	0	8
320	34	554	1,701	0	0	0	0	0	0	2,289	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
321	9	145	444	0	0	0	0	0	0	598	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
322	9	149	458	0	0	0	0	0	0	616	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
323	20	323	990	0	0	0	0	0	0	1,333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
324	13	216	663	0	0	0	0	0	0	892	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
326	0	0	0	0	0	0	33	261	221	0	0	515	0	0	0	0	0	0	0	1	9	0	0	0	9
327	11	180	553	0	0	0	0	0	0	744	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
328	10	171	526	0	0	0	0	0	0	707	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
329	48	797	2,445	0	0	0	0	0	0	3,290	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
330	27	452	1,387	0	0	0	0	0	0	1,866	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2

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TAZ	SFDU0_T	SFDU1_T	SFDU2_T	MFDU0_T	MFDU1_T	MFDU2_T	MH DU0_T	MH DU1_T	MH DU2_T	SFDU_T	MFDU_T	MH DU_T	HI_RETAIL_T	LO_RETAIL_T	G_OFFICE_T	M_OFFICE_T	L_INDSTR_T	H_INDSTR_T	EDUC_T	GOVT_T	Chur_T	Park_T	Agri_T	MISC_T	OTHER_T
331	3	53	164	28	151	115	0	0	0	220	294	0	0	0	0	0	0	36	0	0	10	0	0	0	10
332	0	0	0	0	0	0	0	0	0	0	0	0	0	3,198	0	0	0	0	0	0	0	0	0	0	0
333	9	154	471	0	0	0	0	0	0	634	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
334	15	254	779	0	0	0	0	0	0	1,048	0	0	0	0	0	0	0	0	0	2	0	3	0	0	3
335	3	45	137	0	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
336	1	20	61	5	25	19	0	0	0	82	49	0	0	405	0	0	0	128	0	0	0	0	0	0	0
337	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105	0	0	187	0	0	103	0	103
338	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	13	0	13
339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,076	0	0	16	0	16
500	1	24	75	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	28	0	0	28
501	0	0	0	0	0	0	0	0	0	0	0	0	2,727	0	0	0	0	0	0	0	0	0	0	0	0
502	3	56	171	1	6	5	0	0	0	230	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
503	3	45	137	0	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
504	0	4	14	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10
505	53	870	2,671	0	0	0	0	0	0	3,594	0	0	0	0	0	0	0	0	0	14	32	8	0	0	40
506	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	5	0	0	64	0	64
507	1	22	68	0	0	0	0	0	0	91	0	0	4,884	0	0	0	0	0	0	3	0	0	0	0	0
508	1	11	34	2	13	10	0	0	0	46	25	0	1,007	2,023	102	0	0	0	0	4	0	0	0	0	0
509	0	0	0	0	0	0	0	0	0	0	0	0	7,305	0	0	0	0	0	0	0	0	0	0	0	0
510	11	183	560	16	88	67	0	0	0	754	171	0	2	0	0	0	0	0	1,654	13	17	0	0	1	18
511	3	45	137	0	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
512	2	38	116	0	0	0	0	0	0	156	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
513	1	16	48	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9
514	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	40	0	0	17	0	17
515	1	9	27	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	6	0	0	50	0	50
516	0	4	14	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	1	0	0	49	0	49
517	2	27	82	1	6	5	0	0	0	111	12	0	0	0	0	0	0	0	0	9	0	0	5	0	5
518	0	7	20	1	6	5	0	0	0	27	12	0	0	0	0	0	0	0	0	0	0	0	22	0	22
519	3	45	137	0	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
520	2	29	89	1	6	5	0	0	0	120	12	0	0	99	0	0	0	0	0	2	0	0	0	1	1
521	20	329	1,011	0	0	0	0	0	0	1,360	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
522	14	223	683	0	0	0	0	0	0	920	0	0	0	0	0	0	0	0	0	1	0	2	0	0	2
523	10	167	512	0	0	0	0	0	0	689	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
524	18	292	895	0	0	0	0	0	0	1,205	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
525	35	568	1,742	0	0	0	0	0	0	2,345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	12
527	1	13	41	0	0	0	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
528	0	0	0	0	0	0	0	0	0	0	0	0	1,346	0	0	0	0	0	0	0	0	0	0	0	0
529	10	158	485	0	0	0	0	0	0	653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530	1	22	68	0	0	0	0	0	0	91	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
531	5	76	232	0	0	0	0	0	0	313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
532	2	31	96	0	0	0	0	0	0	129	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
533	8	131	403	0	0	0	0	0	0	542	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
534	7	114	348	0	0	0	0	0	0	469	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
535	5	80	246	0	0	0	0	0	0	331	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
536	2	33	102	0	0	0	0	0	0	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
537	2	40	123	0	0	0	0	0	0	165	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
538	0	2	7	0	0	0	0	0	0	9	0	0	699	218	0	0	0	0	0	0	0	0	0	0	0
539	0	7	20	1	6	5	0	0	0	27	12	0	0	283	54	0	0	0	0	0	0	0	0	0	0
540	7	109	335	0	0	0	0	0	0	451	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
541	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	132	0	0	17	0	0	77	0	77
542	1	22	68	0	0	0	0	0	0	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
543	23	376	1,154	0	0	0	0	0	0	1,553	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
544	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0
545	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	52	0	0	232	0	232
546	0	2	7	1	6	5	0	0	0	9	12	0	0	0	0	0	0	0	0	0	0	0	62	0	62
547	1	11	34	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0	0	1	0	0	60	0	60
548	2	29	89	0	0	0	0	0	0	120	0	0	0	0	0	0	0	413	0	104	0	0	260	0	260
549	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	32	0	32

