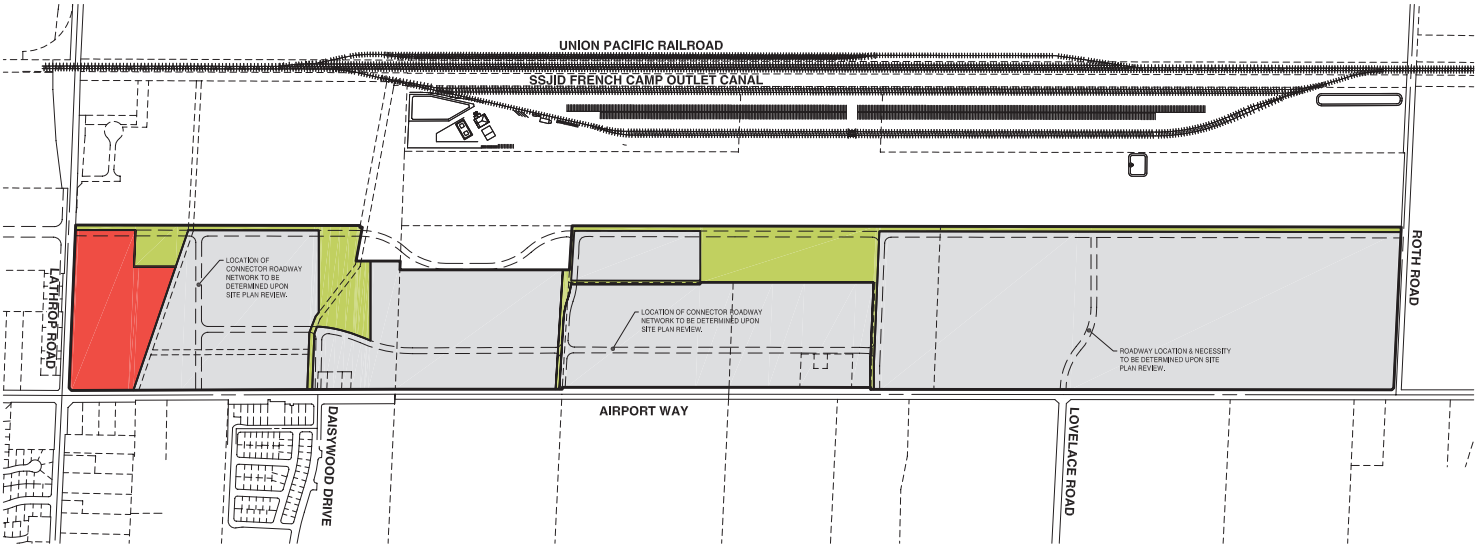




NORTHWEST AIRPORT WAY MASTER PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

SCH No.: 2010022024



August 2, 2010





DRAFT
Environmental Impact Report
Northwest Airport Way Master Plan
City of Manteca, San Joaquin County, California

State Clearinghouse No. 2010022024

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
Air Basin	San Joaquin Valley Air Basin
AM Peak	Weekday morning peak hour (7 a.m. to 9 a.m.)
AQP	Air Quality Plan
AST	aboveground storage tank
ATCM	Airborne Toxic Control Measures
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practices
BVOC	biogenic volatile organic compound
C	Celsius
CAAQS	California Ambient Air Quality Standards
Cal OSHA	California Occupational Health and Safety Administration
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCIC	Central California Information Center
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CH_4	methane
CHL	California Historical Landmarks
CNDDB	California Natural Diversity Database

CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Code
CWA	Clean Water Act
dB	decibel
DC	Drainage Canal
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EMF	electromagnetic field
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
F	Fahrenheit
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GWh/y	gigawatt-hours per year
GWP	global warming potential
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon

HRA	Health Risk Assessment
HRI	California Historic Resources Inventory
HVAC	heating, ventilation, and air conditioning
Hz	hertz
I	Interstate
IPCC	United Nations Intergovernmental Panel on Climate Change
ISR	Indirect Source Review
ITE	Institute of Transportation Engineers
L_{dn}	day/night average sound level
LED	light emitting diode
L_{eq}	equivalent sound level
LESA	Land Evaluation and Site Assessment
LID	Low Impact Development
LOS	Level of Service
MBA	Michael Brandman Associates
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MMI	Modified Mercalli Intensity
mph	miles per hour
$MTCO_2e$	metric tons of carbon dioxide equivalent
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide

NOC	Notice of Completion
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OEHHA	California Office of Environmental Health Hazard Assessment
OHWM	ordinary high water mark
PCB	polychlorinated biphenyl
pCi/l	picoCuries per liter
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment
PM Peak	Weekday afternoon peak hour (4 p.m. to 6 p.m.)
PM_x	particulate matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PVC	polyvinyl chloride
RCRA	Federal Resource Conservation and Recovery Act
RMP	Risk Management Plan
rms	root mean square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill

SF_6	sulfur hexafluoride
SJCOG	San Joaquin Council of Governments
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SO_2	sulfur dioxide
SR	State Route
SSJID	South San Joaquin Irrigation District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCM	transportation control measures
TDS	total dissolved solids
Tg	teragram
therms/y	therms per year
TRU	transportation refrigeration unit
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
VMT	vehicle miles traveled
WARM	Waste Reduction Model
WDR	Waste Discharge Requirements

EXECUTIVE SUMMARY

Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of Northwest Airport Way Master Plan (State Clearinghouse No. 2010022024). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

The purpose of this Draft EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

Project Summary

This EIR evaluates the environmental effects of the Northwest Airport Way Master Plan and the non-master plan annexations.

Project Location

Northwest Airport Way Master Plan

The approximately 300-acre Master Plan area is located in unincorporated San Joaquin County, California adjacent to the City of Manteca limits. The rectangular plan area consists of 300.3 acres bounded by the Union Pacific Railroad Lathrop Intermodal Terminal (west), Roth Road (north), Airport Way (east), and Lathrop Road (south).

Non-Master Plan Annexations

The non-master plan area consists of two areas totaling approximately 221 acres within unincorporated San Joaquin County adjacent to the Master Plan area and contiguous with the Manteca city limits. These areas are described below.

- **East area:** This rectangular-shaped area encompasses approximately 77 acres and is bounded by Airport Way (west), Union Ranch and the Manteca city limits (north and east), and Lathrop Road and the Manteca city limits (south).
- **South area:** This trapezoidal-shaped area encompasses approximately 144 acres and is bounded by the Union Pacific Railroad Oakland Subdivision and Lathrop city limits (west), Lathrop Road (north), Airport Way and the Manteca city limits (east), and the Union Pacific Railroad Fresno Subdivision and the Manteca city limits (south).

Project Description

Northwest Airport Way Master Plan

The Northwest Airport Way Master Plan seeks to develop approximately 4.7 million square feet of light industrial and commercial uses on approximately 300 acres. The entire Master Plan area would be annexed into the City of Manteca. The Master Plan requires General Plan Amendment and pre-zoning approvals.

Non-Master Plan Annexations

Two areas adjacent to the Master Plan area totaling approximately 221 acres would be annexed into the Manteca city limits. These annexations are intended to prevent the creation of "unincorporated islands" within the city limits as a result of Master Plan implementation. The non-master plan annexations require General Plan Amendment and pre-zoning approvals.

Project Objectives

Northwest Airport Way Master Plan

The objectives of the Northwest Airport Way Master Plan are to:

- Create new jobs for local residents.
- Contribute to economic growth through capital investment, the creation of new jobs, the establishment of new businesses, and the expansion of the tax base.
- Facilitate the logical, orderly, and planned development of the Master Plan area through the use of a comprehensive planning document.
- Prevent land use conflicts and avoid the premature conversion of agricultural land through the use of phasing, buffering, and other appropriate land planning techniques.
- Provide new warehouse/distribution and industrial facilities with adjacent rail access that can be easily accessed from the existing roadway network.
- Enhance the efficiency of regional and local goods movement through the development of an integrated logistics center that will interface with the Lathrop Intermodal Terminal.
- Minimize and mitigate truck travel impacts by internalizing truck trips between the Lathrop Intermodal Terminal and the Master Plan uses and also improving Roth Road and Airport Way.
- Develop a community commercial retail center at the Lathrop Road/Airport Way intersection to cater to both the Master Plan land uses and surrounding land uses.
- Provide open space areas within the Master Plan area that serve multiple purposes such as safety, recreation, and land use buffering.

Non-Master Plan Annexations

The objectives of the non-master plan annexations are to:

- Facilitate the logical, orderly, and planned expansion of the Manteca city limits as envisioned by the General Plan.
- Annex areas that are anticipated to redevelop to higher and better uses in the near term, based on surrounding land use patterns and market forces.
- Avoid the creation of "unincorporated islands" and the associated shortcomings with service delivery to these areas.
- Acknowledge and respect existing property rights and entitlements.

Significant Unavoidable Adverse Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Conversion of Important Farmland:** Buildout of the Northwest Airport Way Master Plan would result in the conversion of Important Farmland to non-agricultural use. Mitigation is proposed requiring the payment of fees to the City of Manteca's agricultural farmland mitigation program for preservation of farmland elsewhere. However, the preservation of farmland elsewhere would not fully offset the loss of Important Farmland; therefore, the residual significance of this impact is significant and unavoidable.
- **Air Quality Violations – Construction and Operational Emissions:** Master Plan construction and operational emissions would exceed San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds. Mitigation is proposed requiring the implementation of feasible emissions reduction measures; however, these measures would not reduce emissions to below SJVAPCD thresholds. Therefore, the residual significance of this impact is significant and unavoidable.
- **Air Quality Attainment Plan Consistency:** Because Master Plan construction and operational emissions would exceed SJVAPCD, they would be inconsistent with the agency's regional quality planning assumptions. Mitigation is proposed requiring the implementation of feasible emissions reduction measures; however, these measures would not reconcile this inconsistency. Therefore, the residual significance of this impact is significant and unavoidable.
- **Cumulative Air Quality:** Because Master Plan emissions result in a significant unavoidable air quality impact associated with air quality violations and air quality attainment plan consistency, a significant unavoidable cumulative air quality impact would occur.

- **Existing Plus CenterPoint Traffic:** The CenterPoint Intermodal Facility component of the Master Plan would generate vehicle trips that would contribute to unacceptable intersection under Existing Plus CenterPoint conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.
- **Cumulative Traffic:** The Master Plan uses would generate vehicle trips that would contribute to unacceptable intersection and freeway operations under Cumulative (Master Plan buildout) conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.

Summary of Project Alternatives

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the Proposed Project.

No Project Alternative

Under the No Project Alternative, neither the Northwest Airport Way Master Plan nor the non-master plan annexations would be pursued. These properties would remain in unincorporated San Joaquin County, with no changes in land use or land use designations.

Master Plan Only Alternative

Under the Master Plan Only Alternative, the Northwest Airport Way Master Plan would be implemented as proposed. The non-master plan annexations would not be pursued.

Non-Master Plan Annexations Only Alternative

Under the Non-Master Plan Annexations Only Alternative, the non-master plan annexations would be implemented as proposed. The Northwest Airport Way Master Plan would not be pursued. The Non-Master Plan Annexations Only Alternative is identified as the Environmentally Superior Alternative.

CenterPoint Intermodal Facility Alternative

Under the CenterPoint Intermodal Facility Alternative, the CenterPoint Intermodal Facility would be developed and annexed into the City of Manteca. No Master Plan would be employed under this alternative. The balance of the Master Plan area would remain unchanged and the non-master plan annexations would not be pursued.

Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the proposed project was issued on February 8, 2010. The NOP described the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from February 8, 2010 through March 9, 2010. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics, Light, and Glare
- Agricultural Resources
- Air Quality/Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services and Utilities
- Transportation

Disagreement Among Experts

This Draft EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although the City of Manteca is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision makers to make an informed judgment about the environmental consequences of the proposed project.

Potentially Controversial Issues

Below are a list of potentially controversial issues that may be raised during the public review and hearing process of this Draft EIR.

- Agricultural Land Conversion
- Criteria Pollutant Air Emissions
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use
- Construction and Operational Noise
- Public Services
- Traffic Congestion

It is also possible that evidence will be presented during the 45-day, statutory Draft EIR public review period that may create disagreement. Decision makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision makers are entitled to weigh the evidence relating to the accuracy and sufficiency of the information and to decide whether to accept it. Decision makers need not resolve a dispute among experts. However, in their proceedings, decision makers must consider comments received concerning the adequacy of the Draft EIR and address any objections raised in these comments. In addition, where experts disagree on data or methodology, the Draft EIR should acknowledge the differing opinions and explain why a certain approach was rejected, supporting that explanation with substantial evidence.

Public Review of the Draft EIR

Upon completion of the Draft EIR, the City of Manteca filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the City of Manteca. The address for each location is provided below.

City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337
Hours:
Monday-Thursday 7:30 a.m. to 5:00 p.m.
Friday 8:00 a.m. to 5:00 p.m.
(Closed alternating Fridays)

Stockton-San Joaquin County Public Library
Manteca Branch Library
320 W. Center Street
Manteca, CA 95336-4539
Hours:
Monday, Wednesday: 11 a.m. to 7 p.m.
Tuesday, Thursday: 10 a.m. to 6 p.m.
Friday: 12 p.m. to 5 p.m.
Saturday: 10 a.m. to 4 p.m.

The Draft EIR is also available electronically on the City of Manteca's website: http://www.ci.manteca.ca.us/.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Ms. Rochelle Henson, Senior Planner
City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337
Phone: (209) 456-8516
Fax: (209) 923-8949
Email: rhenson@ci.manteca.ca.us

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the City of Manteca on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

Executive Summary Matrix

Table ES-1 summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1).

Table ES-1: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.1 – Aesthetics, Light, and Glare		
Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.	No mitigation is necessary.	Less than significant impact.
Impact AES-2: The proposed project would not degrade the visual character of the project site and its surroundings.	No mitigation is necessary.	Less than significant impact.
Impact AES-3: Implementation of the proposed project would not result in the introduction of substantial new sources of light and glare.	No mitigation is necessary.	Less than significant impact.
Section 3.2 – Agricultural Resources		
Impact AG-1: The proposed project may result in the conversion of Important Farmland to non-agricultural use.	**MM AG-1:** At the time building permits are sought for any Master Plan contemplated use, the project applicant shall pay the required City of Manteca agricultural mitigation fee to help offset the conversion of Important Farmland pursuant to Manteca Municipal Code Chapter 13.42.	Significant and unavoidable impact.
Impact AG-2: The proposed project would not conflict with existing zoning for agricultural use or conflict with a Williamson Act contract.	No mitigation is necessary.	Less than significant impact.
Impact AG-3: The proposed project would not involve other changes in the existing environment, which, because of their location or nature, could result in conversion of farmland to non-agricultural use.	No mitigation is necessary.	Less than significant impact.
Section 3.3 – Air Quality/Greenhouse Gas Emissions		
Impact AIR-1: Project construction and operational emissions may violate any air quality standard or contribute substantially to an existing or projected air quality violation.	**MM AIR-1a:** Prior to issuance of grading permits for each Master Plan use, the project applicant shall provide information to the City of Manteca describing the methods by which the following measures will be complied with: • Off-road equipment used onsite shall achieve a fleet average emissions equal to or less than the Tier II emissions standard of 4.8 grams of NO_x per horsepower hour. This can be achieved through any combination of	Significant unavoidable impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	uncontrolled engines and engines complying with Tier II and above engine standards. Tier II emission standards are set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. • Construction equipment shall be properly maintained at an offsite location; maintenance shall include proper tuning and timing of engines. Equipment maintenance records and data sheets of equipment design specifications shall be kept on-site during construction. • Onsite construction equipment shall not idle for more than 5 minutes in any one hour. • During the building phase, onsite electrical hook ups shall be provided for electric construction tools including saws, drills and compressors, to eliminate the need for diesel powered electric generators. • Construction workers shall be encouraged to carpool to and from the construction site to the greatest extent practical. Workers shall be informed in writing and a letter shall be placed on file in the City office documenting efforts to carpool. **MM AIR-1b:** During the architectural coating phase for all Master Plan uses, paints with a volatile organic compound content less than 10 grams per liter shall be used. **MM AIR-1c:** Prior to issuance of building permits for each Master Plan building, the project applicant shall demonstrate compliance with all applicable requirements of San Joaquin Valley Air Pollution Control District, Rule 9510 via the submittal of a Rule 9510 Implementation Plan to the City of Manteca for review and approval. The implementation plan shall achieve a 33-percent reduction in NO_x and a 45-percent reduction in PM_{10} over the first 10 years of operations through the use of onsite emissions reduction measures or through the payment of offsite mitigation fees to the SJVAPCD for purchase of emission reductions. The requirements of the approved implementation plan shall be incorporated into the proposed project.	

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	MM AIR-1d: Prior to approval of the final site plan for each Master Plan building that would receive 10 more truck deliveries per week, the project applicant shall demonstrate that the following anti-idling measures would be implemented: • Provide available electricity hookups for trucks in the loading dock areas. • Signs shall be posted in dock areas advising drivers that idling shall not occur for more than 3 minutes. • Telephone numbers of the building facilities manager and the California Air Resources Board shall be posted on signs at truck entrances to report idling violations.	
Impact AIR-2: Project operational emissions would not violate any air quality standard or contribute substantially to an existing or projected air quality violation associated with carbon monoxide hot spots.	No mitigation is necessary.	Less than significant impact.
Impact AIR-3: The project may conflict with or obstruct implementation of the applicable air quality attainment plan.	Implement Mitigation Measures AIR-1a, AIR-1b, AIR-1c, AIR-1d, TRANS-6a, TRANS-6b, TRANS-6c, and TRANS-6d.	Significant unavoidable impact.
Impact AIR-4: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).	Implement Mitigation Measures AIR-1a, AIR-1b, AIR-1c, AIR-1d, TRANS-6a, TRANS-6b, TRANS-6c, and TRANS-6d.	Significant unavoidable impact.
Impact AIR-5: The project would not expose sensitive receptors to substantial pollutant concentrations.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact AIR-6: The project may create objectionable odors affecting a substantial number of people.	**MM AIR-6:** Prior to final site plan approval for any Master Plan use that includes food service (i.e., restaurants, cafeterias, etc.), the applicant shall demonstrate compliance with SJVAPCD Rules 4102 (Nuisance) and 4692 (Commercial Charbroiling) to the extent that these rules are applicable. Compliance may entail the installation of kitchen exhaust vents, exhaust filtration systems, or other odor-reduction measures in accordance with accepted engineering practice. The approved plans shall be incorporated into the proposed project.	Less than significant impact.
Impact AIR-7: The project may generate greenhouse gas emissions that may have a significant impact on the environment and conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	Implement Mitigation Measures AIR-1a, AIR-1d, PSU-3a, PSU-3b, PSU-6a, PSU-6b, TRANS-6a, TRANS-6b, TRANS-6c, and TRANS-6d.	Less than significant impact.
Impact AIR-8: The project may be affected by climate change through a reduction in the quality and supply of water available within the State or increased flooding.	Implement Mitigation Measures HYD-5a, HYD-5b, PSU-3a, and PSU-3b.	Less than significant impact.
Section 3.4 – Biological Resources		
Impact BIO-1: Development activities contemplated by the Master Plan may have a substantial adverse effect, either directly or through habitat modifications, on special-status wildlife species.	**MM BIO-1a:** If ground clearing or vegetation removal activities occur during the nesting season (February 15 through August 31), then pre-construction surveys for nesting birds shall be conducted in all area suitable for nesting that are located within 250 feet of the Master Plan area. Surveys shall be conducted no more than 15 days prior to the beginning of ground disturbance. If an active nest is located, a 250-foot buffer shall be delineated and maintained around the nest until a qualified biologist has determined that fledging has occurred. Alternatively, CDFG may be consulted to determine if the protective buffer can be reduced based upon individual species responses to disturbance. This mitigation measure does not apply if ground clearing or vegetation removal activities occur outside of the nesting season (September 1 through February 14). **MM BIO-1b:** No more than 30 day prior to the beginning of ground disturbance, a pre-construction survey for burrowing owls shall be conducted by a qualified biologist in general accordance with the	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Burrowing Owl Survey Protocol and Mitigation Guidelines by the California Burrowing Owl Consortium. Should the surveys be scheduled to occur during the period extending from February 1 through May 1, then surveys shall be conducted no more that 15 days prior to the start of ground disturbance. Surveys shall be conducted from 2 hours before sunset to 1 hour after sunset, or from 1 hour before sunrise to 2 hours after sunrise, and shall be conducted during weather conducive to observing owls outside of their burrows. No surveys shall occur during heavy rain, high winds, or dense fog. If occupied burrows are found, mitigation for potential impacts shall follow the guidelines outlined by the Burrowing Owl Survey Protocol and Mitigation Guidelines, including passive relocation.	
Impact BIO-2: Development activities contemplated by the Master Plan may have a substantial adverse effect on riparian habitat.	**MM BIO-2:** Prior to issuance of grading permits within any impacted resource area, the project applicant shall obtain all required authorization from agencies with jurisdiction over the drainage canals within the Master Plan area. Such agencies may include but are not limited to the United States Army Corps of Engineers, the California Department of Fish and Game, and the Central Valley Regional Water Quality Control Board. Impacted resources shall be offset through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 1:1 ratio.	Less than significant impact.
Impact BIO-3: Development activities contemplated by the Master Plan may have a substantial adverse effect on federally protected wetlands.	**MM BIO-3:** Prior to issuance of grading permits, the project applicant shall obtain all required authorization from agencies with jurisdiction over the drainage canals within the Master Plan area. This authorization may involve approvals from the United States Army Corps of Engineers and the Central Valley Regional Water Quality Control Board. Impacted features shall be offset through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 1:1 ratio.	Less than significant impact.
Impact BIO-4: Development activities contemplated by the Master Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-5: Development activities contemplated by the Master Plan may conflict with local biological policies or ordinances.	**MM BIO-5:** Prior to issuance of grading permits for any activities that would remove one or more trees subject to City of Manteca Ordinance 17.19.060, the applicant shall prepare and submit a tree removal and replacement plan to the City of Manteca for review and approval. The plan shall identify all trees proposed for removal and proposed replacement tree species and locations. Replacement shall occur at no less than a 1:1 ratio. All replacement trees shall be no less than a 24-inch box size species.	Less than significant impact.
Impact BIO-6: Development activities contemplated by the Master Plan may conflict with the provisions of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.	**MM BIO-6:** Prior to issuance of the first grading or building permit for the Master Plan, the project applicant shall obtain coverage under the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. Coverage shall consist of approval of the Master Plan-specific "Section 8.2.1 (10) Checklist for Unmapped SJMSCP Projects" by the San Joaquin Council of Governments Technical Advisory Committee. The applicant shall pay all required fees to the San Joaquin Council of Governments prior to the commencement of construction activities.	Less than significant impact.
Section 3.5 – Cultural Resources		
Impact CUL-1: The proposed project may cause a substantial adverse change in the significance of a historical resource.	**MM CUL-1:** If potentially significant historic resources are encountered during subsurface excavation activities for any Master Plan use, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate California Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials.	
Impact CUL-2: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered archaeological resources.	**MM CUL-2:** If potentially significant archaeological resources are encountered during subsurface excavation activities, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials.	Less than significant impact.
Impact CUL-3: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered paleontological resources.	**MM CUL-3:** In the event that plant or animal fossils are discovered during subsurface excavation activities for the proposed project, all excavation within 50 feet of the fossil shall cease until a qualified paleontologist has determined the significance of the find and provides recommendations in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the City of Manteca to determine procedures to be followed before construction is allowed to resume at the location of the	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	find. If the find is determined to be significant and the City determines that avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan shall be submitted to the City for review and approval. Upon approval, the plan shall be incorporated into the project.	
Impact CUL-4: Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered human remains.	**MM CUL-4:** If previously unknown human remains are encountered during construction activities, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed: In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. Once project-related ground disturbance begins and if there is accidental discovery of human remains, the following steps shall be taken: • There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner's Office is contacted to determine if the remains are Native American and if an investigation into cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations 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.	Less than significant impact.
Section 3.6 – Geology, Soils, and Seismicity		
Impact GEO-1: Development of the proposed project may expose persons or structures to seismic hazards.	**MM GEO-1:** Prior to issuance of building permits for each Master Plan use, the project applicant shall submit a design-level geotechnical study and building plans to the City of Manteca for review and approval. The building plans shall demonstrate that they incorporate all applicable recommendations of the design-level geotechnical study and comply with all applicable requirements of the most recent version of the California Building Standards Code. A licensed professional engineer shall prepare the plans, including those that pertain to soil engineering, structural	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	foundations, pipeline excavation, and installation. The approved plans shall be incorporated into the proposed project. All onsite soil engineering activities shall be conducted under the supervision of a licensed Geotechnical Engineer or Certified Engineering Geologist.	
Impact GEO-2: Construction activities associated with the proposed project have the potential to create erosion and sedimentation.	Implement Mitigation Measure HYD-1.	Less than significant impact.
Impact GEO-3: The proposed project would not expose persons or structures to hazards associated with unstable geologic units or soils.	Implement Mitigation Measure GEO-1.	Less than significant impact.
Impact GEO-4: Development of the proposed project would not expose persons or structures to hazards associated with expansive soils.	No mitigation is necessary.	Less than significant impact.
Section 3.7 – Hazards and Hazardous Materials		
Impact HAZ-1: Development of the proposed project does not have the potential to expose human health and the environment to hazardous materials associated with past or present usage of the project site or surrounding land uses.	**MM HAZ-1a:** Prior to grading activities for any Master Plan use in areas where THP-D has been detected, the applicant shall conduct soil sampling to delineate the horizontal and vertical extent of the TPH-D in order to implement a soil remediation program. Soil remediation shall be conducted in accordance with California Department of Toxic Substances Control (DTSC) guidelines. Contaminated soil shall be excavated and disposed of at an approved disposal facility. Following excavation, confirmation sampling shall be conducted to confirm whether remaining soil meets acceptable applicable regulatory levels. The excavation shall be backfilled with clean soil. **MM HAZ-1b:** Prior to grading activities for any Master Plan use, any onsite wells or septic systems intended to be removed shall be destroyed under permit and inspection with San Joaquin County Environmental Health Department. **MM HAZ-1c:** Prior to demolition activities of any structures located within the Master Plan area, the project applicant shall retain a certified hazardous waste contractor to determine the presence or absence of	

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	building materials or equipment that contains hazardous waste, including asbestos, lead-based paint, mercury, and PCBs. If such substances are found to be present, the contractor shall properly remove and dispose of these hazardous materials in accordance with federal and state law. All removal activities shall be completed prior to commencement of demolition activities.	
Impact HAZ-2: The proposed project would not 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.	Implement Mitigation Measure HAZ-1c.	Less than significant impact.
Impact HAZ-3: The proposed project would not result in an aviation safety hazard for people residing or working within the Stockton Metropolitan Airport Influence Area.	No mitigation is necessary.	Less than significant impact.
Impact HAZ-4: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	No mitigation is necessary.	Less than significant impact.
Section 3.8 – Hydrology and Water Quality		
Impact HYD-1: Construction activities associated with the proposed project have the potential to degrade water quality in downstream water bodies.	**MM HYD-1:** Prior to the issuance of grading or building permits for each proposed activities within the Master Plan area, the project applicant shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) to the City of Manteca that identifies specific actions and Best Management Practices (BMPs) to prevent stormwater pollution during construction activities. The SWPPP shall identify a practical sequence for BMP implementation, monitoring, and maintenance; site restoration; contingency measures; responsible parties; and agency contacts. The SWPPP shall include but not be limited to the following elements: • Temporary erosion control measures shall be employed for disturbed areas.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• Specific measures shall be identified to protect the onsite open drainages during construction of the proposed resort. • Specific measures shall be identified to protect the French Camp Outlet Canal and Drain 3 during any construction activities. • No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months. • Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures. • The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains. • BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (such as inadvertent petroleum release) is required by the RWQCB to determine adequacy of the measure. • In the event of significant construction delays or delays in final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season.	
Impact HYD-2: Operational activities associated with the proposed project have the potential to degrade water quality in downstream water bodies.	**MM HYD-2:** Prior to the issuance of building or grading permits for any development activities that occur pursuant to the Master Plan, the project applicant shall submit a stormwater quality control plan to the City of Manteca for review and approval. The plan shall include a detailed drainage plan and identify expected site-specific pollutants and required measures to treat those pollutants before they reach the regional detention basins and, ultimately, the French Camp Outlet Canal and San Joaquin River. The approved measures shall be incorporated into the proposed project. The plan will describe monitoring and performance measures and standards required in order to ensure water quality is adequately protected	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	during operation of all proposed sites within the project area. Examples of stormwater pollution prevention measures and practices to be incorporated into the plan include but are not limited to: • Strategically placed bioswales and landscaped areas that promote percolation of runoff • Pervious pavement • Roof drains that discharge to landscaped areas • Trash enclosures with screen walls and roofs • Stenciling on storm drains • Curb cuts in parking areas to allow runoff to enter landscaped areas • Rock-lined areas along landscaped areas in parking lots • Catch basins • Oil/water separators • Regular sweeping of parking areas and cleaning of storm drainage facilities • Employee training to inform maintenance personnel of stormwater pollution prevention measures	
Impact HYD-3: The proposed project would not deplete groundwater supplies or substantially interfere with groundwater recharge.	No mitigation is necessary.	Less than significant impact.
Impact HYD-4: The proposed project would increase impervious surface coverage, which may result in increased stormwater runoff volumes and peak flows.	**MM HYD-4:** Prior to the issuance of building or grading permits for the proposed project, the project applicant shall submit a stormwater quality control plan for the project as a whole to the City of Manteca for review and approval. The plan shall include a detailed drainage plan that demonstrates attainment of pre-project runoff requirements prior to release at the outlet canal and describes the volume reduction measures and treatment controls used to reach attainment. The drainage plan shall identify all expected flows from the project area and the location, size, and type of facilities used to retain and treat the runoff volumes and peak flows to meet pre-project conditions. The approved drainage plan shall be incorporated into the proposed project.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact HYD-5: The proposed project may place structures within a 100-year flood hazard area that may have the potential to divert flood flows or be subjected to flood hazard.	**MM HYD-5a:** Prior to the issuance of grading or building permits, the project applicant must revisit the status of the provisionally accredited levees providing 100-year level of flood protection to the Master Plan area to determine it is still the case and the Master Plan remains outside of the 100-year flood hazard. **MM HYD-5b:** Prior to the issuance of grading permits, the project applicant shall either demonstrate that the developed portions of the Master Plan are outside of the anticipated 200-year flood hazard area or incorporate measures into the Master Plan to achieve a 200-year level of flood protection for any site installations that will occur in 2012 or later.	Less than significant impact.
Impact HYD-6: The proposed project may expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam.	No mitigation is necessary.	Less than significant impact.
Section 3.9 – Land Use		
Impact LU-1: The proposed project would not physically divide an established community.	No mitigation is necessary.	Less than significant impact.
Impact LU-2: The proposed project would be consistent with applicable provisions of the City of Manteca General Plan.	No mitigation is necessary.	Less than significant impact.
Impact LU-3: The proposed Master Plan and non-master plan annexations would be consistent with the applicable provisions of the Manteca Municipal Code.	No mitigation is necessary.	Less than significant impact.
Impact LU-4: The proposed project would be consistent with the applicable recommendations of the adopted San Joaquin County Airport Land Use Plan.	No mitigation is necessary.	Less than significant impact.
Impact LU-5: The proposed project would not conflict with any of the applicable policies established by the San Joaquin County Local Agency Formation Commission.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact LU-6: The proposed project may not be consistent with the applicable policies of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.	Implement Mitigation Measure BIO-6.	Less than significant impact.
Section 3.10 – Noise		
Impact NOI-1: Construction activities associated with the proposed project may expose nearby land uses to excessive noise levels.	**MM NOI-1:** During construction activities for all Master Plan uses, the applicant shall require its construction contractors to adhere to the following noise attenuation requirements: • Construction activities shall be limited to the hours between 7 a.m. to 8 p.m. daily. The City of Manteca Director of Public Works shall have the discretion to permit construction activities to occur outside of allowable hours if compelling circumstances warrant such an exception (e.g., weather conditions necessary to pour concrete). • All construction equipment shall use noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. If no noise-reduction features were installed by the manufacturer, then the contractor shall require that at least a muffler be installed on the equipment. • Construction staging and heavy equipment maintenance activities shall be performed a minimum distance of 300 feet from the nearest residence, unless safety or technical factors take precedence (e.g., an equipment breakdown). • A 10-foot-high construction noise barrier shall be installed along the edge of the Master Plan area within 300 feet of any offsite residence prior to start of grading activities. The noise barrier shall either be constructed of a minimum 0.5-inch plywood or utilize acoustical blankets with a minimum Sound Transmission Class of 12. The barrier shall remain in place until noise intensive aspects of construction are completed.	Less than significant impact.
Impact NOI-2: Construction and operational activities associated with the proposed project would not generate substantial groundborne vibration.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact NOI-3: The proposed project's vehicular trips would not cause a substantial permanent increase in ambient noise levels.	No mitigation is necessary.	Less than significant impact.
Impact NOI-4: The proposed project would not generate stationary noise levels that cause significant impacts at nearby receptors.	**MM NOI-4:** During Master Plan operations, the use of street sweepers and mechanical landscape maintenance equipment (lawnmowers, leaf blowers, etc.) shall be prohibited between the hours of 10 p.m. and 7 a.m.	Less than significant impact.
Impact NOI-5: The proposed project would not generate combined stationary and transportation noise levels that cause significant impacts at nearby receptors.	No mitigation is necessary.	Less than significant impact.
Impact NOI-6: The proposed project would not expose persons residing or working in the project vicinity to excessive aviation noise levels.	No mitigation is necessary.	Less than significant impact.
Section 3.11 – Public Services and Utilities		
Impact PSU-1: The proposed project may contribute to a need for new or expanded fire protection facilities.	**MM PSU-1:** Prior to issuance of building permits for any Master Plan uses, the project applicant shall provide the City of Manteca will all applicable fire protection development fees in accordance with the latest adopted fee schedule.	Less than significant impact.
Impact PSU-2: The proposed project would not contribute to a need for new or expanded police protection facilities.	No mitigation is necessary.	Less than significant impact.
Impact PSU-3: The proposed project may not be served with sufficient water supplies from existing entitlements and resources and may require the construction of new water treatment facilities.	**MM PSU-3a:** Prior to issuance of building permits for each Master Plan use, the applicant shall prepare and submit documentation to the City of Manteca for review and approval identifying a non-potable irrigation system that is separate from the potable water systems. The non-potable irrigation system shall use non-potable well water until recycled water is available, at which point it shall be converted to use recycled water. **MM PSU-3b:** Prior to issuance of building permits for each Master Plan use, the applicant shall prepare and submit documentation to the City of Manteca for review and approval identifying that all appropriate and feasible water conservation measures are incorporated into the proposed use(s). The approved measures shall be incorporated into the final	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	development plans. Examples of water conservation measures include but are not limited to: • Drought-tolerant landscaping or xeriscaping • Water efficient irrigation systems (drip irrigation, bubbler/soaker systems, hydrozones, evapotranspiration controllers, etc.) • Sensor-activated low-flow fixtures (e.g., faucets, urinals, and toilets)	
Impact PSU-4: The proposed project's effluent would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board and would not require the construction of new wastewater treatment facilities.	No mitigation is necessary.	Less than significant impact.
Impact PSU-5: The proposed project would not result require the construction of new downstream drainage facilities.	No mitigation is necessary.	Less than significant impact.
Impact PSU-6: The proposed project may not be served by a landfill with adequate capacity or comply with federal, state, and local statutes and regulations related to solid waste.	**MM PSU-6a:** Prior to issuance of building permits for any building developed pursuant to the Master Plan, the project applicant shall retain a qualified contractor to perform construction and demolition debris recycling. Following the completion of construction activities, the project applicant shall provide documentation to the satisfaction of the City of Manteca demonstrating that construction and demolition debris was recycled. **MM PSU-6b:** Prior to issuance of building permits for each building developed pursuant to the Master Plan, the project applicant shall provide information to the City of Manteca describing the methods by which recycling and waste diversion activities shall be achieved. This information shall include but is not limited to the type and location of facilities necessary to collect and store recyclable materials, contractors who would pick-up recyclable and reusable materials, and how recycling and waste diversion activities would be integrated into operational practices. To the extent feasible, centralized recycling facilities are encouraged to enhance the ease and efficiency of such practices. The approved facilities and practices shall be incorporated into the uses envisioned by the Master Plan.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact PSU-7: The proposed project would not result in the inefficient, wasteful, or unnecessary use of energy.	No mitigation is necessary.	Less than significant impact.
Section 3.12 – Transportation		
Impact TRANS-1: The CenterPoint Intermodal Facility would generate new trips that contribute to unacceptable intersection operations under Existing Plus Project Conditions.	**MM TRANS-1:** Prior to issuance of building permits for each Master Plan use, the applicant shall pay all transportation-related fees in accordance with the latest adopted fee schedule at the time permits are sought. Such fees shall include, but not be limited to, the City of Manteca Public Facilities Implementation Plan fee and the San Joaquin County Regional Transportation Impact Fee.	Significant unavoidable impact.
Impact TRANS-2: Both the CenterPoint Intermodal Facility and the Master Plan uses would generate new trips that contribute to unacceptable intersection and freeway operations under Cumulative Conditions.	**MM TRANS-2a**: Prior to issuance of building permits for each Master Plan use, the applicant shall provide fees to the City of Manteca for the installation of signals at the I-5 Northbound Ramps/Roth Road and I-5 Southbound Ramps/Roth Road intersections, provided that fee collection mechanism exists. Fee amounts shall be calculated in accordance with equitable share methodology. This mitigation measure shall be superseded by Mitigation Measure TRANS-1 if no fee collection mechanism exists for this improvement at the time building permits are sought. **MM TRANS-2b**: Prior to issuance of building permits for each Master Plan use, the applicant shall provide fees to the City of Manteca for improvements to the Roth Road/Harland Road intersection, provided that fee collection mechanism exists. The improvements shall consist of the installation of a signal and widening the westbound approach to include left-turn lane, through lane, and shared through/right lane. Fee amounts shall be calculated in accordance with equitable share methodology. This mitigation measure shall be superseded by Mitigation Measure TRANS-1 if no fee collection mechanism exists for this improvement at the time building permits are sought.	Significant unavoidable impact.
Impact TRANS-3: The proposed project would not cause a change in air traffic patterns that results in substantial safety risks.	No mitigation is necessary.	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact TRANS-4: The proposed project may substantially increase hazards that are due to a design feature or incompatible uses.	**MM TRANS-4a:** Prior to site plan review for each Master Plan use, the applicant shall consult with the City of Manteca Community Development Department about appropriate frontage improvements. All necessary frontage improvements shall be depicted on the final site plan and implemented as part of site development. **MM TRANS-4b:** Prior to site plan review for each Master Plan use, the applicant shall consult with the City of Manteca Community Development Department about the following roadway access issues listed below. The access evaluations shall be performed in accordance with the City's Transportation Impact Study Guidelines. All necessary improvements shall be depicted on the final site plan and implemented as part of site development. Issues include but are not limited to: • Need for traffic signals at driveways • Traffic signal coordination and installation of associated signal conduits • Truck traffic volumes at driveways and associated lane storage requirements, right-turn deceleration needs, and curb return radii • Coordination and accommodation of driveways for future projects on the opposite side of the street • Pavement thickness	Less than significant impact.
Impact TRANS-5: The proposed project would provide adequate emergency access.	No mitigation is necessary.	Less than significant impact.
Impact TRANS-6: The proposed project may conflict with adopted policies, plans, or programs supporting alternative transportation.	**MM TRANS-6a**: Prior to site plan review for each Master Plan light industrial use, the applicant shall consult with the City of Manteca Community Development Department, Manteca Transit, and the San Joaquin Regional Transit District about the inclusion of appropriate transit facilities (turnouts, shelters, etc.) or services (e.g., an employee shuttle). If transit facilities are deemed to be necessary, they shall be provided on the final site plan. If transit services are deemed to be necessary, the applicant shall prepare a service plan and submit it to the City of Manteca for review and approval. The approved plan shall be incorporated into the project. To the extent feasible, transit facilities and services shall be coordinated among	Less than significant impact.

