EXECUTIVE SUMMARY

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Introduction

Under the California Environmental Quality Act (CEQA), when discretionary projects are undertaken by public agencies, an Environmental Impact Report (EIR) is required if the Lead Agency determines that the project may cause a significant environmental impact. This was concluded by the Notice of Preparation (NOP) prepared and published for this project in July 2008 (Appendix A). Comments received during the public review of the Notice of Preparation follow in Appendix A. The purpose of an EIR is to provide full disclosure of the potentially significant environmental effects of the project to the public and their decision-makers and explore means to mitigate (i.e., reduce, avoid, or eliminate) those impacts through special mitigation measures or alternatives to the project. CEQA intends the preparation of an EIR to be a public process that provides meaningful opportunities for public input with regard to potential environmental effects.

The project evaluated in this EIR involves the adoption of the *Merced Vision 2030 General Plan* for the City of Merced.

It is the intent of the Executive Summary to provide the reader with a clear and simple description of the proposed project and its potential environmental impacts. Section 15123 of the CEQA Guidelines requires that the summary identify each significant impact, and recommend mitigation measures and alternatives that would minimize or avoid potential significant impacts. The summary is also required to identify areas of controversy known to the lead agency, including issues raised by agencies and the public, and issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. This section focuses on the major areas of the proposed project that are important to decision-makers and utilizes non-technical language to promote understanding.

This EIR will be used as a Program EIR. The City of Merced is the Lead Agency for the preparation of this Program EIR. Further environmental review may be required for specific activities resulting from the proposed Merced Vision 2030 General Plan's adoption. Section 15168 of the CEQA Guidelines defines a Program EIR 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 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 effects which can be mitigated in similar ways.

Project Description

The proposed project includes an update of the City of Merced's General Plan. California state law requires each city and county to adopt a general plan "for all the physical development of the county or city, and any land outside its boundaries which bears relation to its planning" (§65300). The General Plan will include Urban Expansion, Land Use, Transportation & Circulation, Public Facilities & Services, Urban Design, Open Space, Conservation & Recreation, Sustainable Development, Housing, Noise and Safety Elements. The Housing Element has been previously adopted and certified by the California Department of Housing and Community Development. The Housing Element (last updated in 2003 with minor revision in 2004) has a set schedule for review, generally every five years, based on State law. The Housing Element is currently being updated by the City and will be included in the General Plan document after its adoption. Figure 2-4 shows the proposed 2030 Land Use and Circulation Map for the General Plan. The expansion of the urban land use designations define the limits for extending City services and infrastructure so as to accommodate new development anticipated within the 2010-2030 time-frame of the General Plan. Policies in the proposed General Plan limit leap-frog development and provide for an orderly transition from rural to urban land uses.

The Plan includes Guiding Principles, developed during Community Workshops, described below. Table ES-1 shows the acreage of General Plan land use designations for both the current and proposed General Plans (City limits and Specific Urban Development Planning Area (SUDP)).

Table ES-1
Existing & Proposed General Plan Land Use Comparison Within the City Limits and SUDP/SOI (Acres)

Land Use	City Limits	Existing SUDP	Total	Proposed SUDP/SOI	All Land in new SUDP/SOI
RR (Rural Residential)	15.25	280.84	296.09	2004.91	2301.00
AG (Agriculture)	92.33	21.51	113.84	0	113.84
Total Ag Res	**107.58**	**302.35**	**409.93**	**2004.91**	**2414.84**
LD (Low-Density Residential)	5516.28	2981.05	8497.33	274.08	8771.41
LMD (Low-Medium Density)	824.05	305.48	1129.53	46.96	1176.49
Total Single-Family Res	**6340.33**	**3286.53**	**9626.86**	**321.04**	**9947.90**
HMD (High-Medium Density)	745.08	61.84	806.92	25.35	832.27
HD (High Density Residential)	92.44	0	92.44	23.56	116.00
RMH (Residential Mobile Home)	79.34	0.18	79.52	0	79.52

Land Use	City Limits	Existing SUDP	Total	Proposed SUDP/SOI	All Land in new SUDP/SOI
Total Multi-Family	**916.86**	**62.02**	**978.88**	**48.91**	**1027.79**
P/G (Public/Government)	533.16	5.30	538.46	39.82	578.28
CO (Commercial Office)	341.74	132.32	474.06	0	474.06
Total Office	**874.90**	**137.62**	**1012.52**	**39.82**	**1052.34**
IND (Industrial)	1882.22	994.73	2876.95	0	2876.95
IND-R (Industrial Reserve)	0	150.40	150.40	1072.34	1222.74
Total Industrial	**1882.22**	**1145.13**	**3027.35**	**1072.34**	**4099.69**
BP (Business Park)	128.59	453.35	581.94	77.43	659.37
BP-R (Business Park Reserve)	2.94	85.27	88.21	0	88.21
Total Business Park	**131.53**	**538.62**	**670.15**	**77.43**	**747.58**
CG (General Commercial)	321.55	172.04	493.59	0	493.59
CN (Neighborhood Commercial)	200.75	51.71	252.46	22.84	275.30
CT (Thoroughfare Commercial)	212.89	292.01	504.90	173.92	678.82
RC (Regional/Community)	475.46	42.37	517.83	0	517.83
Total Commercial	**1210.65**	**558.13**	**1768.78**	**196.76**	**1965.54**
OS-PK (Open Space/Park)	786.85	167.24	954.09	152.91	1107.00
Total Open Space	**786.85**	**167.24**	**954.09**	**152.91**	**1107.00**
Total School	**677.91**	**68.32**	**746.23**	**994.18**	**1740.41**
Other Lands					
COM-R (Commercial Reserve)	7.15	83.18	90.33	0	90.33
RES-R (Residential Reserve)		360.34	360.34	0	360.34
PARK-F (Park-Future)	5.83	65.18	71.01	0	71.01
SCHOOL-F (School-Future)	5.83	42.78	48.61	0	48.61
VR (Village Residential)	238.67	205.11	443.78	0	443.78
Total Other Lands	**257.48**	**756.59**	**1014.07**	**0**	**1014.07**
Total Community Plan Areas*	**0**	**389.14**	**389.14**	**7956.00**	**8345.14**
Overall Total	**13186.31**	**7411.69**	**20598.00**	**12864.30**	**33462.30**