APPENDIX TABLE 2 - EXISTING CONDITIONS MODEL TRIP GENERATION VOLUMES BY TAZ

TAZ	SFDU0_T	SFDU1_T	SFDU2_T	MFDU0_T	MFDU1_T	MFDU2_T	MH DU0_T	MH DU1_T	MH DU2_T	SFDU_T	MFDU_T	MH DU_T	HI_RETAIL_T	LO_RETAIL_T	G_OFFICE_T	M_OFFICE_T	L_INDSTR_T	H_INDSTR_T	EDUC_T	GOVT_T	Chur_T	Park_T	Agri_T	MISC_T	OTHER_T	
550	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	
551	0	0	0	0	0	0	0	0	0	0	0	0	2,626	0	0	0	0	48	0	0	0	0	0	0	0	0
552	0	0	0	0	0	0	0	0	0	0	0	0	398	41	0	0	0	0	0	0	0	0	0	0	0	0
553	1	11	34	1	6	5	0	0	0	46	12	0	0	70	0	0	0	0	0	0	0	0	0	0	0	0
554	1	13	41	0	0	0	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
555	1	18	55	0	0	0	0	0	0	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
556	3	45	137	0	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
557	3	45	137	0	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
558	2	27	82	2	13	10	0	0	0	111	25	0	0	80	0	0	0	0	0	0	0	0	0	0	0	0
559	4	62	191	0	0	0	0	0	0	257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
560	3	51	157	1	6	5	0	0	0	211	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
561	2	38	116	0	0	0	0	0	0	156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
562	2	33	102	1	6	5	0	0	0	137	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
563	3	47	143	0	0	0	0	0	0	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
564	1	16	48	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
565	1	18	55	1	6	5	0	0	0	74	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
566	2	27	82	0	0	0	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
567	0	0	0	0	0	0	0	0	0	0	0	0	125	152	114	0	0	0	0	0	0	0	0	0	0	0
568	3	53	164	0	0	0	0	0	0	220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
569	0	0	0	0	0	0	0	0	0	0	0	0	63	253	0	0	0	0	0	0	0	0	0	0	0	0
700	0	0	0	0	0	0	0	0	0	0	0	0	3,246	0	0	0	0	0	0	0	0	0	0	0	0	0
701	0	0	0	1	6	5	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
702	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	17	0	0	17
703	0	0	0	12	63	48	0	0	0	0	123	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14
704	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	405	0	0	1	0	0	0	0	0	0
705	2	27	82	5	25	19	0	0	0	111	49	0	1,659	1,731	0	0	0	29	0	4	0	0	0	0	0	0
706	0	0	0	1	6	5	0	0	0	0	12	0	678	54	0	0	59	0	0	10	0	0	3	0	0	3
707	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	83	96	0	4	0	0	21	0	0	21
708	1	9	27	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	3	0	0	21	0	0	21
709	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	0	0	62
710	0	4	14	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10
711	11	178	546	0	0	0	0	0	0	735	0	0	0	1,454	0	0	0	0	1,217	0	0	11	0	0	0	11
712	27	443	1,359	1	6	5	0	0	0	1,829	12	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
713	5	87	266	0	0	0	0	0	0	358	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6
714	0	2	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	50
715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	8	0	0	8
716	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,605	0	0	17	0	0	17
717	0	4	14	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	221	0	0	221
718	13	216	663	0	0	0	0	0	0	892	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
719	26	432	1,325	0	0	0	0	0	0	1,783	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## APPENDIX 3

### MODEL STREET NETWORK LINK ATTRIBUTE DATABASE

APPENDIX TABLE 3  
Model Street Network Link Attribute Database

<b>NAME</b>	= Street Name
<b>DISTANCE</b>	= Link Distance In Feet
<b>TW_COUNT</b>	= Average Daily Two Way Count
<b>CAPCLASS</b>	= Capacity Class, refers to Facility Type, Arterial, Collector etc.
<b>LANES</b>	= Number of Lanes
<b>SPEED</b>	= MPH
<b>TOTV</b>	= Projected Total Volume
<b>VOLUME</b>	= Projected Daily directional Volume
<b>PER DIFF</b>	= Percent Difference between Projected and Two-Way Count
<b>VOL DIFF</b>	= Volume Difference between Projected and Two-Way Count

## APPENDIX 4

### EXISTING CONDITIONS CALIBRATED MODEL – ADT PLOT



# Special Status Species Considered in the Evaluation of the Los Banos 2030 General Plan Draft EIR

Sources: USFWS draft species lists for Los Banos and Volta quads, CNPS 9-quad search centered on Los Banos and Volta quadrangles, and CNDDDB (2007) within a 5 mile buffer of the City's Planning Area.

The "Potential for Occurrence" category is defined as follows:

**Unlikely:** The Project site and/or immediate area do not support suitable habitat for a particular species or the Project site is outside of the species' known range.

**Low Potential:** The Project site and/or immediate area only provide limited habitat for a particular species. In addition, the known range for a particular species may be outside of the Plan Area.

**Medium Potential:** The Project site and/or adjacent areas that could be affected by the Project provide suitable habitat for a particular species, but the species has not been documented in the Plan Area.

**High Potential:** The Project site and/or immediate area provide ideal habitat conditions for a particular species, and/or the species has been documented in the Plan Area.

Potentially Occurring Special-Status Species in the Los Banos Planning Area			
Scientific Name Common Name	Listing Status Federal/State /CNPS	General Habitat	Potential for Occurrence
<b>Plants</b>			
<i>Astragalus tener</i> var. <i>tener</i> Alkali milk vetch	--/--/IB	Generally found in playas, valley and foothill grasslands with adobe clay and alkaline soils and vernal pools up to 200 feet in elevation. Blooms Mar-Jun.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Atriplex cordulata</i> Heartscale	--/--/IB	Alkali scrub, alkali seasonal wetlands and grassland. Often found in the sandy soils of alkaline flats and scalds in the Central Valley up to 1,200 feet in elevation. Blooms Apr-Oct.	High. CNDDDB contains a record of this species that intersects the northeast border of the Project Area.
<i>Atriplex depressa</i> Brittlescale	--/--/IB	Alkali scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools with alkaline and clay soils up to 1,100 feet in elevation. Blooms May-Oct.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Atriplex persistans</i> Vernal pool smallscale	--/--/IB	Alkaline vernal pools; up to 400 feet in elevation. Blooms Jun-Oct.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Atriplex vallicola</i> Lost Hills crownscale	--/--/IB	Chenopod scrub, valley, and foothill grassland, and in vernal pools with alkaline substrate; from 160 to 2,080 feet in elevation. Blooms Apr-Aug.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.