Table ES-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Master Plan uses to maximize efficiency and effectiveness. **MM TRANS-6b:** Prior to site plan review for each Master Plan light industrial use, the applicant shall consult with the City of Manteca Community Development Department about the inclusion of appropriate bicycle facilities (racks, lockers, etc.). If bicycle facilities are deemed to be necessary, such facilities shall be provided on the final site plan. **MM TRANS-6c:** Prior to site plan review for each Master Plan light industrial use, the applicant shall consult with the City of Manteca Community Development Department about the inclusion of appropriate pedestrian facilities. If pedestrian facilities are deemed to be necessary, such facilities shall be provided on the final site plan. **MM TRANS-6d:** Prior to site plan review for the Master Plan community commercial use, the applicant shall prepare and submit plans to the City of Manteca demonstrating access and facilities for public transit, bicycles, and pedestrians. Public transit facilities shall consist of at least one bus turnout with shelter, lighting, trash receptacle, and direct pedestrian connection to the community commercial center. Bicycle facilities shall consist of racks near building entrances that provide storage equivalent to 2 percent of the minimum Municipal Code parking requirement. Pedestrian facilities shall consist of sidewalks along street frontages and direct connections between buildings. The approved facilities shall be incorporated in the community commercial center plans.	
Impact TRANS-7: Construction traffic and parking may adversely impact local circulation.	**MM TRANS-7:** Prior to issuance of grading permits for each Master Plan use, the applicant shall submit a Construction Traffic Control Plan to the City of Manteca for review and approval. The plan shall identify the timing and routing of all major construction equipment and trucking to avoid potential traffic congestion and delays on the local street network. The plan shall encourage the use of Interstate 5 (I-5), Roth Road, Airport Way, and Lathrop Road wherever practical. Anticipated temporary road closures should be identified, along with safety measures and detours. If necessary, construction equipment and materials deliveries shall be limited to off-peak hours to avoid conflicts with local traffic circulation. The plan shall also identify suitable locations for construction worker parking.	Less than significant impact.

SECTION 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Northwest Airport Way Master Plan (State Clearinghouse No. 2010022024). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.). This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project.

1.1.1 - Overview

The proposed project consists of two components: (1) the Northwest Airport Way Master Plan and (2) non-master plan annexations. Each component is summarized below. Section 2, Project Description provides a complete description of the project.

Northwest Airport Way Master Plan

The Northwest Airport Way Master Plan seeks to develop approximately 4.7 million square feet of light industrial and commercial uses on approximately 300 acres. The entire Master Plan area would be annexed into the City of Manteca. The Master Plan requires General Plan Amendment and pre-zoning approvals.

Non-Master Plan Annexations

Two areas adjacent to the Master Plan area totaling approximately 221 acres would be annexed into the Manteca city limits. These annexations are intended to prevent the creation of "unincorporated islands" within the city limits as a result of Master Plan implementation. The non-master plan annexations require General Plan Amendment and pre-zoning approvals.

1.1.2 - Purpose and Authority

This Draft EIR provides a project-level analysis of the environmental effects of the Northwest Airport Way Master Plan and the non-master plan annexations. The environmental impacts of the proposed project are analyzed in the EIR to the degree of specificity appropriate, in accordance with CEQA Guidelines Section 15146. This document addresses the potentially significant adverse environmental impacts that may be associated with the planning, construction, or operation of the project. It also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to significantly reduce or avoid these impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found Not To Be Significant
- Areas of Known Controversy

1.1.3 - Lead Agency Determination

The City of Manteca is designated as the lead agency for the project. CEQA Guidelines Section 15367 defines the lead agency as " . . . the public agency, which has the principal responsibility for carrying out or approving a project." Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by Michael Brandman Associates, an environmental consultant under contract to the City of Manteca. Prior to public review, it was extensively reviewed and evaluated by the City of Manteca. This Draft EIR reflects the independent judgment and analysis of the City of Manteca as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in Sections 8 and 9 of this Draft EIR, respectively.

1.2 - Scope of the EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The City of Manteca issued a Notice of Preparation (NOP) for the proposed project on February 8, 2010, which circulated between February 8, 2010 and March 9, 2010 for the statutory 30-day public review period. The scope of this Draft EIR includes the potential environmental impacts identified in the NOP and issues raised by agencies and the public in response to the NOP. The NOP is contained in Appendix A of this Draft EIR.

Twelve comment letters were received in response to the NOP. They are listed in Table 1-1 and provided in Appendix A of this Draft EIR.

Table 1-1: NOP Comment Letters

Status	Affiliation	Signatory	Date
Public Agencies	City of Lathrop Community Development Department	Charlie Mullen, AICP, Assistant Community Development Director	February 24, 2010
	San Joaquin County Community Development Department	Mo Hatef, Associate Planner	February 25, 2010
	California Energy Commission Local Energy and Land Use Assistance Unit	Bill Pfanner, Supervisor Local Energy and Land Use Assistance Unit	February 26, 2010
	San Joaquin Council of Governments San Joaquin County Multi-Species Habitat Conservation & Open Space Plan	Anne-Marie Poggio, Regional Habitat Planner	March 2, 2010
	San Joaquin Council of Governments San Joaquin County Multi-Species Habitat Conservation & Open Space Plan	Anne-Marie Poggio, Regional Habitat Planner	March 4, 2010
	San Joaquin County Environmental Health Department	Rodney Estrada, Lead Senior Registered Environmental Health Specialist	March 4, 2010
	San Joaquin Council of Governments Airport Land Use Commission	Laura Brunn, Associate Regional Planner	March 5, 2010
	San Joaquin Council of Governments Congestion Management Agency	Michael Swearingen, Senior Regional Planner	March 5, 2010
	Manteca Unified School District	Jacqui Breitenbucher, Senior Director of Business Services	March 3, 2010
	San Joaquin Valley Air Pollution Control District	David Warner, Director of Permit Services; Arnaud Marjollet, Permit Services Manager	March 8, 2010
	State of California Public Utilities Commission	Moses Stites, Rail Corridor Safety Specialist	March 9, 2010
	Regional Water Quality Control Board – Central Valley Region	Daniel Schultz, Environmental Scientist – Storm Water Unit	March 17, 2010

Notes:
The March 2 and March 4 letters from the San Joaquin Council of Governments San Joaquin County Multi-Species Habitat Conservation & Open Space Plan were identical in terms of content. The only difference is that the March 2 letter addressed the "CenterPoint Intermodal Center" and the March 4 letter addressed the "Northwest Airport Way Master Plan."
Source: City of Manteca, 2010.

1.2.1 - Scoping Meeting

Pursuant to CEQA Guidelines Section 15082(c)(1), the City of Manteca held a scoping meeting for the proposed project on Wednesday, February 24, 2010 at Manteca City Hall. Five agency representatives and members of the public attended the meeting. Three individuals provided oral comments and are listed below. Note that all three individuals submitted written comments, which were previously shown in Table 1-1.

- Charlie Mullen, City of Lathrop
- Thomas Ruark, City of Lathrop
- Ann-Marie Poggio, San Joaquin Council of Governments

1.2.2 - Environmental Issues Determined Not To Be Significant

The NOP identified topical areas that were determined not to be significant. An explanation of why each area is determined not to be significant is provided in Section 7, Effects Found Not To Be Significant. These topical areas are as follows:

- Mineral Resources
- Population and Housing

In addition, certain subjects with various topical areas were determined not to be significant. Other potentially significant issues are analyzed in these topical areas; however, the following issues are not analyzed:

- State Scenic Highways (Section 3.1, Aesthetics Light, and Glare)
- Septic and Alternative Wastewater Disposal Systems (Section 3.6, Geology, Soils, and Seismicity)
- Private Airstrips (Section 3.7, Hazards and Hazardous Materials)
- Wildland Fires (Section 3.7, Hazards and Hazardous Materials)
- 100-Year Flood Hazard Areas (Section 3.8, Hydrology and Water Quality)
- Flooding and Dam or Levee Failure (Section 3.8, Hydrology and Water Quality)
- Seiche, Tsunami, or Mudflow Hazards (Section 3.8, Hydrology and Water Quality)
- Schools (Section 3.11, Public Services and Utilities)
- Parks (Section 3.11, Public Services and Utilities)
- Other Public Facilities (Section 3.11, Public Services and Utilities)

An explanation of why each issue is determined not to be significant is provided in Section 7, Effects Found Not To Be Significant.

1.2.3 - Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the EIR. These sections are as follows:

- Aesthetics, Light, and Glare
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services and Utilities
- Transportation

1.3 - Organization of the EIR

This Draft EIR is organized into the following main sections:

- **Section ES: Executive Summary.** This section includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of the areas of controversy and issues to be resolved, and overview of the Mitigation Monitoring and Reporting Program, in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.
- **Section 1: Introduction.** This section provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Section 2: Project Description.** This section includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Section 3 are as follows:
  - **Section 3.1 - Aesthetics, Light, and Glare:** Addresses the potential visual impacts of development intensification and the overall increase in illumination produced by the project.
  - **Section 3.2 - Agricultural Resources:** Addresses the potential conversion of Important Farmland to non-agricultural use, as well as conflicts with Williamson Act contracts and agricultural zoning.
  - **Section 3.3 - Air Quality/Greenhouse Gas Emissions:** Addresses the potential air quality impacts associated with project implementation, as well as consistency with the San Joaquin Valley Air Pollution Control District's air quality management plans. The section also evaluates project emissions of greenhouse gases.
  - **Section 3.4 - Biological Resources:** Addresses the project's potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important

habitat; and impacts on listed, proposed, and candidate threatened and endangered species.

- **Section 3.5 - Cultural Resources:** Addresses the potential impacts of project development on known historical resources and potential archaeological and paleontological resources.
- **Section 3.6 - Geology, Soils, and Seismicity:** Addresses the potential impacts the project may have on soils and assesses the effects of project development in relation to geologic and seismic conditions.
- **Section 3.7 - Hazards and Hazardous Materials:** Addresses the potential for the presence of hazardous materials or conditions on the project site and in the project area that may have the potential to impact human health.
- **Section 3.8 - Hydrology and Water Quality:** Addresses the potential impacts of the project on local hydrological conditions, including drainage areas, and changes in the flow rates.
- **Section 3.9 - Land Use:** Addresses the potential land use impacts associated with division of an established community and consistency with the City of Manteca General Plan, Manteca Municipal Code, San Joaquin County Airport Land Use Plan (1993), San Joaquin County Local Agency Formation Commission annexation criteria, and the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.
- **Section 3.10 - Noise:** Addresses the potential noise impacts during construction and at project buildout from mobile and stationary sources. The section also addresses the impact of noise generation on neighboring uses.
- **Section 3.11 - Public Services and Utilities:** Addresses the potential impacts upon service providers, including fire protection, law enforcement, water supply, wastewater, storm drainage, solid waste, and energy providers.
- **Section 3.12 - Transportation:** Addresses the impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.

- **Section 4: Cumulative Effects.** This section analyzes the proposed project's environmental impacts in combination with the impact of other, past, present, and probable future projects.
- **Section 5: Alternatives to the Proposed Project.** This section compares the impacts of the proposed project with four land-use project alternatives: the No Project Alternative, the Master Plan Only Alternative, the Non-Master Plan Annexations Only Alternative, and the CenterPoint Intermodal Facility Alternative. An environmentally superior alternative is identified. In addition, alternatives initially considered but rejected from further consideration are discussed.
- **Section 6: Other CEQA Considerations.** This section provides a summary of significant unavoidable environmental impacts, growth inducement, and significant irreversible changes. In addition, the proposed project's energy demand is discussed.

- **Section 7: Effects Found Not To Be Significant.** This section contains analysis of the topical sections not addressed in Section 3.
- **Section 8: Organizations and Persons Consulted/List of Preparers.** This section contains a full list of persons and organizations that were consulted during the preparation of this Draft EIR, as well as the authors who assisted in the preparation of the Draft EIR, by name and affiliation.
- **Section 9: References.** This section contains a full list of references that were used in the preparation of this Draft EIR.
- **Appendices:** This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the Draft EIR has also been described. The documents and other sources that have been used in the preparation of this Draft EIR include, but are not limited to:

- Northwest Airport Way Master Plan
- City of Manteca General Plan
- Manteca Municipal Code
- City of Manteca 2005 Urban Water Management Plan
- San Joaquin County Airport Land Use Plan (1993)
- San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

These documents are specifically identified in Section 9, References, of this Draft EIR. In accordance with CEQA Guidelines Section 15150(b), the Northwest Airport Way Master Plan, General Plan, the Municipal Code, and the referenced documents and other sources used in the preparation of the Draft EIR are available for review at the City of Manteca at the address shown in Section 1.6, below.

1.5 - Documents Prepared for the Project

The following technical studies and analyses were prepared for the proposed project:

- Land Evaluation and Site Assessment Model, prepared by Michael Brandman Associates (Appendix B)

- Air Quality Analysis, prepared by Michael Brandman Associates. (The analysis is wholly contained in Section 3.3, Air Quality; modeling data is provided in Appendix C.)
- Health Risk Assessment, prepared by Michael Brandman Associates (Appendix C)
- Biological Resources Analysis, prepared by Michael Brandman Associates (The analysis is wholly contained in Section 3.4, Biological Resources; supporting data is provided in Appendix D.)
- Jurisdictional Delineation, prepared by Michael Brandman Associates (Appendix D)
- Section 106 Cultural Resources Assessment, prepared by Michael Brandman Associates (Appendix E)
- Preliminary Geotechnical Investigation, prepared by Neil O. Anderson and Associates (Appendix F)
- Phase I and Phase II Environmental Site Assessments, prepared by Conestoga-Rovers & Associates (Appendix G)
- Noise Analysis, prepared by Michael Brandman Associates. (The analysis is wholly contained in Section 3.10, Noise; modeling data is provided in Appendix H.)
- Water Supply Assessment, prepared by City of Manteca (Appendix I)
- Transportation Impact Study, prepared by Fehr & Peers Transportation Consultants (Appendix J)

1.6 - Review of the Draft EIR

Upon completion of the Draft EIR, the City of Manteca filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the City of Manteca. The address for each location is provided below:

City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337
Hours:
Monday-Thursday 7:30 a.m. to 5:00 p.m.
Friday 8:00 a.m. to 5:00 p.m.
(Closed alternating Fridays)

Stockton-San Joaquin County Public Library
Manteca Branch Library
320 W. Center Street
Manteca, CA 95336-4539
Hours:
Monday, Wednesday: 11 a.m. to 7 p.m.
Tuesday, Thursday: 10 a.m. to 6 p.m.
Friday: 12 p.m. to 5 p.m.
Saturday: 10 a.m. to 4 p.m.

The Draft EIR is also available electronically on the City of Manteca's website: http://www.ci.manteca.ca.us/.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Ms. Rochelle Henson, Senior Planner
City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337
Phone: (209) 456-8516
Fax: (209) 923-8949
Email: rhenson@ci.manteca.ca.us

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the City of Manteca on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

SECTION 2: PROJECT DESCRIPTION

2.1 - Projects Location and Setting

This EIR evaluates the environmental effects of the Northwest Airport Way Master Plan and the Non-Master Plan Annexations. Each project component is discussed separately.

2.1.1 - Northwest Airport Way Master Plan

Location

The approximately 300-acre Master Plan area is located in unincorporated San Joaquin County, California adjacent to the City of Manteca limits (Exhibit 2-1). The rectangular plan area consists of 300.3 acres bounded by the Union Pacific Railroad Lathrop Intermodal Terminal (west), Roth Road (north), Airport Way (east), and Lathrop Road (south) (Exhibit 2-2). The plan area is within the City of Manteca Sphere of Influence within the 10-year planning horizon. The Master Plan area is located on the Lathrop, California, United States Geological Survey 7.5-minute topographic quadrangle map, Township 1 South, Range 6 East, Section 24 (Latitude 37°51'00" North; Longitude 121°15'30" West).

Existing Conditions

The Master Plan area consists of agricultural operations, industrial uses, and rural residences. Agricultural uses consist of orchards, row crops, grazing, and fallow fields. Industrial uses consist of a cheese factory and associated settling ponds. Rural residences are located in various places along the Airport Way frontage. Four South San Joaquin Irrigation District (SSJID) cast-in-place concrete pipes and one open channel drain cross the Master Plan area from east to west, conveying irrigation water and stormwater runoff through the site and into the South San Joaquin Irrigation District (SSJID) French Camp Outlet Canal. Photographs of the Master Plan area are provided in Exhibit 2-3a and Exhibit 2-3b.

Most of the lands within the Master Plan area are controlled by four parties, listed here from north to south. Property ownership is depicted on Exhibit 2-4.

- **CenterPoint Properties:** CenterPoint Properties controls two, non-contiguous portions of the Master Plan totaling 189.83 acres. The northern portion extends from Roth Road to the central portion of the Master Plan area, while the southern portion is located south of the RCCI PTP property. This acreage consists mainly of agricultural uses.
- **Riella Trust:** The Riella Trust controls 44.22 acres along Airport Way adjacent to the northern CenterPoint property. This acreage consists mainly of agricultural uses.
- **RCCI PTP:** RCCI PTP controls 41.91 acres between the two CenterPoint Properties-controlled portions. This acreage consists of the cheese factory and the associated settling ponds. The open drainage channel forms the southern boundary of the RCCI PTP properties.

- **Cardoza:** Cardoza controls 21.94 acres located along Lathrop Road and Airport Way. This acreage consists of orchards.

In addition to the parties listed above, a private property owner (Stumphauser) holds a 2.5-acre parcel along Airport Way that is surrounded on three sides by the Riella Trust property.

Surrounding Land Uses

West

The Union Pacific Railroad Lathrop Intermodal Terminal forms the western boundary of the Master Plan area. West of the terminal is the French Camp Outlet Canal, the Union Pacific Railroad Oakland Subdivision (a rail line connecting the Bay Area with Sacramento via the Altamont Pass), and the Sharpe Army Depot. The Lathrop Intermodal Terminal is located in unincorporated San Joaquin County, and the Sharpe Army Depot is located in the City of Lathrop. In addition, the Calaveras Materials cement plant is located west of the Master Plan area near the Lathrop Road overcrossing of the Oakland Subdivision.

North

Roth Road forms the northern boundary of the Master Plan area. North of the roadway are agricultural uses located within unincorporated San Joaquin County. These uses are located within the City of Stockton's Sphere of Influence.

East

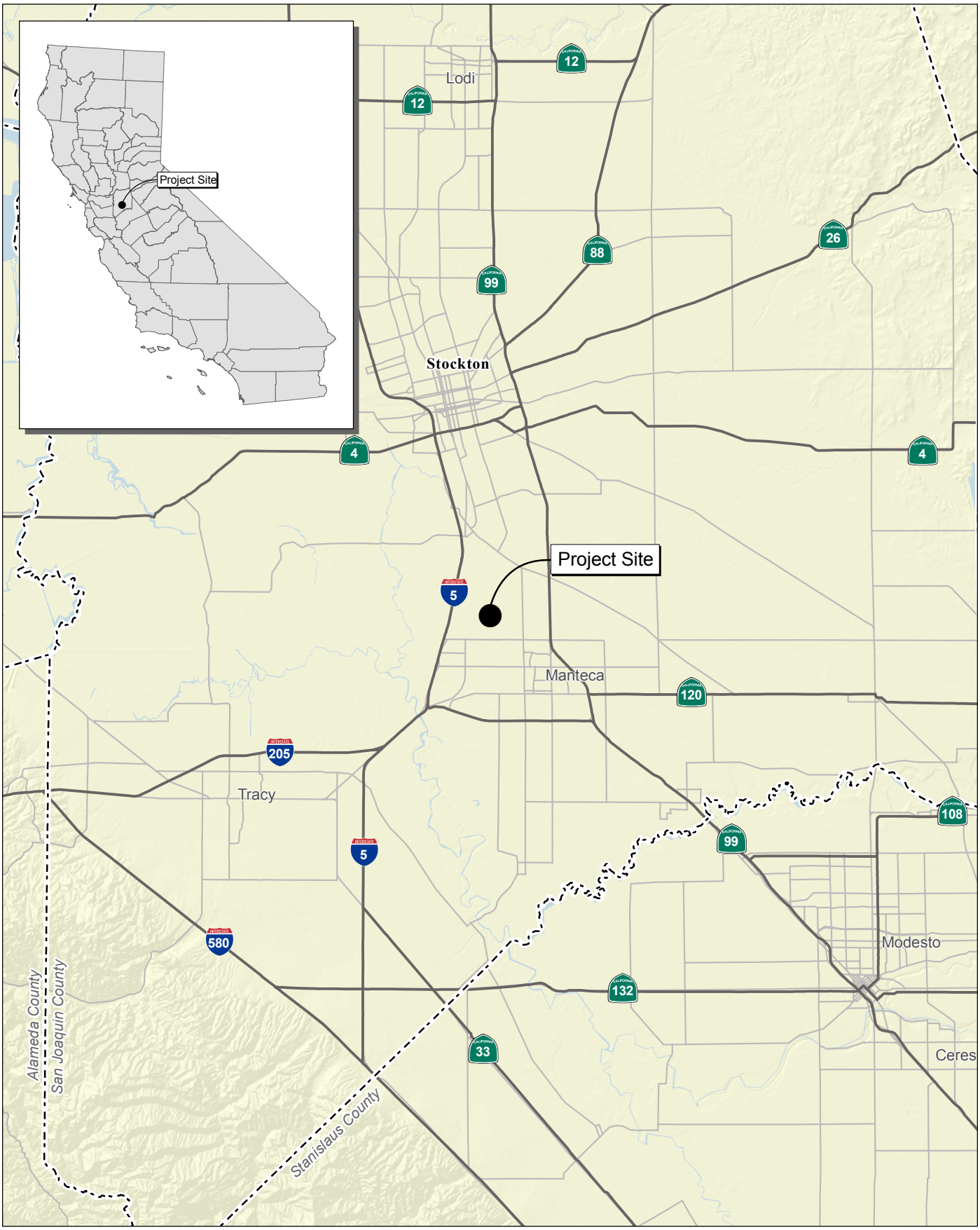
Airport Way forms the eastern boundary of the Master Plan area. East of the roadway is agricultural land and low-density residential uses located within unincorporated San Joaquin County and the Union Ranch single-family residential development located within the Manteca city limits. The unincorporated agricultural and residential uses are within the City of Manteca's Sphere of Influence. The agricultural and residential uses located between Union Ranch and Lathrop Road are designated as the "East" non-master plan area.

South

Lathrop Road forms the southern boundary of the Master Plan area. South of the roadway are agricultural and residential uses located within unincorporated San Joaquin County. These uses are located within the City of Manteca's Sphere of Influence. This area is designated as the "South" non-master plan area.

Land Use Designations

The San Joaquin County General Plan currently designates the Master Plan area General Agriculture. The San Joaquin County Zoning Ordinance designates the Master Plan area General Agriculture, 40-Acre Minimum Parcel Size (AG-40).



Source: Census 2000 Data, The CaSIL, MBA GIS 2009.

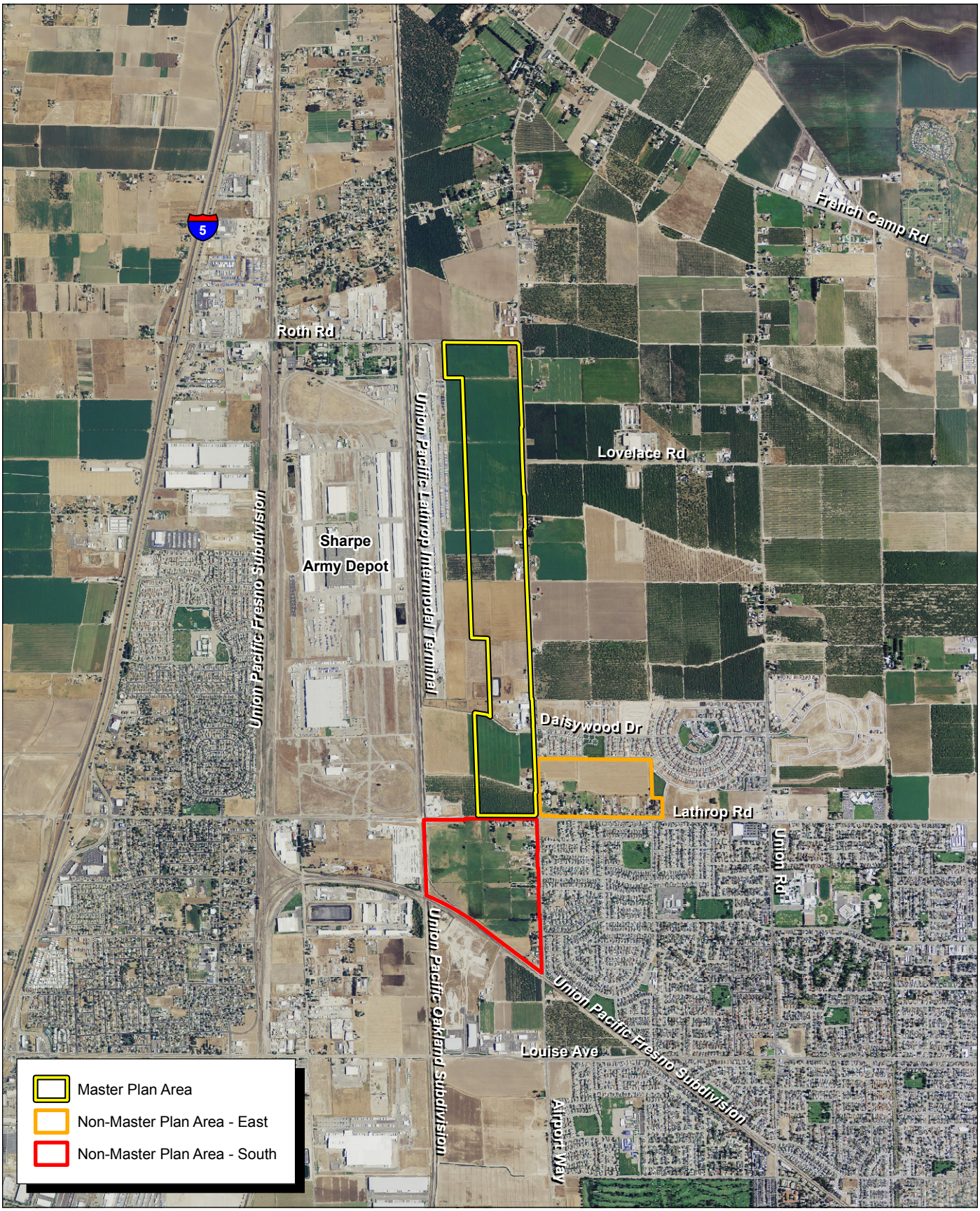
NORTH

5 2.5 0 5

Miles

Michael Brandman Associates

Exhibit 2-1
Regional Location Map



Source: NAIP for San Joaquin County (2009) & San Joaquin County Parcels (2008).

NORTH

3,000 1,500 0 3,000 Feet

Michael Brandman Associates

Exhibit 2-2
Local Vicinity Map
Aerial Base



Photograph 1: View of northern portion of Master Plan Area looking north.



Photograph 2: View of northern portion of Master Plan Area looking west.



Photograph 3: View of central portion of Master Plan Area looking north.



Photograph 4: View of central portion of Master Plan Area looking north.

Source: Michael Brandman Associates, 2010.

Michael Brandman Associates

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Exhibit 2-3a
Site Photographs - Master Plan Area



Photograph 5: View of southern portion of Master Plan Area from Lathrop Road.



Photograph 6: View of southern portion of Master Plan Area from Lathrop Road/Airport Way intersection.



Photograph 7: View of southern portion of Master Plan Area from Airport Way.



Photograph 8: View of southern boundary of Master Plan Area (Lathrop Road).

Source: Michael Brandman Associates, 2010.

Michael Brandman Associates

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Exhibit 2-3b
Site Photographs - Master Plan Area



Photograph 9: View of East Non-Master Plan Annexation Area from Lathrop Road.



Photograph 10: View of South Non-Master Plan Annexation Area from Lathrop Road.



Photograph 11: View of South Non-Master Plan Annexation Area from Lathrop Road.



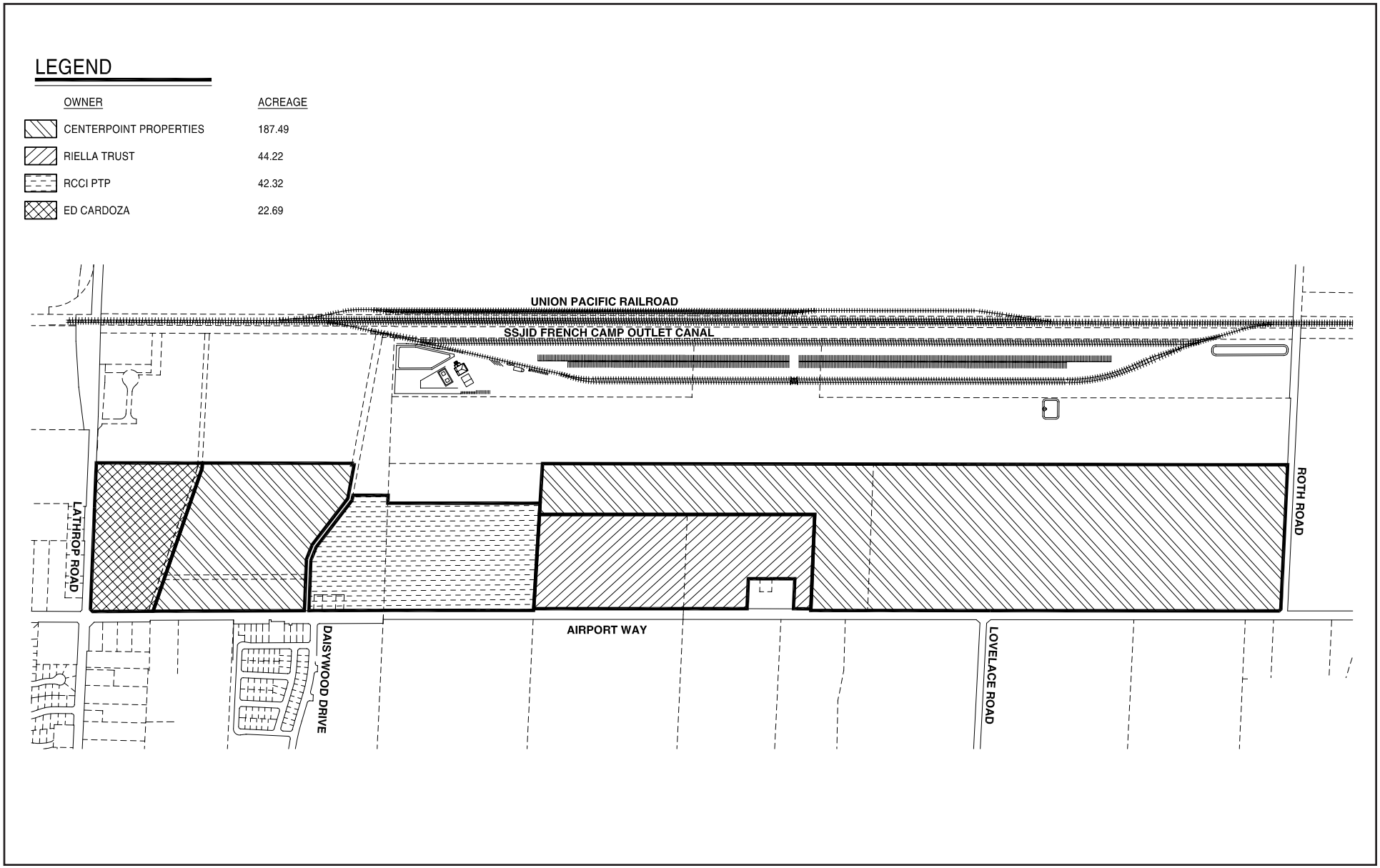
Photograph 12: View of South Non-Master Plan Annexation Area from Airport Way.

Source: Michael Brandman Associates, 2010.

Michael Brandman Associates

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Exhibit 2-3c
Site Photographs - Non-Master Plan Annexation Areas



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,200 600 0 1,200 Feet

Michael Brandman Associates

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Exhibit 2-4
Master Plan Area Major Land Holdings

The City of Manteca General Plan currently designates the Master Plan area Light Industrial and Urban Reserve. The existing General Plan land use designations are shown on Exhibit 2-5.

The Master Plan area is within the Stockton Metropolitan Airport Influence Area and within the boundaries of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

2.1.2 - Non-Master Plan Annexations

Location

The non-master plan area consists of two areas totaling approximately 221 acres within unincorporated San Joaquin County adjacent to the Master Plan area and contiguous with the Manteca city limits. These areas are described below and shown on Exhibit 2-2.

- **East area:** This rectangular-shaped area encompasses approximately 77 acres and is bounded by Airport Way (west), Union Ranch and the Manteca city limits (north and east), and Lathrop Road and the Manteca city limits (south).
- **South area:** This trapezoidal-shaped area encompasses approximately 144 acres and is bounded by the Union Pacific Railroad Oakland Subdivision and Lathrop city limits (west), Lathrop Road (north), Airport Way and the Manteca city limits (east), and the Union Pacific Railroad Fresno Subdivision and the Manteca city limits (south).

Existing Conditions

East Area

The 77-acre East area contains agricultural uses and low-density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts Union Ranch.

A photograph of the East non-master plan area is provided in Exhibit 2-3c, above.

South Area

The 144-acre South area contains agricultural uses and low-density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts the Union Pacific Railroad Oakland and Fresno Subdivisions.

Photographs of the South non-master plan area are provided in Exhibit 2-3c, above.

Surrounding Land Uses

West

Airport Way forms the west boundary of the East non-master plan area. The Master Plan area is on the west side of Airport Way.

The French Camp Outlet Canal and Union Pacific Railroad Oakland Subdivision form the western boundary of the South non-master plan area. The City of Lathrop is located west of the railroad tracks.

North

Union Ranch forms the northern boundary of the East non-master plan area.

Lathrop Road forms the northern boundary of the South non-master plan area. The Master Plan area is on the north side of Airport Way.