* Shown as "Reserve" in Merced Vision 2015 General Plan.
Source: Quad Knopf, City of Merced, 2010

Guiding Principles:

- Expansion of the Sphere of Influence and City boundary with phasing of development to avoid premature conversion of agricultural land and to plan for cost-effective extension of municipal services.

- Foster compact and efficient development patterns.

- Connectivity between existing and planned urban areas. Examples include the northeast area toward UCM, the University Community, and South Merced.

- Merced as the single municipal service provider in the expanded sphere of influence.

- New development provides or pays its fair share of public services and facilities to avoid burdening existing city residents (in short, new growth pays for itself).

- Mixed-use, transit and pedestrian friendly urban villages in growth areas with direct access to commercial cores from surrounding neighborhoods.

- Commercial nodes in new growth areas to avoid the aesthetic and circulation issues associated with more common "strip commercial".

- Circulation: Recognition of the cost and importance of the arterial street system and protect capacity with access standards. Designs that encourage all modes of transportation.

- Build community quality. High community standards for Merced's services, infrastructure, and private development as a strategy for attracting business and industry and to benefit the City's residents.

- Planning well in advance for industrial/business park uses and for the infrastructure needed to support such development.

- A diversity of housing types and opportunities.

- Encouraging Sustainable and "Green" Development.

- Planning for the provision of infrastructure ahead of development.

- Maintaining Merced's high quality of life and keeping it a nice place to live.

- Encouraging new research parks and the use of new technologies.

- Protection of the Merced Regional Airport as an important community asset.

- Maintaining a quality educational environment for pre-school, K-12, and higher education.

- Maintaining our quality parks and recreation systems, including the bike path system.

- Encouraging a healthy community through improved medical facilities, air quality, parks & recreation opportunities, etc.

MERCED SPECIFIC URBAN DEVELOPMENT PLANNING (SUDP) AREA

Merced's current SUDP (adopted in 1997 as part of the Merced Vision 2015 General Plan) is based on policy contained in the *Merced County Year 2000 General Plan*. The Plan utilizes an

"urban centered" concept to focus population growth in defined urban areas. The goal of the plan is *"to provide for intensive urban development and to protect agricultural and open space land from uncontrolled sprawling urban development."* The current SUDP is approximately 20,000 acres.

The County of Merced (County) applies the "urban centered" concept through the designation of Specific Urban Development Plans (SUDP), Rural Residential Centers (RRC), Highway Interchange Centers (HIC), and Agricultural Services Centers (ASC). Of these, only SUDP's and RRC's relate to Merced's planning efforts. Specific Urban Development Plans are intended to accommodate all classifications of urban land use (residential, commercial, industrial, and institutional).

> An SUDP has a boundary line which is recognized as the ultimate growth boundary of the community over the life of the Plan, and all land within the SUDP is planned for eventual development in a mixture of urban and urban-related uses. *(Merced County Year 2030 General Plan)*

Each of the County's six incorporated cities, as well as eighteen unincorporated communities, are presently designated as SUDP's. The City of Merced General Plan proposes to expand its SUDP and combine it with the Sphere of Influence (see below) to 52.4 square miles to provide sufficient developable area to accommodate future growth through the Year 2030 and beyond.

PROPOSED MERCED SPECIFIC URBAN DEVELOPMENT PLAN BOUNDARY (SUDP)/SPHERE OF INFLUENCE (SOI)

The proposed Merced SUDP would result in a coterminous Sphere of Influence (SOI) and SUDP boundary. The proposed SUDP/SOI boundary would also reduce the current SOI boundary in the northeast to reflect the revised location of the U.C. Merced campus. The proposed SUDP/SOI contains approximately 33,463 acres (52.4 square miles of land area); almost the same area as the 1997 Sphere of Influence.

1) Approximately 3,995 acres will be added in Northwest Merced. The new SUDP/SOI boundary would generally move to Franklin Road on the west, north of Old Lake Road, and south to Santa Fe Drive. This area is proposed for industrial and business park uses along Highway 59 and a large mixed-use community north of Bellevue Road. This area will be able to accommodate a significant amount of the residential growth in the City for the next 20 years.

   The business park and industrial areas along Highway 59 are included in order to provide a better "jobs-housing" balance in North Merced, as well as alleviate circulation and air quality concerns. Most existing employment opportunities in Merced are located Downtown and south of Highway 99.

2) The second area of expansion consists of approximately 3,824 acres. It would move the SUDP/SOI south of Highway 99 to the vicinity of McNamara Road and west to a line 1/4 mile west of Thornton Road. South of the Merced Regional Airport, a large community plan

has been proposed. Although impacted by airport land use restrictions, the proposal includes significant residential and recreational growth.

3) The third area to be included encompasses 6,748 acres and moves the SUDP/SOI boundary to take in the property between the current City limit/SUDP, and the U.C. Merced campus and community. These will be brought within the SOI as well.

   Inclusion of this area within the SUDP/SOI will form a more logical urban boundary, which will ultimately facilitate the provision of City services to the University.