**Potentially Occurring Special-Status Species in the Los Banos Planning Area**

<b>Scientific Name Common Name</b>	<b>Listing Status Federal/State /CNPS</b>	<b>General Habitat</b>	<b>Potential for Occurrence</b>
<i>California macrophylla</i> Round-leaved filaree	--/--/2	Open habitat with friable clay soils in valley and foothill grasslands and foothill woodlands up to 3,900 feet in elevation. Blooms Mar-May.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Caulanthus coulteri</i> var. <i>lemmonii</i> Lemmon's jewelflower	--/--/1B	Annual herb occurring in pinyon/juniper woodland, and valley/foothill grassland. Occurs at 260-4,000 feet in elevation. Blooms Mar-May.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Chamaesyce hooveri</i> Hoover's spurge	FT/--/1B	Vernal pools on volcanic mudflow or clay substrate from 80 to 820 feet in elevation. Blooms Jul-Aug.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Cordylanthus mollis</i> ssp. <i>hispidus</i> Hispid bird's beak	--/--/1B	Meadows and seeps, playas, and in valley and foothill grassland communities with alkaline substrate up to 510 feet in elevation. Blooms Jun-Sept.	High. CNDDDB contains a record of this species within the Project Area.
<i>Delphinium recurvatum</i> Recurved larkspur	--/--/1B	Chenopod scrub, cismontane woodland, and in alkaline substrate in valley and foothill grassland up to 2,500 feet in elevation. Blooms Mar-May.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Eryngium racemosum</i> Delta button celery	--/SE/1B	Riparian scrub habitats; often found on clay soils in seasonally inundated floodplains up to 100 feet in elevation. Blooms Jun-Sept.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Malacothamnus hallii</i> Hall's bush mallow	--/--/1B	Chaparral and coastal scrub from 30 to 2500 feet in elevation. Blooms May-Sept.	Low. No suitable habitat in Plan Area.
<i>Myosurus minimus</i> ssp. <i>apus</i> Little mouseltail	--/--/3	Occurs in alkaline soils in vernal pool habitats from 65 to 2,100 feet in elevation. Blooms Mar-Jun.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Navarretia nigelliformis</i> ssp. <i>radians</i> Shining navarretia	--/--/1B	Cismontane woodland, valley and foothill grassland, and vernal pools up to 3,300 feet in elevation. Blooms May-Jul.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Navarretia prostrata</i> Prostrate navarretia	--/--/1B	Coastal scrub, valley and foothill grassland with alkaline soils, and vernal pools or mesic areas from 50 to 2,500 feet in elevation. Blooms Apr-Jul.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Neostahia colusana</i> Colusa grass	FT/SE/1B	Bottoms of large, deep vernal pools, often associated with adobe clay soils from 15 to 660 feet in elevation.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.

**Potentially Occurring Special-Status Species in the Los Banos Planning Area**

<b>Scientific Name Common Name</b>	<b>Listing Status Federal/State /CNPS</b>	<b>General Habitat</b>	<b>Potential for Occurrence</b>
<i>Potamogeton filiformis</i> Slender-leaved pondweed	--/--/2	Marshes and swamps, assorted shallow freshwater from 980 to 7060 feet in elevation. Blooms May-Jul.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Sagittaria sanfordii</i> Sanford's arrowhead	--/--/1B	Marshes and swamps, assorted shallow freshwater features up to 2,000 feet in elevation. Blooms May-Oct.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Senecio aphanactis</i> Rayless ragwort	--/--/2	Chaparral, cismontane woodland, and coastal scrub habitat, often on alkaline substrate from 50 to 2625 feet in elevation. Blooms Jan-Apr.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Streptanthus insignis</i> ssp. <i>lyonii</i> Arbrura Ranch jewel- flower	--/--/1B	Coastal scrub, often on serpentine soils from 750 to 2,810 feet in elevation. Blooms Mar-May.	Unlikely. Species occurs at elevations above those found at the project site.
<i>Trichoronis wrightii</i> v. <i>wrightii</i> Wright's trichoronis	--/--/2	Alkaline substrates under vernaly flooded conditions in riparian, meadow, marsh and vernal pool habitats, up to 1,427 feet in elevation. Blooms May-Sept.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.

**Animals**

<b>Invertebrates</b>			
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/--/--	Lifecycle restricted to large, cool-water vernal pools with moderately turbid water.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Branchinecta longiantenna</i> Longhorn fairy shrimp	FE/--/--	Lifecycle restricted to vernal pools with clear to rather turbid water.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/--/--	Vernal pools, swales, and other seasonal aquatic habitats in grasslands.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT/--/--	Breeds and forages exclusively on blue elderberry shrubs ( <i>Sambucus mexicana</i> ) below 3,000 feet in elevation.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE/--/--	Life cycle restricted to vernal pools.	High. CNDDDB contains a record of this species within the Project Area.
<i>Lindieriella occidentalis</i> California lindieriella fairy shrimp	FSC/--/--	Life cycle restricted to vernal pools.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.

**Potentially Occurring Special-Status Species in the Los Banos Planning Area**

<b>Scientific Name Common Name</b>	<b>Listing Status Federal/State /CNPS</b>	<b>General Habitat</b>	<b>Potential for Occurrence</b>
<b>Fish</b>			
<i>Hypomesus transpacificus</i> Delta smelt (Critical Habitat)	FT/ST/--	Delta estuaries with dense aquatic vegetation and low occurrence of predators. May be affected by downstream sedimentation.	Unlikely. The Project Area is outside of the species range; however, impacts to water quality may affect downstream populations of this species.
<i>Mylopharodon conocephalus</i> Hardhead	--/CSC/--	Prefers deep clear pools with sand/gravel/boulder substrate and slow-moving water in undisturbed streams. Does well in streams with introduced species or that have been altered by human activity.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Oncorhynchus mykiss</i> Central Valley steelhead	FT/--/--	Spawns in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs.	Low. The Project Area is within the historic, but not current, range of this species. Moyle (2002) indicates that steelhead have been extirpated from the San Joaquin Basin, except for a small population in the Stanislaus River.
<b>Amphibians</b>			
<i>Ambystoma californiense</i> California tiger salamander (Critical Habitat)	FT/CSC/--	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Needs underground refuges and vernal pools or other seasonal water sources.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Rana aurora draytonii</i> California red-legged frog (Critical Habitat)	FT/CSC/--	Breeds in slow moving streams, ponds, and marshes with emergent vegetation; forages in nearby uplands within about 200 feet.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Rana boylei</i> Foothill-yellow legged frog	--/CSC/--	Breeds in shaded perennial stream habitats with rocky, cobble substrate, usually below 6,700 feet. Absent or infrequent when introduced predators are present.	Unlikely. The Project Area does not contain suitable habitat.
<i>Spea (=Scaphiopus) hammondi</i> Western spadefoot toad	--/CSC/--	Occurs seasonally in grasslands, prairies, chaparral, and woodlands, in and around wet sites. Breeds in shallow, temporary pools formed by winter rains. Takes refuge in burrows.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<b>Reptiles</b>			

**Potentially Occurring Special-Status Species in the Los Banos Planning Area**

<b>Scientific Name Common Name</b>	<b>Listing Status Federal/State /CNPS</b>	<b>General Habitat</b>	<b>Potential for Occurrence</b>
<i>Emys (=Clemmys) marmorata</i> Western pond turtle	--/CSC/--	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.	High. CNDDDB contains a record of this species within the Project Area.
<i>Gambelia (=Crotaphytus) sila</i> Blunt-nosed leopard lizard	FE/SE/--	Occurs in open, valley and foothill grasslands, valley saltbush scrub, and alkali playa communities of the San Joaquin Valley, Carrizo Plain, and Cuyama Valley. Uses small mammal burrows for refuge.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Masticophis flagellum ruddocki</i> San Joaquin coachwhip (=whipsnake)	--/CSC/--	Occurs in open, dry, vegetative associations with little or no tree cover. In the western San Joaquin Valley, it occurs in valley grassland and saltbush scrub associations. Probably dependent on mammals for burrows and prey.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species,
<i>Thamnophis gigas</i> Giant garter snake	FT/ST/--	Generally inhabits marshes, sloughs, ponds, slow-moving streams, ditches, and rice fields which have water from early spring through mid-fall, emergent vegetation (such as cattails and bulrushes), open areas for sunning, and high ground for hibernation and escape cover.	High. CNDDDB contains a record of this species within the Project Area.