East

Union Ranch forms the eastern boundary of the East non-master plan area.

Airport Way forms the eastern boundary of the South non-master plan area. Residential uses located within the City of Manteca are located on the east side of Airport Way.

South

Lathrop Road forms the southern boundary of the East non-master plan area. Residential uses located within the City of Manteca are on the south side of Lathrop Road.

The Union Pacific Railroad Fresno Subdivision forms the southern boundary of the South non-master plan area. Industrial uses and the Manteca Unified School District Farm Laboratory located within the City of Manteca are on the south side of the railroad tracks.

Land Use Designations

Table 2-1 summarizes the land use designations of the non-master plan areas. The East area is within the Stockton Metropolitan Airport Influence Area; the South area is not. Both the East and South areas are within the boundaries of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

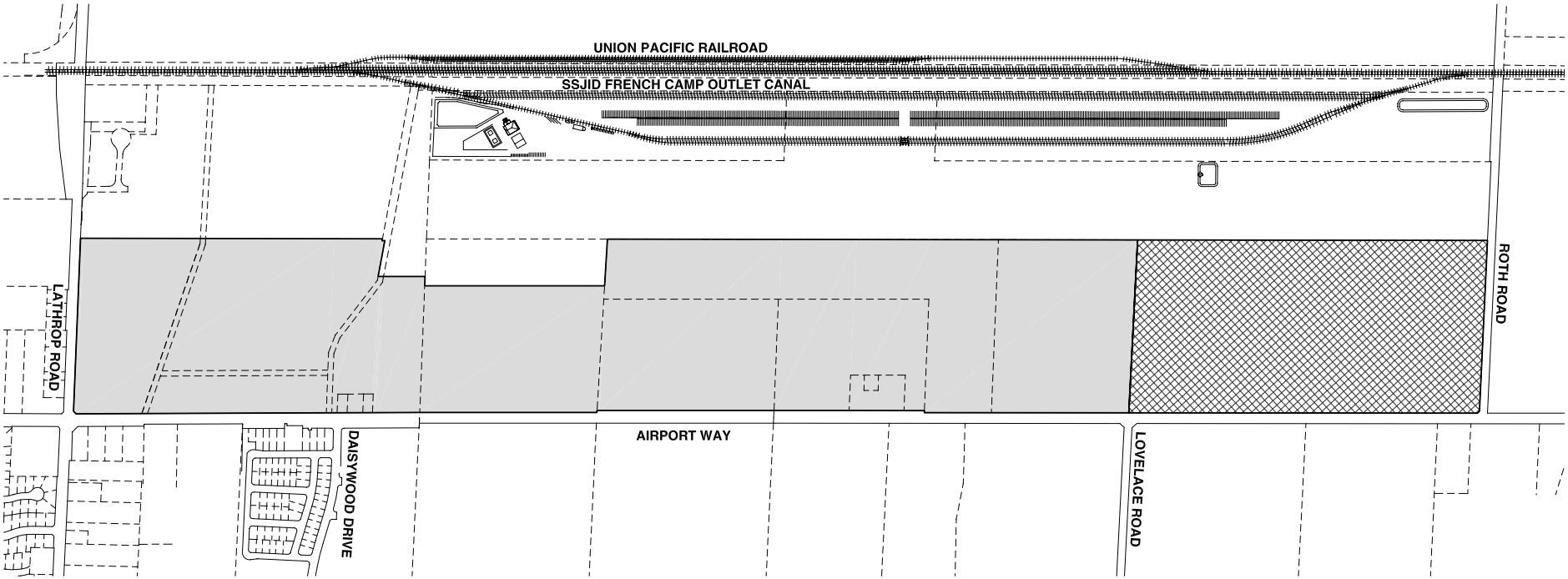
Table 2-1: Non-Master Plan Areas Land Use Designations

Area	San Joaquin County		City of Manteca General Plan
	General Plan	Zoning	
East	Low Density Residential	Agriculture-Urban Reserve, 20-acre Minimum (AU-20)	Neighborhood Commercial; Low Density Residential; Medium Density Residential; High Density Residential; Park
South	General Agriculture; Limited Industrial	General Agriculture, 40-acre Minimum (AG-40); Limited Industrial (I-L/S-11A)	Light Industrial

Notes:
The City of Manteca does not identify zoning designations for areas outside of the city limits.
Source: County of San Joaquin, 2010; City of Manteca, 2010.

LEGEND

DESIGNATION	ACREAGE
LI (LIGHT INDUSTRIAL)	222.3 AC.
UR-LI (URBAN RESERVE LIGHT INDUSTRIAL)	77.4 AC.
TOTAL	300.3 AC.



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,200 600 0 1,200 Feet

Michael Brandman Associates

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Exhibit 2-5
Existing General Plan Land Use Designations

2.2 - Characteristics of the Project

This EIR evaluates the Northwest Airport Way Master Plan and the Non-Master Plan Annexations. Each component is discussed separately.

2.2.1 - Northwest Airport Way Master Plan

The Northwest Airport Way Master Plan is intended to guide future development and land use activities within the 300.3-acre plan boundaries. The City of Manteca would annex the Master Plan area, and the land uses proposed in this Master Plan will constitute the permitted uses for the area. This Master Plan document will be adopted as an overlay district to the Manteca Municipal Code. The Master Plan components are summarized below. The complete Master Plan is available at the City of Manteca Community Development Department offices.

Goals

The purpose of the Master Plan is to implement the goals, objectives, and policies of the Manteca General Plan as they relate to future development projects in the area, the first of which is expected to be an intermodal facility with warehouse and distribution uses. Below are the specific goals of the Master Plan:

- Relate all proposed development within the Master Plan to each other and to their surroundings, including Airport Way and future residential development to the east of Airport Way.
- Develop a circulation system that provides a framework within which future development can take place in a coherent manner.
- Encourage development of the area to be environmentally friendly and sustainable.
- Set parameters to guide future development and ensure quality development with limited visual impacts.
- Establish clear and concise requirements for developers and builders so that review of implementing projects is streamlined and predictable.

The Master Plan is not a rigid book of rules, nor does it attempt to control every design detail of future development projects. By focusing on land use, infrastructure, and design standards for private improvements and implementation, it seeks to avoid the mistakes of static, end-state plans, which leave little if any room for future flexibility or design creativity. The Master Plan anticipates changing market conditions and acknowledges that developers will play an active role in determining the final design of individual projects that are consistent with the Master Plan goals and requirements.

Guiding Principles

The following guiding principles of the Master Plan have been established. They are to be used by developers and their consultants in the design of specific projects as well as by City staff in the review of these projects.

Land Use

- Develop light industrial and warehouse uses bordering the Union Pacific Rail facility.
- Develop a retail/commercial facility at the northwestern corner of Lathrop Road and Airport Way.
- Encourage small-scale light industrial uses along the Airport Way frontage to provide a transition from the large-scale industrial uses within the Plan area to the residential uses existing and planned across Airport Way to the east.

Circulation/Access

- Consolidate vehicular access points along Airport Way.
- Provide a signalized access point to the Plan area at Lovelace Road.
- Provide an adequate internal roadway system within the Plan area for all phases of development.

Open Space/Storm Drainage

- Develop a comprehensive open space network that can also act as a network of channels for stormwater treatment, conveyance, and detention in heavy rains.
- Utilize open surface channels where possible.
- Integrate walking, jogging and bicycle paths into the open space network where appropriate.
- Plant drought tolerant trees and plants in open space areas.

Visual/Design

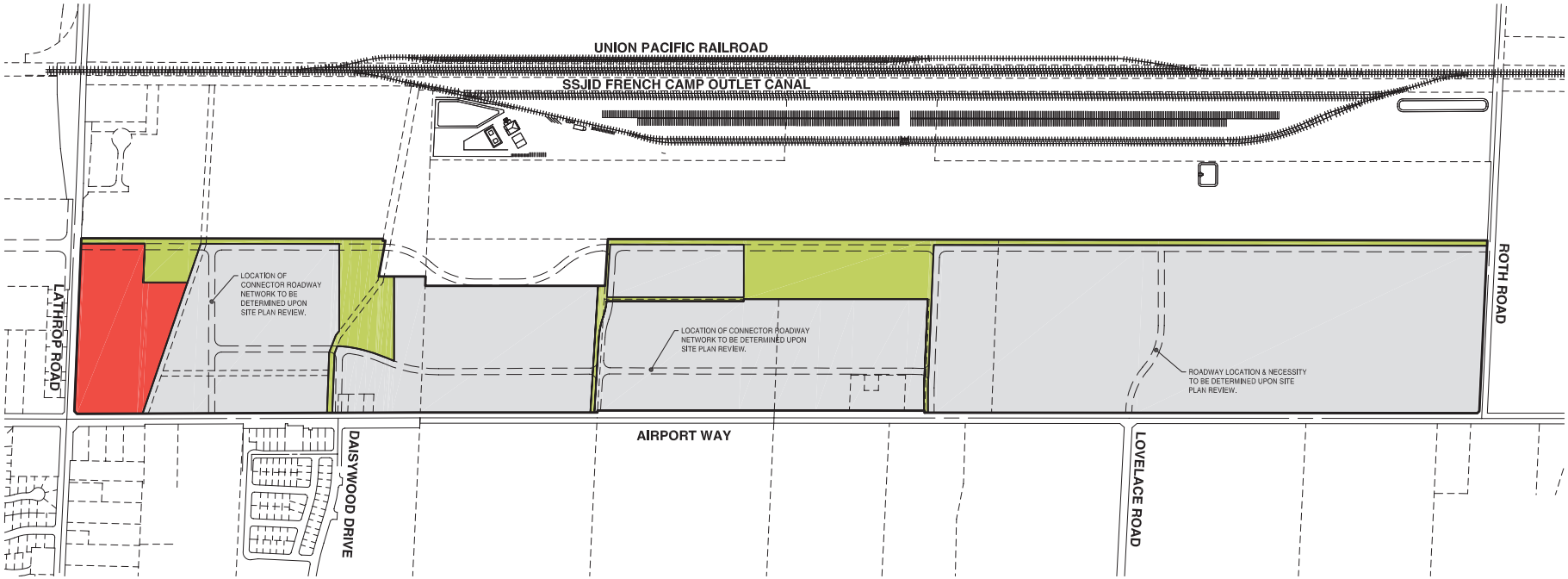
- Encourage good design with a central theme that will result in a successful and aesthetically pleasing development.
- Establish proper relationships between buildings and roads, open spaces, car parking, truck loading docks, and trailer parking.

Land Use

The Master Plan would guide the development of industrial and community commercial uses. Table 2-2 summarizes and Exhibit 2-6 depicts the land use designations within the Master Plan area. As shown in the table, most of the Master Plan area would be designated for light industrial use, with the balance designated for community commercial and open space.

LAND USE LEGEND

DESIGNATION	ACREAGE
CC (COMMUNITY COMMERCIAL)	18.1 AC.
LI (LIGHT INDUSTRIAL)	248.3 AC.
OS (OPEN SPACE) DRAINAGE CORRIDORS & BASINS	33.9 AC.
TOTAL	300.3 AC.



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,250 625 0 1,250 Feet

Exhibit 2-6
Proposed Master Plan Land Uses

Michael Brandman Associates

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Table 2-2: Master Plan Land Use Summary

Land Use	Acres
Light Industrial	248.3
Community Commercial	18.1
Open Space	33.9
Total	**300.3**
Source: City of Manteca, 2010.	

The Master Plan buildout potential is provided in Table 2-3. As shown in the table, the Master Plan would allow approximately 4.7 million square feet of light industrial and community commercial uses. The CenterPoint Intermodal Facility (discussed below) would occupy most of the square footage, with the non-CenterPoint components occupying the balance. The conceptual Master Plan development is shown in Exhibit 2-7.

Table 2-3: Master Plan Buildout Potential

Component	Use	Square Footage
CenterPoint Intermodal Facility	Light Industrial and High Cube Warehouse	3,177,521
Non-CenterPoint Development	Light Industrial	1,275,620
	Community Commercial	205,820
	Subtotal	1,483,620
Total	—	**4,658,961**
Source: City of Manteca, 2010.		

Light Industrial

Light Industrial land use accounts for most of the Master Plan uses. The light industrial zone allows business and professional uses, and uses involving heavy trucks, automobile services, mini-storage, various agricultural industries, industrial manufacturing or assembly uses, industrial storage, and truck and motor freight uses.

The northern area is expected to develop primarily with warehouse/distribution facilities uses and limited light industrial uses (95 percent warehouse distribution, 5 percent light industrial). The southern area is expected to be developed with a majority of warehouse/distribution facilities, and some light industrial uses and limited retail development (80 percent warehouse/distribution, 15 percent light industrial, and 5 percent commercial).

Including both the CenterPoint and non-CenterPoint components, a maximum of 4,453,141 square feet of light industrial uses could be developed under the Master Plan.

CenterPoint Intermodal Facility

The CenterPoint Intermodal Facility is expected to occupy 187.49 acres of the Light Industrial acreage. The intermodal facility would be an integrated logistics center and would interface with the adjacent Union Pacific Railroad Lathrop Intermodal Terminal[1]. The intermodal facility would sort, store and distribute goods for shippers and receivers. The facility would have a maximum square footage of 3,177,521.

The facility would occupy two, non-contiguous sites (North and South):

- **North Site:** The north site would be the larger of the two sites and contain three buildings totaling 2,693,483 square feet. All three of the north buildings would be rail-served with spur tracks connecting to the neighboring Lathrop Intermodal Terminal. This EIR will assume that each rail-served building receives two train movements a week (one inbound and one outbound). The buildings would also be accessible to trucks.
- **South Site:** The south site would be the smaller of the two sites and would contain as many as three buildings totaling 484,038 square feet. These buildings would be served exclusively by trucks.

The North and South sites would be linked by an internal roadway along the adjacent property line with the Lathrop Intermodal Terminal. The roadway would provide a single, controlled accessed point to the Lathrop Intermodal Terminal.

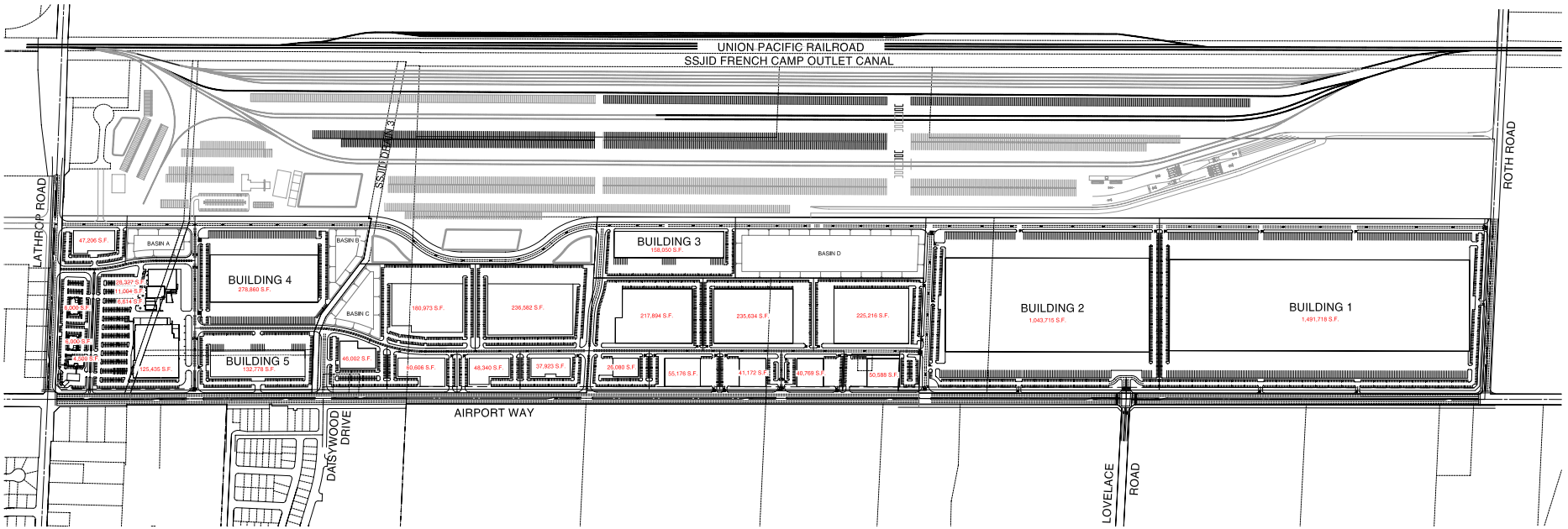
Non-CenterPoint Light Industrial Uses

The Non-CenterPoint light industrial uses would total 1,275,620 square feet. These uses would occupy the acreage between the CenterPoint North and South sites. As many as 14 buildings are proposed ranging in size from 26,080 to 236,582 square feet. All buildings would be served exclusively by trucks. These uses would be accessible to the CenterPoint Intermodal Facility via internal roadways and would use the single, controlled accessed point to the Lathrop Intermodal Terminal.

Community Commercial

The Community Commercial land use would serve as a focal point for residents of the area and workers in the industrial portion of the development. An 18.1-acre, community-scale shopping center is envisioned for this area at the Lathrop Road/Airport Way intersection. The Community Commercial zone allows a wide variety of permitted or conditionally permitted commercial uses, such as commercial office and retail uses. A maximum of 205,820 square feet of commercial uses could be developed within this area.

[1] Union Pacific Railroad has an application pending before the County of San Joaquin to expand its Lathrop Intermodal Facility from its current capacity of 270,000 annual lifts to 730,000 annual lifts. The terminal expansion is independent of the Northwest Airport Way Master Plan and is undergoing separate environmental review through the County of San Joaquin.



Source: Strategic Planning Collaborative, LLC. (October 20, 2009).

NORTH

1,200 600 0 1,200 Feet

Michael Brandman Associates

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Exhibit 2-7
Conceptual Master Plan Development

Exhibit 2-7 depicts the conceptual layout for the community commercial uses. A 125,435-square-foot anchor is envisioned, with smaller buildings ranging in size from 4,500 to 47,206 square feet. At the time of this writing, no tenants have been identified. As such, this EIR will assume a generic shopping center use.

Circulation and Access

The circulation system proposed for the Master Plan is composed of the following elements:

- Improved major arterial roadways (Lathrop Road, Airport Way and Roth Road)
- New onsite truck routes
- New onsite collector roads for trucks and autos
- Bikeways and pedestrian paths

The primary goal of the circulation system is to provide a network of roadways, pedestrian paths, and bikeways that allows for the safe and efficient movement of goods, people, and services within the Master Plan area, and to provide proper connections to the existing network of roadways and routes in the City of Manteca. Improvements within the Master Plan area include the provision of new rights-of-way and improvements to existing street sections with traffic signals added where necessary. Auto and truck parking, and truck loading and unloading areas also are part of the circulation system. The proposed circulation system will provide safe and convenient access to all locations within the Master Plan area, as illustrated in Exhibit 2-8 and Exhibit 2-9. The interim circulation system provides access to the northern and southern portions of the Master Plan without the inclusion of the RCCI PTP property.

The entrances are Lovelace Road at Airport Way, private roadway "F" at Roth Road, private roadway "I" at Airport Way, and private roadway "A" at Lathrop Road. The Lovelace entrance will serve as the major auto entry to the Plan area while roadways "F" and "A" entrances will serve trucks entering and leaving the Plan area from the north and south. These would all be full access intersections with new traffic signals at the Lovelace/Airport and roadway "A"/Lathrop Road intersections. Private roadway "I" will serve commercial auto and industrial truck traffic entering and leaving the southern portion of the Plan area, as indicated in Exhibit 2-8. Should the RCCI property redevelop, the existing signalized extension of Daisywood Drive at Airport Way would become the primary entrance to the southern portion, connecting to roadway "F" as indicated in Exhibit 2-9. Below is a summary of the circulation system.

Airport Way

Airport Way is an existing arterial road. The roadway would be widened to a 140-foot right-of-way with partial improvements where it abuts any existing or new residential development (south of Daisywood Drive), and a 130-foot right-of-way with partial improvements elsewhere (north of Daisywood Drive). Class II bicycle facilities (i.e., on-street lanes) would be installed along Airport Way.

Roth Road

Roth Road is an existing arterial road with an at-grade crossing of the Union Pacific Railroad Oakland Subdivision. Roth Road will be widened to an 84-foot right-of-way with partial improvements.

As a separate project unrelated to the proposed Master Plan, Roth Road is proposed to be grade-separated from the Union Pacific Railroad Oakland Subdivision. This grade separation is being pursued in conjunction with the proposed Lathrop Intermodal Terminal expansion project.

Lathrop Road

Lathrop Road is an existing arterial road with a grade-separated crossing of the Union Pacific Railroad Oakland Subdivision. The roadway would be widened to a 106-foot right-of-way with partial improvements.

Internal Roadways

Internal roads are designed to provide for the efficient movement of commercial and industrial-oriented trucks within the Plan area. Curb-to-curb widths would range from 46 to 86 feet. These roads are depicted on Exhibit 2-8 and Exhibit 2-9.

Open Space, Landscaping, and Drainage

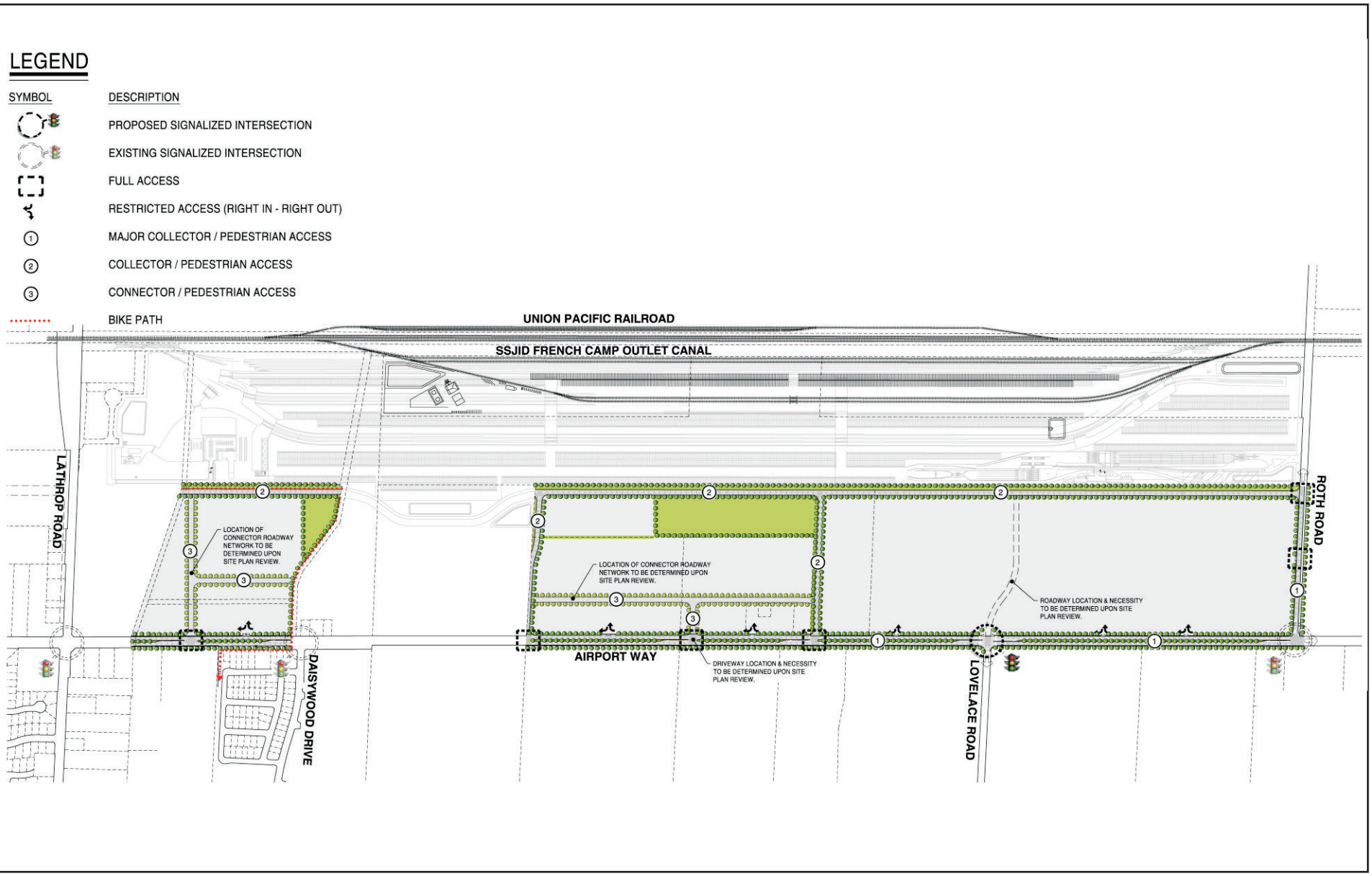
Open Space would be primarily achieved through landscape corridors, low-impact drainage landscape corridors, and detention basins; refer to Exhibit 2-10. Park areas in the Master Plan would be developed to include recreational amenities such as benches, picnic areas, shade structures, and landscaping in conformance with City of Manteca standards. The open spaces in the Plan area would also serve as corridors for onsite stormwater treatment and detention facilities that are part of an overall framework of open areas in the Master Plan.

Utilities

Water Plan

Water is distributed to the City of Manteca through City-maintained piping infrastructure. Water is supplied by the City's Municipal Well System and through an agreement with SSJID to receive treated surface water that is transported through a pipeline system owned by SSJID. The 30-inch SSJID transmission line connects to the City-owned system on Lathrop Road approximately 0.25 mile east of Airport Way. There is also an SSJID storage tank connected to the 30-inch transmission line. An existing 12-inch City water main is located in Airport Way and extends from Lathrop Road to the northern boundary of the Union Ranch subdivision approximately 600 feet north of Daisywood Drive.

A network of 12-inch water mains will be placed in a grid throughout the Plan area. The existing 12-inch water main in Airport Way will be extended north from its current terminus point 600 feet north of Daisywood Drive to Roth Road. The 12-inch main will continue west on Roth Road to the



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

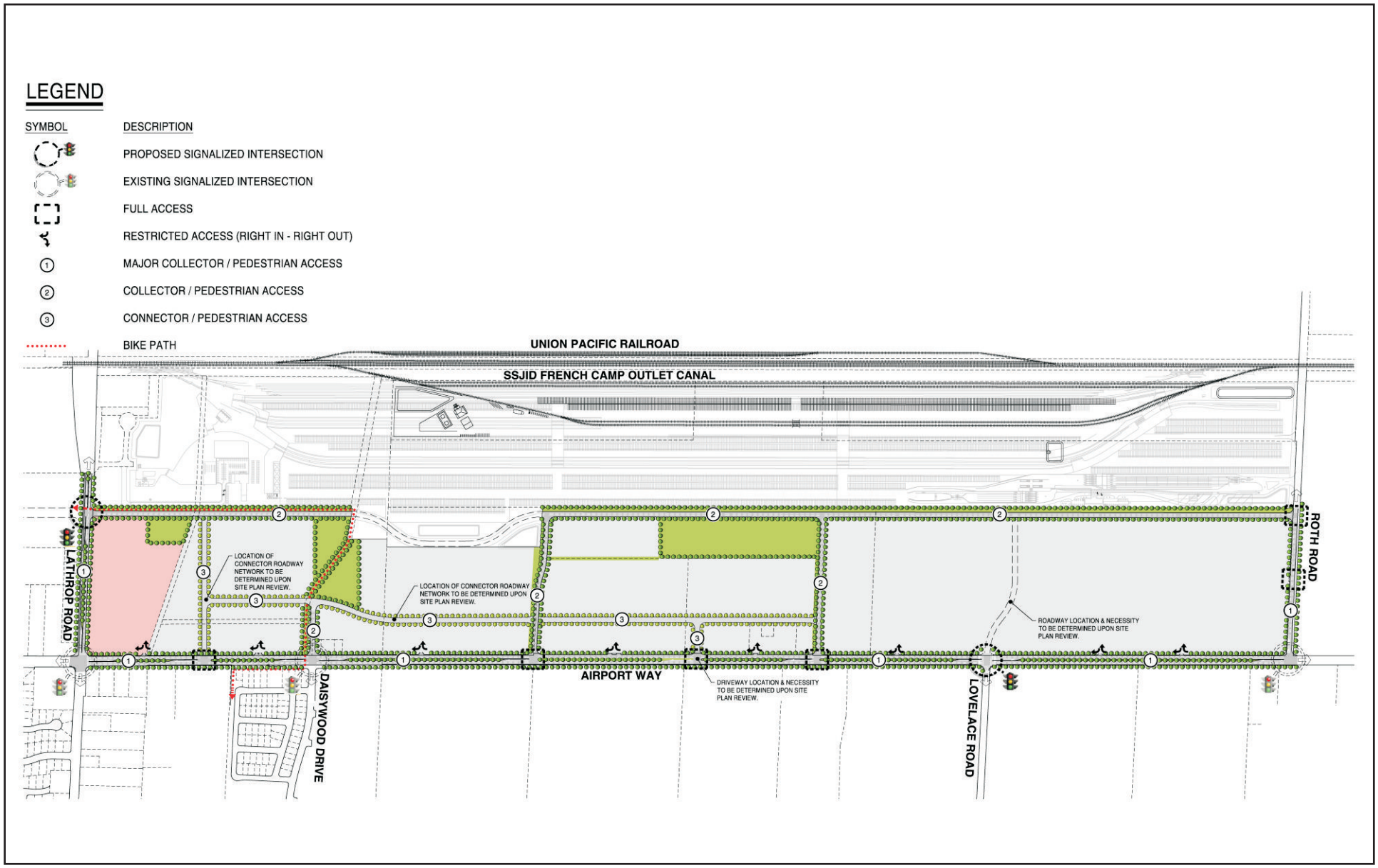
NORTH

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Exhibit 2-8
Master Plan Interim Circulation Plan

Michael Brandman Associates

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Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

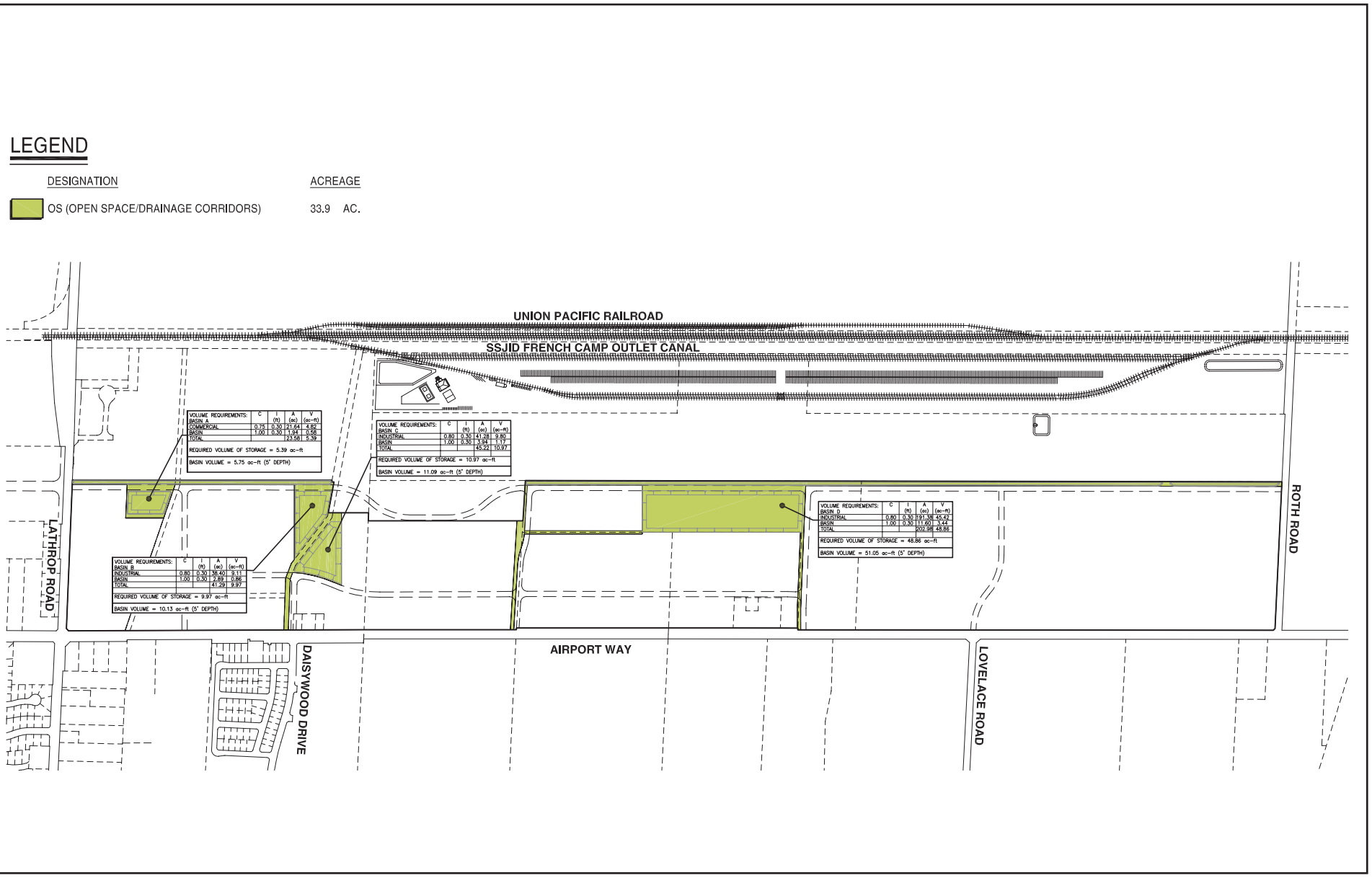
NORTH

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Exhibit 2-9
Master Plan Long-Term Circulation Plan

Michael Brandman Associates

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Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,250 625 0 1,250 Feet

Exhibit 2-10
Master Plan Open Space and Drainage System

Michael Brandman Associates

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private road "F." A 12-inch water main will be located in private road "F" that connects from Roth Road in the north to Lathrop Road on the south. A 12-inch water main will be extended west of Airport Way along Lathrop Road to connect to the 12-inch water main in the private road "F." A minimum of two 12-inch water mains will interconnect the Airport Way water main with private road "F" via proposed water mains in private roads "G" and "I." The water mains are shown on Exhibit 2-11. The water network will provide adequate water for domestic purposes, irrigation, and fire flow.

A Water Supply Assessment was prepared by the City of Manteca Public Works Department and concluded that adequate water supplies exist to serve the Master Plan uses. Refer to Section 3.11, Public Services and Utilities for further discussion.

Wastewater Plan

Currently, the site is not served by the City sewage system. In accordance with the City of Manteca Wastewater Collection System Master Plan, the site lies in the North Manteca Trunk Sewer Shed area. In order to acquire sanitary sewer service sized for future development, there will have to be connections made to the existing sewer system in place. On Airport Way, there is an existing, 48-inch sewer main that terminates close to Daisywood Drive where it is downsized to a 30-inch line terminating approximately 600 feet north of Daisywood Drive. Sewage from this trunk line is collected at the sewer pump station located approximately 600 feet south of Daisywood Drive in the Union Ranch subdivision that fronts Airport Way. It is then pumped through a 24-inch force main in Airport Way that connects with the Center Street sewer approximately 2 miles south of the project site. The Center Street trunk sewer flows into the Manteca Wastewater Quality Control Facility, which is located at Airport Way at West Yosemite Avenue.

The sanitary sewer piping system in Airport Way will be extended north along Airport Way (refer to Exhibit 2-12) to connect with a proposed sewer main in Roth Road. The existing 30-inch sewer main that terminates approximately 600 feet north of Daisywood Drive will be extended north along Airport Way to Roth Road, stepping down in size from 30 inches at the termination point to 24 inches. An 8-inch sewer main will be constructed in Roth Road from Airport Way to the rectangular parcel just west of the private road "F." The Plan area will be served by a series of 12-inch to 15-inch sewer stub-outs to the site at private roadways "G" and "I" and by an 8-inch line in Roth Road to serve individual sites.

Developers in the southern portion of the Plan area (CenterPoint Properties and Cardoza parcels) will need to install a 10-inch to 18-inch gravity sewer line along private road "I" to serve the southern portion of the plan area. This line would connect to the existing pump station and the 24-inch force main in Airport Way, and, ultimately, the Wastewater Quality Control Facility.

Storm Drainage Plan

The City utilizes drains and laterals of the South San Joaquin Irrigation District (SSJID) to convey stormwater runoff west to the French Camp Outlet Canal, where the stormwater is conveyed to the

San Joaquin River. The City Storm Drain Master Plan encourages the use of regional detention basins within project developments to control a 10-year storm event and meter the peak flow over time into the SSJID system.

Currently, the Master Plan area has several existing SSJID facilities running through the site: Lateral RJ, Lateral RG, Lateral RGC, Drain 3, and Lateral T (refer to Exhibit 2-11). They run east to west in the Plan area and terminate at the French Camp Outlet Canal. The Plan area consists of sandy loam soil and the topography is relatively flat. The majority of the stormwater that comes to the site percolates into the groundwater. What does not percolate may surface flow into SSJID facilities and discharge into the French Camp Outlet Canal.