These areas referenced above represent logical expansion areas for the City, primarily because they are adjacent to major road improvements (Merced-Atwater Expressway, Mission/Highway 99 Interchange, etc.). They also encompass areas needed for long-term commercial and industrial development. The residential areas included in this expansion were for the most part large tracts with significant planning efforts currently underway. Given the environmental and physical limitations elsewhere around the City, these are the most logical areas for the next phase of expansion. These areas will give the City enough land to accommodate expected growth over the next 20 to 40 years.

Potential Areas of Controversy and Issues to be Resolved

The following issues could produce controversy in reviewing and considering the proposed project:

AESTHETICS:

- The proposed project could have a cumulatively adverse effect on aesthetic resources including the generation of light and glare

AGRICULTURE AND FOREST RESOURCES:

- Directly or indirectly result in conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland) to non-agricultural use

- Conflict with existing zoning for agricultural use, or a Williamson Act contract

- Have a cumulatively adverse affect on agricultural resources

AIR QUALITY:

- Development and operation under the General Plan would result in emissions of criteria pollutants, ozone precursors, and other pollutants caused by mobile source activity, area sources, and stationary sources.

NOISE:

- Buildout of the General Plan may contribute to increased traffic noise levels, and a significant increase in overall traffic noise levels at existing sensitive receptors.

TRANSPORTATION/TRAFFIC:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system and/or exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

GREENHOUSE GAS EMISSIONS (GLOBAL CLIMATE CHANGE):

- Development of the Project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change.

Alternatives to the Project

Section 15126.6 of the State CEQA Guidelines requires the EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed project, and to evaluate the comparative merits of the alternatives. Alternatives that would reduce or avoid significant impacts represent an environmentally superior alternative to the proposed project. However, if the environmentally superior alternative is the "no project" alternative, the EIR must also identify an environmentally superior alternative among the other alternatives. Based on Chapter Four, Table 4-1 and the analyses developed in this EIR, the Reduced Project Area Alternative is the environmentally superior alternative because it reduces more potential impacts than other alternatives relative to the proposed General Plan and serves to reduce the severity of three significant cumulative impacts (agriculture, air quality, and transportation/traffic). The No Project alternative (existing General Plan) is environmentally inferior to the proposed General Plan and the other alternatives because it fails to achieve the objectives of the plan update.

The alternatives identified for consideration are as follows:

EXISTING GENERAL PLAN (NO PROJECT) ALTERNATIVE

In accordance with Section 15126.6(e)(3)(B) of the State CEQA Guidelines, the No Project Alternative consists of a description of an analysis of the circumstances under which the proposed project does not proceed. This alternative entails a general discussion of what can reasonably be expected to occur on the project site in the foreseeable future if the proposed project is not approved, based on the existing general plan land use designations, zoning, and available infrastructure and services.

Under this alternative, the 2030 General Plan would not be adopted, and the existing Merced Vision 2015 General Plan would remain in effect. Future development would occur as allowed under the existing LAFCO approved SOI with the same General Plan Land Use Diagram in effect (reference Figure 2-3).

REDUCED PROJECT AREA ALTERNATIVE

The Reduced Project Area Alternative would update the General Plan elements but would restrict growth to a smaller area. In this Alternative, the two Community Plan areas identified in the northwest and southwest corners of the 2030 Plan area are deleted from the proposed Plan. This alternative was considered feasible because the City could grow at a slower pace than is being planned for. Further, the potential population of the Project exceeds that projected for 2030. Figure 4-1 shows the Reduced Project Area Alternative.

CONCENTRATED GROWTH ALTERNATIVE

The Concentrated Growth Alternative assumes the same number of residential units at buildout as the proposed project, as well as the same goals, objectives, and policies. However, the density of residential development would increase to reduce the amount of land needed to provide the same growth capacity. Residential land use densities would be increased significantly (25-50%), and minimum densities would be imposed. As a result, more of the land in the proposed SUDP/SOI would be left in agricultural use.

Summary of Impacts and Mitigation Measures

Section 15123(b)(1) of the Guidelines for Implementation of the CEQA Guidelines provides that the summary shall identify each significant effect with proposed mitigation measures that would reduce or avoid that effect. This information is summarized in Table ES-2, Summary of Impacts and Mitigation Measures.

Table ES-2
Summary of Impacts and Mitigation Measures

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.1 Aesthetics					
3.1-1	Substantial adverse effect on a scenic vista	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.1-2	Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway	No Impact		No mitigation measures are required.	No Impact
3.1-3	Substantially degrade the existing visual character or quality of the site and its surroundings	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.1-4	Create a new source of substantial light or glare that would adversely affect day or night views in the area	Potentially Significant	3.1-4	The following guidelines will be followed in selecting and designing any outdoor lighting: 1. All outdoor lights including parking lot lights, landscaping, security, path and deck lights should be fully shielded, full cutoff luminaries. 2. Complete avoidance of all outdoor up-lighting for any purpose. 3. Avoidance of tree mounted lights unless they are fully shielded and pointing down towards the ground or shining into dense foliage. Ensure compliance over time. 4. Complete avoidance of up-lighting and unshielded	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				lighting in water features such as fountains or ponds.	
3.1-5	The proposed project could have a cumulatively adverse effect on aesthetic resources including the generation of light and glare	Potentially Significant and Cumulatively Considerable		No mitigation measures are available.	Significant, Cumulatively Considerable, and Unavoidable
3.2 Agriculture and Forest Resources					
3.2-1	Directly or indirectly result in conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland) to non-agricultural use	Potentially Significant	3.2-1	The City will encourage property owners outside the City limits but within the SUDP/SOI to maintain their land in agricultural production until the land is converted to urban uses. The City will also work cooperatively with land trusts and other non-profit organizations to preserve agricultural land in the region. This may include the use of conservation easements. Infill development will be preferred and encouraged over fringe development. Sequential and contiguous development is also preferred and encouraged over leap-frog development.	Significant and Unavoidable
3.2-2	Conflict with existing zoning for agricultural use, or a Williamson Act contract	Potentially Significant		No mitigation measures available.	Significant and Unavoidable
3.2-3	Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by	No Impact		No mitigation measures are required.	No Impact