**Birds**

<i>Agelaius tricolor</i> Tricolored blackbird (nesting colony)	--/CSC/--	Largely endemic to California, most numerous in the Central Valley and nearby vicinity. Requires open water, protected nesting substrate, and foraging grounds within vicinity of the nesting colony. Nests in dense thickets of cattails, tules, willow, blackberry, wild rose, and other tall herbs near fresh water. Also nests in crops such as silage.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
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**Potentially Occurring Special-Status Species in the Los Banos Planning Area**

<b>Scientific Name Common Name</b>	<b>Listing Status Federal/State /CNPS</b>	<b>General Habitat</b>	<b>Potential for Occurrence</b>
<i>Aquila chrysaetos</i> Golden eagle	--/CSC/--	Nests on cliffs of all heights and in large trees near open areas. Occurs in rolling foothills, mountain terrain, sage-juniper flats, and rugged open habitats with canyons and escarpments. Preys mostly on small mammals. Breeds late Jan-Aug.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Athene cucularia</i> Burrowing owl (burrow sites)	--/CSC/--	Forages in open plains, grasslands, and prairies; typically nests in abandoned small mammal burrows.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Branta hutchinsii leucopareia</i> Cackling (=Aleutian Canada) goose (wintering)	FD/CSC/--	Feeds in emergent wetlands, moist grasslands, croplands, pastures and meadows near water.	Medium. The Project Area contains potentially suitable foraging habitat and is within the range of this species.
<i>Buteo regalis</i> Ferruginous hawk (wintering)	--/CSC/--	Wintering grounds consist of open grasslands.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Buteo swainsoni</i> Swainson's hawk (nesting)	--/ST/--	Forages in open plains, grasslands, and prairies; typically nests in trees or large shrubs.	High. CNDDDB contains a record of this species within the Project Area.
<i>Circus cyaneus</i> Northern harrier	--/CSC/--	Nests in wet meadows and tall grasslands, forages in grasslands and marshes.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Coturnicops noveboracensis</i> Yellow rail	--/CSC/--	Winters in coastal marsh and historically known from freshwater marsh.	Low. CNDDDB contains a record from 1911 of this species within the Project Area. May winter in freshwater marshes.
<i>Elanus leucurus</i> White-tailed (=black shouldered) kite (nesting)	FSC/CFP/--	Forages in open plains, grasslands, and prairies; typically nests in trees.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Eremophila alpestris actia</i> California horned lark	--/CSC/--	Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Falco mexicanus</i> Prairie falcon	--/CSC/--	Breeds on cliffs, bluffs and outcrops near large, open areas.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Haliaeetus leucocephalus</i> Bald eagle (nesting & wintering)	FD/SE/--	Nests in large trees with open branches along lake and river margins, usually within one mile of water.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.

**Potentially Occurring Special-Status Species in the Los Banos Planning Area**

<b>Scientific Name Common Name</b>	<b>Listing Status Federal/State /CNPS</b>	<b>General Habitat</b>	<b>Potential for Occurrence</b>
<b>Mammals</b>			
<i>Ammospermophilus nelsoni</i> San Joaquin (=Nelson's) antelope squirrel	--/ST/--	Occurs in the San Joaquin Valley, in arid (<10") annual grassland and shrubland communities with sparse-to-moderate shrub cover. Needs friable soils and areas free from flooding for digging burrows.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Dipodomys ingens</i> Giant kangaroo rat	FE/SE/--	Prefers annual grassland communities with sparse shrubs and friable sandy-loam soils on gentle slopes, although it can occur in a variety of grassland and shrub communities in many soil types.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Dipodomys nitratooides exilis</i> Fresno kangaroo rat	FE/SE/--	Subspecies of San Joaquin kangaroo rat. In sandy and saline sandy soils in annual valley grassland, chenopod scrub, alkali sink communities. Needs open/sparse vegetation, loose soils.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Eumops perotis californicus</i> Greater western mastiff-bat	--/CSC/--	Roosts primarily in crevices within cliffs and canyons, occasionally in buildings. Primarily feeds on moths. Maternity colonies active May through July.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Myotis yumanensis</i> Yuma myotis	--/--/--	Often near reservoirs. Roosts in buildings, trees, mines, caves, bridges, and rock crevices. Maternity colonies active May through July.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Perognathus inornatus inornatus</i> San Joaquin pocket mouse	--/--/--	Primarily above 1,000 feet in dry, open grasslands or scrub. Will dig burrows for cover.	Medium. The Project Area contains potentially suitable habitat and is within the range of this species.
<i>Taxidea taxus</i> American badger	--/CSC/--	Occurs in a wide variety of open forest, shrub, and grassland habitats that have friable soils for digging.	High. CNDDDB contains a record of this species within the Project Area.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE/ST/--	Occurs in native valley and foothill grasslands and chenopod scrub communities of the valley floor and surrounding foothills. Prefers open level areas with loose-textured soils supporting scattered, shrubby vegetation and little human disturbance.	High. CNDDDB contains a record of this species within the Project Area.

SOURCE: U.S. Fish and Wildlife Service 2007; California Natural Diversity Database 2007;  
California Native Plant Society 2007.

STATUS CODES:

FEDERAL: (U.S. Fish and Wildlife Service)

- FC = Candidate for Federal Listing
- FD = Federal Delisted
- FE = Listed as Endangered by the Federal Government
- FPD = Federal Proposed for Delisting
- FPT = Proposed for Listing as Threatened
- FT = Listed as Threatened by the Federal Government
- = No listing

STATE: (California Department of Fish and Game)

- SE = Listed as Endangered by the State of California
- CFP = California Fully Protected
- SR = Listed as Rare by the State of California (plants only)
- CSC = California Species of Special Concern
- ST = Listed as Threatened by the State of California
- = No listing

CNPS: (California Native Plant Society)

- List 1A = Presumed extinct in California
- List 1B = Plants rare, threatened, or endangered in California and elsewhere
- List 2 = Plants rare, threatened, or endangered in California but more common elsewhere
- = No listing

**NATIVE AMERICAN HERITAGE COMMISSION**

916 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-4082  
Fax (916) 657-5390  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)



May 16, 2006

Erin Camarena  
Dyett & Bhatia

Sent by Fax: 415-956-7315  
Number of Pages: 3

Re: Proposed General Plan Update, Merced County. General Plan Update, Tulare County.