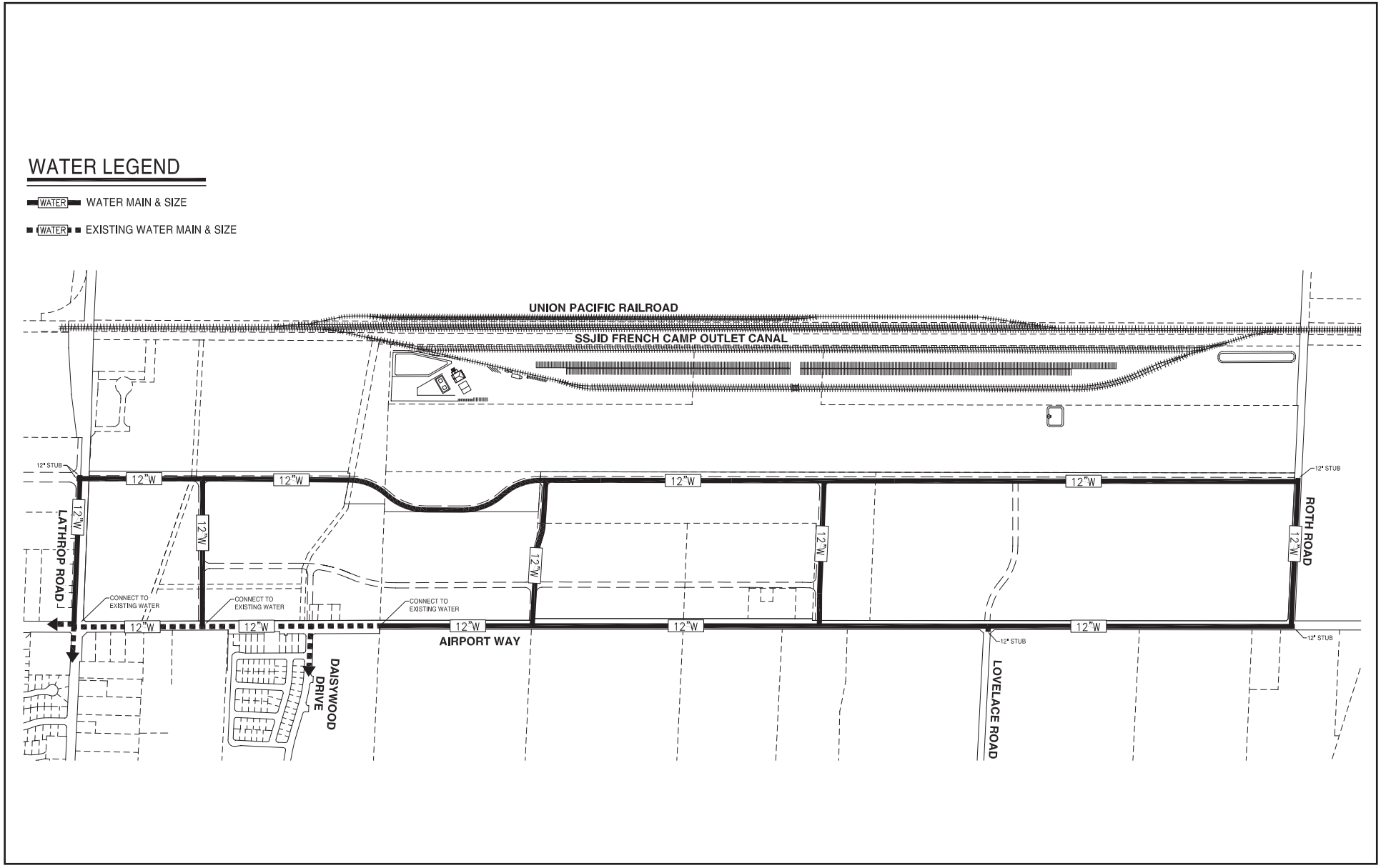
SSJID facilities

SSJID facilities will be improved as shown on Exhibit 2-13. These improvements consist of the following:

- Lateral T Will be replaced and rerouted as shown. The existing pipe will be removed and replaced with rubber–gasketed, reinforced concrete pipe according to SSJID standard drawings and specifications. A 30-foot-wide SSJID easement for access and maintenance will be recorded and centered on the pipe alignment.
- Drain 3 will remain in its existing condition, partially piped and the rest an open drain ditch. Where the private roadways cross Drain 3, a box culvert or approved equal construction will be installed to prevent restriction of the flow of drain water to the French Camp Outlet Canal. Any public or private utilities that cross the Drain 3 channel must cross with a minimum 2-foot clearance below the bottom of the channel, assuring no flow is restricted in Drain 3. All improvements within the Drain 3 right-of-way must be approved by SSJID.
- Lateral RCG will be replaced in place with rubber-gasketed reinforced concrete pipe and a new 30-foot easement will be recorded and centered on the new pipe. Lateral RG will be replaced and rerouted. The existing pipe will be removed and replaced with rubber-gasketed reinforced concrete pipe according to SSJID standard drawings and specifications. A 30-foot-wide SSJID easement for access and maintenance will be recorded and centered on the pipe alignment. Lateral RJ will be plugged on the east side of Airport Way with the existing structure converted into a backup structure. The existing pipe from the backup structure to the westernmost boundary of the Plan area will be removed.

Plan Area Storm Drainage

The Master Plan uses will discharge treated runoff into the SSJID drainage facilities. In addition, the Master Plan uses will generate additional stormwater runoff as previously pervious land is converted to impervious surfaces. As such, the proposed project will be required to implement BMPs (Best Management Practices) to reduce runoff created as a result of development. In addition to BMPs, Low Impact Development (LID) will be encouraged for the Master Plan uses. The Master Plan area



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

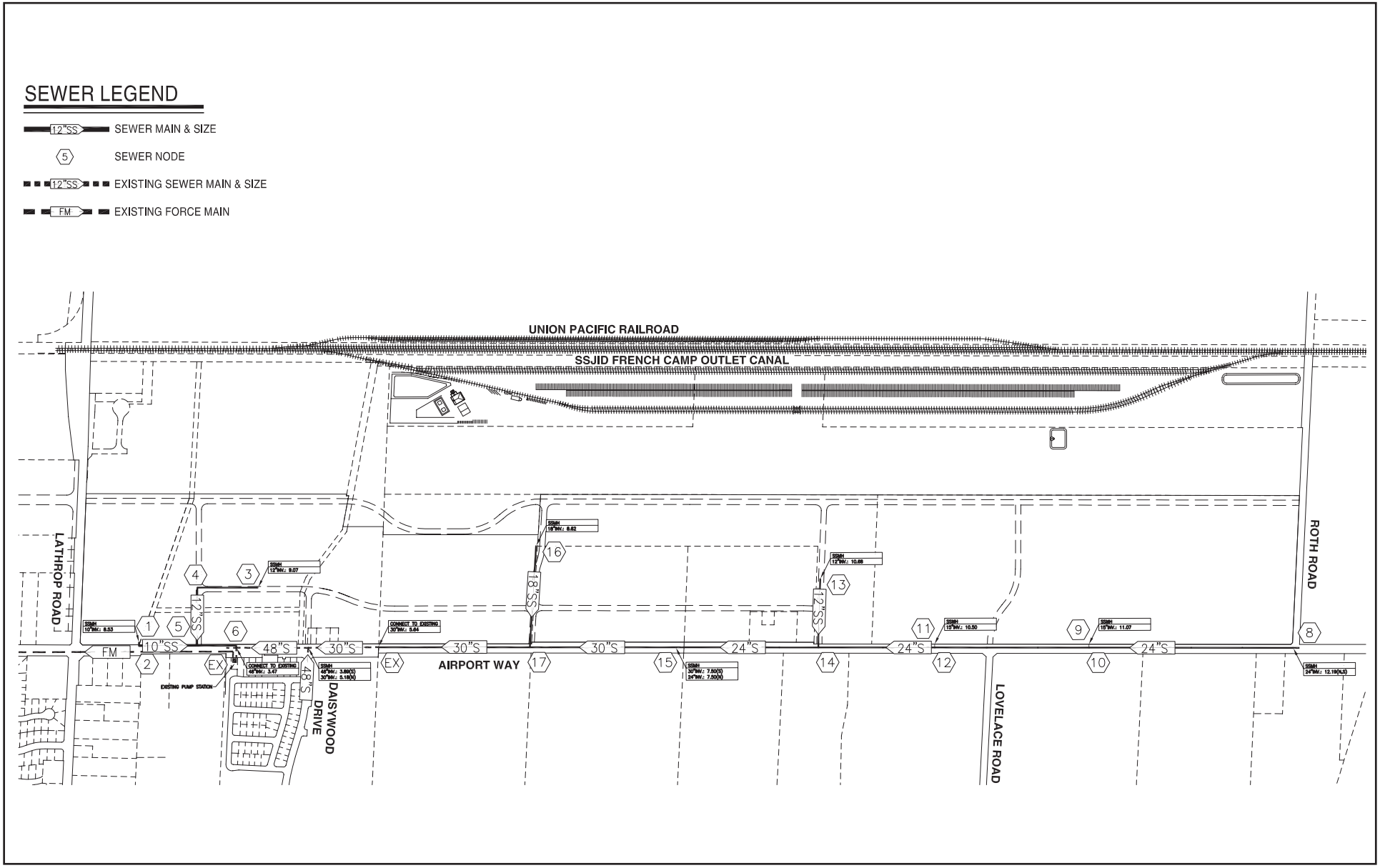
NORTH

1,250 625 0 1,250 Feet

Exhibit 2-11
Master Plan Utility Plan - Water

Michael Brandman Associates

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Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,250 625 0 1,250 Feet

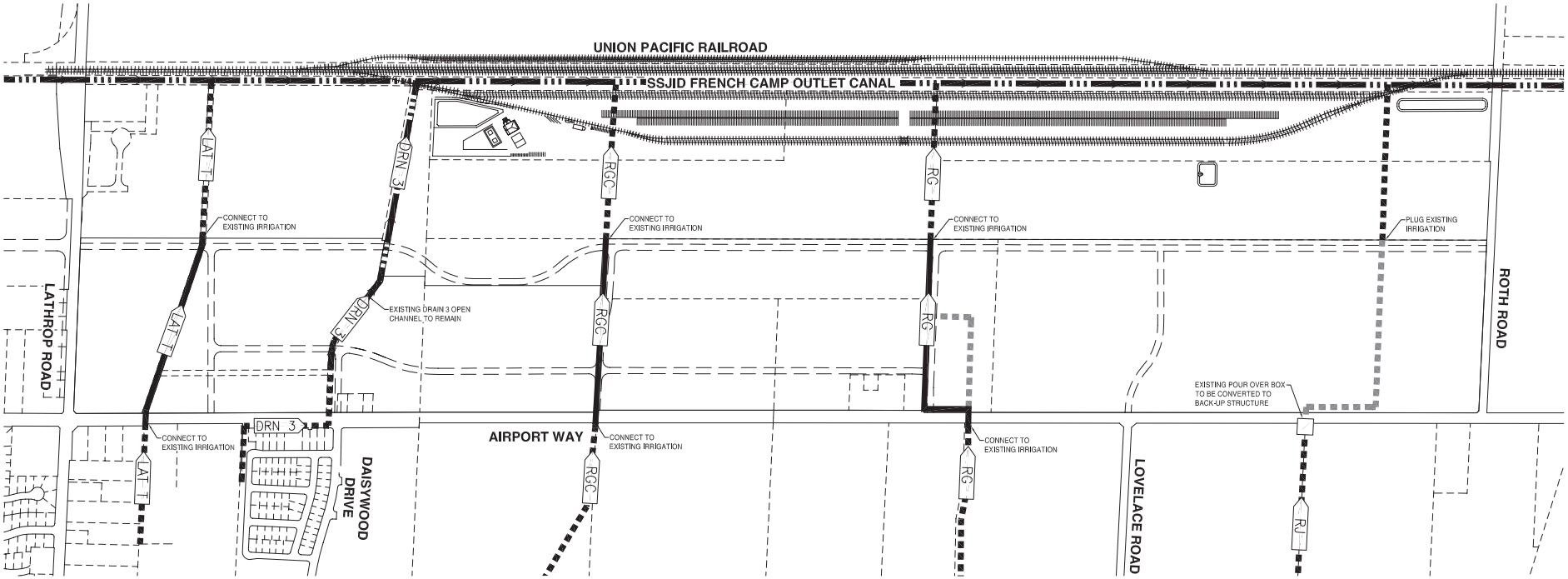
Exhibit 2-12
Master Plan Utility Plan - Sewer

Michael Brandman Associates

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IRRIGATION LEGEND

- LAT — IRRIGATION MAIN
- LAT — EXISTING IRRIGATION MAIN
- EXISTING IRRIGATION MAIN TO BE REMOVED
- EXISTING IRRIGATION OPEN CHANNEL



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,250 625 0 1,250 Feet

Exhibit 2-13
Master Plan Utility Plan
South San Joaquin Irrigation District Facilities

Michael Brandman Associates

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storm drain conveyance system will consist of both open channels, where feasible, and an underground pipe network (Exhibit 2-14). This network of piping and channels will flow into a series of regional storm drain detention basins strategically placed to allow development flexibility and to adequately store storm drainage runoff from the Plan area. Detention basins are sized to attenuate peak stormwater flows (a 10-year, 48-hour storm event) and reduce the potential for downstream flooding. Each individual building site will be required to treat its stormwater runoff prior to entering the storm drain conveyance system and regional storm drainage detention basins in compliance with local codes and NPDES (National Pollutant Discharge Elimination System) permit requirements.

The open channels will be designed to control up to a 10-year peak storm and will also be able to control the 100-year storm without stormwater topping the banks of the channels. During a 100-year event, the channels will convey the 10-year storm runoff to the detention basins and will store the excess between the 10-year and 100-year storms—all of which is consistent with the City's Storm Drain Master Plan.

The purpose of the storm drain detention basins is to reduce the peak flows coming from the Plan area. The basins hold the peak flows and release them over a 96-hour period, thus reducing the peak flow to the French Camp Outlet Canal. The basins will be designed in accordance with City standards, having a 5-foot maximum water depth and 8:1 side slopes. All basins will be landscaped to augment the open space network (see Exhibit 2-10). Each basin will have a pump station that is designed to drain the basin within a 96-hour period and will be controlled by the City's Supervisory Control and Data Acquisition system.

All City storm drain discharge is coordinated with SSJID. SSJID pipes become joint-use pipes with the City of Manteca. The City and SSJID share in the maintenance costs of these pipes.

The treatment of storm drain runoff on each independent site in the Plan area will address water quality issues, and the detention basins will address of peak flow discharge issues. The Plan area will meet all requirements of the Regional Water Quality Control Board, SSJID, City of Manteca NPDES Permit requirements, and the City of Manteca Storm Drain Master Plan, with discharge and water quality treatment addressed in the storm drainage system.

Other Utilities

Electricity

Pacific Gas and Electric Company (PG&E) 47-kilovolt (kv) overhead power lines are located on the east side of Airport Way running north-south along the Plan area eastern border between the curb and edge of the right-of-way. In addition, PG&E overhead electrical lines are located along Lathrop Road and Roth Road.

Power will be provided from the 47-kv overhead power lines located on the east side of Airport Way. The power will be dropped from the overhead lines and distributed throughout the Plan area via

underground electrical lines and a series of transformers. All electric lines will be placed in public rights-of-way or public-utility-easements.

Natural Gas

A PG&E mainline, high-pressure, gas transmission line is located in Airport Way running north-south along the eastern boundary on the Plan area. Underground distribution lines are present in both Roth Road and Lathrop Road bordering the Plan area.

The existing natural gas distribution lines will be expanded to provide natural gas to the Plan area. These natural gas distribution lines will be located in public rights-of-way or in public utility easements.

Telecommunications

Telephone is currently provided to the Plan area by Verizon via overhead lines located along Airport Way, Lathrop Road, and Roth Road.

Cable television is not currently provided to the Plan area.

The existing overhead telephone lines will be installed underground and placed in the joint trench with PG&E gas and electric utilities along with Comcast cable. The joint trench will occur throughout the Plan area and will be located in the public right-of-way or in public utility easements.

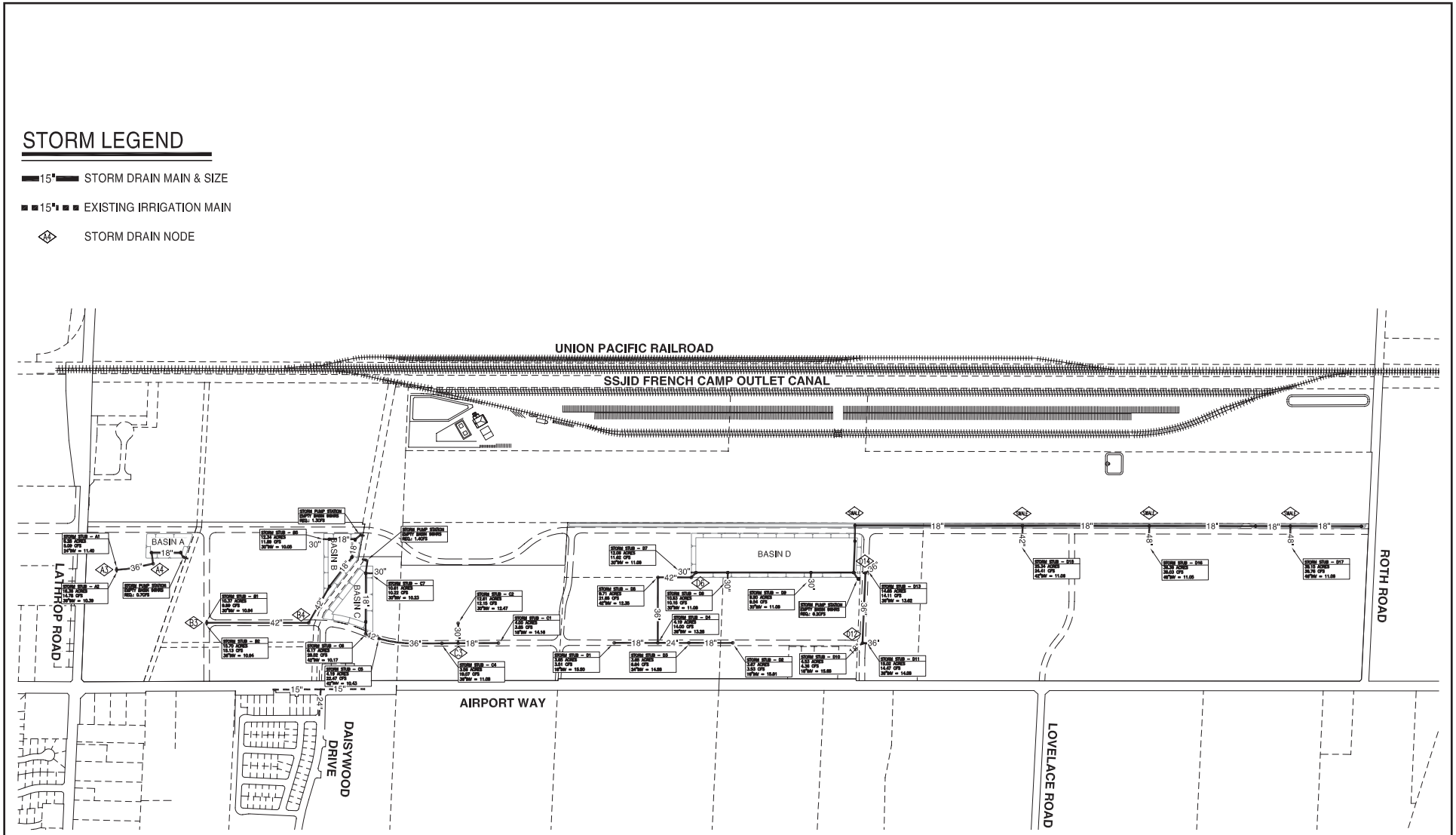
Cable television services will be provided within the joint trench that includes PG&E gas and electric utilities and Verizon telephone lines. The joint trench will occur throughout the Plan area and will be located in the public rights-of-way or public utility easements.

Design Standards and Guidelines

The Master Plan sets forth detailed design standards and guidelines. Design standards are required of all developments. Design guidelines are recommended measures that, while not obligatory, are nonetheless endorsed as measures that help ensure quality design. Altogether, the standards and guidelines address the placement and appearance of buildings, circulation, parking and loading, landscape design, fencing and screening, signage, exterior lighting, and sustainable design practices.

Phasing

Because of the large size of the Northwest Airport Way Plan area, flexibility is required for project phasing. Market forces will determine actual project development of the Master Plan. CenterPoint Properties will likely develop first—both in the northern and southern portions of its property. Light industrial and commercial development of the Riella Trust and Cardoza properties will likely follow in later phases of the Master Plan, spurred by the CenterPoint light industrial development. Redevelopment of the RCCI PTP property is uncertain at this time. Buildout of the Master Plan is expected to take approximately 15 years.



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,250 625 0 1,250 Feet

Exhibit 2-14
Master Plan Utility Plan - Storm Drainage

Michael Brandman Associates

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In order to determine what offsite improvements will be needed when a project is proposed, Master Plan phasing is divided into North, Central, and South phases (see Exhibit 2-15). These three phases are very large in terms of the scope of activities, and there can be sub-phases within each of the three phases.

North Phase

Development of the North Phase will involve the construction of large-scale, light industrial buildings. The North Phase will also establish the north-south connector road (private roadway "F") as well as major entries to this portion of the Master Plan, including the Airport Way connection to Lovelace Road, a possible Airport Way connection to private roadway "F" in the middle of the north area if more than one building is constructed, the connection of private roadway "F" to Roth Road. Development in this area will also involve improvements to Airport Way and Roth Road. Light industrial buildings in this area will observe the 20-foot setbacks from the property line along Airport Way and along Roth Road. Landscaping will be developed in this area that screens the light industrial buildings from public view.

Central Phase

Development of the Central Phase will involve the construction of light industrial buildings. The Central Phase will also establish the further extension of private roadway "F," as well as the development of private roadways "G" and "J"—the internal, north-south connector road. Daisywood Drive (private roadway "E") will be extended from Airport way to private roadway "F." Major entries to this portion of the Master Plan include the connections of private roadways "E" and the northern segment of "G" to Airport Way. Development in this area will also involve improvements to Airport Way. Landscaping will be developed in this area that screens the light industrial buildings from public view.

South Phase

Development of the South Phase will involve the development of light industrial and commercial buildings. The South Phase will also establish the extension of the north-south connector road (private roadway "A"), the extension of the internal north-south private connector roadway "J," as well as the development of private roadway "I." Major entries to this portion of the Master Plan include the connections of private roadway "I" to Airport Way and private roadway "A" to Lathrop Road. Private roadway "I" will provide the major entry to the south area, providing access to all the uses in this area. Development in this area will also involve improvements to Airport Way and Lathrop Road. The commercial buildings in this area will observe the 10-foot setback, and light industrial buildings will observe 20-foot setbacks from the property line along Airport Way.

Employment

Table 2-4 summarizes the employment estimates for the Master Plan uses. The CenterPoint estimate was provided by the applicant (CenterPoint Properties) and is based on observed employment rates at

the company's other facilities. The non-CenterPoint light industrial and community commercial employment estimates were calculated from standard industry employment rates. As shown in the table, the Master Plan uses are anticipated to employ as many as 2,588 workers.

Table 2-4: Master Plan Employment Estimate

Component	Employment Rate	Square Feet	Employees
CenterPoint Light Industrial	N/A	3,177,521	900
Non-CenterPoint Light Industrial	1 employee/1,000 square feet	1,275,620	1,276
Community Commercial	1 employee/500 square feet	205,820	412
Total	—	**4,658,961**	**2,588**

Notes:
CenterPoint Intermodal Facility employment estimate provided by CenterPoint Properties.
The Non-CenterPoint and Community Commercial employment rates represent standard industry assumptions.
Source: CenterPoint Properties, 2010. Michael Brandman Associates, 2010.

An estimated 2,176 jobs (or 84 percent) of the total employment opportunities would be associated with the light industrial uses. These types of jobs would include opportunities associated with warehousing, logistics, trucking, and similar activities. Most of these jobs would be full-time opportunities and include skilled and unskilled positions.

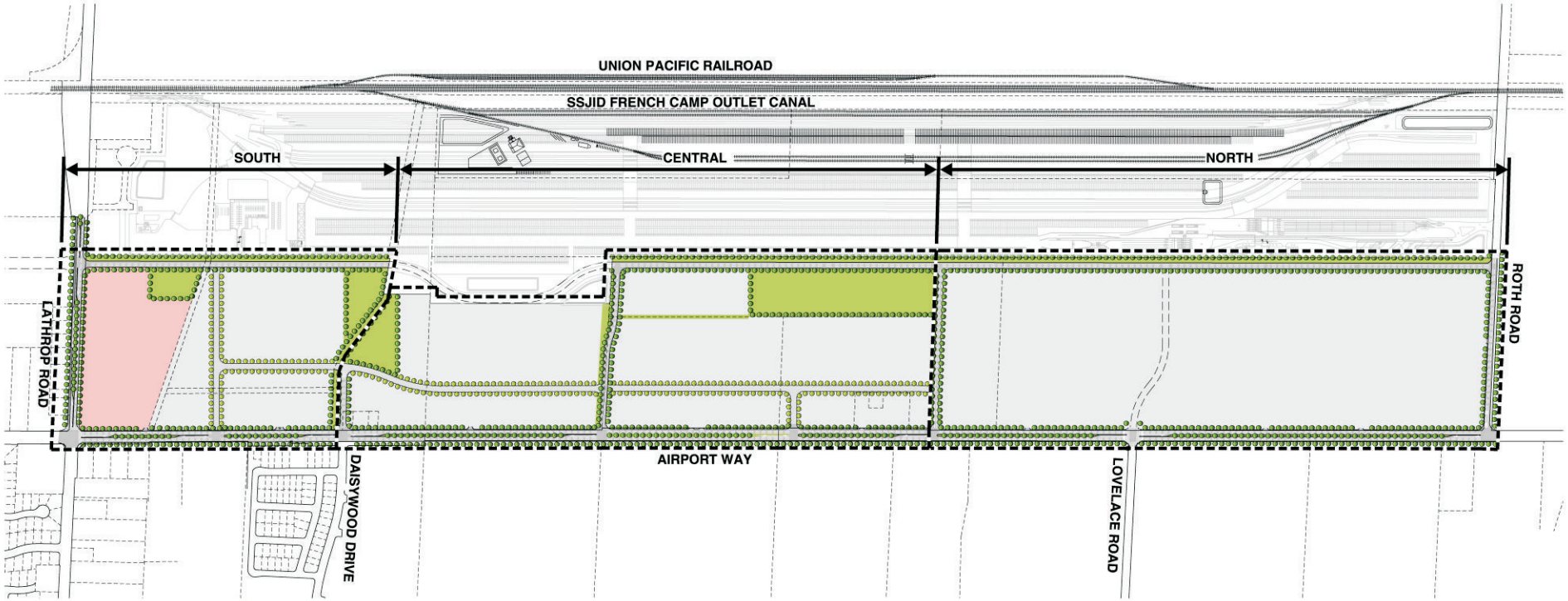
The remaining 412 jobs would be associated with the community commercial uses. These types of jobs would include opportunities associated with retail and restaurants. Jobs would include full-time and part-time positions, with most being entry-level.

The employment opportunities shown in Table 2-4 would be created over the projected 15-year planning horizon of the Master Plan. As such, this would translate to an average of 173 new jobs on an annual basis.

2.2.2 - Non-Master Plan Annexations

At the request of the San Joaquin County Local Agency Formation Commission (LAFCo), the City of Manteca is evaluating annexation of two unincorporated areas (East and South) adjacent to the Master Plan area and contiguous to the Manteca City limits. Annexation of the lands encompassed by the Northwest Airport Way Master Plan would result in these areas becoming "unincorporated islands" within the Manteca city limits, a condition discouraged by LAFCo.

The proposed annexations would bring these areas into the Manteca city limits and involve associated pre-zoning approvals. The annexations themselves do not confer any development rights that would allow new construction to occur on any of the affected properties. Instead, the annexations merely change jurisdictional and political boundaries (e.g., the annexation areas would be patrolled by the Manteca Police Department instead of the San Joaquin County Sheriff's Department).



Source: Strategic Planning Collaborative, LLC. (July 8, 2010).

NORTH

1,250 625 0 1,250 Feet

Exhibit 2-15
Master Plan Phasing Plan

Michael Brandman Associates

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2.3 - Project Objectives

2.3.1 - Northwest Airport Way Master Plan

The objectives of the Northwest Airport Way Master Plan are to:

- Create new jobs for local residents.
- Contribute to economic growth through capital investment, the creation of new jobs, the establishment of new businesses, and the expansion of the tax base.
- Facilitate the logical, orderly, and planned development of the Master Plan area through the use of a comprehensive planning document.
- Prevent land use conflicts and avoid the premature conversion of agricultural land through the use of phasing, buffering, and other appropriate land planning techniques.
- Provide new warehouse/distribution and industrial facilities with adjacent rail access that can be easily accessed from the existing roadway network.
- Enhance the efficiency of regional and local goods movement through the development of an integrated logistics center that will interface with the Lathrop Intermodal Terminal.
- Minimize and mitigate truck travel impacts by internalizing truck trips between the Lathrop Intermodal Terminal and the Master Plan uses and by improving Roth Road and Airport Way.
- Develop a community commercial retail center at the Lathrop Road/Airport Way intersection to cater to both the Master Plan land uses and surrounding land uses.
- Provide open space areas within the Master Plan area that serve multiple purposes such as safety, recreation, and land use buffering.

2.3.2 - Non-Master Plan Annexations

The objectives of the non-master plan annexations are to:

- Facilitate the logical, orderly, and planned expansion of the Manteca city limits as envisioned by the General Plan.
- Annex areas that are anticipated to redevelop to higher and better uses in the near-term, based on surrounding land use patterns and market forces.
- Avoid the creation of "unincorporated islands" and the associated shortcomings with service delivery to these areas.
- Acknowledge and respect existing property rights and entitlements.

2.4 - Intended Uses of This Draft EIR

This Draft EIR is being prepared by the City of Manteca to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed project. Pursuant to CEQA Guidelines Section 15367, the City of Manteca is the lead agency for the proposed project and has discretionary authority over the proposed project and project approvals. The Draft EIR is intended to address all public infrastructure improvements and all future development that are within the parameters of the proposed project.

2.4.1 - Discretionary and Ministerial Actions

Northwest Airport Way Master Plan

The Northwest Airport Way Master Plan would require the following discretionary approvals and actions, including:

- Master Plan Adoption – City of Manteca
- General Plan Amendment – City of Manteca
- Pre-Zone – City of Manteca
- Tentative Parcel Map – City of Manteca
- Development Agreement – City of Manteca
- Annexation – City of Manteca and San Joaquin Local Agency Formation Commission

Concurrent with or subsequent to plan adoption, entitlements would be sought for development contemplated by the Master Plan. This EIR intends to provide sufficient detail to provide coverage for development activities that are consistent with the Master Plan, including, but not limited to, major and minor subdivisions, site plan reviews, and use permits.

Non-Master Plan Annexations

The non-master plan annexations would require the following discretionary approvals and actions, including:

- Pre-Zone – City of Manteca
- Annexation – City of Manteca and San Joaquin County Local Agency Formation Commission

This EIR will only evaluate the environmental effects of the non-master plan annexations. Future development or land use activity proposals with the East and South areas that are filed following annexation may be subject to additional environmental review.

2.4.2 - Responsible and Trustee Agencies

A number of other agencies in addition to the City of Manteca will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these agencies and other public agencies, which may

be required to grant approvals or coordinate with other agencies, as part of implementation of the proposed projects. These agencies may include but are not limited to the following.

- United States Army Corps of Engineers
- California Department of Fish and Game
- California Department of Transportation
- California Public Utilities Commission
- Central Valley Regional Water Quality Control Board
- County of San Joaquin
- San Joaquin County Local Agency Formation Commission
- San Joaquin Council of Governments
- South San Joaquin Irrigation District
- City of Lathrop

Actions that are necessary to implement the project that must be taken by other agencies may include:

- Annexation of Master Plan area and non-master plan areas into the City of Manteca (San Joaquin County LAFCo)
- Airport Land Use Plan Consistency Determination (San Joaquin Council of Governments)
- Obtain Coverage Under the San Joaquin Multi Species Habitat Conservation Plan (San Joaquin Council of Governments)
- Obtain Coverage Under General Construction Stormwater Permit (State Water Resources Control Board)
- Issuance of Section 404 Permits (United States Army Corps of Engineers)
- Issuance of Section 1602 Streambed and Lake Alteration Agreement (California Department of Fish and Game)
- Issuance of Section 401 Water Quality Certification (Central Valley Regional Water Quality Control Board)
- Issuance of Encroachment Permits for work within SSJID facilities (South San Joaquin Irrigation District)
- Issuance of Encroachment Permits for roadway improvements within facilities outside of the jurisdiction of the City of Manteca (Caltrans, City of Lathrop, and County of San Joaquin)
- Indirect Source Review (San Joaquin Valley Air Pollution Control District)

SECTION 3: ENVIRONMENTAL IMPACT ANALYSIS

Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts for those environmental topics where it was determined in the Notice of Preparation issued on February 8, 2010, or through subsequent analysis that the proposed project would result in "potentially significant impacts." Sections 3.1 through 3.12 discuss the environmental impacts that may result with approval and implementation of the proposed project.

Issues Addressed in This EIR

The following environmental issues are addressed in Section 3:

- Aesthetics, Light, and Glare
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services and Utilities
- Transportation

Each environmental issue area in Sections 3.1 through 3.12 contains a description of:

1. The environmental setting as it relates to the specific issue
2. The regulatory framework governing that issue
3. The methodology used in identifying the issues
4. The significance criteria
5. An evaluation of the project-specific impacts and identification of mitigation measures
6. A determination of the level of significance after mitigation measures are implemented

Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final EIR. If the EIR identifies any significant unmitigated

impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this Draft EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the CEQA Guidelines and checklist; state, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

Impact Analysis and Mitigation Measure Format

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact AES-1:	**An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact abbreviation identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.**

Impact Analysis

A narrative analysis follows the impact statement.

Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AES-1a Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact with which it is associated (**AES-1** in this example); the letter identifies the sequential order of that mitigation for that impact (**a** in this example).

Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are:

Code	Environmental Issue
AES	Aesthetics, Light, and Glare
AG	Agricultural Resources
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
GEO	Geology, Soils, and Seismicity
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LU	Land Use
NOI	Noise
PSU	Public Services and Utilities
TRANS	Transportation

3.1 - Aesthetics, Light, and Glare

3.1.1 - Introduction

This section describes the existing aesthetics, light, and glare setting and potential effects from project implementation on visual resources and the site and its surroundings. Descriptions and analysis in this section are based on site reconnaissance by Michael Brandman Associates, as well as review of the City of Manteca General Plan and the proposed Master Plan.

3.1.2 - Environmental Setting

Aesthetic Character

Regional Setting

The city of Manteca is located in central San Joaquin County in the northern portion of the San Joaquin Valley near the Sacramento Delta. Manteca is characterized by flat relief and is at a relatively low elevation owing to its proximity to the delta. Land use in the Manteca area generally consists of urban uses within the city limits and agricultural and open space uses in the unincorporated county.

On particularly clear days, however, there are distant views of the Sierra Nevada Mountains to the east and the Coast Range to the west and southwest. Mt. Diablo, located approximately 37 miles to the west in Contra Costa County, is most prominent topographic feature visible from Manteca.

The City of Manteca is the third largest city in San Joaquin County with a population of 67,754. The City of Manteca has developed in a compact urban form around the historic downtown centered along Yosemite Avenue. Residential development in the past few decades has occurred in relatively compact neighborhoods defined by the established grid of major streets. Recent urban growth has occurred around the perimeter of the City, particularly in the northern and western areas.

Project Site

Master Plan Area

The Master Plan area consists of agricultural operations, industrial uses, and rural residences. Agricultural uses consist of orchards, row crops, grazing, and fallow fields. Industrial uses consist of a cheese factory and associated settling ponds, and a cement plant. Rural residences are located in various places along the Airport Way frontage.

Exhibits 2-3a and 2-3b provide photographs of the Master Plan area.

Non-Master Plan Annexation Areas

The 77-acre East area contains agricultural uses and low density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts the Union Ranch single-family residential development.

The 144-acre South area contains agricultural uses and low density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts the Union Pacific Railroad Oakland and Fresno subdivisions.

Exhibits 2-3c provides photographs of the non-master plan areas.

Surrounding Land Uses

Below is a description of surrounding land uses, including views from and of the project site.

Master Plan Area

West

The Union Pacific Railroad Lathrop Intermodal Terminal forms the western boundary of the Master Plan area. West of the terminal is the Union Pacific Railroad Oakland Subdivision (a rail line connecting the Bay Area with Sacramento) and the Sharpe Army Depot. The depot is located in the City of Lathrop. In addition, the Calaveras Materials cement plant is located west of the Master Plan area near the Lathrop Road overcrossing of the Oakland Subdivision.