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
	Government Code section 51104(g))				
3.2-4	Result in the loss of forest land or conversion of forest land to non-forest use	No Impact		No mitigation measures are required.	No Impact
3.2-5	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.	No Impact		No mitigation measures are required.	No Impact
3.2-6	Have a cumulatively adverse effect on agricultural resources	Significant, Unavoidable, and Cumulative		No mitigation measures are available.	Significant, Cumulatively Considerable, and Unavoidable
3.3 Air Quality					
3.3-1	Construction activities associated with development under the Merced Vision 2030 General Plan would result in criteria pollutants, ozone precursors, and other pollutants.	Potentially Significant	3.3-1a	For any phase of construction in which an area greater than 22 acres, in accordance with Regulation VIII of the SJVAPCD, will be disturbed on any one day, the project developer(s) shall implement the following measures: 1. Basic fugitive dust control measures are required for all construction sites by SJVAPCD Regulation VIII. 2. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				a slope greater than one percent. 3. Traffic speeds on unpaved roads shall be no greater than 15 mph. 4. Install wind breaks at windward side(s) of construction areas.	
		Potentially Significant	3.3-1b	To reduce emissions and thus reduce cumulative impacts, the City of Merced shall consider adoption of an ordinance requiring the following measures to be implemented in conjunction with construction projects within the City: 1. The idling time of all construction equipment used in the plan area shall not exceed ten minutes when practicable. 2. The hours of operation of heavy-duty equipment shall be minimized when practicable. 3. All equipment shall be properly tuned and maintained in accord with manufacturer's specifications when practicable. 4. When feasible, alternative fueled or electrical construction equipment shall be used at the project site. 5. The minimum practical engine size for construction equipment shall be used when practicable. 6. When feasible, electric carts or other smaller	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				equipment shall be used at the project site. 7. Gasoline-powered equipment shall be equipped with catalytic converters when practicable.	
3.3-2	Development and operation under the General Plan would result in emissions of criteria pollutants, ozone precursors, and other pollutants caused by mobile source activity, area sources, and stationary sources.	Significant and Cumulative	3.3-2	The following BACT (Best Available Control Technology) installations and mitigation shall be considered for new discretionary permits, to the extent feasible as determined by the City: • Trees shall be carefully selected and located to protect building(s) from energy consuming environmental conditions, and to shade paved areas when it will not interfere with any structures. Trees should be selected to shade paved areas that will shade 50% of the area within 15 years. Structural soil should be used under paved areas to improve tree growth. • If transit service is available to a project site, development patterns and improvements shall be made to encourage its use. If transit service is not currently available, but is planned for the area in the future, easements shall be reserved to provide for future improvements such as bus turnouts, loading areas, route signs and shade structures. • Multi-story parking facilities shall be considered instead of parking lots to reduce exposed concrete surface and save green space. • Sidewalks and bikeways shall be installed throughout as much of any project as possible, in	Significant, Cumulative, and Unavoidable