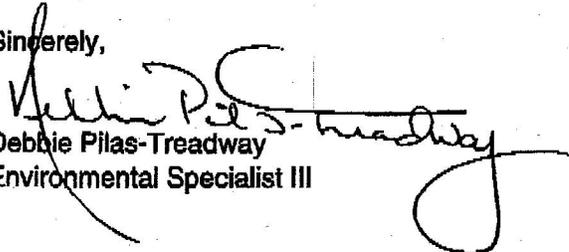
Dear Ms. Camarena:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

  
Debbie Pilas-Treadway  
Environmental Specialist III

**Native American Contacts  
Merced County  
May 16, 2006**

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PO Box 717  
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(209) 474-2602

Ohlone/Costanoan  
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Bay Miwok

Southern Sierra Miwuk Nation  
Jay Johnson, Spiritual Leader  
5235 Allred Road  
Mariposa, CA 95338-9357  
209-966-6038

Miwok  
Pauite  
Northern Valley Yokut

Amah Mutsun Tribal Band  
Valentin Lopez, Chairperson  
3015 Eastern Ave, #40  
Sacramento, CA 95821  
(916) 481-5785

Ohlone/Costanoan

Southern Sierra Miwuk Nation  
Anthony Brochini, Chairperson  
P.O. Box 1200  
Mariposa, CA 95338  
209-379-1120  
209-628-0085 cell

Miwok  
Pauite  
Northern Valley Yokut

Amah Mutsun Tribal Band  
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Ohlone/Costanoan  
Northern Valley Yokuts

Southern Sierra Miwuk Nation  
Les James, Spiritual Leader  
PO Box 1200  
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209-966-3690

Miwok  
Pauite  
Northern Valley Yokut

Choinumni Tribe; Choinumni/Mono  
Lorrie Planas  
2736 Palo Alto  
Clovis, CA 93611  
(559) 855-5355, ext 3335

Choinumni  
Mono

*This list is current only as of the date of this document.*

*Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.*

*This list is only applicable for contacting local Native Americans with regard to cultural for the proposed  
\* General Plan Update, Merced County.*

**CENTRAL CALIFORNIA INFORMATION CENTER**

***California Historical Resources Information System***

Department of Anthropology - California State University, Stanislaus

801 W. Monte Vista Avenue, Turlock, California 95382

(209) 667-3307 - FAX (209) 667-3324

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*Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties*

**Date:** 10/21/05

**CCIC File #:** 59671

**Project:** Los Banos General  
Plan Update

Erin Camarena, Planner  
Dyett & Bhatia  
Urban and Regional Planners  
755 Sansome Street, Suite 400  
San Francisco, CA 94111

Dear Ms. Camarena:

We have conducted a records search as per your request for the above-referenced project area located on the Los Banos and Volta USGS 7.5-minute quadrangle maps in Merced County.

Search of our files includes review of our maps for the specific project area, and review of the National Register of Historic Places, the California Register of Historical Resources, the *California Inventory of Historic Resources* (1976), the *California Historical Landmarks* (1990), and the California Points of Historical Interest listing (May 1992 and updates), the Historic Property Data File (Directory of Properties in the Historic Property Data File, Office of Historic Preservation current computer list dated 08-08-2005), the *Survey of Surveys* (1989), and General Land Office Survey Plats.

Please be advised that in accordance with the Procedural Manual issued by the California Office of Historic Preservation, planning agencies such as your office are not allowed to receive exact locational information pertaining to archaeological resources--this information can only be released to a qualified professional historical resources consultant. In the event that your office retains the services of a qualified professional at a future date, this individual may obtain the necessary locational data and pertinent documentation from our office based on the regular fee schedule.

The following details the results of the records search:

# California Historical Resource Status Codes

- 1 Properties listed in the National Register (NR) or the California Register (CR)**
- 1D Contributor to a district or multiple resource property listed in NR by the Keeper. Listed in the CR.
  - 1S Individual property listed in NR by the Keeper. Listed in the CR.
  
  - 1CD Listed in the CR as a contributor to a district or multiple resource property by the SHRC
  - 1CS Listed in the CR as individual property by the SHRC.
  - 1CL Automatically listed in the California Register – Includes State Historical Landmarks 770 and above and Points of Historical Interest nominated after December 1997 and recommended for listing by the SHRC.
- 2 Properties determined eligible for listing in the National Register (NR) or the California Register (CR)**
- 2B Determined eligible for NR as an individual property and as a contributor to an eligible district in a federal regulatory process. Listed in the CR.
  - 2D Contributor to a district determined eligible for NR by the Keeper. Listed in the CR.
  - 2D2 Contributor to a district determined eligible for NR by consensus through Section 106 process. Listed in the CR.
  - 2D3 Contributor to a district determined eligible for NR by Part I Tax Certification. Listed in the CR.
  - 2D4 Contributor to a district determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
  - 2S Individual property determined eligible for NR by the Keeper. Listed in the CR.
  - 2S2 Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the CR.
  - 2S3 Individual property determined eligible for NR by Part I Tax Certification. Listed in the CR.
  - 2S4 Individual property determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
  
  - 2CB Determined eligible for CR as an individual property and as a contributor to an eligible district by the SHRC.
  - 2CD Contributor to a district determined eligible for listing in the CR by the SHRC.
  - 2CS Individual property determined eligible for listing in the CR by the SHRC.
- 3 Appears eligible for National Register (NR) or California Register (CR) through Survey Evaluation**
- 3B Appears eligible for NR both individually and as a contributor to a NR eligible district through survey evaluation.
  - 3D Appears eligible for NR as a contributor to a NR eligible district through survey evaluation.
  - 3S Appears eligible for NR as an individual property through survey evaluation.
  
  - 3CB Appears eligible for CR both individually and as a contributor to a CR eligible district through a survey evaluation.
  - 3CD Appears eligible for CR as a contributor to a CR eligible district through a survey evaluation.
  - 3CS Appears eligible for CR as an individual property through survey evaluation.
- 4 Appears eligible for National Register (NR) or California Register (CR) through other evaluation**
- 4CM Master List - State Owned Properties – PRC §5024.
- 5 Properties Recognized as Historically Significant by Local Government**
- 5D1 Contributor to a district that is listed or designated locally.
  - 5D2 Contributor to a district that is eligible for local listing or designation.
  - 5D3 Appears to be a contributor to a district that appears eligible for local listing or designation through survey evaluation.
  
  - 5S1 Individual property that is listed or designated locally.
  - 5S2 Individual property that is eligible for local listing or designation.
  - 5S3 Appears to be individually eligible for local listing or designation through survey evaluation.
  