The project site has mostly unobstructed views of land uses to the west. Land uses on the west side of the project site have mostly unobstructed views of the project site. The Union Pacific Railroad Lathrop Intermodal Terminal obstructs the view of the project site from land uses further west of the Terminal.

North

Roth Road forms the northern boundary of the Master Plan area. North of the roadway are agricultural uses located within unincorporated San Joaquin County. These uses are located within the City of Stockton's Sphere of Influence.

The project site has mostly unobstructed views of land uses to the north. Land uses on the north side of the project site have mostly unobstructed views of the project site.

East

Airport Way forms the eastern boundary of the Master Plan area. East of the roadway is agricultural land and low-density residential uses located within unincorporated San Joaquin County, and Union Ranch located within the Manteca city limits. The unincorporated agricultural and residential uses are within the City of Manteca's Sphere of Influence. The agricultural and residential uses located between Union Ranch and Lathrop Road are designated as the "East" non-master plan area.

The project site has mostly unobstructed views of land uses to the east. Trees and shrubbery surrounding the existing rural residences on the project site along Airport Way and north of Lovelace Road partially obstruct the views of the some of the lands on the east side. The same trees and shrubbery also serve to partially obstruct portions of the project site from land uses on the east side. However, the land uses on the east side have unobstructed views of the project site.

South

Lathrop Road forms the southern boundary of the Master Plan area. South of the roadway are agricultural and residential uses located within unincorporated San Joaquin County. These uses are located within the City of Stockton's Sphere of Influence. This area is designated as the "South" non-master plan area.

With the exception of the existing orchard, the project site has unobstructed views of the land uses to the south. With the exception of trees and shrubbery surrounding existing rural residences, land uses on the south side of the project site have mostly unobstructed views of the project site.

Non-Master Plan Annexations Area

West

Airport Way forms the western boundary of the East non-master plan area. The Master Plan area is on the west side of Airport Way.

The Union Pacific Railroad Oakland Subdivision forms the western boundary of the South non-master plan area. The City of Lathrop is located west of the railroad tracks.

The East area has mostly unobstructed views of land uses to the west. Trees and shrubbery surrounding the existing rural residences obstruct the views of the some of the lands on the west side. Land uses to the west have mostly unobstructed views of the East area.

The South area has unobstructed views of land uses to the west. Land uses to the west have mostly unobstructed views of the South area.

North

Union Ranch forms the north boundary of the East non-master plan area.

Lathrop Road forms the northern boundary of the South non-master plan area. The Master Plan area is on the north side of Airport Way.

The East area has mostly unobstructed views of land uses to the north. Trees and shrubbery surrounding the existing rural residences obstruct the views of the some of the lands on the north side. Land uses to the north have mostly unobstructed views of the East area.

With the exception of trees and shrubbery surrounding existing rural residences, land uses in the South area have mostly unobstructed views of the land uses to the north. Land uses to the north have mostly unobstructed views of the land uses of the South area.

East

Union Ranch forms the east boundary of the East non-master plan area.

Airport Way forms the east boundary of the South non-master plan area. Residential uses located within the City of Manteca are located on the east side of Airport Way.

The East area has mostly unobstructed view of the land uses to the east. Land uses to the east have mostly unobstructed views of the East area.

The South area has mostly unobstructed views of land uses to the east. Land uses to the east have mostly unobstructed views of the South area.

South

Lathrop Road forms the south boundary of the East non-master plan area. Residential uses located within the City of Manteca are on the south side of Lathrop Road.

The Union Pacific Railroad Fresno Subdivision forms the southern boundary of the South non-master plan area. Industrial uses and the Manteca Unified School District Farm Laboratory located within the City of Manteca are on the south side of the railroad tracks.

The East area has mostly unobstructed views of land uses to the south. Land uses in the south have mostly unobstructed views of the East area.

The South area has unobstructed views of land uses to the south. Land uses to the south have unobstructed views of the South area.

Light and Glare

Master Plan Area

The Master Plan area consists of agricultural operations, industrial uses, and rural residences. These uses contain structures and improvements (such as light fixtures) that emit sources of light or glare. The rural residences also contain structures and improvements that emit sources of light and glare. Vehicles traveling along Airport Way, Roth Road, Lathrop Road, Daisywood Drive, and Lovelace Road are also sources of light and glare.

Non-Master Plan Annexations Area

The East area contains agricultural uses and low-density residential uses. Approximately 20 rural residences contain structures and improvements (such as light fixtures) that emit sources of light or glare. Vehicles traveling along Airport Way and Lathrop Road are also sources of light and glare.

The South area contains agricultural uses and low density residential uses. Approximately 20 rural residences contain structures and improvements (such as light fixtures) that emit sources of light or glare. Vehicles traveling along Airport Way and Lathrop Road are sources of light and glare. Rail vehicles traveling along the Union Pacific Railroad Fresno Subdivision along the southern boundary of the South area are also sources of light and glare.

Surrounding Areas

Sources of light or glare in the surrounding area include the Union Pacific Railroad Lathrop Intermodal Terminal, the Sharpe Army Depot, the Calaveras Materials cement plant, scattered rural residential development, and Union Ranch. Streetlights are present at the intersections of Airport Way and Roth Road, Airport Way and Daisywood Drive, and Airport Way and Lathrop Road.

3.1.3 - Regulatory Framework

State

California Environmental Quality Act (CEQA)

CEQA affords protection for the environment, including aesthetic resources. The CEQA Guidelines provide four criteria that may be used to evaluate the significance of visual quality impacts: negative effects on a scenic vista, damage to scenic resources within a state scenic highway, degradation of the visual character or quality of a site and its surroundings, and creation of a new source of substantial light or glare affecting views.

Local

City of Manteca

General Plan

The City of Manteca General Plan established the following goals and policies related to aesthetic resources that are applicable to the proposed project:

- **Policy LU-P-24:** New commercial development shall be designed to avoid the appearance of strip development.
- **Goal CD-2:** Maintain a memorable City identity characterized by distinctive, high quality buildings and streetscapes.
- **Policy CD-P-15:** Major arterial streets shall include a common landscape theme that includes primary street trees, groundcover, sidewalks, bus shelters where required, and lighting applied throughout the City.
- **Policy CD-P-16:** The City shall develop special design standards for the perimeter road system comprising Lathrop Road, Austin Road, Woodward Avenue, and Airport Way to ensure their development as divided roadways.
- **Policy CD-P-35:** Architectural elements that contribute to a building's character, aid in climate control, and enhance pedestrian scale are encouraged. Examples include canopies, roof overhangs, projections or recessions of stories, balconies, reveals, and awnings.
- **Policy CD-P-36:** Encourage the creation of an urban forest comprised of street trees, residential lot trees, and trees in non-residential parking lots and other public open space.
- **Policy CD-P-37:** Commercial centers should provide for convenient, attractive pedestrian access from street fronts and from adjacent commercial, office, and residential land uses.

- **Policy CD-P-38:** Commercial centers should provide for convenient, attractive pedestrian access within the center with dedicated pedestrian ways between all buildings and pedestrian spaces such as plazas, courtyards, and terraces at natural gathering areas within the site.
- **Policy CD-P-40:** Outdoor plazas or other common areas that provide space for special landscaping, public art, food service, outdoor retail sales, or seating areas for patrons are encouraged in retail settings appropriate to such pedestrian activity. The plaza or other common area shall be appropriately scaled to the retail use and shall be directly connected to primary walkway.
- **Policy CD-P-44:** Provide minimal levels of street, parking, building, site and public area lighting to meet safety standards and provide direction.
- **Policy CD-P-45:** Provide directional shielding for all exterior lighting to minimize the annoyance of direct or indirect glare.
- **Policy CD-P47:** The City shall adopt light and glare standards that minimize the creation of new light source and the annoyance of direct and indirect glare.
- **Goal ED-16:** Maintain and enhance the physical beauty of the Community and surrounding landscape.
- **Policy ED-P-21:** Enhance community identity and beauty.
- **Goal RC-8:** To provide adequate land for open space as a framework for urban development, to meet the passive recreation needs of the community, and to set aside wildlife habitat.
- **Policy RC-P-16:** Provide public and private open space within urbanized parts of Manteca, in order to provide visual contrast with the built environment and to provide for the recreational needs of residents.
- **Policy RC-P-18:** New development shall maximize the potential for open space and visual experiences.

Municipal Code

The City of Manteca Zoning Ordinance addresses exterior lighting and glare in Section 17.13.040.D and Section 17.15.090.G of the City Municipal Code:

17.13.040.D. Glare.

1. No direct glare shall be permitted with the exception that parking areas and walkways may be illuminated by luminaries so hooded or shielded that the maximum angle of the cone of direct illumination shall be sixty degrees if the luminary is not less than six feet above the ground. Such luminaries shall be placed not more than twenty feet above ground level and shall not be in excess of ten foot candles.
2. Indirect glare shall not exceed that value which is produced by an illumination of the reflecting surface, not to exceed:
    a) 10 foot-candle (maximum).
    b) 4 foot-candle (average).
    c) 1 foot-candle (minimum).

d) Any light or combination of lights shall not cast light on residential property and shall not exceed 0.0 foot-candles as measured from said property.

17.15.090.G. Lighting.

1. Public parking areas designed to accommodate ten or more vehicles in other than vehicle sales areas shall provide a minimum lighting level of one foot candle of maintained illumination on the parking surface during the hours of use between one-half hour before dusk and one-half hour after dawn.
2. Any parking area illumination, including security lighting, shall be so arranged as to reflect away from adjoining properties and rights-of-way.

3.1.4 - Methodology

Michael Brandman Associates (MBA) evaluated potential project impacts on aesthetics, light, and glare through site reconnaissance and review of applicable plans and policies. MBA personnel visited the project site and surrounding land uses in February 2010, and documented the site conditions through photographs and notation. The City of Manteca General Plan and the City of Manteca Zoning Ordinance were reviewed to determine applicable policies and design requirements for the proposed project. Additionally, the Master Plan Design Standards and Guidelines of the Master Plan were reviewed to determine compliance with the requirements of the General Plan and Zoning Ordinance.

3.1.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, aesthetics impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a.) Have a substantial adverse effect on a scenic vista?

b.) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway? (Refer to Section 7, Effects Found Not To Be Significant.)

c.) Substantially degrade the existing visual character or quality of the site and its surroundings?

d.) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.1.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Scenic Vista

Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect scenic vistas.

Master Plan

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The Master Plan area itself does not provide any visual resources that would be considered a scenic vista because it primarily consists of agricultural lands, some industrial uses, and rural residential uses that are relatively common in other areas of the City and are not unique to the surrounding visual setting. Further, onsite agricultural production activities have altered the natural landscape; therefore, the project site does not provide views of the indigenous natural landscape. Although the current land uses provide views of an agricultural landscape that is representative of the region, the Master Plan does not contain resources that are exemplary of the agricultural history of the area (such as historic structures or landmarks; see Section 3.5, Cultural Resources). Views of the Master Plan are not unique in the region.

The Master Plan area is generally flat with unobstructed view of the surrounding agricultural lands, the Lathrop Intermodal Terminal, and residential developments. Neither the Master Plan area nor any of the surrounding land uses contains features typically associated with scenic vistas (e.g., ridgelines, peaks, overlooks). Therefore, little opportunity exists for project activities to obscure views of scenic vistas that may be located within the immediate area of the Master Plan.

More distant views of the Coast Ranges (including Mt. Diablo) and the Sierra Nevada Mountains would largely be unaffected by the development of the Master Plan because of the distance and limited visibility of these features. Furthermore, the City of Manteca does not identify views of these features to be "protected" and, therefore, any obstruction that does occur would not be significant.

Impacts would be than significant impact.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Properties within these areas contain existing developed land uses. The annexations would not change any existing land use activities or confer any development rights that would allow new construction to occur. Therefore, views of scenic vistas would not be altered by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Visual Character

Impact AES-2:	**The proposed project would not degrade the visual character of the project site and its surroundings.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to degrade visual character.

Master Plan

The Master Plan occupies approximately 300 acres on relatively flat land with no discernable sloping. The Master Plan elevation is approximately 27 feet above mean sea level. Land uses in the Master Plan area consist of agricultural operations, industrial uses, and rural residences.

The Master Plan seeks to build a comprehensive development totaling a maximum of 4.7 million square feet with the following components:

- Light industrial and warehouse uses bordering the Union Pacific Rail facility
- Retail/commercial facility at the northwest corner of Lathrop Road and Airport Way
- Small-scale light industrial uses along the Airport Way frontage to provide a transition from the large-scale industrial uses within the Master Plan area to the residential uses existing and planned across Airport Way to the east

The land use plan is shown in Exhibit 2-5.

Chapter 9, Design Standards and Guidelines of the Master Plan specifically identifies City design expectation in the context of new industrial and commercial developments in the Plan area. Design standards are required of all developments. Design guidelines are recommended measures that help ensure quality design. Together, the standards and guidelines address the placement and appearance of buildings, circulation, parking and loading, landscape design, fencing and screening, signage, exterior lighting, and sustainable design practices.

The design standards are to be applied to development within the Master Plan in conjunction with the development standards listed in the Manteca Municipal Code and applicable utility master plans. Where differences occur between the design standards of the Master Plan and the Manteca Municipal Code, the design standards of the Master Plan shall prevail.

The design standards and guidelines are to be used by applicants and their consultants in the formulation of specific development proposals. The standards and guidelines will also be used by City of Manteca staff in the review of development proposals.

The general objectives of the Master Plan Design Standards and Guidelines are to:

- Promote a functional and attractive environment
- Ensure a quality development image
- Protect and enhance private property values and investments
- Protect public investments
- Employ sustainable design practices

The standards and guidelines are intended to encourage sensitive, integrated, innovative, and sustainable project designs rather than dictate any particular design theme. The following discussion provides an overview of the relevant design standards and guidelines related to visual character.

Light Industrial Design Standards & Guidelines

Site Design

Standard(s):

1. Entry points shall be designed with a unique appearance and landscaped. Entries should be delineated with clear and well-designed monument signs. These entry points should relate to the roads serving developments on the west and east sides of Airport Way.

A. Setbacks

Standard(s):

1. Setbacks along Airport Way along the Light Industrial portion of the Plan Area shall be a minimum of 20-feet from the property line.
2. Setbacks shall be 20-feet from the property line on the south side of Roth Road and 20-feet from property line on the north side of Lathrop Road along the Light Industrial portion of the Plan Area.
3. There shall be no buildings, parking lots or loading areas within the required landscape setback area.

Guideline(s):

4. A variety of building and parking setbacks shall be provided in order to avoid long monotonous building facades and to create visual diversity.
5. Berms, walls, shrubs, and trees should be used in appropriate combinations within the setback area to buffer sensitive nearby uses.

C. Landscaping Design

Standard(s):

1. Minimum landscaped open space shall be 10% of the total site area.
2. Landscaping recommendations for developments along Airport Way, Roth Road, and Lathrop Road frontages shall conform to the illustrations in Exhibit 10 of the Master Plan or shall otherwise be approved by the Community Development Director as meeting the objectives of the Master Plan.
3. Street trees shall be provided along all public streets with a minimum of one tree installed for each thirty feet of frontage. One dominant street, one alternate and two accent trees shall also be chosen for each street frontage from the City of Manteca Approved Street Tree list.
4. The Master Plan, Chapter 2, B, 3 provides street sections for landscaping along private streets.
5. Drainage channels and detention basins shall be designed without fencing and shall be treated as a part of an integrated landscape design.
6. Parking lots shall be shaded per the standards listed in the Manteca Municipal Code.
7. Accessory facilities such as mechanical equipment, trash collection, storage areas, and vehicle service areas shall be located away from portions of the site which are visible from public roadways or private properties with dissimilar improvements. Heavy landscaping and screening may be used in instances where alternative locations are not available.
8. Truck loading docks and truck and trailer parking areas shall be screened from public view.

Guideline(s):

6. Parking lots and loading areas adjacent to and visible from public streets must be adequately screened from view through the use of earth berms, low screen walls, changes in elevation, landscaping or combinations thereof.
7. All landscaping should employ a mix of trees, shrubs, groundcovers and turf where appropriate. The plant palette should be relatively limited and applied in groupings of similar species.
8. Setback areas should be landscaped in a similar style, providing visual connections to buildings and adjacent open spaces

Building Design

Standard(s):

1. Long expanses of loading docks shall be screened from public views by the use of landscaping, walls and earth mounds.

Guideline(s):

2. Large building forms should be designed to break up the apparent mass of the buildings. This should be accomplished by using various methods to help create interest and reduce scale. Examples include the staggering of vertical walls, recessing openings, providing upper-level roof overhangs, using deep score lines at construction joints, contrasting compatible building materials, and using bands of compatible colors.
3. Design and color themes should be used consistently throughout each site and should relate harmoniously to adjacent development.
4. The use of architectural features (parapets, canopies, fascias, and other architectural features) should be used where appropriate to break up large, blank wall surfaces.
5. Primary buildings in close proximity on the same property should have harmonious proportions and similar architectural styles. Nearby accessory buildings should be of compatible design and treatment. Variety in roof shapes and form is encouraged to add diversity, enhance scale, and complement the features of adjacent buildings. Where parapet walls are used, they should be treated as an integral part of the building design.
6. Long exterior walls should incorporate contrasting finishes and colors to provide a sense of scale.
7. Long building walls that do not have loading docks should have trees planted along them to modulate the long expanse of wall. A minimum 8-foot landscape strip should be provided at the base of each building, not including loading docks.
8. Utility doors, fire doors, loading docks and other potentially unsightly service features should be designed to blend with the building's architecture.

Airport Frontage Buffer Area

The intent of the buffer area is to shield nearby residences and public views along Airport Way from more intensive industrial uses. As a result, smaller scale light industrial uses are encouraged along the Airport Way frontage. These additional guidelines are intended to promote such development along this frontage area.

Guideline(s):

1. Architecture should be designed at a smaller, pedestrian friendly scale.
2. Buildings visible from Airport Way should provide architectural enhancements along the street frontage.
3. Landscaping and masonry walls as appropriate should be used to buffer perimeter areas from neighboring uses
4. A variety of building forms and facade treatments are encouraged to avoid the appearance of a single continuous building form.

5. Where large buildings are to be placed adjacent to the Airport Way right of way, the apparent mass of the buildings should be reduced by introducing variations in wall setbacks and heights, additions of projections, porticos, windows and other openings, using different materials or finishes, and similar methods.
6. The mixing of unrelated architectural styles, materials and details should be avoided. Exterior siding materials should be of masonry, plaster, wood, metal, or approved alternative material. Metal clad buildings should have baked-on enamel exterior finishes or equal. Mirrored or highly reflective glass is prohibited.

Signs

The purpose of the sign program is to promote economic vitality, enhance the community's appearance, and encourage the effective use of signs in the community by maintaining minimum standards that limit the number, size, design and illumination of signs.

A Sign Program is required for all developments in the Northwest Airport Way Master Plan. The Sign Program for the industrial project area shall accompany the first development application for each building complex. Applicants shall establish an industrial design theme for signage that subsequent applicants are required to adhere to.

Standard(s):

1. Establish a theme for signing. Indicate location and form of signs on building plans. Include designs for freestanding signs/monument signs, building-mounted signs, and directory signs.
2. Signs are to be illuminated only by backlighting of raised letters, internally illuminated individual letters, or by low intensity spotlights that are screened from direct view. Internally illuminated box or can signs are prohibited. Signs are to be glare free. Light fixtures must be screened from view.
3. All signs shall have a similar architecture style as buildings in the complex.
4. Freestanding/monument signs:
    a. Monument signs shall relate to the materials and style of the building.
    b. One multi-tenant freestanding sign with solid base (monument-type) is permitted on each major entry to the site by the name of the center and/or address. Major tenants may be listed. Size to be consistent with Section 17.17.110 of the Manteca Municipal Code.
5. Wall signs:
    a. One business identification wall sign or logo may be placed on each building exterior for each tenant. Overly large wall signs tend to hide the building to which they are attached and compete with signs on adjacent buildings for the viewers' attention.
    b. Corporate logos may be used in combination with business names but should not occupy more than 25% of the sign area.

c. Signs shall not extend above top of wall or parapet. Signage shall appear as an integral part of the building.
d. Signs shall be made of individual letters. Letters may be raised, inset, or flush. No box or can signs or signs painted on a board or similar surface and mounted on building shall be permitted. Maximum letter height is 24 inches.

6. Directory Signs:
   a. One directory sign is permitted per each multi-tenant building complex, including buildings off of main roads such as at corners.
   b. Directories shall only list tenant names and locations within buildings.
   c. Directories shall be either, wall-mounted glass case or freestanding, solid base, monument-type sign.
   d. Directory signs shall not exceed 20 sq. ft. in area or 5 ft. in height above finish grade.
   e. Directory signs shall not exceed 3 feet 6 inches if placed in the clear vision triangle as defined by the Manteca Public Works Dept.

Guideline(s):

7. Signs facing secondary streets look best if they are smaller and less dominant than the signs on the primary street.
8. Keep signs simple. Too many combinations of colors, typefaces, and symbols can result in visual chaos. Generally, no more than three complementary colors should be used on a single sign. Keep to a maximum of 2 typefaces. Signs are more legible if upper and lower case letters are combined.
9. Do not allow signage to affect the skyline or obstruct views.

Community Commercial Design Standards & Guidelines

Unified site design architecture for the building or buildings (which contain separate commercial establishments with at least one major anchor), signage and contiguous, and shared parking characterize community scale shopping centers.

Site Design

Standard(s):

1. Development shall have one theme carried throughout the entire center.
2. A strong sense of entry and orientation to the storefronts shall be created by providing a central space, such as a plaza or a focal point that shall be used to orient and direct shoppers.

Guideline(s):

3. Landscaping at major site entries should help define the project and provide a sense of arrival. Use elements such as low ornamental walls, accent planting, fountains,

and special paving to help define the entry. Accent trees should be used to distinguish main access drives.

4. Enhanced paving should be used to highlight entries and pedestrians areas.

A. Setbacks

Standard(s):

1. Setbacks along Airport Way along the Community Commercial portion of the Plan Area shall be 10-feet from the property line on the west side of Airport Way. Berms, walls, shrubs, and trees shall be used in appropriate combinations within the setback area to buffer sensitive nearby uses
2. Setbacks along Lathrop Road along the Community Commercial portion of the Plan Area shall be 10-feet from the property line on the north side of Lathrop Road.

C. Landscaping Design

Standard(s):

1. Minimum landscaped open space shall be 10% of the total site area.
2. Landscaping recommendations for developments along Airport Way and Lathrop Road frontages shall conform to the illustrations in Exhibit 10 of the Master Plan or shall otherwise be approved by the Community Development Director as meeting the objectives of the Master Plan.
3. Service areas shall be screened from public view.
4. Adjoining land uses shall be buffered from light, sound and traffic intrusion. Utilize screen planting as well as masonry walls where truck deliveries would disturb nearby residences.

Guideline(s):

5. The design of the streetscape should integrate plant materials, paths, lighting, street furniture, and signage to produce an attractive overall environment.
6. Trees should be located throughout the parking lot and not simply at the ends of parking aisles.
7. Provide accent planting at site and building entrances.
8. Incorporate amenities such as sculptures, fountains, benches, drinking fountains, kiosks, and seating areas.
9. Setback areas should be landscaped in a similar style, providing visual connections to buildings and adjacent open spaces.

Building Design

Standard(s):

1. Emphasize individual structures, but design buildings on a single site to relate to each other.
2. Large structures shall be visually broken up into smaller components through changes in massing form and texture.
3. Roof mounted mechanical equipment shall be fully screened from the public view.

Guideline(s):

1. Corner buildings should be highlighted with features such as special architecture, towers or other vertical elements and entries facing the intersection.
2. The use of quality accent materials such as stone, brick; wood siding; or tile is encouraged.
3. Rooflines should be varied and designed as an integral part of building mass.
4. Entrances should be identified with roof articulation, such as slanted roofs, canopies or trellis structures.
5. Architectural design of buildings should integrate commercial signage to avoid the appearance of buildings unrelated to the size, shape and appearance of signage.
6. Covered walkways, arcades, canopies, storefronts or awnings or combinations thereof should be designed along the public face of buildings. These forms are to be integrated into the building design to avoid looking like afterthoughts.
7. Courtyards, atriums and outdoor gathering and eating areas should be incorporated into the design of the community commercial center. Site furnishing shall be provided in public areas.

Signs

The purpose of the sign program is to promote economic vitality, enhance the community's appearance, and encourage the effective use of signs in the community by maintaining minimum standards that limit the number, size, design and illumination of signs.

A Sign Program is required for all applicants for development in the Northwest Airport Way Master Plan. The Sign Program for the commercial project area shall be submitted with the first development application. Applicants shall establish a commercial design theme complementary to the sign program theme for the industrial portion of the Plan Area. Subsequent applicants are required to adhere to the sign program once established.

Standard(s):

1. Signs are to be illuminated only by backlighting of raised letters, internally illuminated individual letters, or by low intensity spotlights that are screened from direct view. Internally illuminated box or can signs are prohibited. Signs are to be

glare free. All signs shall have a similar architecture style as buildings in the complex.

2. Keep projecting signs 8-feet above sidewalks and, if attached to a wall, mounted away from face of building. Such signage is appropriate for pedestrian shopping areas.
3. Freestanding/monument signs:
   a. Monument signs shall relate to the materials and style of the building.
   b. One multi-tenant freestanding sign with solid base (monument-type) is permitted on each major entry to the site by the name of the center and/or address. Major tenants may be listed. Size to be consistent with Section 17.17.110 of the Manteca Municipal Code.
4. Wall signs:
   a. One business identification wall sign or logo may be placed on each building exterior for each tenant. Overly large wall signs tend to hide the building to which they are attached and compete with signs on adjacent buildings for the viewers' attention.
   b. Corporate logos may be used in combination with business names but should not occupy more than 25% of the sign area.
   c. Signs shall not extend above top of wall or parapet. Signage shall appear as an integral part of the building.
   d. Signs shall be made of individual letters. Letters may be raised, inset, or flush. No box or can signs or signs painted on a board or similar surface and mounted on building shall be permitted. Maximum letter height is 24 inches.
5. Directory Signs:
   a. One directory sign is permitted per each multi-tenant building complex, including buildings off of main roads such as at corners.
   b. Directories shall only list tenant names and locations within buildings.
   c. Directories shall be either, wall-mounted glass case or freestanding, solid base, monument-type sign.
   d. Directory signs shall not exceed 20 sq. ft. in area or 5 ft. in height above finish grade.
   e. Directory signs shall not exceed 3 feet 6 inches if placed in the clear vision triangle as defined by the Manteca Public Works Dept.

Guideline(s):

6. Establish a theme for signing. Indicate location and form of signs on building plans. Include designs for freestanding signs/monument signs, building-mounted signs, and directory signs.
7. Signs facing secondary streets look best if they are smaller and less dominant than the signs on the primary street.

8. Keep signs simple. Too many combinations of colors, typefaces, and symbols can result in visual chaos. Generally, no more than three complementary colors should be used on a single sign. Keep to a maximum of 2 typefaces. Signs are more legible if upper and lower case letters are combined.
9. Ensure the sign relates to the building in size. Oversized, over-illuminated and flashy signs are unnecessary and cause confusion to the reader.
10. Paint any awning signage on the awning itself. The awning's flap or end panels provide highly visible surfaces.
11. Draw attention to signs with attractive landscaping, eye level placement or placement on prominent building elements. Pole installations are prohibited. Preferred monument signs are low, horizontal signs with incised or raised lettering set off by flowers or lawn.
12. Do not allow signage to affect the skyline or obstruct views.

In summary, the Design Guidelines establish a comprehensive and robust set of standards and guidelines to ensure that the Master Plan uses provide high quality design that is compatible with surrounding land uses.

Surrounding Area

The area surrounding the project site is generally undergoing a transition from rural and agricultural open space uses to an urban environment. While over time the area would be fully developed with urban land uses, the Master Plan area is currently in a transitional state and provides representative views of typical agricultural and urban environments. Existing land uses surrounding the Master Plan area include agricultural, industrial, rural residential and residential subdivisions. These land uses do not possess any unique visual attributes (for example, historic design elements) that could be adversely affected by the proposed project.

Conclusion

In summary, the Master Plan would establish a comprehensive industrial and commercial development on a mostly undeveloped site designated for light industrial uses. The project site is located within an area that contains existing developed industrial, scattered rural residential, residential subdivisions, and agricultural land uses that are currently contemplated for future residential, commercial, and industrial uses. The Master Plan's Design Guidelines provide certainty that future development that occurs within the plan area will be compatible with surrounding land uses. For these reasons, the proposed project would not degrade the visual character of the project site or its surroundings. Therefore, impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Properties within these areas contain existing developed land uses. The annexations would not change any existing land use

activities or confer any development rights that would allow for new construction to occur. Therefore, visual character would not be altered by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Light and Glare

Impact AES-3:	**Implementation of the proposed project would not result in the introduction of substantial new sources of light and glare.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to introduce new sources of light and glare.

Master Plan

The Master Plan area contains existing sources of light and glare. Existing land uses such as the cheese plant, cement plant, and scattered rural residential units include outdoor lighting. The Union Pacific Railroad Lathrop Intermodal Terminal, the Sharpe Army Depot, scattered rural residential development, and Union Ranch also include outdoor lighting. Other nearby sources of light include the streetlights at the intersections of Airport Way and Roth Road, Airport Way and Daisywood Drive, and Airport Way and Lathrop Road. Vehicles traveling along Airport Way, Roth Road, Lathrop Road, Daisywood Drive, and Lovelace Road are also nearby sources of light.

The proposed Master Plan would include the installation of freestanding and building-mounted lighting associated with the industrial and commercial uses. Such lighting would include lighting in parking lots, along pathways, and mounted on buildings for safety and security reasons. As such, the proposed project may create a substantial source of nighttime light, which may affect nighttime views in the surrounding area.

The Master Plan includes Design Standards and Guidelines to minimize light impacts. Specifically, all lighting in the Master Plan area must comply with candle foot standards established in the Manteca Municipal Code. Night lighting in the Master Plan area shall be limited to that necessary for operations, security, safety, and identification, and it shall be screened from adjacent residential areas and not be directed in an upward manner or beyond the boundaries of the parcel on which the buildings are located. Specific design standards also apply to signage in the Master Plan area that

requires signs to be illuminated only by backlighting of raised letters, internally illuminated individual letters, or by low-intensity spotlights that are screened from direct view. Internally illuminated box or can signs are prohibited in the Master Plan area. Signs are to be glare-free and light fixtures must be screened from view. Additional best management practices to minimize light trespass are described in the design guidelines and include the following recommended measures:

- Light bulbs or tubes should not be exposed.
- Light shields should reduce the spillage of light onto adjacent properties.
- Lighting should be adequate but not overly bright.
- Security lighting may be indirect or diffused and should be shielded or directed away from a residential district.

In summary, the Design Guidelines establish a comprehensive and robust set of standards to ensure that Master Plan uses do not introduce substantial sources of light and glare to the project vicinity. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Properties within these areas contain existing developed land uses that emit sources of light and glare. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, no additional sources of light and glare would be created by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.2 - Agricultural Resources

3.2.1 - Introduction

This section describes the existing agricultural resources and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by the California Department of Conservation Farmland Mapping and Monitoring Program and the United States Department of Agriculture. The Land Evaluation and Site Assessment model is provided in this EIR as Appendix B.

3.2.2 - Environmental Setting

Agricultural Economy

The City of Manteca is located in an area of rich agricultural resources, including orchards, dairies, vineyards, row crops, and pasture land. As noted in the City of Manteca General Plan, the Manteca economy is transforming from agriculture and agriculturally related industries to warehousing and distribution industries that take advantage of the central location, relatively affordable land, and transportation network. However, for San Joaquin County as a whole, agriculture remains the largest economic activity.

The City of Manteca is located in San Joaquin County. Agriculture is the dominant land use in San Joaquin County, accounting for 84 percent of the total land area according to the California Department of Conservation Farmland Mapping and Monitoring Program. San Joaquin County has consistently maintained its status as one of the top 10 agricultural producing counties in California during the past 5 years. Table 3.2-1 summarizes agricultural production in the County between 2004 and 2008. As shown in the table, the production value of San Joaquin County crops increased from $1.61 billion to $2.13 billion between 2004 and 2009.

Table 3.2-1: San Joaquin County Agricultural Economy (2004-2008)

Year	Value (Billions)	Rank in State
2004	$1.61	7
2005	$1.73	8
2006	$1.68	6
2007	$2.00	7
2008	$2.13	7
Source: United States Department of Agriculture, 2004–2008.		

Table 3.2-2 summarizes the top 10 agricultural commodities produced in San Joaquin County by dollar value in 2008. Milk is the leading commodity, with a production value of $412 million.

Table 3.2-2: San Joaquin County Agricultural Commodity Summary (2008)

Rank	Commodity	Value (Millions)
1	Milk	$412
2	Grapes	$221
3	Walnuts	$178
4	Cherries	$175
5	Almond Meats	$175
6	Tomatoes	$145
7	Hay	$108
8	Cattle and Calves	$97
9	Corn, Grain	$69
10	Apples	$48
Source: San Joaquin County Agricultural Commissioner, 2009.		

Farmland Classifications

The California Department of Conservation Farmland Mapping and Monitoring Program classifies cultivated agricultural land into four categories, listed below:

- **Prime Farmland:** Land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields.
- **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 climactic zones in California.
- **Farmland of Statewide Importance:** Land similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.
- **Farmland of Local Importance:** Land of importance in the local agricultural economy, as determined by each county's Board of Supervisors and a local advisory committee.

Table 3.2-3 provides a summary of Important Farmland acreage in San Joaquin County between 2000 and 2006. As shown in the table, Important Farmland acreage decreased by 6,875 acres or 1.1 percent between 2000 and 2006.

Table 3.2-3: San Joaquin County Important Farmland Summary (2000-2006)

Classification	Acres			
	2000	2002	2004	2006
Prime Farmland	419,227	416,307	412,548	407,609
Farmland of Statewide Importance	93,739	92,559	91,225	89,273
Unique Farmland	59,118	61,030	62,534	63,231
Farmland of Local Importance	58,906	56,506	57,808	59,957
Important Farmland Total	**630,990**	**626,402**	**624,115**	**624,115**
Total County area	912,601	912,602	912,600	912,600

Notes:
Difference in County area acreage figure attributable to changes in GIS mapping technology.
Source: California Department of Conservation, 2004–2008.

Master Plan area

Important Farmland

Exhibit 3.2-1 depicts the Important Farmland designations for the Master Plan area. As shown in the exhibit, the Master Plan area contains 185.91 acres of Prime Farmland and 76.165 acres of Farmland of Statewide Importance. Non-Important Farmland designations represent the balance of the acreage.

Soils

Exhibit 3.2-2 provides the agricultural soil mapping for the Master Plan area. As shown in the exhibit, the Master Plan area contains mostly Veritas fine sandy loam (223.1 acres), with the remaining acreage divided between Timor loamy sand (62.44 acres) and Tinnin loamy coarse sand (18.72 acres).

Non-Master Plan Annexation areas

Important Farmland

As shown in Exhibit 3.2-1, both the East and South areas contain Farmland of Statewide Importance and Non-Important Farmland designations.

Soils

As shown in Exhibit 3.2-2, both the East and South areas contain Tinnin loamy coarse sand and Timor loamy sand soils.

Williamson Act Contracts

Exhibit 3.2-3 depicts the locations of active Williamson Act contracts within the Master Plan area and the non-master plan areas. As shown in the exhibit, there are no Williamson Act contracts in effect on the parcels within the Master Plan area and the non-master plan areas.

Surrounding Agricultural Land Uses

Exhibit 3.2-3 identifies the Zone of Influence around the Master Plan area. The Zone of Influence encompasses all parcels within 0.25 mile of the Master Plan area and is intended to provide context about the surrounding land uses. The Zone of Influence encompasses approximately 2,500 acres, of which approximately 1,316 acres or 53 percent are shown as being in agricultural production. Note that the aerial map used in Exhibit 3.2-3 was prepared using the most recent California Department of Conservation Farmland Mapping and Monitoring Program report for 2004–2006 and, therefore, may not reflect land use changes that have occurred since the report release date.