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				compliance with street standards, and shall be connected to any nearby existing and planned open space areas, parks, schools, residential areas, commercial areas, etc., to encourage walking and bicycling. • Projects shall encourage as many clean alternative energy features as possible to promote energy self-sufficiency. Examples include (but are not limited to): photovoltaic cells, solar thermal electricity systems, small wind turbines, etc. Rebate and incentive programs are offered for alternative energy equipment. As many energy-conserving features as possible shall be included in the individual projects. Energy conservation measures include both energy conservation through design and operational energy conservation. Examples include (but are not limited to): • Increased energy efficiency (above California Title 24 Requirements) • Energy efficient widows (double pane and/or Low-E) • Use Low and No-VOC coatings and paints • High-albedo (reflecting) roofing material • Cool Paving. "Heat islands" created by development projects contribute to the reduced air quality in the valley by heating ozone precursors	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				• Radiant heat barrier • Energy efficient lighting, appliances, heating and cooling systems • Install solar water-heating system(s) • Install photovoltaic cells • Install geothermal heat pump system(s) • Programmable thermostat(s) for all heating and cooling systems • Awnings or other shading mechanism for windows • Porch, patio and walkway overhangs • Ceiling fans, whole house fans • Utilize passive solar cooling and heating designs (e.g. natural convection, thermal flywheels) • Utilize daylighting (natural lighting) systems such as skylights, light shelves, interior transom windows etc. • Electrical outlets around the exterior of the unit(s) to encourage use of electric landscape maintenance equipment • Bicycle parking facilities for patrons and employees in a covered secure area. Bike storage should be located within 50' of the project's entrance.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				Construct paths to connect the development to nearby bikeways or sidewalks • On-site employee cafeterias or eating areas • Low or non-polluting landscape maintenance equipment (e.g. electric lawn mowers, reel mowers, leaf vacuums, electric trimmers and edger's, etc.) • Pre-wire the unit(s) with high speed modem connections/DSL and extra phone lines • Natural gas fireplaces (instead of wood-burning fireplaces or heaters) • Natural gas lines (if available) and electrical outlets in backyard or patio areas to encourage the use of gas and/or electric barbecues • Low or non-polluting incentives items should be provided with each residential unit (such items could include electric lawn mowers, reel mowers, leaf vacuums, gas or electric barbecues, etc.)	
3.3-3	Development and Operation under the General Plan would Expose Sensitive Receptors to Pollutant Concentration.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.3-4	Implementation of the General Plan Update Would Create Odor Impact	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.4 Biological Resources					
3.4-1	Result in substantial adverse impacts on candidate, special-status, or sensitive species.	Potentially Significant	3.4-1a	**Vernal Pools and Vernal Pool Associates** To protect vernal pools and species associated with vernal pools including vernal pool smallscale, succulent owl's-clover, pincushion navarretia, Colusa grass, hairy Orcutt grass, spiny-sepaled button celery, San Joaquin Orcutt grass, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, Midvalley fairy shrimp, vernal pool tadpole shrimp, California linderiella, and Molestan blister beetle, surveys shall be conducted to determine the presence of vernal pools prior to or concurrent with application for annexation in areas identified as having potential habitat. Surveys to detect vernal pools are most easily accomplished during the rainy season or during early spring when pools contain water. If vernal pools are found to occur on a project site, the pools and a 100 foot-wide buffer around each pool or group of pools will be observed. If the vernal pools and buffer areas cannot be avoided, then the project proponent must consult with and obtain authorizations from, but not limited to, the California Department of Fish and Game, the United States Fish and Wildlife Service, the Army Corps of Engineers, and the State Water Resources Quality Control Board. Consultation and authorizations may require that additional surveys for special-status species be completed. Because there is a federal policy of no net loss of wetlands, mitigation to reduce losses and compensation to offset losses to vernal pools and associated special-status species will be required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
		Potentially Significant	3.4-1b	**Special-Status Plants** To protect special-status plants, the City shall ensure that a botanical survey be conducted for projects containing habitat suitable for special-status plant species. Surveys shall be conducted by a qualified biologist or botanist during the appropriate flowering season for the plants and shall be conducted prior to issuance of a grading or building permit for the project. If special-status plants are found to occur on the project site, the population of plants shall be avoided and protected. If avoidance and protection is not possible, then a qualified biologist will prepare a mitigation and monitoring plan for the affected species. The plan shall be submitted to the CDFG and/or the USFWS for review and comment. Details of the mitigation and monitoring plan shall include, but not be limited to: • Removing and stockpiling topsoil with intact roots and seed bank in the disturbance area, and either replacing the soil in the same location after construction is complete or in a different location with suitable habitat; or • Collect plants, seeds, and other propogules from the affected area prior to disturbance. After construction is complete, then the restored habitat will be replanted with propogules or cultivated nursery stock; or • These and other mitigations will only be considered successful if the populations of the affected species are sustained for a minimum of three years and are of	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				a similar size and quality as the original population.	
		Potentially Significant	3.4-1c	**Valley Elderberry Longhorn Beetle** To protect the Valley elderberry longhorn beetle (VELB), the project proponent shall ensure that a survey for elderberry bushes be conducted by a qualified biologist at each project site containing habitat suitable for VELB prior to the issuance of a grading permit or building permit. If elderberry bushes are found, the project proponent shall implement the measures recommended by the biologist, which shall contain the standardized measures adopted by the USFWS.	Less Than Significant
		Potentially Significant	3.4-1d	**Burrowing Owls** To protect burrowing owls on proposed projects where suitable habitat exists, the following shall be implemented: • To protect burrowing owls, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain grasslands, fallowed agricultural fields, or fallow fields along roadsides, railroad corridors, and other locations prior to grading. If, during a pre-construction survey, burrowing owls are found to be present, the project proponent shall implement the measures recommended by the biologist and include the standardized avoidance measures of CDFG.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
		Potentially Significant	3.4-1e	**Special-Status Birds** To protect raptors and other special-status birds on proposed projects where suitable habitat exists, the following measures shall be implemented: • Trees scheduled to be removed because project implementation shall be removed during the non-breeding season (late September to the end of February). • Prior to construction, but not more that 14 days before grading, demolition, or site preparation activities, a qualified biologist shall conduct a preconstruction nesting survey to determine the presence of nesting raptors. Activities taking place outside the breeding season (typically February 15 through August 31) do not require a survey. If active raptor nests are present in the construction zone or within 250-feet of the construction zone, temporary exclusion fencing shall be erected at a distance of 250-feet around the nest site. Clearing and construction operations within this area shall be postponed until juveniles have fledged and there is no evidence of a second nesting attempt determined by the biologist. • If nesting Swainson's hawks are observed during field surveys, then consultation with the CDFG regarding Swainson's hawk mitigation guidelines shall be required. The guidelines include, but are not limited to, buffers of up to one quarter mile, monitoring of the nest by a qualified biologist, and	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				mitigation for the loss of foraging habitat. • To avoid impacts to common and special-status migratory birds pursuant to the Migratory Bird Treaty Act and CDFG codes, a nesting survey shall be conducted prior to construction activities if the work is scheduled between March 15 and August 31. If migratory birds are identified nesting within the construction zone, a 100-foot buffer around the nest site must be designated. No construction activity may occur within this buffer until a qualified biologist has determined that the young have fledged. A qualified biologist may modify the size of the buffer based on site conditions and the bird's apparent acclimation to human activities. If the buffer is modified, the biologist would be required to monitor stress levels of the nesting birds for at least one week after construction commences to ensure that project activities would not cause nest site abandonment or loss of eggs or young. At any time the biologist shall have the right to implement the full 100-foot buffer if stress levels are elevated to the extent that could cause nest abandonment and/or loss of eggs or young.	
		Potentially Significant	3.4-1f	**Special-Status Amphibians** To protect California tiger salamander and western spadefoot on proposed projects where suitable habitat exists, the following shall be implemented: • To protect special-status amphibians, preconstruction surveys shall be conducted by a qualified biologist at	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				all project sites that contain appropriate habitat. If, during a pre-construction survey, special-status amphibians are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.	
		Potentially Significant	3.4-1g	**Special-Status Reptiles** To protect western pond turtle and giant garter snake on proposed projects where suitable habitat exists, the following shall be implemented: • To protect special-status reptiles, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special-status reptiles are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.	Less Than Significant
		Potentially Significant	3.4-1h	**Special-Status Fish** To protect special-status fish, including hardhead, on proposed projects where suitable habitat exists, the following shall be implemented: • To protect special-status fish, preconstruction surveys shall be conducted by a qualified fish biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special status fish are found to be present, the project	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS, National Marine Fisheries Service (NMFS) or the CDFG.	
		Potentially Significant	3.4-1i	**Special-Status Mammals** To protect Merced kangaroo rat, western mastiff bat, western red bat, hoary bat, Yuma myotis, San Joaquin pocket mouse, American badger, and San Joaquin kit fox on proposed projects where suitable habitat exists, the following shall be implemented: • To protect special-status mammals, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special-status mammals are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.	Less Than Significant
3.4-2	Result in substantially adverse affect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS.	Potentially Significant	3.4-2	**Streambed Alteration Agreement** To minimize impacts to riparian habitat and other sensitive natural communities, the following the measures shall be implemented when streambed alterations are proposed: • The project proponent shall have a qualified biologist map all riparian habitat, or other sensitive natural communities. To the extent feasible and practicable, all planned construction activity shall be designed to	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				avoid direct effects on these areas. • In those areas where complete avoidance is not possible, then all riparian habitat, or other sensitive natural communities, shall be mitigated on a "no-net-loss" basis in accordance with either CDFG regulations and/or a Section 1602 Streambed Alteration Agreement, if required. Habitat mitigation shall be replaced at a location and with methods acceptable to the CDFG.	
		Potentially Significant	3.4-1a	See Mitigation Measure #3.4-1a above.	Less Than Significant
3.4-3	Result in substantially adverse affect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means.	Potentially Significant	3.4-3a	**Conduct a delineation of Waters of the U.S. and Wetlands (WOUS/Wetlands) and Obtain Permits.** In order to determine if there are wetlands or waters of the U.S. on a proposed project site which fall under the U.S. Army Corps of Engineers (Corps) jurisdictional authority under Section 404 of the CWA, a delineation of the Waters of the U.S. and wetlands shall be performed and submitted to the Corps for verification prior to annexation. A Section 404 permit and a Section 401 Water Quality Certification or Waiver of Waste Discharge shall be acquired from the Corps and the Regional Water Quality Control Board (RWQCB) and a Section 1602 Streambed Alteration Agreement from DFG respectively prior to the onset of construction related activities.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
		Potentially Significant	3.4-3b	Any jurisdictional waters that would be lost or disturbed due to implementation of any proposed project within the plan area shall be replaced or rehabilitated on a "no-net-loss" basis in accordance with the Corps' and the RWQCB mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement if required shall be at a location and by methods agreeable to the Corps, the RWQCB, and the City of Merced. The project applicant shall abide by the conditions of any executed permits.	Less Than Significant
3.4-4	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.	Potentially Significant	3.4-1e	See Mitigation Measure #3.4-1e above.	Less Than Significant
3.4-5	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	No Impact		No mitigation measures are required.	No Impact
3.4-6	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No Impact		No mitigation measures are required.	No Impact