  - 5B Locally significant both individually (listed, eligible, or appears eligible) and as a contributor to a district that is locally listed, designated, determined eligible or appears eligible through survey evaluation.
- 6 Not Eligible for Listing or Designation as specified**
- 6C Determined ineligible for or removed from California Register by SHRC.
  - 6J Landmarks or Points of Interest found ineligible for designation by SHRC.
  - 6L Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning.
  - 6T Determined ineligible for NR through Part I Tax Certification process.
  - 6U Determined ineligible for NR pursuant to Section 106 without review by SHPO.
  - 6W Removed from NR by the Keeper.
  - 6X Determined ineligible for the NR by SHRC or Keeper.
  - 6Y Determined ineligible for NR by consensus through Section 106 process – Not evaluated for CR or Local Listing.
  - 6Z Found ineligible for NR, CR or Local designation through survey evaluation.
- 7 Not Evaluated for National Register (NR) or California Register (CR) or Needs Reevaluation**
- 7J Received by OHP for evaluation or action but not yet evaluated.
  - 7K Resubmitted to OHP for action but not reevaluated.
  - 7L State Historical Landmarks 1-769 and Points of Historical Interest designated prior to January 1998 – Needs to be reevaluated using current standards.
  
  - 7M Submitted to OHP but not evaluated - referred to NPS.
  - 7N Needs to be reevaluated (Formerly NR Status Code 4)
  - 7N1 Needs to be reevaluated (Formerly NR SC4 – may become eligible for NR w/restoration or when meets other specific conditions.
  - 7R Identified in Reconnaissance Level Survey; Not evaluated.
  - 7W Submitted to OHP for action – withdrawn.

PROPERTY-NUMBER	PRIMARY-#	STREET-ADDRESS	NAMES	PATE RANCH & BARNS, CHASE RANCH	(VIC) LE GRAND	P	1899	HIST. SURV.	5333-0003-0000	PRG-REFERENCE-NUMBER	STAT-DAT	NRS
056491	24-000695	1250 SR 140			LIVINGSTON	P		HIST. RES.	DOE-24-03-0004-0000		05/23/03	6Y
140016		1244 A ST			LIVINGSTON	P		PROJ. REVW.	HUD030519D		05/23/03	6Y
145336		1736 C ST			LIVINGSTON	P		HIST. RES.	DOE-24-03-0009-0000		12/02/03	6Y
150433		1534 CROWELL ST			LIVINGSTON	P	1920	HIST. RES.	HUD031105C		12/02/03	6Y
056492	24-000696	SR 99			LIVINGSTON	P	1932	HIST. RES.	DOE-24-04-0019-0000		07/13/04	6Y
056493	24-000697	SR 99	BR 39-15 YAMATO COLONY		LIVINGSTON	S		PROJ. REVW.	HUD040617E		07/13/04	6Y
147703		BIRD RD			LIVINGSTON	P		HIST. SURV.	5334-0001-0000		07/13/04	6Y
147716		BIRD RD			LIVINGSTON	P		HIST. SURV.	5334-0002-0000		07/13/04	6Y
107075	24-000097				(VIC) LIVINGSTON	U		HIST. RES.	DOE-24-04-0007-0000		05/06/04	6Y
128870	24-001702				(VIC) LIVINGSTON	S	1930	PROJ. REVW.	FHWA040419B		05/06/04	6Y
128871	24-001703				(VIC) LIVINGSTON	S	1930	HIST. RES.	DOE-24-04-0008-0000		05/06/04	6Y
128874	24-000434				(VIC) LIVINGSTON	S	1930	PROJ. REVW.	FHWA040419B		05/06/04	6Y
128876	24-000082				LOS BANOS	U	1890	PROJ. REVW.	FHWA970110B		03/05/97	6Y
128879	24-001704				LOS BANOS	S	1950	HIST. RES.	DOE-24-00-0021-0000		11/28/00	2S2
154261					LOS BANOS	S	1946	PROJ. REVW.	FHWA000623D		11/28/00	2S2
154267					LOS BANOS	S	1946	HIST. RES.	DOE-24-00-0022-0000		11/28/00	2S2
090818	24-000621				LOS BANOS	P	1952	PROJ. REVW.	FHWA000623D		11/28/00	2S2
052422	24-000623	836 6TH ST			LOS BANOS	P		HIST. RES.	DOE-24-04-0023-0000		09/09/04	6Y
150701		1234 ARIZONA AVE			LOS BANOS	P		PROJ. REVW.	HUD040903D		09/09/04	6Y
154272		14308 BADGER FLAT RD			LOS BANOS	P	1930	PROJ. REVW.	FHWA040722B		09/16/04	6Y
154271		14323 BADGER FLAT RD			LOS BANOS	P	1933	PROJ. REVW.	FHWA040722B		09/16/04	6Y
154270		14515 BADGER FLAT RD			LOS BANOS	S		HIST. RES.	SPLI-MER-002		06/02/67	7L
154305		CENTER AVE			LOS BANOS	P	1923	HIST. SURV.	3635-0002-0000		08/24/79	1S
154304		CENTER AVE			LOS BANOS	P	1952	HIST. RES.	DOE-24-04-0023-0000		09/09/04	6Y
154303		CENTER AVE			LOS BANOS	P	1953	PROJ. REVW.	HUD040903D		09/09/04	6Y
154307		CENTER AVE			LOS BANOS	P	1910	PROJ. REVW.	FHWA040722B		09/16/04	6Y
154306		CENTER AVE			LOS BANOS	P	1930	PROJ. REVW.	FHWA040722B		09/16/04	6Y
154301		CENTER AVE			LOS BANOS	P	1946	PROJ. REVW.	FHWA040722B		09/16/04	6Y
090413	24-000641	803 E PACHECO BLVD			LOS BANOS	P	1920	PROJ. REVW.	FHWA040722B		09/16/04	6Y
102768	24-000082	FAHEY RD OVERCROSS			LOS BANOS	P	1900	PROJ. REVW.	FHWA040722B		09/16/04	6Y
102771	24-000434	FAHEY RD OVERCROSS			LOS BANOS	P	1939	PROJ. REVW.	FHWA040722B		09/16/04	6Y
154357		411 H ST			LOS BANOS	P	1936	PROJ. REVW.	FHWA040722B		09/16/04	6Y
102767	24-000082	HENRY MILLER RD OVERC			LOS BANOS	C		HIST. RES.	SHL-0550-0000		03/01/56	7L
102770	24-000434	HENRY MILLER RD OVERC			LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
154268		INGOMAR GRADE			LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
154269		INGOMAR GRADE			LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
150324		941 J ST			LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914	PROJ. REVW.	HUD050531A		06/02/05	6Y
					LOS BANOS	P	1874	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1896	PROJ. REVW.	FHWA960802A		08/12/96	6Y
					LOS BANOS	P	1914					