3.2.3 - Regulatory Framework

State

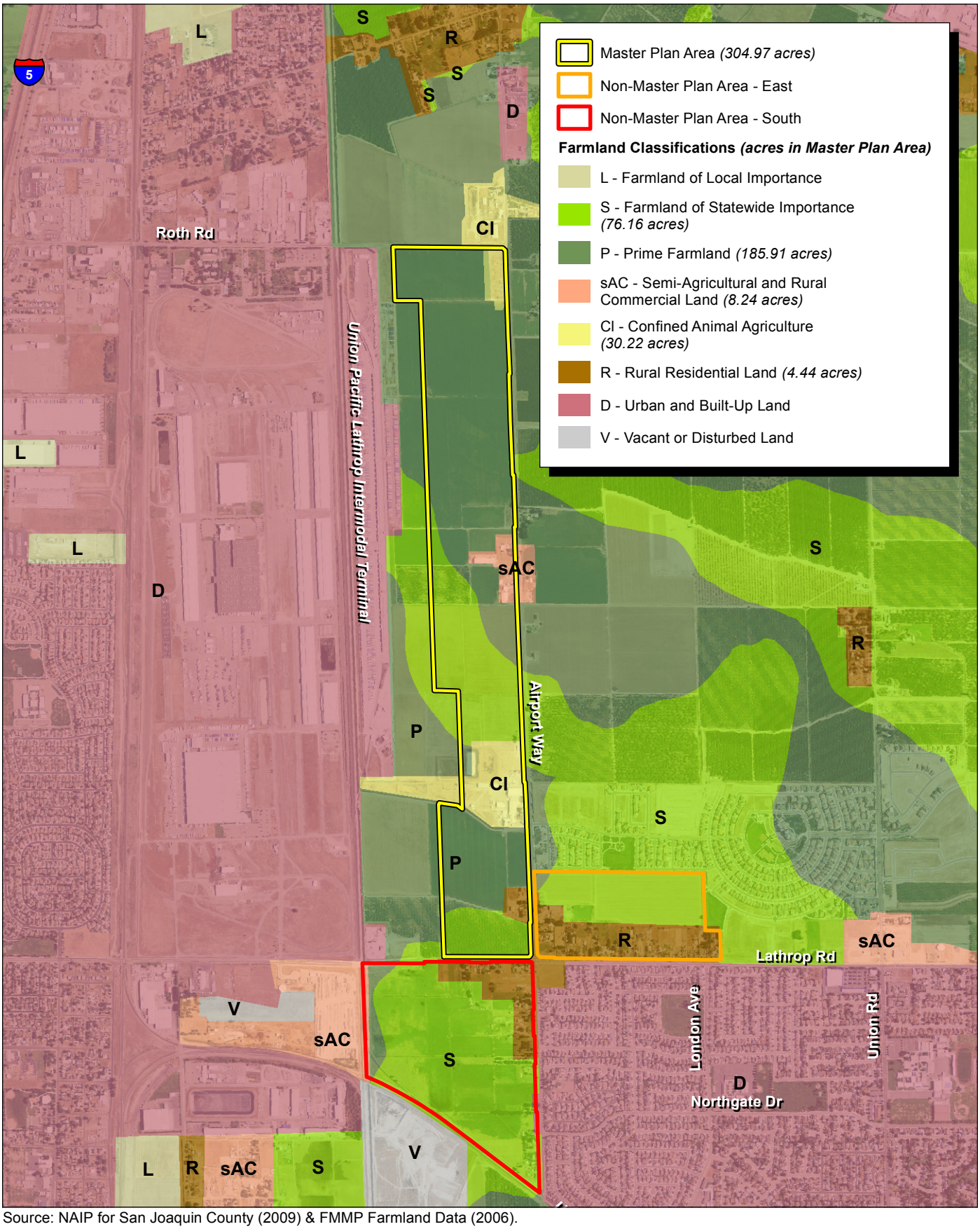
Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program was established in 1982 to continue farmland mapping efforts initiated in 1975 by the Soil Conservation Service (since renamed Natural Resources Conservation Service [NRCS]) of the U.S. Department of Agriculture. Since 1980, the State of California has assisted the NRCS with completing its mapping in the State. The Farmland Mapping and Monitoring Program was created within the California Department of Conservation to carry on the mapping activity on a continuing basis and with a greater level of detail.

Williamson Act

In 1965, The California Land Conservation Act, also known as the Williamson Act, was adopted. This voluntary program allows property owners to have their property assessed on the basis of its agricultural production rather than at the current market value. The property owner is thus relieved of having to pay higher property taxes, as long as the land remains in agricultural production. The purpose of the Act is to encourage property owners to continue to farm their land, and to prevent the premature conversion of farmland to urban uses. Participation requires that the area consist of 100 contiguous acres of agricultural land under one or more ownerships.

Upon approval of an application by the Board of Supervisors, the agricultural preserve is established, and the land within the preserve is restricted to agricultural and compatible uses for at least 10 years. Williamson Act contracts are automatically renewed annually for an additional 1-year period, unless the property owner applies for non-renewal or early cancellation. The Williamson Act also contains limited provisions for cancellation of contracts, and a substantial penalty for the cancellation is assessed. Generally, the specific findings to justify cancellation are extremely difficult to make and contracts are rarely cancelled.



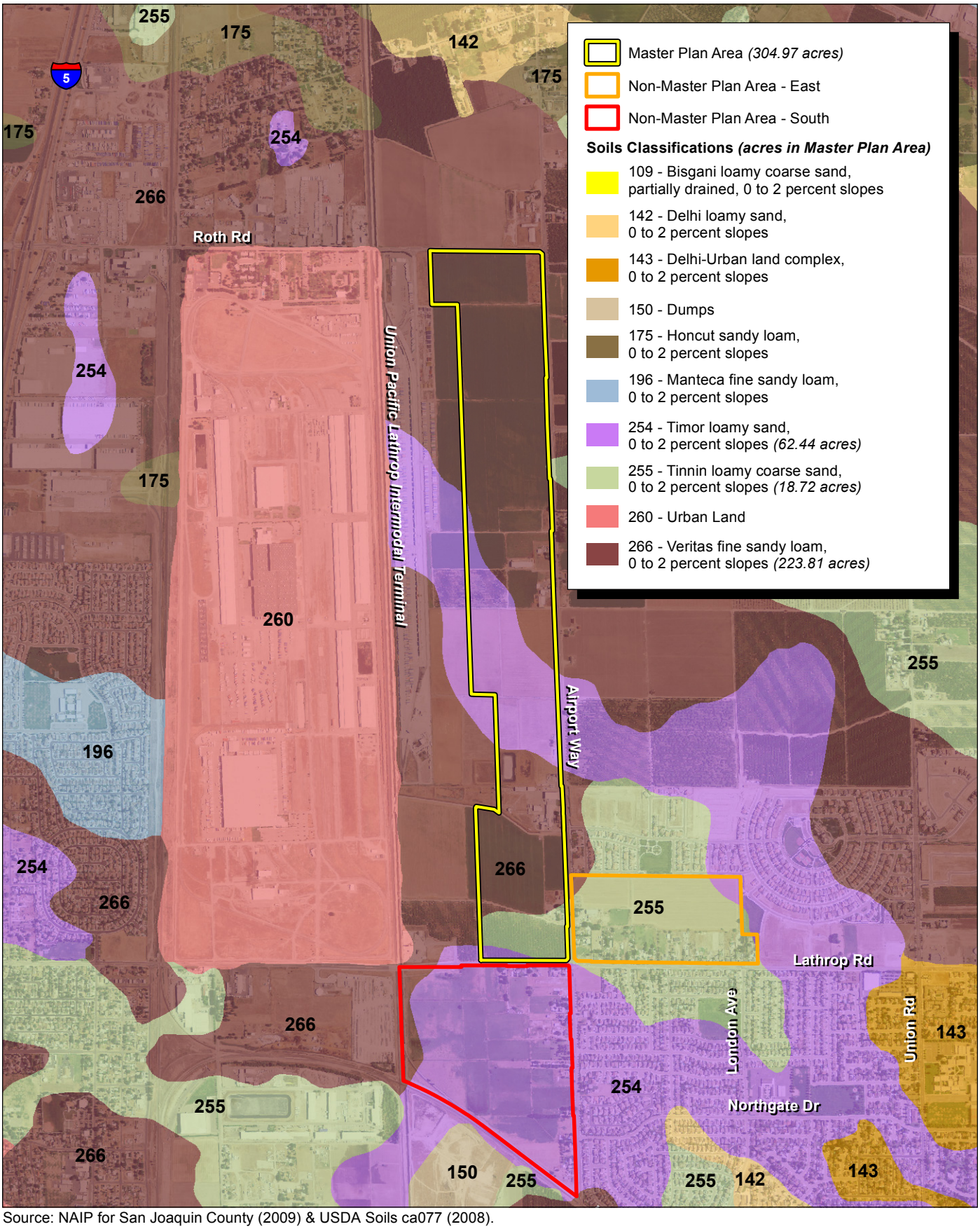
Source: NAIP for San Joaquin County (2009) & FMMP Farmland Data (2006).

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

Exhibit 3.2-1
Important Farmland Map



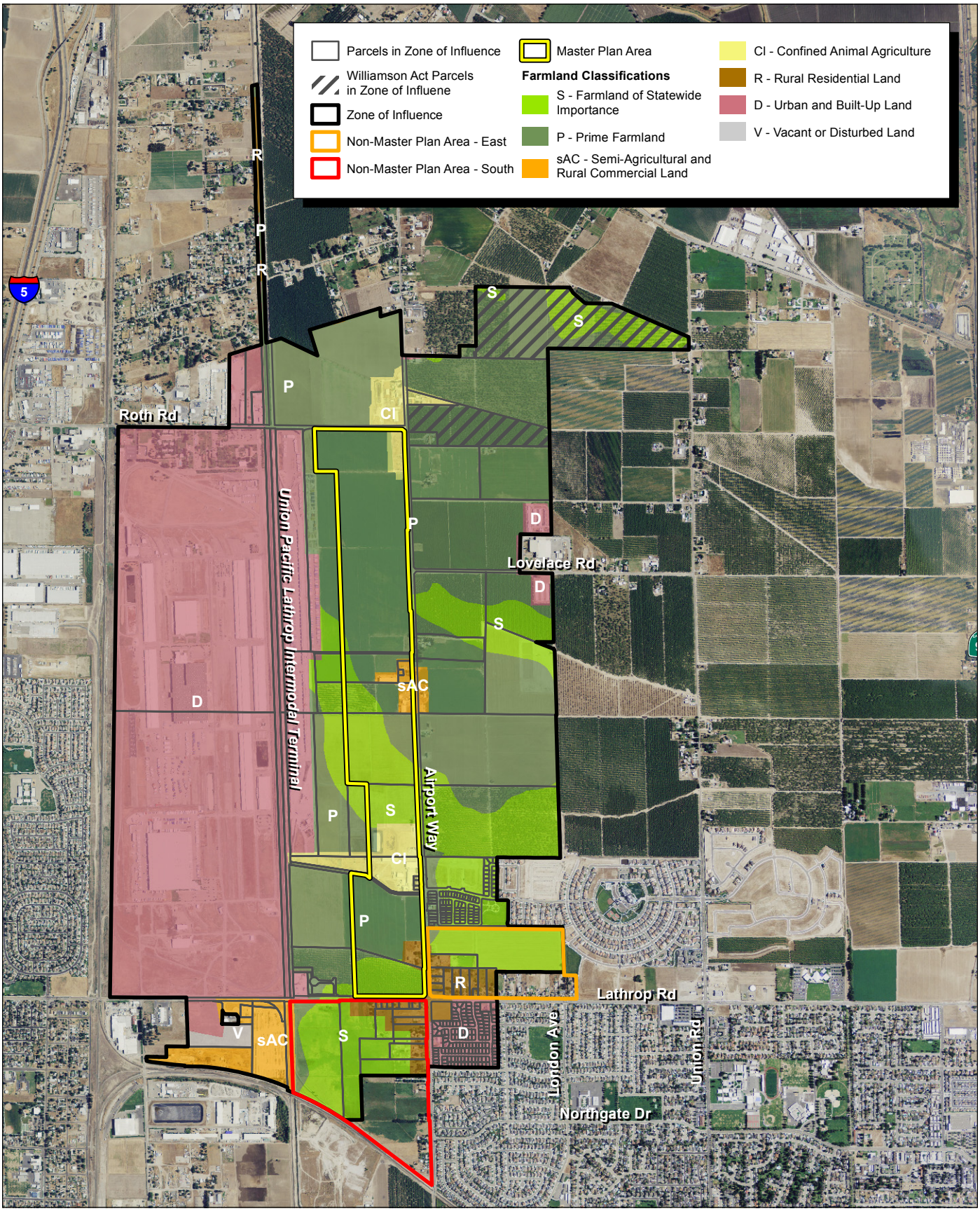
Source: NAIP for San Joaquin County (2009) & USDA Soils ca077 (2008).

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

Exhibit 3.2-2
USDA Soils Map



Source: NAIP for San Joaquin County (2009), San Joaquin County Parcels (2009), FMMP Farmland Data (2006) and Williamson Act Data (2006).

NORTH

2,500 1,250 0 2,500 Feet

Michael Brandman Associates

Exhibit 3.2-3
Zone of Influence

Local

City of Manteca

General Plan

The City of Manteca General Plan established the following goals and policies related to agricultural resources that are applicable to the proposed project:

- **Goal RC-9:** To promote the continuation of agricultural uses in the Manteca area and to discourage the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca.
- **RC-P-19:** The City shall support the continuation of agricultural uses on lands designated for urban use, until urban development is imminent.
- **RC-P-20:** The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.
- **RC-P-21:** In approving urban development near existing agricultural lands, the City shall take actions so that such development will not unnecessarily constrain agricultural practices or adversely affect the viability of nearby agricultural operations.
- **RC-P-22:** Nonagricultural uses in areas designated for agriculture should be redirected to urban areas.
- **RC-P-23:** Protect designated agricultural lands, without placing an undue burden on agricultural landowners.
- **RC-P-24:** Provide buffers at the interface of urban development and farmland; in order to minimize conflicts between these uses.
- **RC-P-25:** The City shall ensure, in approving urban development near existing agricultural lands, that such development will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations.
- **RC-P-30:** The City of Manteca will participate in a county-wide program to mitigate the conversion of Prime Farmland and Farmlands of Statewide Importance to urban uses.

City of Manteca Right to Farm Ordinance

Chapter 8.24 of Manteca Municipal Code is a "Right to Farm" ordinance intended to protect agricultural productivity in the City. The ordinance states:

> It is the policy of this City to preserve, protect and encourage the use of viable agricultural land for the production of food and other agricultural products. When nonagricultural land uses extend into or approach agricultural areas, conflicts often arise between such land uses and agricultural operations. Such conflicts often result in the involuntary curtailment or cessation of agricultural operations, and discourage investment in such operations. This chapter is intended to reduce the occurrence of conflicts between nonagricultural and agricultural land uses within the City.

City of Manteca Agriculture Mitigation Fee Program

In June 2005, the Manteca City Council adopted Ordinance No. 1304, adding Chapter 13.42 to the Manteca Municipal Code, which established the agricultural mitigation fee program. This was done in conjunction with a settlement agreement, in which the cities of Lathrop, Manteca, and Tracy agreed to implement the program to mitigate the loss of Important Farmland, due to the conversion to private urban uses. Under the program, the fees collected are used to acquire farmland conservation easements or farmland deed restrictions. The fee is adjusted each year.

3.2.4 - Methodology

Michael Brandman Associates evaluated the proposed project's impacts on Important Farmland through the use of the Land Evaluation and Site Assessment (LESA) model issued by the California Department of Conservation. The LESA model provides analytical approach for rating the relative quality of land resources based upon specific measurable features. Factors considered by the LESA model include soils, site acreage, water availability, and surrounding land uses. The LESA model worksheets are provided in Appendix B.

3.2.5 - Thresholds of Significance

For the purposes of this EIR, to determine whether impacts to agricultural resources are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a.) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b.) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c.) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)? (Refer to Section 7, Effects Found Not To Be Significant.)

d.) Result in the loss of forest land or conversion of forest land to non-forest use? (Refer to Section 7, Effects Found Not To Be Significant.)

e.) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

3.2.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Convert Important Farmland to Non-Agricultural Use

Impact AG-1: **The proposed project may result in the conversion of Important Farmland to non-agricultural use.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to convert Important Farmland to non-agricultural use.

Master Plan

As shown in Exhibit 3.2-1, the Master Plan area contains 185.91 acres of Prime Farmland and 76.16 acres of Farmland of Statewide Importance. Buildout of the Master Plan uses would permanently convert all 262.07 acres of Important Farmland to urban use. To assess the significance of this conversion, Michael Brandman Associates prepared a LESA model, and the results are summarized in Table 3.2-4.

Table 3.2-4: Land Evaluation and Site Assessment Model Scoring Summary

Category	Factor	Points	Factor Weigh	Weighted Points	Remarks
Land Evaluation	Land Capability Class	75	0.25	19	The project site contains mostly Class IIs soils, which have few agricultural limitations and, therefore, are considered to have high agricultural value.
	Storie Index	77	0.25	19	The project site has a high Storie Index because of the high agricultural value of the soils.
		Subtotal	**0.50**	**38**	—
Site Assessment	Project Size	100	0.15	15	The project site size rating is 100 because the soils are of high agricultural value.
	Water Resources Availability	80	0.15	12	The project site is assumed to have access to irrigation district water, although physical and economic restrictions may limit water availability during drought years.
	Surrounding Agricultural Lands	40	0.15	6	Farmland accounts for 53.2 percent of the surrounding land uses, which translates to 40 points.
	Surrounding Protected Resource Lands	0	0.05	0	Protected resource lands account for 5 percent of surrounding acreage, which translates to zero points.
		Subtotal	**0.50**	**33**	—
			Total	**71**	—

Notes:
LESA scoring sheet provided in Appendix B.
Source: Michael Brandman Associates, 2010.

As shown in Table 3.2-4, the project site achieves a total score of 71. The LESA model indicates that scores between 60 to 79 points are considered significant unless either the Land Evaluation or Site Assessment subscore is less than 20 points. In this case, neither the Land Evaluation nor the Site Assessment score is less than 20; therefore, buildout of the Master Plan would exceed the threshold of significance for conversion of Important Farmland to non-agricultural use. This would be a potentially significant impact.

The City of Manteca General Plan designates the Master Plan area for Light Industrial and Urban Reserve. These designations indicate the City has contemplated the conversion of this agricultural land to urban uses over the planning horizon of the General Plan and, therefore, does not view the Master Plan area as a preferred location for permanent agricultural uses. Although conversion of the Master Plan area to urban uses would reflect the land use assumptions contained in the City of Manteca General Plan, farmland is an important resource to the region, and direct conversion of Important Farmland to urban land uses would be considered a significant impact under LESA methodology.

The California Department of Conservation identifies preservation of existing Important Farmland acreage as the desired mitigation for the loss of such acreage. The City's agricultural mitigation fee program helps offset the conversion of Important Farmland through the acquisition of irrevocable instruments on active farmland (e.g., conservation easements or farmland deed restrictions). Accordingly, Mitigation Measure AG-1 requires the applicant to pay the required City of Manteca agricultural mitigation fee. Implementation of this mitigation measure would substantially lessen significant impacts associated with the conversion of 262.07 acres of Important Farmland within the Master Plan, by funding irrevocable instruments that would provide assistance to the public and private sectors in permanently preserving farmland.

Although the agricultural mitigation fee would be used to fund an irrevocable instrument to permanently preserve farmland, 262.07 acres of Important Farmland would be permanently converted to non-agricultural use as a result of Master Plan implementation. The fees collected by Mitigation Measure AG-1 do not provide certainty that net new Important Farmland acreage would be created or the productivity of existing non-Important Farmland could be improved such that it could be re-classified as Important Farmland. Therefore, full compensation for the loss of Important Farmland is not feasible. Furthermore, no other feasible mitigation is available fully offset the loss of Important Farmland. Therefore, the residual significance of this impact would be significant and unavoidable.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. As shown in Exhibit 3.2-1, these areas contain Farmland of Statewide Importance. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the annexations would not convert this Important Farmland to non-agricultural use.

Furthermore, the City of Manteca General Plan contains several policies allowing for the continued agricultural production of farmland within the city limits up until the point that higher and better uses are pursued. Therefore, annexation into the city limits would not be incompatible with or otherwise preclude the continuance of the Important Farmland designation.

Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AG-1 At the time building permits are sought for any Master Plan contemplated use, the project applicant shall pay the required City of Manteca agricultural mitigation fee to help offset the conversion of Important Farmland pursuant to Manteca Municipal Code Chapter 13.42.

Level of Significance After Mitigation

Significant and unavoidable impact.

Conflicts with Agricultural Zoning or Williamson Act Contracts

Impact AG-2: The proposed project would not conflict with existing zoning for agricultural use or conflict with a Williamson Act contract.

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to conflict with existing agricultural zoning or Williamson Act contracts.

Master Plan

Agricultural Zoning

The San Joaquin County General Plan currently designates the Master Plan area General Agriculture. The San Joaquin County Zoning Ordinance designates the Master Plan area General Agriculture, 40-Acre Minimum Parcel Size (AG-40). This zoning designation is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. The existing County agricultural zoning would be replaced with City urban zoning consistent with the City General Plan following annexation. The City of Manteca General Plan currently designates the Master Plan area Light Industrial and Urban Reserve. The City of Manteca does not identify zoning designations for areas outside of the city limits.

The project includes annexation to the City of Manteca. A General Plan Amendment and a pre-zone application are proposed that will zone the property to be consistent with the proposed Master Plan land uses of industrial and community commercial. This process would reconcile any conflicts with

existing agricultural zoning, as the affected properties would be re-zoned to industrial or commercial use. Therefore, after annexation, the project would not conflict with an existing agricultural zone.

Williamson Act Contracts – Agricultural Preserves

None of the parcels within the Master Plan area are encumbered by an active Williamson Act contract. Therefore, the annexation of these parcels into the City of Manteca would not have the potential to create conflicts with an active Williamson Act contract.

The Master Plan area is designated by San Joaquin County to be under an agriculture preserve, R-83-5. 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 contract. Preserves are also intended to create a setting for contract-protected lands that is conducive to continuing agricultural use. If land within an agricultural preserve is annexed, the City must continue to implement the rights, duties, and powers of the County in administering the preserve and contracts unless conditions specified in California Government Code Section 51243.5 apply. Uses of contracted and preserve land must meet compatibility standards identified in California Government Code Sections 51238 through 51238.3 and Section 51296.7. Otherwise, contract termination must occur prior to the initiation of the land use, or the preserve must be disestablished. Upon annexation, the agricultural preserve will be disestablished. There are no Williamson Act contracts in place within the Master Plan area; therefore, no contract cancellations will be required. Impacts would be less than significant.

Non-Master Plan Annexations

Agricultural Zoning

The San Joaquin County General Plan currently designates the non-master plan area-East as Low Density Residential. The San Joaquin County Zoning Ordinance designates the non-master plan area - East as Agriculture - Urban Reserve, 20-acre Minimum (AU-20). This zone is intended to retain in agriculture those areas planned for future urban development in order to facilitate compact, orderly growth and to assure the proper timing and economical provision of services and utilities.

The San Joaquin County General Plan currently designates the non-master plan area - South as General Agriculture and Limited Industrial. The San Joaquin County Zoning Ordinance designates part of the non-master plan area - South as General Agriculture, 40-acre Minimum (AG-40) Reserve, Limited Industrial (I-L/S-11a). The agricultural zone is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. The limited industrial zone is intended to provide for light impact manufacturing, warehousing, wholesaling, construction contracting, and distribution uses.

The existing County agricultural zoning would be replaced with City urban zoning consistent with the City General Plan following annexation. The City of Manteca General Plan currently designates the non-master plan area - East as Neighborhood Commercial, Low Density Residential, Medium Density Residential, High Density Residential, and Park. The City of Manteca General Plan currently

designates the non-master plan area - South as Light Industrial. The City of Manteca does not identify zoning designations for areas outside of the city limits. The project includes annexation to the City of Manteca. The proposed annexations would bring these areas into the Manteca city limits and involve associated General Plan Amendments and pre-zoning approvals. This process would reconcile any conflicts with existing agricultural zoning, as the affected properties would be re-zoned for consistency with the General Plan land use designation, which are non-agricultural in nature. Impacts would be less than significant.

Williamson Act Contracts – Agricultural Preserves

As a standard condition of annexation, a Notice of Non-Renewal must be filed for any parcels with an active Williamson Act contract. However, none of the parcels within the non-Master Plan annexation areas are encumbered by an active a Williamson Act contract. Therefore, the annexation of these parcels into the City of Manteca would not have the potential to create conflicts with an active Williamson Act contract.

There are several parcels within the non-Master Plan annexation areas that are designated by San Joaquin County to within agriculture preserves, R-69-C1 and R-82-11. Upon annexation, these agricultural preserves will be disestablished. There are no Williamson Act contracts in place within the non-Master Plan areas; therefore, no contract cancellations will be required. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Pressures to Convert Farmland to Non-Agricultural Use

Impact AG-3:	**The proposed project would not involve other changes in the existing environment, which, because of their location or nature, could result in conversion of farmland to non-agricultural use.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to create pressure to convert farmland to non-agricultural use.

Master Plan

The Master Plan area is surrounded by urban uses to the west, agriculture land to the north, agriculture and low-density residential to the east, and agriculture and residential uses to the south.

The City of Manteca General Plan contemplates urban development on the undeveloped land east and south of the project site. The land north of the project site is outside the City of Manteca's planning boundaries and is expected to remain under the authority of San Joaquin County. The designation of urban land uses for areas surrounding the project site indicates the City has planned for the conversion of the agricultural land within the City's planning boundary. General Plan Land Use Policy RC-P-24 identifies the use of buffers at the interface of urban development and farmland, such as roadways, to minimize conflict between urban and agricultural uses. In this case, both Roth Road and Airport Way serve as buffers between the Master Plan area and these agricultural uses. Although the General Plan contemplates the long-term conversion of the lands to south and east of the project site to non-agricultural use, the use of a buffer is a widely recognized planning technique intended to prevent the premature conversion of agricultural land to non-agricultural use. The lands north of the project site would remain under the authority of San Joaquin County. Roth Road would serve as a buffer between the project site and the unincorporated lands north of the project site. As such, the proposed project would be consistent with the General Plan's policies intended to avoid premature conversion of farmlands; therefore, the proposed project would not create additional pressures to convert this land to non-agricultural use. Impacts would be less than significant.

Non-Master Plan Annexations

While the non-master plan areas will be annexed into the City of Manteca and assume the City's General Plan designations, no changes to existing land use will occur. The 77-acre East area contains agricultural uses and low density residential uses. The 144-acre South area contains agricultural uses and low density residential uses. The non-master plan areas are surrounded by urban development. Lathrop Road, Airport Way, and the Union Pacific Railroad tracks serve as buffers between the non-master plan areas and urban development. General Plan Land Use Policy RC-P-24 identifies the use of buffers at the interface of urban development and farmland as one method of minimizing conflicts between farmland and urban development. Although the General Plan contemplates the long-term conversion of the non-master plan areas to non-agricultural use, the use of a buffer is a widely recognized planning technique intended to prevent the premature conversion of agricultural land to non-agricultural use. In this case, the buffers serve to protect the non-master plan areas from development pressures from the surrounding land uses. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.3 - Air Quality

3.3.1 - Introduction

This section describes the existing air quality setting and potential effects from project implementation on the site and its surrounding area. Michael Brandman Associates conducted air quality and greenhouse gas analyses for the project. The analysis in this section is supported by the Air Quality Modeling Output and the Health Risk Assessment, which are both provided in Appendix C.

3.3.2 - Environmental Setting

San Joaquin Valley Air Basin

The Master Plan area is located in the City of Manteca, which is located in the San Joaquin Valley Air Basin. Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The combination of topography and inversion layers generally prevents dispersion of air pollutants. The information in this section is primarily from the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) and the accompanying Technical Document.

The Air Basin has an "inland Mediterranean" climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be a catalyst in the formation of some air pollutants (such as ozone); the Air Basin averages over 260 sunny days per year. At the Stockton Metropolitan Airport, the closest meteorological station located approximately 2 miles northeast of the Master Plan area, the maximum daily average temperatures (approximately 94.3 degrees Fahrenheit [ºF]) occur in July. The range of daily temperature in the summer can vary as much as 30ºF. The lowest average high temperatures (approximately 37.5ºF) occur in January.

The majority of rainfall in the Air Basin occurs between November and April. Since 1948, precipitation at the Stockton Metropolitan Airport weather station averaged 13.8 inches per year, with 89 percent of the precipitation occurring between November and April.

Topography

The Air Basin is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Dominant Airflow

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Southeast Desert Air Basin portion of Kern County. As the wind moves through the

Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

Inversions

Generally, the temperature of air decreases with height, creating a gradient from warmer air near the ground to cooler air at elevation. This gradient of cooler air over warm air is known as the environmental lapse rate. Inversions occur when warm air sits over cooler air, trapping the cooler air near the ground. These inversions trap pollutants from dispersing vertically and the mountains surrounding the San Joaquin Valley trap the pollutants from dispersing horizontally. Strong temperature inversions occur throughout the Air Basin in the summer, fall, and winter. Daytime temperature inversions occur at elevations of 2,000 to 2,500 feet above the San Joaquin Valley floor during the summer and at 500 to 1,000 feet during the winter.

The result is a relatively high concentration of air pollution in the valley during inversion episodes. These inversions cause haziness, which in addition to moisture may include suspended dust, a variety of chemical aerosols emitted from vehicles, particulates from wood stoves, and other pollutants. In the winter, these conditions can lead to CO "hotspots" along heavily traveled roads and at busy intersections. During summer's longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NO_x), which results in the formation of ozone.

Location and Season

Because of the prevailing daytime winds and time-delayed nature of ozone, concentrations are highest in the southern portion of the Air Basin, such as around Bakersfield. Summers are often periods of hazy visibility and occasionally unhealthful air, while winter air quality impacts tend to be localized and can consist of (but are not exclusive to) odors from agricultural operations; soot or smoke around residential, agricultural, and hazard-reduction wood burning; or dust near mineral resource recovery operations.

Regional Air Quality

The Air Basin is designated as "nonattainment" for the federal ozone and $PM_{2.5}$ standards, and "nonattainment" for the state ozone, $PM_{10,}$ and $PM_{2.5}$ standards, as discussed in the Regulatory Framework section. A description of the air pollutants and related health effects is also contained in the Regulatory Framework section.

San Joaquin County Emissions Inventory

An emissions inventory is an account of the amount of air pollution generated by various emissions sources and is organized by source categories: mobile, stationary, areawide, and natural sources.

Mobile sources include on-road sources and off-road mobile sources. The on-road emissions inventory, which includes automobiles, motorcycles, and trucks, is an estimate of population, activity,

and emissions of the on-road motor vehicles used in California. The off-road emissions inventory is an estimate of the population, activity, and emissions of various off-road equipment, including recreational vehicles, farm and construction equipment, lawn and garden equipment, forklifts, locomotives, and commercial marine and marine pleasure craft.

Stationary sources are large, fixed sources of air pollution, such as power plants, refineries, and manufacturing facilities. Stationary sources also include aggregated point sources. These include many small point sources, or facilities, that are not inventoried individually but are estimated as a group and reported as a single-source category. Examples include gas stations and dry cleaners. Each of the local air districts estimates the emissions for the majority of stationary sources within its jurisdiction.

Areawide sources include source categories associated with human activity, and these emissions take place over a wide geographic area. Consumer products, fireplaces, farming operations (such as tilling), and unpaved road dust are examples of areawide sources.

Natural, or non-anthropogenic, sources include source categories with naturally occurring emissions such as wildfires and biogenic emissions from plants.

Table 3.3-1 summarizes San Joaquin County's estimated 2008 emissions inventory for major categories of air pollutants presented in tons per day. According to the 2008 data (the most recent year available) for San Joaquin County, over 44 percent of ROG emissions came from mobile sources, almost equally split between on-road and off-road mobile sources. Approximately 27 percent of ROG emissions came from areawide sources, such as solvent evaporation and farming operations. For the CO inventory, mobiles sources accounted for approximately 88 percent of emissions. The 2008 NO_x inventory is similarly dominated by mobile sources (approximately 86 percent).

Areawide sources generated the majority of PM_{10} and $PM_{2.5}$ emissions in San Joaquin County. The PM_{10} inventory is dominated by areawide sources with 80 percent, mobile sources account for 12 percent. Within areawide sources, the main contributors of PM_{10} were farming operations and paved road dust, constituting 25 and 23 percent of the County's total PM_{10} inventory, respectively.

The inventory for $PM_{2.5}$ is also concentrated in areawide sources at approximately 57 percent, mobile sources account for 29 percent, and stationary sources for 14 percent. The main areawide sources to contribute to the County's $PM_{2.5}$ inventory were residential fuel combustion, farming operations, and paved road dust, contributing 15, 13, and 10 percent, respectively.

Table 3.3-1: San Joaquin County 2008 Emissions Inventory

Source	Pollutant (tons per day)				
	ROG	CO	NO_x	PM_{10}	$PM_{2.5}$
Stationary Sources	7.5	4.9	10.6	2.6	1.6
Areawide Sources	15.1	22.0	1.7	26.4	6.4
Mobile Sources	24.4	195.7	78.7	3.9	3.3
Natural (Non-anthropogenic)	8.2	0.2	0.0	0.0	0.0
Total	55.2	222.8	91.0	32.9	11.3
Source: California Air Resources Board, 2009.					

Local Air Quality

The SJVAPCD operates monitoring stations throughout the Air Basin. Existing local air quality, historical trends, and projections of air quality are best evaluated by reviewing relevant air pollutant concentrations from near the Master Plan area. The California Air Resources Board (CARB) and SJVAPCD operate five air monitoring stations in San Joaquin County. The closest monitoring station to the Master Plan area is located in Stockton on Hazelton Avenue near Wilson Way, approximately 6.5 miles to the north. Table 3.3-2 summarizes 2007 through 2009 published monitoring data from CARB's Aerometric Data Analysis and Management System for the Stockton-Hazelton Station.

As shown in Table 3.3-2, ambient air pollution concentrations in the Master Plan area regularly exceeded the state 1-hour ozone standard and the federal 8-hour standard in the last 3 years. In the same timeframe, the Master Plan area exceeded the state daily PM_{10} standard and the federal $PM_{2.5}$ standard. However, the Master Plan area did not exceed the federal or state CO standards, nor did the Master Plan area exceed the federal PM_{10} standard.

Table 3.3-2: Air Quality Monitoring Summary

Pollutant	Averaging Time (Units)	2007	2008	2009
Ozone	Maximum 1 Hour (ppm) Days > State Standard (0.09 ppm)	0.093 0	**0.105** **2**	**0.116** **2**
	Maximum 8 Hour (ppm)[1] Days > 2008 Federal Standard (0.075 ppm) Days > State Standard (0.07 ppm)	**0.082** **3** **4**	**0.091** **4** **7**	**0.096** **2** **4**
Nitrogen dioxide (NO_2)	Annual Average (ppm)	0.016	0.017	0.015
	Maximum 1 Hour (ppm) Days > State Standard (0.18 ppm)	0.070 0	0.076 0	0.068 0
Sulfur dioxide	Max 24 Hour (ppm) Days > State Standard (0.04 ppm)	0.007 0	0.003 0	0.005 0
	Annual Average (ppm)	ID	0.001	0.001

Table 3.3-2 (cont.): Air Quality Monitoring Summary

Pollutant	Averaging Time (Units)	2007	2008	2009
Carbon monoxide (CO)	Maximum 1 Hour (ppm)[2]	3.30	2.66	3.27
	Maximum 8 Hour (ppm) Days > State Standard (9.0 ppm) Days > Federal Standard (9 ppm)	2.31 0 0	1.86 0 0	2.29 0 0
Fine particulate matter (PM_{10})	State Annual Average (20 µg/m^3)	**27.7**	**31.1**	**23.6**
	Maximum 24 Hour (µg/m^3) [1] Est. Days > State Standard (50 µg/m^3) Est. Days > Federal Standard (150 µg/m^3)	**75.0** **23.5** 0.0	**105.0** **48.6** 0.0	58.8 18.2 0.0
Ultrafine particulate matter ($PM_{2.5}$)	State Annual Average (µg/m^3)	**13.5**	**14.4**	**11.3**
	Maximum 24 Hour (µg/m^3) Est. Days > Federal Standard (35 µg/m^3)	**66.8** **34.1**	**91.0** **27.7**	**51.1** **15.9**

Notes:
> = exceed ppm = parts per million ID = insufficient data
Exceedances are listed in **bold.**
[1] From the California measurement.
[2] The CARB does not report 1-hour average CO concentrations in its database, only 8-hour CO concentrations. Therefore, the 1-hour CO concentration was derived by dividing the 8-hour concentration by 0.7.
Data is from the Stockton-Hazelton Street Station except for sulfur dioxide, which is from the Fresno station
Source: California Air Resources Board, 2010.

Local Sources of Air Pollution

Nearby sources of air pollution include the following:

- Union Pacific Railroad Oakland and Fresno Subdivisions, located approximately 0.1 mile west and approximately 0.3 mile south, respectively.
- Interstate 5 is approximately 1 mile west of the Master Plan area, which is associated with emissions from motor vehicles and trucks.
- The Lovelace Transfer Station, which may be associated with odors.
- There is a feed lot or dairy located at Roth Road and S. Airport Way.
- The Calaveras Materials cement plant is located west of the Master Plan area near the Lathrop Road overcrossing of the Oakland Subdivision, which may have emissions of fugitive dust and/or toxic air contaminants.
- California Natural Products, a manufacturing plant, located at 1250 Lathrop Road.
- Sharpe Army Depot, which may have emissions from motor vehicles.
- Various residences, which have minimal emissions from motor vehicles, natural gas, and ROGs.

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. For purposes of CEQA, the SJVAPCD considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The nearest sensitive receptors to the Master Plan area are the residences located approximately 50 meters to the east across Airport Way and approximately 30 meters to the south across Lathrop Road.