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.5 Cultural Resources					
3.5-1	Cause a substantial adverse change in the significance of a historic or archaeological resource	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.5-2	Potentially disturb human remains or destroy a unique paleontological resource, site, or geologic feature	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.6 Geology and Soils					
3.6-1	Expose people or structures to potential substantial adverse effects from seismic hazards	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.6-2	The proposed project would not result in substantial soil erosion or the loss of topsoil	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.6-3	The proposed project would not be located on 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	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.6-4	The proposed project could be located on expansive soils creating substantial risks to life or property	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.6-5	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.7 Hazards and Hazardous Materials					
3.7-1	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.7-2	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.7-3	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		No mitigation measures are required.	Less Than Significant
3.7-4	Would the proposed project be located on a site, or proximate to a site, that is included on a list of hazardous materials	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
	sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment				
3.7-5	Would the proposed project be located within an airport land use plan, or within two miles of a public airport or private airstrip, creating a safety hazard for people residing or working in the project area	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.7-6	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.7-7	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 residence are intermixed with wildlands	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.8 Hydrology and Water Quality					
3.8-1	Violation of water quality standards or waste discharge requirements or otherwise	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
	substantially degrade water quality				
3.8-2	The proposed project could substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.	Significant		No mitigation measures are available.	Significant
3.8-3	The proposed project could substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site or substantially increase the rate or amount of surface runoff in a manner, which would result in on- or offsite flooding.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.8-4	The proposed project could create or contribute runoff water which would exceed the capacity of existing stormwater drainage systems or provide substantial	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
	additional sources of polluted runoff.				
3.8-5	The proposed project could place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map or place within a 100-year flood hazard area structures which could impede or redirect flood flows.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.8-6	The proposed project could expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami or mudflow.	No Impact		No mitigation measures are required.	No Impact
3.9 Land Use and Planning					
3.9-1	Physically divide an established community	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.9-2	Conflict with any applicable land use plan, policy, or regulation	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.9-3	Conflict with any applicable habitat conservation plan or natural community conservation plan.	No Impact		No mitigation measures are required.	No Impact
3.10 Mineral Resources					
3.10-1	The proposed project could adversely affect the availability of a known mineral resource of value to the region and/or residents of the state	No Impact		No mitigation measures are required.	No Impact
3.10-2	The proposed project could adversely affect the availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan	No Impact		No mitigation measures are required.	No Impact
3.11 Noise					
3.11-1	Buildout of the General Plan may contribute to increased traffic noise levels, and an exceedance of the City's noise standards and resulting in potential noise impacts to new sensitive receptors.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.11-2	Buildout of the General Plan may contribute to increased traffic noise levels, and a	Potentially Significant		No mitigation measures are available.	Significant and Unavoidable