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068298	24-000698	968 J ST		LOS BANOS	U			HIST. RES.	DOE-24-89-0026-0000	06/20/89	6Y	
154280		13343 JOHNSON RD		LOS BANOS	P	1910		PROJ. REVW.	FHWA890612A	06/20/89	6Y	
154283		13344 JOHNSON RD		LOS BANOS	P	1920		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154281		13345 JOHNSON RD		LOS BANOS	P	1910		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154282		13436 JOHNSON RD		LOS BANOS	P	1920		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154279		13518 JOHNSON RD		LOS BANOS	P	1937		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154276		13585 JOHNSON RD		LOS BANOS	P	1950		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154278		13612 JOHNSON RD		LOS BANOS	P	1935		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154277		13670 JOHNSON RD		LOS BANOS	P	1935		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154275		13711 JOHNSON RD		LOS BANOS	P	1935		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154274		13804 JOHNSON RD		LOS BANOS	P	1915		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154273		13835 JOHNSON RD		LOS BANOS	P	1938		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
152771		304 K ST		LOS BANOS	P	1919		HIST. RES.	DOE-24-05-0001-0000	02/02/05	6Y	
134400		1109 K ST	CHURCH OF ST. JOSEPH /	LOS BANOS A	P	1923		PROJ. REVW.	HUD041227E	02/02/05	6Y	
								NAT. REG.	24-0008	11/10/03	7J	
								NAT. REG.	24-0007	10/11/02	7W	
154296		MERCEY SPRINGS RD		LOS BANOS	P	1920		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
154297		MERCEY SPRINGS RD		LOS BANOS	P	1952		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
102769	24-000082	MORAGA RD	MAIN CANAL CENTRAL CA IRRIG DISTR	LOS BANOS		1874		PROJ. REVW.	FHWA960802A	08/12/96	6Y	
102772	24-000434	MORAGA RD	OUTSIDE CANAL CENTRAL CA IRRIG DIS	LOS BANOS		1896		PROJ. REVW.	FHWA960802A	08/12/96	6Y	
154453		1222 NEVADA AVE		LOS BANOS	P	1951		PROJ. REVW.	HUD050531C	06/13/05	6Y	
154308		17449 ORTIGALITA RD		LOS BANOS	P	1914		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
107077	24-000082	PACHECO BLVD	MAIN CANAL, CENTRAL CALIFORNIA IRR	LOS BANOS	D	1896		PROJ. REVW.	FHWA970110B	03/05/97	6Y	
154287		2548 PACHECO BLVD		LOS BANOS	P	1949		PROJ. REVW.	FHWA040722B	09/16/04	6Y	
065930	24-000699	524 PACHECO HWY	SR 152	LOS BANOS	U			HIST. RES.	DOE-24-89-0018-0000	06/20/89	6Y	
065929	24-000700	528 PACHECO HWY	WIDEN SR 152	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/20/89	6Y	
065928	24-000701	536 PACHECO HWY	WIDEN SR 152	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/20/89	6Y	
065923	24-000702	538 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	DOE-24-9-0016-0000	06/20/89	6Y	
068076	24-000703	600 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/21/89	6Y	
065922	24-000704	621 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	DOE-24-89-0015-0000	06/20/89	6Y	
065921	24-000705	625 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/20/89	6Y	
065920	24-000706	627 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	DOE-24-89-0025-0000	06/20/89	6Y	
065919	24-000707	629 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/20/89	6Y	
065918	24-000708	637 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	DOE-24-89-0011-0000	06/20/89	6Y	
065917	24-000709	641 PACHECO HWY	SR 152 (641-645)	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/20/89	6Y	
065916	24-000710	665 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	DOE-24-89-0013-0000	06/20/89	6Y	
065915	24-000711	820 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/20/89	6Y	
065914	24-000712	922 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	DOE-24-89-0007-0000	06/20/89	6Y	
065913	24-000713	926 PACHECO HWY	SR 152	LOS BANOS	U			PROJ. REVW.	FHWA890612A	06/20/89	6Y	

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PROPERTY-NUMBER	PRIMARY-#	STREET ADDRESS	NAMES	CITY	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT
068300	2	4-000714	930 PACHECO HWY	LOS BANOS	U		HIST. RES.	DOE-24-89-0002-0000	06/21/89
							PROJ. REVW.	FHWA890612A	06/21/89
065912	2	4-000715	940 PACHECO HWY	LOS BANOS	U	SR 152	HIST. RES.	DOE-24-89-0004-0000	06/20/89
							PROJ. REVW.	FHWA890612A	06/20/89
065911	2	4-000716	1201 PACHECO HWY	LOS BANOS	U	SR 152 WIDEN	HIST. RES.	DOE-24-89-0003-0000	06/20/89
							PROJ. REVW.	FHWA890612A	06/20/89
154302			PLOW CAMP RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154299			17114 PLOW CAMP RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154300			17824 PLOW CAMP RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154263			15728 RAMOS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
150325			1504 S 7TH ST	LOS BANOS			HIST. RES.	DOE-24-04-0017-0000	10/14/04
							PROJ. REVW.	HUD040922E	10/14/04
154285			S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
152956			10746 S MERCY SPRINGS RD	LOS BANOS	P		HIST. RES.	DOE-24-05-0003-0000	04/07/05
							PROJ. REVW.	FCC050318A	04/07/05
154284			13397 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
128878	2	4-001706	16893 S MERCY SPRINGS RD	LOS BANOS	P		HIST. RES.	DOE-24-00-0029-0000	11/28/00
							PROJ. REVW.	FHWA00623D	11/28/00
154289			17048 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154290			17311 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154291			17359 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154292			17383 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
128877	2	4-001707	17386 S MERCY SPRINGS RD	LOS BANOS	P	PHILLIPS DAIRY	HIST. RES.	DOE-24-00-0028-0000	11/28/00
							PROJ. REVW.	FHWA00623D	11/28/00
154293			17411 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154294			17445 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154295			17465 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
154298			18016 S MERCY SPRINGS RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04
128875	2	4-001705	20172 S MERCY SPRINGS RD	LOS BANOS	P	FAGUNDAS DAIRY BARN/ HOUSE	HIST. RES.	DOE-24-00-0026-0000	11/28/00
							PROJ. REVW.	FHWA00623D	11/28/00
128872	2	4-001708	20180 S MERCY SPRINGS RD	LOS BANOS	P	FAGUNDAS BARN	HIST. RES.	DOE-24-00-0023-0000	11/28/00
							PROJ. REVW.	FHWA00623D	11/28/00
128873	2	4-001709	20268 S MERCY SPRINGS RD	LOS BANOS	P		HIST. RES.	DOE-24-00-0024-0000	11/28/00
							PROJ. REVW.	FHWA00623D	11/28/00
154264			SR 152	LOS BANOS	P		PROJ. REVW.	FHWA00623D	11/28/00
065931	2	4-000717	524 SR 152	LOS BANOS	U	PACHECO STAR HOLSTEINS	HIST. RES.	DOE-24-89-0019-0000	06/20/89
							PROJ. REVW.	FHWA890612A	06/20/89
154265			22116 SR 152	LOS BANOS	P	OLD MACHADO PLACE	PROJ. REVW.	FHWA040722B	09/16/04
154266			22116 SR 152	LOS BANOS	P	NUNES BROTHERS DAIRY	PROJ. REVW.	FHWA040722B	09/16/04
154262			23626 W HWY 152	LOS BANOS	P	FAUSSET PLACE	PROJ. REVW.	FHWA040722B	09/16/04
136844			745 W J ST	LOS BANOS	F	NRCS FIELD OFFICE	HIST. RES.	DOE-24-03-0001-0000	01/23/03
150326			124 W K ST	LOS BANOS			PROJ. REVW.	NRCS021218A	01/23/03
065932	2	4-000718	29 W PACHECO SR	LOS BANOS	U		HIST. RES.	DOE-24-04-0018-0000	10/14/04
							PROJ. REVW.	HUD040922C	10/14/04
065933	2	4-000719	50 W PACHECO SR	LOS BANOS	U		HIST. RES.	DOE-24-89-0020-0000	06/20/89
							PROJ. REVW.	FHWA890612A	06/20/89
065934	2	4-000720	104 W PACHECO SR	LOS BANOS	U		HIST. RES.	DOE-24-89-0021-0000	06/20/89
							PROJ. REVW.	FHWA890612A	06/20/89
065935	2	4-000721	112 W PACHECO SR	LOS BANOS	U		PROJ. REVW.	FHWA890612A	06/20/89
065937	2	4-000722	120 W PACHECO SR	LOS BANOS	U		HIST. RES.	DOE-24-89-0023-0000	06/20/89
							PROJ. REVW.	FHWA890612A	06/20/89
065938	2	4-000723	225 W PACHECO SR	LOS BANOS	U		HIST. RES.	DOE-24-89-0024-0000	06/20/89
							PROJ. REVW.	FHWA890612A	06/20/89
154309			21490 W PIONEER RD	LOS BANOS	P		PROJ. REVW.	FHWA040722B	09/16/04