Greenhouse Gases

Unlike criteria and toxic air pollutants, which are of regional and local concern, greenhouse gases are global pollutants. Greenhouse gases trap heat in the atmosphere. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities also emit greenhouse gas. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of one. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent metric. Methane's warming potential of 21 indicates that methane has a 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential.

Table 3.3-3 summarizes the major greenhouse gases expected to be generated by the Master Plan uses.

Table 3.3-3: Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Methane (CH_4)	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, decay of organic matter, and cattle.
Nitrous oxide (N_2O)	Nitrous oxide is also known as laughing gas and is a colorless greenhouse gas. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.

Table 3.3-3 (cont.): Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Carbon dioxide (CO_2)	Carbon dioxide is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Hydro-fluorocarbons	Hydrofluorocarbons are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Source: Michael Brandman Associates, 2010.		

Emissions

Emissions worldwide were approximately 49,000 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2004, as identified in the Intergovernmental Panel on Climate Change's Fourth Assessment Report. In 2007, emissions in the United States were 7107 $MMTCO_2e$ and in California were 477 $MTCO_2e$, as identified by the California Air Resources Board's Almanac of Emissions.

Potential Environmental Effects

The International Panel on Climate Change has declared that worldwide, average temperatures are likely to increase by approximately 3°F to 7°F by the end of the 21st century. However, a global temperature increase does not translate to a uniform increase in temperature in all locations on the earth. Regional climate changes are dependent on multiple variables, such as topography and the effects of natural climatic changes. One region of the earth may experience increased temperature, increased incidents of drought and similar warming effects, whereas another region may experience a relative cooling. Climate change impacts to North America may include diminishing snowpack, increasing evaporation, exacerbated shoreline erosion, exacerbated inundation from sea level rising, increased risk and frequency of wildfire, increased risk of insect outbreaks, increased experiences of heat waves, and rearrangement of ecosystems, as species and ecosystem zones shift northward and to higher elevations.

In California, climate change may result in consequences such as the following (The information is from a document prepared by the California Climate Change Center in 2006 and Moser et al. in 2009.):

- **A reduction in the quality and supply of water to the State from the Sierra snow pack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as

much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.

- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are expected to increase by approximately 30 percent toward the end of the century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** Crops that are likely to be hard hit include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if temperature rises are kept in the lower warming range.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If heat-trapping emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **Damage to marine ecosystems and the natural environment.**
- **An increase in infections, disease, asthma, heat stroke/exhaustion, heart attack, stroke, and other health-related problems.**
- **A decrease in the health and productivity of California's forests**.

Although certain environmental effects are widely accepted to be a potential hazard to certain locations, such as rising sea level for low-laying coastal areas, it is currently infeasible to predict all environmental effects of climate change on any one location.

3.3.3 - Regulatory Framework

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The CARB regulates at the state level and SJVAPCD regulates at the air basin level.

Federal and State

The EPA handles global, international, national, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as federal standards or national standards. There are national standards for six common air pollutants, called criteria air pollutants, which were identified from provisions of the Clean Air Act of 1970. The criteria pollutants are:

- Ozone
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Nitrogen dioxide
- Carbon monoxide (CO)
- Lead
- Sulfur dioxide

The national standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary national standards are the levels of air quality necessary, with an adequate margin of safety, to protect public health, as discussed in Ambient Air Quality Standards summary prepared by the California Air Resources Board.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain national standards. The State Implementation Plan for the State of California is administered by the CARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. The CARB also administers California Ambient Air Quality Standards for the 10 air pollutants designated in the California Clean Air Act. The 10 state air pollutants are the six national standards listed above as well as the following: visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

The national and state ambient air quality standards, the most relevant effects, the properties, and sources of the pollutants are summarized in Table 3.3-4.

Table 3.3-4: Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard [a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	(a) Decrease of pulmonary function and localized lung edema in humans and animals, (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals, (c) increased mortality risk, (d) risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans, (e) vegetation damage, (f) property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between reactive organic gases, NO_x, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (ROG and NO_x) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.075 ppm			
Carbon Monoxide (CO)	1 Hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease, (b) decreased exercise tolerance in persons with peripheral vascular disease and lung disease, (c) impairment of central nervous system functions, (d) possible increased risk to fetuses.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen Dioxide [c] (NO_2)	1 Hour	0.18 ppm	0.100 ppm	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups, (b) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes, (c) contribution to atmospheric discoloration.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides - NO_x (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_x is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_x can react with compounds to form nitric acid and related particles.	NO_x is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Table 3.3-4 (cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard [a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm	0.075 ppm [d]	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and national standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour[1]	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 ppm			
	Annual	—	0.030 ppm			
Particulate Matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease, (b) declines in pulmonary function growth in children, (c) increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in $PM_{2.5}$ levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter.	Stationary sources include fuel combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust.
	Mean	20 µg/m^3	—			
Particulate Matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3			
	Annual	12 µg/m^3	15.0 µg/m^3			

Table 3.3-4 (cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard [a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m^3	—	(a) Decrease in ventilatory function, (b) aggravation of asthmatic symptoms, (c) aggravation of cardio-pulmonary disease, (d) vegetation damage, (e) degradation of visibility, (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-}. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead [b]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. An aerosol is a collection of solid, liquid, or mixed-phase particles suspended in the air. Lead was first regulated as an air pollutant in 1976. Leaded gasoline was first marketed in 1923 and was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or national air quality standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering. Lead can be removed from the atmosphere through deposition to soils, ice caps, oceans, and inhalation.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl Chloride [b]	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, CARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.

Table 3.3-4 (cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard [a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Hydrogen Sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).
Reactive Organic Gases (ROGs)		There are no state or national ambient air quality standards for ROGs because they are not classified as criteria pollutants.		Health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of ROGs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many ROGs have been classified as toxic air contaminants.	ROGs, or volatile organic compounds (VOCs), are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.	Indoor sources of ROGs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of ROGs are from combustion and fuel evaporation. A reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. ROGs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.
Benzene		There are no ambient air quality standards for benzene.		Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer.	Benzene is a ROG. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a "Group A" carcinogen.	Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. It is used in the extraction of oils from seeds and nuts and in the manufacture of detergents, explosives, and pharmaceuticals.

Table 3.3-4 (cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard [a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Diesel Particulate Matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of diesel exhaust exposure include eye, nose, throat, and lung irritation, and can cause coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. In 2002 in the South Coast Air Basin, the main sources of diesel particulate matter were due to the combustion of diesel fuel in diesel-powered engines. Such engines can include on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Abbreviations:
ppm = parts per million (concentration) $\mu g/m^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

a) National standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
b) The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
c) Effective April 12, 2010, to attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb, or 188 $\mu g/m^3$
d) To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

Source of effects: South Coast Air Quality Management District, 2007; California Environmental Protection Agency, 2002; California Air Resources Board, 2009; United States Environmental Protection Agency, 2007; United States Environmental Protection Agency, 2000; National Toxicology Program, 2005.
Source of standards: California Air Resources Board, 2010.
Source of properties and sources: United States Environmental Protection Agency, 1999; United States Environmental Protection Agency, 2003; Environmental Protection Agency, 2009; National Toxicology Program, 2005.

Toxic Air Contaminant Regulation

The California legislature enacted the Toxic Air Contaminant Identification and Control Act (AB 1807; Tanner 1983) governing the release of toxic air contaminants into the air. This law charges CARB with the responsibility for identifying substances as toxic air contaminants, setting priorities for control, adopting control strategies, and promoting alternative processes. The CARB has designated almost 200 compounds as toxic air contaminants. AB 2588, the Air Toxics "Hot Spots" Program, was enacted in 1987, and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels. CARB also prepares the California Toxics Inventory, and provides Risk Management Guidelines for new and modified sources of toxic air contaminants. Additionally, the CARB has implemented control strategies, called Airborne Toxic Control Measures, for a number of compounds that pose high health risk and show potential for effective control, including diesel particulate matter and asbestos. Diesel particulate matter is discussed in Table 3.3-4.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States.

Construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos, but no demolition is associated with this project. However, asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs).

The CARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of

asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity.

CARB's Land Use Handbook

CARB adopted the Air Quality and Land Use Handbook: A Community Health Perspective (Land Use Handbook) in 2005. The Land Use Handbook provides information and guidance on siting sensitive receptors in relation to sources of toxic air contaminants. The sources of toxic air contaminants identified in the Land Use Handbook are high-traffic freeways and roads, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and large gasoline dispensing facilities. If the project involves siting a sensitive receptor or source of toxic air contaminants discussed in the Land Use Handbook, siting mitigation may be added to avoid potential land use conflicts, thereby reducing the potential for health impacts to the sensitive receptors.

The Master Plan does not propose new sensitive receptors near existing sources of toxic air contaminants. However, it does it contain the sources of air pollution discussed in the Land Use Handbook, specifically, distribution centers. The Land Use Handbook's recommendations are based on siting new sensitive receptors, and are only guidelines. They are not designed to substitute for more specific information if it exists. The recommendations for distribution centers are:

- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where operations exceed 300 hours per week.
- Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.

San Joaquin Valley Air Pollution Control District

The SJVAPCD is responsible for controlling emissions primarily from stationary sources. The SJVAPCD maintains air quality monitoring stations throughout the basin. The SJVAPCD, in coordination with the eight countywide transportation agencies, is also responsible for developing, updating, and implementing air quality attainment plans for the Air Basin. In addition, in 2002, the SJVAPCD has prepared the GAMAQI, which sets forth recommended thresholds of significance, analysis methodologies, and provides guidance on mitigating significant impacts.

Attainment Status

There are three terms used to describe if an air basin is exceeding or meeting federal and state standards: attainment, nonattainment, and unclassified. Air basins are assessed for each applicable pollutant and receive a designation for each standard based on that assessment. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

Areas are designated attainment or nonattainment on a per-pollutant basis. If an air basin exceeds the form of a federal or state standard, the air basin is designated as "nonattainment" for that air pollutant. An air basin is designated as "attainment" for pollutant if all the standards for that pollutant are met. If there is inadequate or inconclusive data to make a definitive attainment designation for a pollutant, the air basin is considered "unclassified." The current attainment designations for the Air Basin are shown in Table 3.3-5.

Table 3.3-5: Air Basin Attainment Status

Pollutant	Designation	
	Federal	State
Ozone –1-hour	No Federal Standard	Nonattainment/Severe
Ozone – 8-hour	Nonattainment/Serious	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment
Source: San Joaquin Valley Air Pollution Control District, 2010.		

Current Air Quality Plans

Ozone Plans

The Air Basin is designated nonattainment of state and federal health-based air quality standards for ozone. To meet Clean Air Act requirements for the 1-hour ozone standard, the SJVAPCD adopted an

Extreme Ozone Attainment Demonstration Plan in 2004, which has an attainment date of 2010. However, the federal 1-hour ozone standard has been revoked by the EPA and replaced with an 8-hour standard. The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010.

The Air Basin is classified as serious nonattainment for the federal 8-hour ozone standard. On April 30, 2007, the SJVAPCD's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be unfeasible. The 2007 Ozone Plan calls for a 75-percent reduction in NO_x emissions and a 25-percent reduction in ROG emissions by the year 2023. CARB approved the plan in June 2007. On April 15, 2010, the EPA signed a final rule to grant requests from the State of California to reclassify 8-hour ozone nonattainment areas in San Joaquin Valley from "serious" to "extreme."

State ozone standards do not have an attainment deadline but require implementation of all feasible measures to achieve attainment at the earliest date possible.

Particulate Matter Plans

The Air Basin was designated nonattainment of state and federal health-based air quality standards for PM_{10}. To meet Clean Air Act requirements for the PM_{10} standard, the SJVAPCD adopted a PM_{10} Attainment Demonstration Plan (Amended 2003 PM_{10} Plan and 2006 PM_{10} Plan), which has an attainment date of 2010.

The SJVAPCD adopted the 2007 PM_{10} Maintenance Plan and Request for Redesignation (2007 PM_{10} Plan). The 2007 PM_{10} Plan contains modeling demonstrations that show the Air Basin will not exceed the federal PM_{10} standard for 10 years after the expected EPA redesignation, monitoring, and verification measures, and it provides a contingency plan. Even though the EPA revoked the federal annual PM_{10} standard, the 2007 PM_{10} Plan addresses both the annual and 24-hour standards because both standards were included in the EPA-approved SIP. The EPA finalized the determination that the Air Basin attained the PM_{10} standards on October 17, 2007, effective October 30, 2007. On September 25, 2008, the EPA redesignated the Air Basin as attainment for the federal PM_{10} standard and approved the PM_{10} Plan.

The Air Basin is also designated nonattainment for the new federal $PM_{2.5}$ annual standard. The SJVAPCD adopted the 2008 $PM_{2.5}$ Plan on April 30, 2008. This Plan demonstrates the Air Basin will attain the 1997 federal standard by 2014 and make progress toward attaining the 2006 federal 24-hour standard. Barring delays due to legal challenges, the SJVAPCD estimates that attainment plans for the federal 2006 standard will be required by 2012 or 2013 with an attainment deadline of 2020. Measures contained in the 2003 PM_{10} Plan will also help reduce $PM_{2.5}$ levels and will provide progress toward attainment until new measures are implemented for the $PM_{2.5}$ Plan, if needed.

Applicable Rules

The SJVAPCD rules and regulations that may apply to the Master Plan uses include but are not limited to the following:

- SJVAPCD Rule 2201 – New and Modified Stationary Source Review.
- SJVAPCD Rule 4002 – National Emission Standards for Hazardous Air Pollutants.
- SJVAPCD Rule 4102 – Nuisance. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.
- SJVAPCD Rule 4601 – Architectural Coatings. The purpose of this rule is to limit ROG emissions from architectural coatings. Emissions are reduced by limits on ROG content and providing requirements on coatings storage, cleanup, and labeling.
- SJVAPCD Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit ROG emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.
- SJVAPCD Regulation VIII – Fugitive PM_{10} Prohibitions. Rule 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc.

Compliance with Rule 9510 (ISR)

SJVAPCD Rule 9510 – Indirect Source Review (ISR) reduces the impact of NO_x and PM_{10} emissions from growth in the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through onsite mitigation, offsite SJVAPCD-administered projects, or a combination of the two. Each of the Master Plan uses will submit an Air Impact Assessment application in accordance with Rule 9510's requirements.

Compliance with SJVAPCD Rule 9510 reduces the emissions impact of the Master Plan uses through incorporation of onsite measures as well as payment of an offsite fee that funds emission reduction projects in the Air Basin. The emissions analysis for Rule 9510 is highly detailed and is dependent on the exact use design that is expected to be constructed or installed. Minor changes to components between the CEQA analysis and construction often occur. An example of such a change is a change in square footage. The required amounts of emission reductions required by Rule 9510 are as follows:

Construction Exhaust:	20 percent of the total NO_x emissions, and
	45 percent of the total PM_{10} emissions.

Operational Emissions: 33 percent of NO_x emissions over the first 10 years, and
50 percent of the PM_{10} emissions over the first 10 years.

City of Manteca

The City of Manteca General Plan establishes the following goals and policies associated with air quality:

- **Goal AQ-1:** Improve air quality by:
  - Achieving and maintaining ambient air quality standards established by the U.S. Environmental Protection Agency, the California Air Resources Board, and the San Joaquin Air Pollution Control District;
  - Minimizing public exposure to toxic or hazardous air pollutants; and
  - Minimizing public exposure to pollutants that create a public nuisance, such as unpleasant odors.
- **Goal AQ-2:** Integrate air quality planning with land use and transportation planning processes in order to reduce vehicle miles traveled in the City and by commuters.
- **Goal AQ-3:** Increase opportunities for alternatives to internal combustion automobiles including, but not limited to, public transportation, bicycles, walking and alternative fuel vehicles including hybrid gas-electric, electric, and compressed natural gas.
- **Goal AQ-4:** Reduce air emissions through energy conversation.
- **Policy AQ-P-2:** Develop a land use plan that will help to reduce the need for trips and will facilitate the common use of public transportation, walking, bicycles, and alternative fuel vehicles.
- **Policy AQ-P-3:** Segregate and provide buffers between land uses that typically generate hazardous or obnoxious fumes and residential or other sensitive land uses.
- **Policy AQ-P-4:** Develop and maintain street systems that provide for efficient traffic flow and thereby minimize air pollution from automobile emissions.
- **Policy AQ-P-5:** Develop and maintain circulation systems that provide alternatives to the automobile for transportation, including bicycle routes, pedestrian paths, bus transit, and carpooling.
- **Policy AQ-P-7:** New construction will be managed to minimize fugitive dust and construction vehicle emissions.
- **Policy AQ-P-10:** Encourage energy efficient building designs.

3.3.4 - Greenhouse Gas Regulatory Framework

International and National

International and federal agreements have been enacted to deal with climate change issues. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant

to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change. Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

A particularly notable result of the United Nations Framework Convention on Climate Change efforts is a treaty known as the Kyoto Protocol, which went into effect on February 16, 2005. When countries sign the Kyoto Protocol, they demonstrate their commitment to reduce their emissions of greenhouse gases or engage in emissions trading. More than 170 countries are currently participating in the Kyoto Protocol. Industrialized countries are required to reduce their greenhouse gas emissions by an average of 5 percent below their 1990 levels by 2012. In 1998, United States Vice President Al Gore symbolically signed the Protocol; however, in order for the Kyoto Protocol to be formally ratified, the United States Congress must approve it. Congress did not do this during the Clinton Administration. Former President George W. Bush did not submit the Protocol to Senate to be ratified based on the exemption granted to China. President Barack Obama has not taken action regarding the Kyoto Protocol because it is about to end.

Massachusetts v. EPA (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the EPA regulate four greenhouse gases, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court held that petitioners have a standing to challenge the EPA and that the EPA has statutory authority to regulate greenhouse gases emissions from new motor vehicles.

The Consolidated Appropriations Act of 2008 (HR 2764): Passed in December 2007, this law requires the establishment of mandatory greenhouse gas reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires reporting of greenhouse gas emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under Section 202(a) of the Clean Air Act: (1) Current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons,

perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations. (2) The combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

Congress first passed the Corporate Average Fuel Economy law in 1975, which is to increase the fuel economy of cars and light trucks thereby reducing energy consumption. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States. The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The EPA and the National Highway Safety Administration will now begin working on a second-phase joint rulemaking to establish national standards for light-duty vehicles for model years 2017 and beyond.

California

There has been significant legislative and regulatory activity that affects climate change and greenhouse gases in California, as discussed below.

Title 24. Although not originally intended to reduce greenhouse gases, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. The 2008 standards became effective January 1, 2010. The requirement for when the 2008 standards must be followed is dependent on when the application for the building permit is submitted. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Green Building Standards. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which will go into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code will require:

- A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;
- 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30-, 35- and 40-percent reductions;
- Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day;
- Moisture-sensing irrigation systems for larger landscaped areas;
- Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particle board;
- Mandatory inspections of energy systems (e.g., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Pavley Regulations. California AB 1493, enacted on July 22, 2002, required the CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. The regulation was stalled by automaker lawsuits and by the EPA's denial of an implementation waiver. On January 21, 2009, the CARB requested that the EPA reconsider its previous waiver denial. On January 26, 2009, President Obama directed that the EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, the EPA granted the waiver request, which begins with motor vehicles in the 2009 model year.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009-2012) standards will result in about a 22-percent reduction compared with the 2002 fleet, and the mid-term (2013-2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and

allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for greenhouse gas emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be an aggressive, but achievable, mid-term target. The Climate Action Team's Report to the Governor in 2006 contains recommendations and strategies to help ensure the 2020 targets in Executive Order S-3-05 are met.

Low Carbon Fuel Standard - Executive Order S-01-07. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low-Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to CARB for consideration as an "early action" item under AB 32. The CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

SB 97. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to adequately analyze the effects of greenhouse gases would not violate CEQA.

On April 13, 2009, OPR submitted to the Secretary for Natural Resources its recommended amendments to the CEQA Guidelines for addressing greenhouse gas emissions, as required by SB 97.

On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments pursuant to Public Resources Code section 21083.05. Following a 55-day public comment period and two public hearings, the Natural Resources Agency proposed revisions to the text of the proposed Guidelines amendments.

The Natural Resources Agency transmitted the adopted amendments and the entire rulemaking file to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. CARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The CARB approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) on December 6, 2007. Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a business as usual scenario are estimated to be 596 $MMTCO_2e$.

Under AB 32, the CARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The CARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The CARB estimates that the 44 recommendations are expected to result in reductions of at least 42 $MMTCO_2e$ by 2020, representing approximately 25 percent of the 2020 target.

The CARB approved the Climate Change Scoping Plan in December 2008. The Scoping Plan contains measures designed to reduce the State's emissions to 1990 levels by the year 2020. The

Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. The measures in the Scoping Plan will be in place by 2012. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.

Executive Order S-13-08. Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, in December 2009, the California Natural Resources Agency released its 2009 California Climate Adaptation Strategy. The Strategy is the " . . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

SB 1078, SB 107, and Executive Order S-14-08. On September 12, 2002, Governor Gray Davis signed SB 1078 requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

San Joaquin Valley Air Pollution Control District

Climate Change Action Plan

On August 21, 2008, the SJVAPCD Governing Board approved the SJVAPCD's proposal, called the Climate Change Action Plan, to begin a public process to bring together stakeholders, land use agencies, environmental groups, and business groups, and conduct public workshops to develop comprehensive policies for CEQA guidelines and a carbon exchange bank, and voluntary greenhouse gas emissions mitigation agreements for the Governing Board's consideration. The Climate Change Action Plan contained the following goals and actions:

Goals:

1. Assist local land-use agencies with California Environmental Quality Act (CEQA) issues relative to projects with greenhouse gas emissions increases.
2. Assist Valley businesses in complying with mandates of AB 32 (Global Warming Solutions Act of 2006).
3. Ensure that climate protection measures do not cause increases in toxic or criteria pollutants that adversely impact public health or environmental justice communities.

Actions:

1. Authorize the Air Pollution Control Officer to develop greenhouse gas significance threshold(s) or other mechanisms to address CEQA projects with greenhouse gas emissions increases. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in the spring of 2009.
2. Authorize the Air Pollution Control Officer to develop necessary regulations and instruments for establishment and administration of the San Joaquin Valley Carbon Exchange Bank for voluntary greenhouse gas reductions created in the Valley. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in spring 2009.
3. Authorize the Air Pollution Control Officer to enhance the District's existing criteria pollutant emissions inventory reporting system to allow businesses subject to AB 32 emission

reporting requirements to submit simultaneous streamlined reports to the District and the state of California with minimal duplication.

4. Authorize the Air Pollution Control Officer to develop and administer voluntary greenhouse gas emission reduction agreements to mitigate proposed greenhouse gas increases from new projects.

5. Direct the Air Pollution Control Officer to support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted area.

SJVAPCD CEQA Greenhouse Gas Guidance

On December 17, 2009, the SJVAPCD adopted Addressing Greenhouse Gas Emission Impacts under the California Environmental Quality Act. This guidance is intended to assist land-use agencies in addressing the impacts of greenhouse gases in CEQA documents. The guidance establishes a streamlined process that can be used to evaluate the significance of project specific greenhouse gas emission impacts on climate change, based on the use of Best Performance Standards to reduce project specific greenhouse gas emissions. This guidance is discussed in Impact AIR-7.

San Joaquin Valley Carbon Exchange

The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary greenhouse gas emissions reductions generated within the San Joaquin Valley. To investigate the various issues concerning the development of a mechanism to register greenhouse gas emission reductions, the SJVAPCD formed a technical workgroup consisting of SJVAPCD staff, land use agency representatives, industry representatives, agricultural representatives, environmental group representatives, and other interested parties.

While the Climate Change Action Plan indicated that the greenhouse gas emission reduction program would be called the San Joaquin Valley Carbon Exchange, SJVAPCD staff has proposed to incorporate a method to register voluntary greenhouse gas emission reductions into its existing Rule 2301- Emission Reduction Credit Banking through amendments of the rule.

In its present draft form, the amendments to Rule 2301 would provide a mechanism to preserve voluntary, high-quality greenhouse gas emission reductions. The draft rule will allow the use of registered greenhouse gas emission reductions for any purpose and will not impose any restrictions on their use. The draft amendments to Rule 2301 will allow greenhouse gas emission reductions that fall into two different categories to be registered with the SJVAPCD: non-protocol greenhouse gas emission reductions and protocol-based greenhouse gas emission reduction credits.

The non-protocol based reductions would be quantified using the criteria in Rule 2301; i.e., that the emission reductions be real, enforceable, permanent, surplus, and quantifiable. Emission reductions would not be required to be additional; in other words, greenhouse gas emission reductions that occur as a collateral benefit of another requirement may qualify for registration, provided they are surplus of existing regulations. Emission Reduction Credits quantified without CARB-approved protocols could likely be retired as one possible method to provide mitigation for a project's greenhouse gas emissions as part of the CEQA process, if approved by the lead agency.

The reductions rely on a CARB-approved greenhouse gas emission reduction project protocol. CARB approved greenhouse gas emission reduction project protocols include detailed procedures on how to quantify emission reductions for specific project types and specific criteria to ensure that the emission reductions are additional. To date, there are three CARB-approved greenhouse gas emission reduction project protocols—forestry preservation, urban forestry, and manure management.

3.3.5 - Methodology

The methodology follows the GAMAQI, which sets forth recommended thresholds of significance, analysis methodologies, and provides guidance on mitigating significant impacts. Detailed methodology is described in each of the Impact sections below.

3.3.6 - Thresholds of Significance

Appendix G, Environmental Checklist, of the CEQA Guidelines establishes significance criteria for assessing the significance of air quality and greenhouse gas emissions impacts resulting from the implementation of the proposed project. Where available, the significance criteria established by a local air district such as the San Joaquin Valley Air Pollution Control District may be relied upon to make the following determinations.

Would the project:

a.) Conflict with or obstruct implementation of the applicable air quality plan?

b.) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c.) 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)?

d.) Expose sensitive receptors to substantial pollutant concentrations?

e.) Create objectionable odors affecting a substantial number of people?

f.) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

g.) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

3.3.7 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Air Quality Violations – Construction and Operational Emissions

Impact AIR-1:	**Project construction and operational emissions may violate any air quality standard or contribute substantially to an existing or projected air quality violation.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation as a result of construction or operational emissions.

Thresholds of Significance

The SJVAPCD indicates that all control measures in Regulation VIII are required for all construction sites by regulation. The SJVAPCD's GAMAQI lists additional measures that may be required because of sheer project size or proximity of the project to sensitive receptors. If all appropriate "enhanced control measures" in the GAMAQI are not implemented for these very large or sensitive projects, then construction impacts would be considered significant (unless the Lead Agency provides a satisfactory detailed explanation as to why a specific measure is unnecessary); refer to Table 3.3-6 for further discussion. The GAMAQI also lists additional control measures (Optional Measures) that may be implemented if further emission reductions are deemed necessary by the Lead Agency.

The GAMAQI does not require construction emission quantification; however, the SJVAPCD indicated that with the requirement to quantify construction emissions for Rule 9510 and the availability of modeling tools to quantify the emissions, the SJVAPCD now recommends construction emission quantification for all projects large enough to trigger Rule 9510 applicability (i.e., 2,000 square feet of commercial space); therefore, Rule 9510 applies to the Master Plan uses.

Ozone is a secondary pollutant that can be formed miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The Air Basin often exceeds the ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The SJVAPCD established significance thresholds for ozone precursors, ROG and NO_x, and has published them in its GAMAQI. For typical projects, operation-related emissions that exceed the threshold of 10 tons per year for ROG or NO_x, would be considered significant. The threshold for PM_{10} is not identified in the GAMAQI; however, pursuant to direction provided by the

SJVAPCD, 15 tons per year is used as a threshold for large projects such as the proposed Master Plan.

The GAMAQI does not have quantitative thresholds for construction emissions. However, the GAMAQI does have operational thresholds for ROG and NO_x of 10 tons per year for each. Since the GAMAQI was published, the SJVAPCD has been recommending use of a PM_{10} threshold of 15 tons per year. Because the Air Basin is in nonattainment for $PM_{2.5}$, the threshold for $PM_{2.5}$ for this project will be 10 tons per year. The justification for this number is that $PM_{2.5}$ is in nonattainment and should have a more stringent threshold than PM_{10} to provide a worst-case assessment. To present a worst-case evaluation, the annual thresholds are compared with the combined construction and operational emissions during the years where said emissions overlap.

The annual significance thresholds to be used for the Master Plan uses for combined operational and construction emissions are as follows:

- 10 tons per year ROG
- 10 tons per year NO_x
- 15 tons per year PM_{10}
- 10 tons per year $PM_{2.5}$

Master Plan

Existing Emissions

There are several existing uses within the Master Plan boundaries that emit ROG, NO_x, PM_{10}, and $PM_{2.5}$. Most of the site has been used for agricultural purposes, which has fugitive dust (PM_{10} and $PM_{2.5}$) from tilling, windblown dust, and agricultural equipment exhaust. The existing RCCI cheese factory has emissions from employee vehicles, trucks, and onsite equipment. The residential units have emissions from motor vehicle trips and area sources (natural gas, painting, consumer products). However, the existing emissions are not estimated to provide a worst-case analysis for the Master Plan uses.

Construction Assumptions

Construction of the Master Plan uses would result in the generation of air pollutant emissions. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from onsite and offsite activities. Onsite emissions principally consist of exhaust emissions (NO_x, SO_x, CO, ROG, PM_{10}, and $PM_{2.5}$) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and application of architectural coatings would release ROG emissions. Offsite emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$).

The construction emissions were derived using the Urban Emissions Model, URBEMIS 2007 Version 9.2.4 (URBEMIS). Note that specific details regarding construction, including the length of construction, the construction equipment list, and construction phase details were not available for incorporation into this assessment. Therefore, a worst-case scenario was developed to portray the maximum emissions on any one day during the various construction activities, as described below.

Compliance with SJVAPCD Regulation VIII is assumed; the reductions for compliance with this regulation is demonstrated in URBEMIS as "mitigation" even though technically it is not mitigation.

Table 3.3-6: Compliance with Fugitive Dust Regulation VIII

Regulation VIII Control Measures	URBEMIS Reduction
All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.	Apply soil stabilizers to inactive areas
All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.	Manage haul road dust
All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.	Water exposed surfaces two times per day
With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.	—
When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.	Equipment loading/unloading
All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)	Manage haul road dust
Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.	Water exposed surfaces two times per day, apply soil stabilizers to inactive areas
Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.	Manage haul road dust
Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.	Manage haul road dust
Notes: The Regulation VIII Control Measures are from San Joaquin Valley Air Pollution Control District, 2002. The URBEMIS reduction is from the modeling data provided in Appendix C. Source: Michael Brandman Associates, 2010.	

Significance of construction emissions is on a tons per year basis. Therefore, to present a worst-case scenario, it is assumed that heavy construction would occur within 1 or 2 years per phase. Construction phasing assumptions are shown in Table 3.3-7.

Table 3.3-7: Construction Phasing Assumptions – Master Plan

Land Holding, Site	Year	Phase Duration	Construction Phase Assumptions
Phase 1, (Northern Phase)	2012	9 days (assume one day per structure)	**Demolition** of existing residential units and buildings 15,000 square feet, assuming 6 feet of material = 90,000 cubic feet • Maximum daily volume of buildings to be demolished concurrently is the largest building, 5,000 square feet (30,000 cubic feet) • Equipment: default URBEMIS (3 excavators and 2 rubber tired dozers)
		4 months	**Grading** of 124 acres • Assume one-fourth of the total acreage would be disturbed on one day (31 acres) • Since the Master Plan area is fairly flat, the default fugitive dust emission rate was used (20 pounds per day) • Equipment: default URBEMIS (2 scrapers, 3 tractors, 1 excavator, 1 grader, 1 rubber tired dozer, 1 water truck) plus 1 scraper and 1 grader.
	2012-2013	1 year	**Construct** 2,693,483 square feet • Equipment: default URBEMIS (3 forklifts, 3 tractors, 1 crane, 1 generator set, 1 welder) plus 4 generator sets, 3 cranes, and 2 forklifts • Changed horsepower for generator set from 49 to 400
		5 months	**Paint** buildings
		1 month	**Asphalt Paving** • Equipment: default URBEMIS (2 paving equipment, 2 rollers, 1 paver)
Offsite Utilities	2013	1 month	**Trenching** for 8,000 lineal feet of water and sewer lines within Airport; trenching for 1,700 lineal feet of water and sewer lines within Roth Road • Equipment: default URBEMIS (2 excavators, 1 other industrial equipment, 1 tractor) plus 1 trencher, and 1 other industrial equipment
Phase 2, (Central Phase)	2018	10 days	**Demolition** of cheese factory (100,000 square feet, assume 6 feet high = 600,000 cubic feet) • Maximum daily volume of buildings to be demolished concurrently is equal to the total divided by 10 days = 60,000 cubic feet • Equipment: 3 excavators and 2 rubber tired dozers

Table 3.3-7 (cont.): Construction Phasing Assumptions – Master Plan

Land Holding, Site	Year	Phase Duration	Construction Phase Assumptions
Phase 2, (Central Phase) (*cont.*)	2018 (*cont.*)	2 months	**Grading** (114 acres) • Assume 29 acres disturbed in one day • Assume default fugitive dust rate 20 pounds/acre/day • Assume haul away settling ponds (3 areas approximately 100,000 square feet, assume 2 feet high = 200,000 cubic feet, 7407 cubic yards) • Equipment: URBEMIS default (3 tractors, 2 scrapers, 1 excavator, 1 grader, 1 rubber tired dozer, 1 water truck)
		10 months	**Construct** 1,275,620 square feet of buildings • Equipment: URBEMIS default (2 forklifts, 1 generator set, 1 crane, 1 tractor, 3 welders) plus 1 generator set • Changed horsepower for generator set from 49 to 400
		2 months	**Paint** buildings
		2 weeks	**Asphalt paving** Default acreage to be paved Equipment: URBEMIS default (2 paving equipment, 2 rollers, 1 pavers)
Phase 3, (Southern Phase)	2023	1 month	**Grading** (64 acres) • Assume 16 acres disturbed per day • Default fugitive dust (20 pounds/acre/day) • Equipment: Default URBEMIS (3 tractors, 1 excavator, 1 grader, 1 rubber tired dozer, 1 water truck)
		5 months	**Construct** 205,820 square feet community commercial and 483,765 of light industrial • Equipment: Default URBEMIS (3 welders, 2 forklifts, 1 crane, 1 generator set, 1 tractor) • Changed horsepower for generator set from 49 to 400
		1 month	**Paint** buildings
		2 weeks	**Asphalt paving** • Default URBEMIS (4 cement/mortar mixers, 2 paving equipment, 1 paver, 1 roller)
Sources: City of Manteca, 2010; Michael Brandman Associates, 2010.			

Operational Assumptions

Operational emissions from the Master Plan uses would occur once the uses are in operation. Emissions would be from the motor vehicles and trucks that would access the Master Plan area, onsite rail movements, and area sources (natural gas, painting, and landscaping). The following are the assumptions used in estimating the emissions.

Mobile Emissions for CenterPoint. Emissions were estimated using the URBEMIS model. The average speed was assumed to be 45 miles per hour, rather than the URBEMIS default of 35 miles per hour, to account for trips on highways. The average trip length of 100 miles was employed and is intended to represent the regional serving characteristics of the CenterPoint facility. The emissions represent the mileage within the State of California. The vehicle and truck fleet, which was tailored to the Master Plan uses, is the same as what was used in the Health Risk Assessment for the buildout year and is summarized in Appendix C. The trip generation rate is from the Transportation Impact Study (Appendix J), taking into account reductions due to the project design feature of locating the buildings next to the Lathrop Intermodal Terminal. (The Transportation Impact Study assumed a 20-percent reduction for this.)

Mobile Emissions for Other Master Plan Uses. Emissions were estimated using the URBEMIS model. An average trip length is 30 miles, based on potential destinations within the region. The trip generation rates are from the Transportation Impact Study (Appendix J). The average speed was changed to 45 miles per hour, to account for the proximity of highways.

Mobile Emissions for Retail Uses. Emissions were estimated using the URBEMIS model. For the retail land use, the URBEMIS pass-by trip routine was used to account for 15 percent in pass-by trips and 5 percent of industrial to retail internalization reported by the traffic study. The trip generation rate is from the Transportation Impact Study (Appendix J). All other URBEMIS defaults were used.

Rail. Onsite rail emissions are presented in Table 3.3-8. Onsite rail activities consist of switching movements between the Lathrop Intermodal Terminal and the CenterPoint facility. Three CenterPoint buildings would be "rail-served" and would receive one train a week. Accounting for inbound and outbound movements, a total of six onsite train movements would occur a week.

Emissions

Air pollutant emissions for the various years of construction and operation are shown in Table 3.3-8. As shown in the table, NO_x emissions are exceeded for every year and ROG, PM_{10}, and $PM_{2.5}$ are exceeded for years after 2013. Emissions from vendor trips are the highest contributor to construction related NO_x emissions. Vendor trips represent the on-road trips needed to bring building supplies to the worksite. Vendor trips are assumed to consist of 100 percent heavy-heavy duty trucks. Emissions from painting are the highest contributor to construction ROG emissions. Emissions of ozone precursor pollutants (ROG and NO_x) and particulate matter (PM_{10} and $PM_{2.5}$) are significant.