<table>
<tr><th>Impact #</th><th>Impact</th><th>Significance</th><th>Mitigation #</th><th>Mitigation Measure</th><th>Significance After Mitigation</th></tr>
<tr><td></td><td>significant increase in overall traffic noise levels at existing sensitive receptors.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>3.11-3</td><td>Buildout of the General Plan will result in construction activities which will contribute to the overall ambient noise environment.</td><td>Less Than Significant</td><td></td><td>No mitigation measures are required.</td><td>Less Than Significant</td></tr>
<tr><td>3.11-4</td><td>Proposed General Plan Buildout will result in construction activities which could contribute to vibration levels at building facades.</td><td>Potentially Significant</td><td>3.11-4</td><td>Table 3.11-13 provides criteria for evaluating construction vibration impacts. If construction activities include the use of pile drivers or large vibratory compactors, an analysis of potential vibration impacts should be conducted. The vibration impacts should not exceed a peak particle velocity of 0.1 inches/second.

Table 3.11-13
Effects of Vibration on People and Buildings
<table>
<tr><th>Peak Particle Velocity inches/second</th><th>Peak Particle Velocity mm/second</th><th>Human Reaction</th><th>Effect on Buildings</th></tr>
<tr><td>0-.006</td><td>0.15</td><td>Imperceptible by people</td><td>Vibrations unlikely to cause damage of any type</td></tr>
<tr><td>.006-.02</td><td>0.5</td><td>Range of Threshold of perception</td><td>Vibrations unlikely to cause damage of any type</td></tr>
<tr><td>.08</td><td>2.0</td><td>Vibrations clearly perceptible</td><td>Recommended upper level of which ruins and ancient monuments should be subjected</td></tr>
<tr><td>0.1</td><td>2.54</td><td>Level at which continuous vibrations begin to annoy people</td><td>Virtually no risk of architectural damage to normal buildings</td></tr>
</table></td><td>Less Than Significant</td></tr>
</table>

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				<table><tr><td>0.2</td><td>5.0</td><td>Vibrations annoying to people in buildings</td><td>Threshold at which there is a risk of architectural damage to normal dwellings</td></tr><tr><td>1.0</td><td>25.4</td><td></td><td>Architectural Damage</td></tr><tr><td>2.0</td><td>50.4</td><td></td><td>Structural Damage to Residential Buildings</td></tr><tr><td>6.0</td><td>151.0</td><td></td><td>Structural Damage to Commercial Buildings</td></tr></table> *Source: Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic, Caltrans 1976.*	
3.11-5	Proposed General Plan Buildout could expose new noise-sensitive receptors to railroad noise levels.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.11-6	The Proposed General Plan Buildout may include stationary noise sources such as automotive and truck repair facilities, tire installation centers, car washes, loading docks, corporation yards, parks, and play fields may create noise levels in excess of the City standards.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.11-7	Proposed General Plan Buildout could expose new noise sensitive receptors to aircraft operations noise levels.	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.12 Population and Housing					
3.12-1	Induce substantial population growth in an area, either directly or indirectly	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.12-2	Displace a substantial number of people or existing housing, necessitating the construction of replacement housing elsewhere	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.13 Recreation					
3.13-1	Increase the use of existing neighborhood and regional parks or other recreational facilities or require the construction or expansion of recreational facilities.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.13-2	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.14 Public Services					
3.14-1	Result in a substantial adverse physical impact to the continued provision of law enforcement services in the City	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.14-2	Result in a substantial adverse physical impact to the continued provision of fire protection services in the City	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.14-3	Result in a substantial adverse physical impact to the continued provision of school services in the City	No Impact		No mitigation measures are required.	Less Than Significant
3.14-4	Result in a substantial increase in the demand for other public services and facilities	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.15 Transportation/Traffic					
3.15-1	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system and/or exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.	Potentially Significant	3.15-1a	Table 3.15-4 indicates the recommended number of travel lanes for several of the road segments analyzed to keep traffic levels-of-service at the City's preferred LOS "D" at General Plan buildout. Implementation of the following projects will permit the City to manage its traffic volumes at Level of Service "D", or better: 1. SR 59 from 16th to Olive (2 lanes to 6 lanes) Existing LOS=F / Future LOS=D 2. SR 59 from Olive to Yosemite (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 3. SR 59 from Yosemite to Cardella (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 4. SR 59 from Cardella to Bellevue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D	Significant and Unavoidable