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PROPERTY-NUMBER	PRIMARY-#	STREET-ADDRESS	NAMES	CITY-NAME	OWN	YR-C	OHP-PROG.	PRG-REFERENCE-NUMBER	STAT-DAT
154311	21858	W PIONEER RD	LOS BANOS	LOS BANOS	P	1957	PROJ.REVW.	FHWA040722B	09/16/04
154312	21872	W PIONEER RD	LOS BANOS	LOS BANOS	P	1940	PROJ.REVW.	FHWA040722B	09/16/04
154310	21521	W PIONEER ROAD	LOS BANOS	LOS BANOS	P	1938	PROJ.REVW.	FHWA040722B	09/16/04
154288		WARD RD	AGRARIAN SHED	LOS BANOS	P	1940	PROJ.REVW.	FHWA040722B	09/16/04
052423	24-000640	E OF LOS BANOS	MILLER & LUX RANCH HEADQUARTERS SI	(VIC) LOS BANOS	P	1879	HIST.SURV.	3635-0003-0000	01/27/56
							HIST.RES.	SHL-0548-0000	
052421	24-000725	SR 152	BR 39-40L	(VIC) LOS BANOS	S	1917	HIST.SURV.	3635-0001-0000	05/29/69
089491	24-000643	W SR 152	PACHECO PASS	(VIC) LOS BANOS	F		HIST.RES.	SHL-0829-0000	02/24/94
043081	24-000621	WOLFSEN RD	SAN LUIS CAMP ADOBE	(VIC) LOS BANOS	PS	1866	NAT.REG.	24-0002	
107923	24-000726		EDENDALE CREEK RAILROAD TRESTLE/YO	MERCED			PROJ.REVW.	COE970203A	05/07/97
119204	24-000581		DEANE CANAL	MERCED	D	1888	HIST.RES.	DOE-24-98-0002-0000	12/28/98
							PROJ.REVW.	FHWA981221Z	12/28/98
119205	24-000580		EASTSIDE CANAL	MERCED	D	1887	HIST.RES.	DOE-24-98-0003-0000	12/28/98
							PROJ.REVW.	FHWA981221Z	12/28/98
125243			OWENS CREEK BRIDGE #39-06	MERCED	F		HIST.RES.	DOE-24-00-0005-0000	06/15/00
							PROJ.REVW.	FHWA000107A	06/15/00
130531			BURLINGTON NORTHERN SANTA FE RAILR	MERCED	P	1890	HIST.RES.	DOE-24-02-0084-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130093			TANK HOUSE / SUNSHINE DAIRY	MERCED	P		HIST.RES.	DOE-24-02-0001-0002	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130094			BUNKHOUSE / SUNSHINE DAIRY	MERCED	P	1927	HIST.RES.	DOE-24-02-0001-0003	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130095			MILK BARN / SUNSHINE DAIRY	MERCED	P		HIST.RES.	DOE-24-02-0001-0004	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130096			HAY BARN / SUNSHINE DAIRY	MERCED	P		HIST.RES.	DOE-24-02-0001-0005	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130097			HAY STORAGE STRUCTURE / SUNSHINE D	MERCED	P		HIST.RES.	DOE-24-02-0001-0006	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130099			LOAF BARN / SUNSHINE DAIRY	MERCED	P	1955	HIST.RES.	DOE-24-02-0001-0007	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130100			SHOP BUILDING / SUNSHINE DAIRY	MERCED	P		HIST.RES.	DOE-24-02-0001-0008	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130101			QUONSET HUT / SUNSHINE DAIRY	MERCED	P		HIST.RES.	DOE-24-02-0001-0009	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130521			LE GRAND CANAL	MERCED	U	1922	HIST.RES.	DOE-24-02-0074-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130522			FAIRFIELD CANAL	MERCED	U	1903	HIST.RES.	DOE-24-02-0075-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130523			TOWER LATERAL	MERCED	U	1925	HIST.RES.	DOE-24-02-0076-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130524			SELLS LATERAL	MERCED	U	1888	HIST.RES.	DOE-24-02-0077-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130525			YOSEMITE LATERAL	MERCED	U	1888	HIST.RES.	DOE-24-02-0078-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130526			BRADLEY LATERAL	MERCED	U	1903	HIST.RES.	DOE-24-02-0079-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130527			MERCED LATERAL	MERCED	U	1903	HIST.RES.	DOE-24-02-0080-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130528			ROBINSON LATERAL	MERCED	U	1903	HIST.RES.	DOE-24-02-0081-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
130529			HARTLEY LATERAL	MERCED	U	1903	HIST.RES.	DOE-24-02-0082-0000	02/26/02
							PROJ.REVW.	FHWA020109A	02/26/02
							HIST.RES.	DOE-24-01-0025-0000	12/18/01
							PROJ.REVW.	FHWA010924C	12/18/01