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				5. SR 59 from Bellevue to Old Lake (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C 6. SR 59 from Old Lake to Castle Farms (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 7. "R" Street from Old Lake to Area of Influence Boundary (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=C+ 8. "M" Street from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS=none / Future LOS = C+ 9. "M" Street from Bellevue to Old Lake (Future Extension 0 lanes to 4 lanes) Existing LOS=none / Future LOS = C+ 10. Martin Luther King Jr. Way/South SR 59 from Roduner to Mission (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 11. Martin Luther King Jr. Way/South SR 59 from Mission to Gerard (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 12. "G" Street from Yosemite to Cardella (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C+ 13. "G" Street from Cardella to Bellevue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				14. "G" Street from Bellevue to Old Lake (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 15. "G" Street from Old Lake to Snelling (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C 16. Parsons/Gardner from Childs to SR 140 (2 lanes to 4 lanes) Exiting LOS=D / Future LOS=D 17. Parsons/Gardner from Bear Creek to Olive (2 lanes to 4 lanes) Exiting LOS=C+ / Future LOS=D 18. Parsons/Gardner from Olive to Yosemite (2 lanes to 6 lanes) Exiting LOS=D / Future LOS=D 19. Parsons/Gardner from Yosemite to Cardella (2 lanes to 4 lanes) Exiting LOS=C+ / Future LOS=D 20. Parsons/Gardner from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 21. Parsons/Gardner from Bellevue to Old Lake (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+ 22. Parsons/Gardner from Old Lake to Golf Club (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=D 23. Campus Parkway SR 99/Mission to Childs (Future Extension 0 lanes to 6 lanes) Existing LOS= none / Future LOS=D	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				24. Campus Parkway from Childs to SR 140 (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 25. Campus Parkway from SR 140 to Olive (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 26. Campus Parkway from Olive to Yosemite (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 27. Campus Parkway from Yosemite to Cardella (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 28. Campus Parkway from Cardella to Bellevue (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 29. Tyler Road from Childs to Mission (Future Extension 0 lanes to 2 lanes) Existing LOS= none / Future LOS=D 30. Old Lake Road SR 59 to "R" Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+ 31. Old Lake Road "R" Street to "M" Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				32. Old Lake Road "M" Street to "G" Street Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C 33. Bellevue Road from Atwater/Merced Expressway to Thornton (2 lanes to 8 lanes Exiting LOS=C+ / Future LOS=C+ 34. Bellevue Road from Thornton to SR 59 (2 lanes to 8 lanes Exiting LOS=C+ / Future LOS=D 35. Bellevue Road from Parsons/Gardner to Campus Parkway (2 lanes to 6 lanes) Exiting LOS=C+ / Future LOS=D 36. Cardella Road from SR 59 to "R" Street (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 37. Cardella Road from "M" Street to "G" Street (2 lanes to 4 lanes) Existing LOS= C+ / Future LOS=D 38. Cardella Road from "G" Street to Parsons/Gardner (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 39. Cardella Road from Parsons/Gardner to Campus Parkway (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=D 40. Yosemite Avenue from Parsons/Gardner to Campus Parkway (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				41. Olive Avenue West of Hwy 59 (Santa Fe Avenue) (4 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C 42. SR 99 from Atwater/Merced Expressway to Mariposa (4 lanes to 6 lanes through Merced) Existing LOS=C+ and D / Future LOS=C+ and D 43. Childs Avenue from SR 59 to Tyler (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 44. Childs Avenue from Parsons/Gardner to Coffee (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 45. Childs Avenue from Coffee to Campus Parkway (2 lanes to 4 lanes) Existing LOS=D / Future LOS=D 46. Childs Avenue from Campus Parkway to Tower (Future Extension 0 lanes to 4 lanes) Existing LOS= none / Future LOS=C+ 47. Dickerson Ferry/Mission Avenue from Thornton to West Avenue (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D 48. Dickerson Ferry/Mission Avenue from West Avenue to SR 59 (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+ 49. Dickerson Ferry/Mission Avenue from SR 50 to Tyler (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				50. Dickerson Ferry/Mission Avenue from SR 99 to Coffee (Future Campus Parkway)(2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=C+ 51. Dickerson Ferry/Mission Avenue from Tyler to Henry (2 lanes to 6 lanes) Existing LOS=C+ / Future LOS=D 52. Dickerson Ferry/Mission Avenue from Coffee to Tower (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=C+ 53. Thornton from Dickerson Ferry/Mission to SR 140 (2 lanes to 4 lanes) Existing LOS=C+ / Future LOS=D	
		Potentially Significant	3.15-1b	Traffic studies should be performed to satisfy the requirements of the California Environmental Quality Act (CEQA) for all proposed General Plan Amendments which intensify development, proposed specific plans, annexations, and other projects at the discretion of the Development Services Department. Future traffic studies should generally conform to any guidelines established by the City. The studies should be performed to determine, at a minimum, opening-day impacts of proposed projects and as confirmation or revision of the General Plan. The studies should address queue lengths and (at a minimum) peak-hour traffic signals warrants in addition to LOS and provide appropriate mitigations. At the discretion of the City, a complete warrant study in accordance with the most recent edition of the California Manual on Uniform Traffic Control Devices may be required to evaluate the need for traffic signals.	Significant and Unavoidable

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.15-2	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	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.15-3	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.15-4	Result in Inadequate Emergency Access	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.15-5	Result in Inadequate Parking Capacity	No Impact		No mitigation measures are required.	No Impact
3.15-6	Conflict with Adopted Polices Supporting Alternative Transportation	No Impact		No mitigation measures are required.	No Impact
3.16 Utilities/Services					
3.16-1	The proposed project would result in the exceedance of wastewater treatment requirements of the CVRWQCB	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.16-2	The proposed project would require or result in the construction of new water or wastewater treatment facilities	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
	or expansion of existing facilities, the construction of which could cause significant environmental effects				
3.16-3	The proposed project would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.16-4	The proposed project would require new or expanded water supply entitlements	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.16-5	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.16-6	The proposed project would increase demand for solid waste disposal services	Less Than Significant		No mitigation measures are required.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.16-7	Will the proposed project comply with federal, state, and local statutes and regulations related to solid waste?	Less Than Significant		No mitigation measures are required.	Less Than Significant
3.17 Greenhouse Gas Emissions (Global Climate Change)					
3.17-1	Development of the Project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change	Significant, Cumulatively Considerable, and Unavoidable		No mitigation measures are available.	Significant, Cumulatively Considerable, and Unavoidable
3.17-2	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less Than Significant		No mitigation measures required.	Less Than Significant
3.17-3	Climate Change could potentially result in an impact on City of Merced water resources	Less Than Significant		No mitigation measures required.	Less Than Significant