Table 3.3-8: Air Pollutant Emissions

Year/ Period	Phase	Source	Emissions (tons per year)			
			ROG	NO_x	PM_{10}	$PM_{2.5}$
2012	Construction of Phase 1	Demolition	0.03	0.23	0.07	0.02
		Grading	0.36	2.98	2.44	0.61
		Vendor trips	1.29	15.91	0.74	0.60
		Building*	1.64	12.20	0.57	0.46
	Total		3.32	31.32	3.82	1.69
	Significance threshold		10	10	15	10
	Exceed significance threshold?		No	**Yes**	No	No
2013	Construction of Phase 1	Vendor trips	0.69	8.30	0.39	0.32
		Building*	0.88	6.59	0.32	0.25
		Coating**	17.31	0.01	0.00	0.00
		Paving	0.08	0.29	0.02	0.02
		Trenching	0.03	0.24	0.01	0.01
	Total		18.99	15.43	0.74	0.60
	Significance threshold		10	10	15	10
	Exceed significance threshold?		**Yes**	**Yes**	No	No
2014-2017	Operation of Phase 1	Area	2.90	0.15	0.00	0.00
		Mobile	26.72	308.63	55.54	17.51
		Onsite Rail	0.03	0.62	0.02	0.02
	Total		29.65	309.40	55.56	17.53
	Significance threshold		10	10	15	10
	Exceed significance threshold?		**Yes**	**Yes**	**Yes**	**Yes**
2018	Construction of Phase 2	Demolition	0.02	0.18	0.13	0.03
		Grading	0.12	0.91	1.41	0.32
		Building	0.89	6.69	0.41	0.30
		Coating**	8.20	0.00	0.00	0.00
		Paving	0.03	0.08	0.01	0.00
		Subtotal	9.26	7.86	1.96	0.65
	Operation of Phase 1	Area	2.90	0.15	0.00	0.00
		Mobile	20.03	191.21	52.57	14.77
		Onsite Rail	0.03	0.62	0.02	0.02
		Subtotal	22.96	191.98	52.59	14.79

Table 3.3-8 (cont.): Air Pollutant Emissions

Year/ Period	Phase	Source	Emissions (tons per year)			
			ROG	NO_x	PM_{10}	$PM_{2.5}$
2018 (*cont.*)	Total		32.22	199.84	54.55	15.44
	Significance threshold		10	10	15	10
	Exceed significance threshold?		**Yes**	**Yes**	**Yes**	**Yes**
2019-2022	Operation of Phase 1 and 2	Phase 1 Area	2.90	0.15	0.00	0.00
		Phase 2 Area	1.42	0.38	0.00	0.00
		Phase 1 Mobile	18.30	170.26	52.03	14.28
		Phase 2 Mobile	6.60	52.96	19.68	5.14
		Onsite Rail	0.03	0.62	0.02	0.02
	Total		29.25	224.37	71.73	19.44
	Significance threshold		10	10	15	10
	Exceed significance threshold?		**Yes**	**Yes**	**Yes**	**Yes**
2023	Construction of Phase 3	Grading	0.03	0.20	0.39	0.08
		Building	0.17	1.20	0.06	0.06
		Paving	0.02	0.05	0.00	0.00
		Coating**	4.43	0.00	0.00	0.00
		Subtotal	4.65	1.45	0.45	0.14
	Operation of Phase 1 and 2***	Phase 1 Area	2.90	0.15	0.00	0.00
		Phase 2 Area	1.42	0.38	0.00	0.00
		Phase 1 Mobile	18.30	170.26	52.03	14.28
		Phase 2 Mobile	6.60	52.96	19.68	5.14
		Onsite Rail	0.03	0.62	0.02	0.02
		Subtotal	29.25	224.37	71.73	19.44
	Total		33.90	225.82	72.18	19.58
	Significance threshold		10	10	15	10
	Exceed significance threshold?		**Yes**	**Yes**	**Yes**	**Yes**
2024	Operation of all phases****	Phase 1 Area	2.90	0.15	0.00	0.00
		Phase 2 Area	1.42	0.38	0.00	0.00
		Phase 3 Retail Area	0.26	0.36	0.00	0.00
		Phase 3 Industrial Area	0.54	0.15	0.00	0.00
		Phase 1 Mobile	11.81	98.27	50.35	12.73

Table 3.3-8 (cont.): Air Pollutant Emissions

Year/ Period	Phase	Source	Emissions (tons per year)			
			ROG	NO_x	PM_{10}	$PM_{2.5}$
		Phase 2 Mobile	4.68	31.05	19.13	4.63
		Phase 3 Retail Mobile	2.77	2.51	6.71	1.44
		Phase 3 Industrial Mobile	2.13	17.66	9.04	2.29
		Onsite Rail	0.03	0.62	0.02	0.02
	Total		26.54	151.15	85.25	21.11
	Significance threshold		10	10	15	10
	Exceed significance threshold?		**Yes**	**Yes**	**Yes**	**Yes**
Exceed threshold during any phase?			**Yes**	**Yes**	**Yes**	**Yes**

Notes:
ROG = reactive organic gases; NO_x = nitrogen oxides; PM_{10} and $PM_{2.5}$ = particulate matter; Area = area sources, includes natural gas, landscape, and architectural coatings (painting)
* This phase of building includes off-road diesel and worker trips. Vendor trips are listed separately.
** SJVAPCD Rule 4601 was amended on December 17, 2009. The current version of URBEMIS does not account for the provisions of the rule. The rule reduces non-flat high gloss coatings from ROG content of 250 grams per liter to 150 effective January 1, 2012. Because construction will occur after that date, ROG emissions from architectural coatings are reduced by 40 percent to account for this rule.
*** 2019 mobile emissions used for 2023; URBEMIS does not have emission factors for the year 2023.
**** Emission factors for the year 2025 are used to estimate mobile emissions, as the URBEMIS model does not have emission factors available for the year 2024.
Note that the mobile emissions shown in this table reflect emissions within the State of California; emissions within the San Joaquin Valley Air Basin would be much lower. Rule 9510 is applied to emissions within the air basin. The mobile emissions take into account reductions from project design features, such as being located near the Lathrop Intermodal Terminal.
Source: Michael Brandman Associates, 2010

As indicated in Table 3.3-8, combined construction and operational emissions would exceed SJVAPCD thresholds between 2012 and 2024. Emissions of ROG and NO_x exceed the ozone precursor thresholds, which means that the Master Plan uses may contribute to a violation of the ozone standards. Emissions of PM_{10} and $PM_{2.5}$ exceed the significance thresholds, which means that the Master Plan uses may contribute to a violation of the PM_{10} and $PM_{2.5}$ standards, respectively.

The Air Basin is in attainment for the nitrogen dioxide ambient air quality standards. The national ambient air quality standard for 1 hour nitrogen dioxide is 0.100 ppm (3-year average of 98th percentile), effective on April 12, 2010. As shown in Table 3.3-2, the highest 1 hour concentration of nitrogen dioxide is 0.076 ppm, which is below 0.100 ppm. As discussed previously, Master Plan emissions of NO_x exceed the ozone precursor threshold of 10 tons per year. The ozone threshold was not set to determine exceedances of the nitrogen dioxide standard. Even though project emissions of NO_x are relatively high, the emissions will be distributed throughout the State and will be dispersed. Rule 9510 will also reduce NO_x emissions in the Air Basin. However, to be conservative and because

there is no certain way to determine this impact on a regional basis, this impact is potentially significant and the project could contribute to an exceedance of the nitrogen dioxide standard. Accordingly, mitigation is proposed to reduce Master Plan-related emissions.

As shown in Table 3.3-9, Mitigation Measure AIR-1b reduces the significance of ROG emissions during the first phase of construction. However, the other years during a combination of operation and construction would not observe emissions under the threshold because operational emissions are so high. The potential reductions of NO_x from mitigation measure AIR-1a are not demonstrated because the mitigation would not be enough to reduce NO_x emissions to below the significance thresholds because the emissions from vendor trips are so high and are not subject to feasible mitigation.

Table 3.3-9: Air Pollutant Emissions (with Reductions from Mitigation Measure AIR-1b)

Year	Phase	Source	ROG Emissions (tons per year)
2013	Construction of Phase 1	Vendor trips	0.82
		Building	0.82
		Coating*	1.43
		Paving	0.12
		Trenching	0.03
	Total		3.22
	Significance Threshold		10
	Exceeds Threshold?		No

Notes:
* To account for mitigation that reduces ROG content, a 93-percent reduction in ROG for the coating phase was taken. This is because the unmitigated ROG content is 150 grams per liter (consistent with regulations) and mitigation requires less than 10 grams per liter.
Unmitigated values are contained in Table 3.3-8.

In addition, Mitigation Measure AIR-1c requires that each Master Plan use comply with Rule 9510, which would reduce 20 percent of the construction related NO_x emissions, 45 percent of the construction PM_{10} emissions, 33 percent of operational NO_x emissions over the first 10 years, and 50 percent of the operational PM_{10} emissions over the first 10 years. However, ROG emissions are not reduced through the rule and the reductions would not be sufficient to reduce combined emissions to less than the significance thresholds.

Finally, Mitigation Measures TRANS-6a, TRANS-6b, TRANS-6c, and TRANS-6d require the provision of appropriate public transit, bicycle, and pedestrian facilities in association with each Master Plan use.

At the time of this writing, most of the non-CenterPoint aspects of the Master Plan are conceptual in nature. Aside from the aforementioned mitigation measures, it is not feasible to require additional emissions reduction measures because of the uncertainty regarding end uses and characteristics. Therefore, the residual significance of this impact is significant and unavoidable.

Sulfur Dioxide

The Master Plan uses would produce minimal emissions of sulfur oxides (SO_x), primarily due to increased regulations for reducing SO_x from fuel. As shown in Appendix C, SO_x emissions range from zero to 1 ton per year. As shown in Table 3.3-2, the highest background 24-hour concentration of sulfur dioxide is 0.007 ppm, substantially under the state ambient air quality standard of 0.04 ppm. Master Plan use emissions would not cause or contribute to an air quality standard violation for sulfur dioxide. This impact is less than significant.

Other

Other pollutants such as visibility reducing particles, lead, hydrogen sulfide, and vinyl chloride emissions would either not be emitted or would be at low levels. The Master Plan uses would emit CO during construction and operation. Operational emissions of CO are discussed in Impact AIR-2. Construction emissions of CO are minimal and thus would not contribute to a violation of the CO ambient air quality standards. This impact is less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the proposed annexations would not generate new air emissions and, therefore, not have the potential to contribute to air quality violations. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measures TRANS-6a, TRANS-6b, TRANS-6c, TRANS-6d, and the following measures.

MM AIR-1a Prior to issuance of grading permits for each Master Plan use, the project applicant shall provide information to the City of Manteca describing the methods by which the following measures will be complied with:

- Off-road equipment used onsite shall achieve a fleet average emissions equal to or less than the Tier II emissions standard of 4.8 grams of NOx per horsepower hour. This can be achieved through any combination of uncontrolled engines and engines complying with Tier II and above engine standards. Tier II emission standards are set forth in Section 2423 of Title 13

of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations.

- Construction equipment shall be properly maintained at an offsite location; maintenance shall include proper tuning and timing of engines. Equipment maintenance records and data sheets of equipment design specifications shall be kept on-site during construction.
- Onsite construction equipment shall not idle for more than 5 minutes in any one hour.
- During the building phase, onsite electrical hook ups shall be provided for electric construction tools including saws, drills and compressors, to eliminate the need for diesel powered electric generators.
- Construction workers shall be encouraged to carpool to and from the construction site to the greatest extent practical. Workers shall be informed in writing and a letter shall be placed on file in the City office documenting efforts to carpool.

MM AIR-1b During the architectural coating phase for all Master Plan uses, paints with a volatile organic compound content less than 10 grams per liter shall be used.

MM AIR-1c Prior to issuance of building permits for each Master Plan building, the project applicant shall demonstrate compliance with all applicable requirements of San Joaquin Valley Air Pollution Control District, Rule 9510 via the submittal of a Rule 9510 Implementation Plan to the City of Manteca for review and approval. The implementation plan shall achieve a 33-percent reduction in NO_x and a 45-percent reduction in PM_{10} over the first 10 years of operations through the use of onsite emissions reduction measures or through the payment of offsite mitigation fees to the SJVAPCD for purchase of emission reductions. The requirements of the approved implementation plan shall be incorporated into the proposed project.

MM AIR-1d Prior to approval of the final site plan for each Master Plan building that would receive 10 more truck deliveries per week, the project applicant shall demonstrate that the following anti-idling measures would be implemented:

- Provide available electricity hookups for trucks in the loading dock areas.
- Signs shall be posted in dock areas advising drivers that idling shall not occur for more than 3 minutes.
- Telephone numbers of the building facilities manager and the California Air Resources Board shall be posted on signs at truck entrances to report idling violations.

Level of Significance After Mitigation

Significant unavoidable impact.

Carbon Monoxide Hot Spots

Impact AIR-2:	**Project operational emissions would not violate any air quality standard or contribute substantially to an existing or projected air quality violation associated with carbon monoxide hot spots.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation as a result of the creation of carbon monoxide (CO) hot spots.

Thresholds of Significance

CO hot spot thresholds ensure that emissions of CO associated with traffic impacts from a project in combination with CO emissions from existing and forecasted regional traffic do not exceed state or national ambient air quality standards for CO at any traffic intersection impacted by the project. Project concentrations may be considered significant if a CO hot spot intersection analysis determines that project generated CO concentrations cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, national CO 1-hour standard of 35 ppm, or national CO 8-hour standard of 9 ppm.

Master Plan

Although the basin has demonstrated success in achieving CO standards, the GAMAQI states that localized CO concentrations still warrant concern and should be assessed to maintain ambient air quality standards and safeguard against localized high concentrations of CO that may expose sensitive receptors but not be recorded at monitoring sites. High levels of CO are associated with traffic congestion, idling, or slow-moving vehicles. CO transport is limited as it disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations close to a congested roadway or intersection may reach unhealthful levels, affecting sensitive receptors.

Annual emissions of CO during construction and operation were estimated by URBEMIS (see Impact AIR-1 for details regarding the assumptions) and are presented in Table 3.3-10. As shown in the table, mobile sources are the greatest source of CO and decrease by approximately 100 tons per year from the time of operation of Phase 1 to complete build out in 2024. This is because of decreases in vehicle and truck emissions resulting from the replacement of older, more polluting engines with newer engines that generate fewer emissions.

Table 3.3-10: Carbon Monoxide Emissions

Year	Activity	Carbon Monoxide Emissions (tons per year)
2012	Construction of Phase 1	43
2013	Construction of Phase 1	23
2014–2018	Operation of Phase 1 Mobile Area Onsite Rail **Total**	 314 <1 <1 **314**
2018	Construction of Phase 2	13
2019–2023	Operation of Phases 1 and 2 Mobile Area Onsite Rail **Total**	 283 1 <1 **285**
2023	Construction of Phase 3	0.63
2024 and beyond	Operation of all phases Mobile Area Onsite Rail **Total**	 211 1 <1 **212**
Source: Michael Brandman Associates, 2010.		

To estimate CO concentrations at impacted intersections, the fourth generation California Line Source Roadway Dispersion Model (CALINE4) is used. This is as recommended by the Transportation Project-Level Carbon Monoxide Protocol. The model estimates CO concentrations based on peak hour traffic volumes through the intersection. Therefore, the intersections with the greatest traffic volumes would have the greatest CO concentrations.

The SJVAPCD has established that if either of the criteria below can be associated with any intersection affected by the project, then the project needs to conduct a CO hotspot analysis to determine significance: (1) A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or (2) a traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity.

Using the CALINE4 model, potential CO hot spots were analyzed at the intersections listed in Table 3.3-11. There are several inputs to the CALINE4 model. One input is the traffic volumes, which is derived from the project-specific traffic report. The traffic volumes with the project were used for final buildout (assumed to be 2024) as well as emission factors generated using the EMFAC2007 model for the year 2014. Using an emission factor for the year 2014 presents a worst-case scenario

because emission factors for earlier years result in greater emissions compared with later years. If this approach demonstrates that traffic volumes at buildout (2024) using emission factors for 2014 is less than significant, then CO concentrations at intersections from traffic generated from the CenterPoint component in 2014 will be less than significant and concentrations will be less than significant.

As shown in Table 3.3-10, the estimated 1-hour and 8-hour average CO concentrations at buildout in combination with background concentrations are below the state and national ambient air quality standards. No CO hot spots are anticipated because of traffic-generated emissions by the Master Plan uses in combination with other anticipated development in the area. Therefore, the mobile emissions of CO from the Master Plan uses are not anticipated to contribute substantially to an existing or projected air quality violation of CO.

Table 3.3-11: Localized Carbon Monoxide Concentrations

Intersection	Peak Hour	Estimated CO Concentration (ppm)		Significant Impact?***
		1 Hour	8 Hour	
2. Roth Road/I-5 Southbound Ramps	PM	4.1	2.9	No
3. Roth Road /I-5 Northbound Ramps	PM	4.2	2.9	No
4. Roth Rd./Harlan Road	PM	4.2	2.9	No
7. Daisywood Drive/Airport Way	PM	5.3	3.7	No
8. Lathrop Road /I-5 Southbound Ramps	PM	5.6	3.9	No
9. Lathrop Road /I-5 Northbound Ramps	PM	5.4	3.8	No
10. Lathrop Road /Harlan Road	AM	4.8	3.4	No
13. Lathrop Road /Airport Way	PM	4.9	3.4	No
19. Hastings Drive/Airport Way	PM	4.3	3.0	No
20. Louise Avenue/Airport Way	PM	5.3	3.7	No

Notes:
* CALINE4 output (see Appendix C for model output) plus the 1 hour background concentration of 3.3 ppm (from Table 3.3-2).
** The 8-hour project increment was calculated by multiplying the 1-hour CALINE4 output by 0.7 (persistence factor), then adding the 8 hour background concentration of 2.31 ppm (from Table 3.3-2).
*** Comparison of the 1-hour concentration to the state standard of 20 ppm and the 8-hour concentration to the state /national standard of 9 ppm.
Source: Michael Brandman Associates, 2010.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the proposed annexations would not generate new air emissions and, therefore, not have the potential to contribute to CO hotspots. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Air Quality Attainment Plan Consistency

Impact AIR-3:	**The project may conflict with or obstruct implementation of the applicable air quality attainment plan.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to conflict with or obstruct implementation of the applicable air quality plan.

Master Plan

Because of the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the Master Plan-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_x), PM_{10}, or $PM_{2.5}$ would exceed the SJVAPCD's significance thresholds, then the Master Plan uses would be considered to conflict with the attainment plans. In addition, if the Master Plan uses would result in a change in land use and corresponding increases in vehicle miles traveled, they may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

As discussed in Impact AIR-1, predicted construction and operational emissions would exceed the SJVAPCD significance thresholds for ROG, NO_x, PM_{10}, and $PM_{2.5}$. As a result, the Master Plan uses may conflict with emissions inventories contained in regional air quality attainment plans and result in a significant contribution to the region's air quality non-attainment status.

The SJVAPCD adopted the 2003 PM_{10} Plan on June 19, 2003 and first amended it on December 15, 2003 to comply with federal Clean Air Act requirements. The EPA approved the amended 2003 PM_{10} Plan effective June 25, 2004. The Air Basin is currently in attainment of the national standards for PM_{10}.

The SJVAPCD Governing Board adopted the 2008 $PM_{2.5}$ Plan following a public hearing on April 30, 2008. This plan will assure that the Valley will attain all the $PM_{2.5}$ standards - the 1997 federal standards, the 2006 federal standards, and the state standard - as soon as possible. The CARB submitted the 2008 $PM_{2.5}$ Plan to the EPA June 30, 2008. The 2008 $PM_{2.5}$ Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Valley into attainment of the 1997 national standards for $PM_{2.5}$. The EPA has identified NO_x and sulfur dioxide as precursors that

must be addressed in air quality plans for the 1997 $PM_{2.5}$ standards. The 2008 $PM_{2.5}$ Plan is a continuation of the SJVAPCD's strategy to improve the air quality in the San Joaquin Valley.

As an extreme nonattainment area for the 1-hour ozone national standard, the SJVAPCD adopted the Extreme Ozone Attainment Demonstration Plan in 2004. On March 8, 2010, the EPA approved the Plan for 1-hour ozone. Although effective June 15, 2005, the EPA revoked the 1-hour standard, the control requirements remain in effect to ensure progress toward meeting the new more stringent 8-hour ozone standard that has replaced the 1-hour standard. The Plan contains commitments to reduce a precursor of ozone, NO_x, including NO_x reductions from indirect sources.

The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Air Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NO_x and 25-percent reduction of ROG. The SJVAPCD Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Air Basin residents. The CARB approved the plan on June 14, 2007.

In December 2005, the SJVAPCD adopted the ISR and the accompanying administrative fee rule (Rule 3180). The ISR requires certain development projects within the San Joaquin Valley Air Basin to reduce emissions by specified amounts either through on-site measures or through the payment of air quality impact fees to the SJVAPCD to obtain emission reductions off-site. The emission reduction requirements are designed to reduce PM_{10} and NO_x by amounts needed to meet the commitments of the 2003 PM_{10} Plan necessary to achieve attainment on schedule. Emission reduction projects envisioned by the ISR include retrofitting heavy-duty engines, replacing agricultural machinery and pumps, paving unpaved roads and road shoulders, trading out combustion-based lawn and agricultural equipment for electrical and other equipment, as well as a host of other projects that result in quantifiable emission reductions of PM_{10} and NO_x. Compliance with Rule 9510 is incorporated into Mitigation Measure AIR-1c.

Compliance with the ISR, however, does not achieve full and complete mitigation of a project's air quality impacts on nonattainment pollutants. This is because the rule requires projects to reduce their construction emissions by 20 percent for NO_x and 45 percent for PM_{10} and operational emissions by 33 percent for NO_x and 50 percent for PM_{10}.

Although the Master Plan uses would comply with applicable rules and regulations, the emissions generated by the uses are substantial. Therefore, the residual significance of this impact is significant and unavoidable.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new

construction to occur. As such, the proposed annexations would not generate new air emissions and, therefore, do not have the potential to conflict with an adopted air quality plan. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measures AIR-1a, AIR-1b, AIR-1c, AIR-1d, TRANS-6a, TRANS-6b, TRANS-6c, and TRANS-6d.

Level of Significance After Mitigation

Significant unavoidable impact.

Cumulative Impacts

Impact AIR-4:	**The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).**

Master Plan

The Air Basin is in nonattainment for ozone, PM_{10}, and $PM_{2.5}$, which are discussed individually below.

Ozone

As discussed in Impact AIR-1, Master Plan emissions emitted within the State of California would exceed the significance thresholds for ROG and NO_x. Therefore, Master Plan emissions could cumulatively combine with other sources in the Air Basin and could cause a future violation of the ozone standards. This is a potentially significant impact. As such, there could be health effects from ozone from cumulative exposure of the pollutants. Health impacts may or may not include the following: (a) pulmonary function decrements and localized lung edema in humans and animals, (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals, (c) increased mortality risk, (d) and/or risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans.

Particulate Matter

As discussed in Impact AIR-1, emissions during operation would exceed the PM_{10} and $PM_{2.5}$ significance thresholds, primarily due to paved road dust from project related motor vehicles and trucks traveling throughout the State. A smaller proportion of these emissions is from the motor vehicle and truck exhaust. Much of the road dust would settle out near the road. However, some of it could extend up into the air, cumulatively combine with other sources, and cause a violation of the PM_{10} or $PM_{2.5}$ ambient air quality standards. This is a potentially significant impact. As such, there

could be cumulative exposure from the pollutants. Health effects from PM_{10} and $PM_{2.5}$ may include the following: (a) exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease, (b) declines in pulmonary function growth in children, and/or (c) increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in $PM_{2.5}$ levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.

Air Quality Plan

Section 15130(b) of the CEQA Guidelines states the following:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. This analysis considers the current CEQA Guidelines, which includes the recent amendments approved by the Natural Resources Agency and effective on March 18, 2010. Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The air quality attainment plans describe and evaluate the future projected emissions sources in the Air Basin and sets forth a strategy to meet both state and federal Clear Air Act planning requirements and federal ambient air quality standards. Therefore, the plans are relevant plans for a CEQA cumulative impacts analysis. As discussed in Impact AIR-3, the Master Plan is not consistent with the air quality attainment plans. Therefore, this is a potentially significant impact.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the proposed annexations would not generate new air emissions and, therefore, do not have the potential to cumulatively contribute to adverse air quality impacts. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measures AIR-1a, AIR-1b, AIR-1c, AIR-1d, TRANS-6a, TRANS-6b, TRANS-6c, and TRANS-6d.

Level of Significance After Mitigation

Significant unavoidable impact.

Sensitive Receptors

Impact AIR-5:	**The project would not expose sensitive receptors to substantial pollutant concentrations.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to expose sensitive receptors to substantial pollutant concentrations. The three air quality issues of concern as they relate to sensitive receptors are toxic air contaminants, valley fever, and naturally occurring asbestos. Each is issue is discussed separately.

Master Plan

Construction: Toxic Air Contaminants

Health-related risks associated with diesel exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. The estimation of cancer risk associated with exposure to toxic air contaminants is typically calculated based on a 70-year period of exposure. The use of diesel-powered construction equipment for the Master Plan uses, however, would be temporary (approximately 4 years in duration) and episodic and would occur over a relatively large area. For this reason, diesel-exhaust generated by construction, in and of itself, would not be expected to create conditions where the probability of contracting cancer over a 70-year lifetime of exposure is greater than 10 in 1 million for nearby receptors.

Operation: Toxic Air Contaminants

Any project with the potential to expose sensitive receptors or the general public to substantial levels of toxic air contaminants would be deemed to have a potentially significant impact. A health risk is the probability that exposure to a given toxic air contaminant under a given set of conditions will result in an adverse health effect. The health risk is affected by several factors, such as the amount, toxicity, and concentration of the contaminant; meteorological conditions; distance from the emission sources to people; the distance between emission sources; the age, health, and lifestyle of the people living or working at a location; and the length of exposure to the toxic air contaminant.

The SJVAPCD has adopted the following health risk significance thresholds:

- Maximum Incremental Cancer Risk: 10 in 1 million at the nearest sensitive receptor or offsite worker; and
- Non-cancer Hazard Index (project increment): 1.0 or greater.

A Health Risk Assessment was prepared to asses the potential health risks from diesel particulate matter exposure to the sensitive receptors close to the Master Plan uses (see Appendix C). The Health Risk Assessment explains the details and assumptions used in estimating the potential health risks.

A health risk assessment requires the completion and interaction of four general steps:

1. Quantify project-generated toxic air contaminant emissions.
2. Identify nearby ground-level receptor locations that may be affected by the emissions (including any special sensitive receptor locations such as residences, schools, hospitals, convalescent homes, daycare centers, and offsite worker receptors).
3. Perform air dispersion modeling analyses (using the EPA model, AERMOD) to estimate ambient pollutant concentrations at each receptor location using project toxic air contaminant emissions and representative meteorological data to define the transport and dispersion of those emissions in the atmosphere.
4. Characterize and compare the calculated health risks with significance thresholds.

The health risks from the Master Plan uses are shown in Table 3.3-12. As shown in the table, the estimated cancer risks and non cancer risks do not exceed the significance thresholds. This impact is less than significant.

Table 3.3-12: Master Plan Health Risks

Year of Operation	Parts of Master Plan in Operation	Cancer Risk at Maximum Exposed Residential Receptor (risk per million)	Non Cancer Risk
2014	CenterPoint	8.5(1)	0.004
2019	CenterPoint and Non-CenterPoint Light Industrial	9.7(2)	0.005
2024	Entire Master Plan	6.4(3)	0.003
Significance Threshold		10	1
Exceed Threshold?		No	No

Notes:
(1) The location of the maximum exposed cancer risk at an existing residential receptor occurs at a residence located 85 meters east of the project site across Airport Way opposite Building 2 of the CenterPoint Center. The highest cancer risk in the modeling domain was 13.9 in one million at a currently undeveloped location 213 meters across Airport Way from Building 2.
(2) The location of the maximum exposed cancer risk at an existing residential receptor occurs at a residence located 80 meters east of the project site across Airport Way opposite Building 11 of the Master Plan. The highest cancer risk in the modeling domain was at this same location.
(3) The location of the maximum exposed cancer risk at an existing residential receptor occurs at a residence located 80 meters east of the project site across Airport Way opposite Building 11 of the Master Plan. The highest cancer risk in the modeling domain was at this same location.
Source: Michael Brandman Associates, 2010.

The Health Risk Assessment assumed that all CenterPoint uses would be operational in 2014. The analysis presented in the Health Risk Assessment is a worst-case assessment, because the emission factors for the year 2014 are greater than in 2024.

As discussed above, the operation of the Master Plan uses would emit quantities of toxic air contaminants, most particularly diesel particulate matter during operations. Emissions of diesel particulate matter would result from the operation of diesel vehicles and locomotives. Air dispersion modeling was used in conjunction with a detailed inventory of diesel emissions to estimate cancer risks at sensitive receptors located in the vicinity of the Master Plan area. The results of the air dispersion modeling concluded that the operation of the project would not result in cancer risks and chronic non-cancer risks that exceed any of the SJVAPCD health risk significance thresholds at any existing sensitive receptor for the years 2014, 2019, and 2024. A cancer risk in excess of the cancer risk threshold was theoretically calculated in 2014. However, this location contains undeveloped land is not occupied by sensitive receptors (e.g., residences). This impact is less than significant.

Valley Fever

Valley Fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis*. The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and include dust storms, grading, and recreational off-road activities.

By geographic region, hospitalizations for coccidioidomycosis in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for coccidioidomycosis died.

Construction activities are anticipated to generate fugitive dust. The project will minimize the generation of fugitive dust during construction activities by complying with the SJVAPCD's Regulation VIII. As discussed in Impact AIR-1, compliance with the SJVAPCD's Regulation VIII will reduce potential impacts to air quality from fugitive dust generated during construction to less than significant.

During Master Plan operations, dust emissions are anticipated to be negligible, because most of the Master Plan area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the Master Plan uses from generating fugitive dust that may contribute to Valley Fever exposure. Impacts would be less than significant.

Naturally Occurring Asbestos

The Department of Conservation, Division of Mines and Geology published a guide entitled A General Location Guide For Ultramafic Rocks In California - Areas More Likely To Contain Naturally Occurring Asbestos, for generally identifying areas that are likely to contain naturally occurring asbestos. The guide includes a map of areas where formations containing naturally occurring asbestos in California are likely to occur. There are no such areas in San Joaquin County.

Furthermore, the Preliminary Geotechnical Investigation prepared by Neil O. Anderson and Associates (Appendix G) did not indicate the presence of serpentine or other minerals associated with naturally occurring asbestos within the Master Plan boundaries.

For these reasons, development of the Master Plan uses is not anticipated to expose workers or nearby receptors to naturally occurring asbestos. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the proposed annexations would not generate new air emissions and, therefore, not have the potential to expose sensitive receptors to substantial pollutant concentrations. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Objectionable Odors

Impact AIR-6:	**The project may create objectionable odors affecting a substantial number of people.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to create objectionable odors affecting a substantial number of people.

Thresholds of Significance

If the proposed project were to result in a sensitive odor receptor being located in the vicinity of an undesirable odor generator, the impact would be considered significant. The SJVAPCD regulates odor sources through its nuisance rule, Rule 4102, but has no quantitative standards for odors. The

SJVAPCD presents a list of project screening trigger levels for potential odor sources in its GAMAQI, which is displayed in Table 3.3-13. If the project were to result in sensitive receptors being located closer to an odor generator in the list in Table 3.3-13 than the recommended distances, a more detailed analysis including a review of SJVAPCD odor complaint records is recommended.

Table 3.3-13: Screening Levels for Potential Odor Sources

Odor Generator	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: San Joaquin Valley Air Pollution Control District, 2002.	

Master Plan

The Master Plan would allow the development of light industrial and community commercial uses within the 300-acre plan area. The light industrial uses envisioned by the Master Plan would be primarily warehouse/distribution facilities, which are not considered sources of objectionable odors. The community commercial component is expected to include restaurant uses. Some restaurants are associated with odors from charbroiling, which are considered objectionable to some. Therefore, mitigation is recommended to reduce any potential impacts.

There are some potentially odorous land uses near the Master Plan area, including a small feed lot or dairy to the north of the project site. There is a cement plant adjacent to the southwestern boundary of the Master Plan area, which may generate noticeable odors. The Master Plan uses are not considered sensitive receptors and do not require further detailed analysis regarding surrounding odors. Any surrounding odors should dissipate with distance and should not reach an objectionable level to employees and customers of the Master Plan uses.

During construction and operation, the Master Plan uses will emit diesel particulate matter, which is odorous to some. During construction, there would be short-term emissions of ROGs during painting

and asphalt paving. These odors will dissipate with distance and should not reach an objectionable level at nearby residences. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to generate objectionable odors. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-6 Prior to final site plan approval for any Master Plan use that includes food service (i.e., restaurants, cafeterias, etc.), the applicant shall demonstrate compliance with SJVAPCD Rules 4102 (Nuisance) and 4692 (Commercial Charbroiling) to the extent that these rules are applicable. Compliance may entail the installation of kitchen exhaust vents, exhaust filtration systems, or other odor-reduction measures in accordance with accepted engineering practice. The approved plans shall be incorporated into the proposed project.

Level of Significance After Mitigation

Less than significant impact.

Greenhouse Gas Emissions

Impact AIR-7:	**The project may generate greenhouse gas emissions that may have a significant impact on the environment and conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to generate greenhouse gas emissions that may have a significant impact on the environment and potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Thresholds of Significance

In accordance with the SJVAPCD's Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA (San Joaquin Valley Air Pollution Control District, 2009), a project would be considered to have a less than significant impact on climate change if it were to do at least one of the following:

- It was exempt from the requirements of CEQA, or

- Comply with an approved greenhouse gas emission reduction plan or greenhouse gas mitigation program which avoids or substantially reduces greenhouse gas emissions within the geographic area in which the project is located. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency, or
- Implement approved best performance standards, or
- Quantify project greenhouse gas emissions and reduce those emissions by at least 29 percent compared to business as usual. "Business as usual" is referenced in CARB's AB 32 Scoping Plan as emissions occurring in 2020 if the average baseline emissions during the 2002–2004 period grew to 2020 levels, without control. Therefore, 2002–2004 emissions factors, on a unit of activity basis, multiplied by the activity expected to occur in 2020, is an appropriate representation of 2020 business as usual. The reductions can be based on any combination of reduction measures, including greenhouse gas reductions achieved as a result of changes in building and appliance standards occurring since the 2002–2004 baseline period.

Master Plan

There are no approved greenhouse gas emission reduction plans or programs applicable to the Master Plan uses. In addition, the SJVAPCD has not yet provided best performance standards for this type of project. Therefore, the Master Plan uses would need to reduce greenhouse gas emissions by 29 percent compared with business as usual. This reduction can be taken through design features, mitigation measures in other impact areas, greenhouse gas mitigation measures, and future regulations.

Construction Emissions Inventory

During construction activities, greenhouse gases would be emitted from construction equipment, vehicle, and truck exhaust. Construction emissions were estimated using URBEMIS 2007 as described in Impact AIR-1. Construction emissions are presented in Table 3.3-14. The SJVAPCD does not have thresholds or guidance regarding the significance of construction related emissions. However, that does not mean a significance finding should not be identified. AB 32 requires that emissions within the State are reduced to 1990 levels by the year 2020. However, it could be possible that there could be some construction in 2020 or later. These construction emissions are minimal and, therefore, are anticipated to be less than significant.

Table 3.3-14: Construction Greenhouse Gas Emissions

Year	Phase	Carbon Dioxide Emissions (tons)	Emissions ($MTCO_2e$)
2012	Demolition	27	24
	Grading	377	342
	Building	7,097	6,438
2013	Building	4,160	3,774
	Coating	41	37
	Paving	52	47
	Trenching	28	25
2018	Demolition	38	34
	Grading	95	86
	Building	3,671	3,330
	Coating	16	15
	Paving	15	14
2023	Grading	16	15
	Building	173	157
	Paving	45	41
	Coating	3	3
Multiple	Waste	719	652
Total		**16,573**	**15,035**

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents, converted from tons by multiplying by the global warming potential of carbon dioxide (1) and 0.9072.
Waste emissions were generated using the EPA WARM model.
Source: Michael Brandman Associates, 2010 .

Operational Emissions Inventory

Greenhouse gas emissions from operation of the project are shown in Table 3.3-15. As shown, the largest source of emissions are from motor vehicles and trucks that would access the project site, contributing approximately 81 percent of the emissions. The emissions presented are "business as usual" emissions, which refer to emissions that do not account for reductions attributable to regulations that occurred after 2004, project design features, or mitigation measures.

Table 3.3-15: Operational Greenhouse Gas Emissions (Buildout)

Source	Business as Usual Emissions ($MTCO_2e$ per year)
Motor vehicles – CenterPoint Intermodal Facility	128,255
Motor vehicles – Non-CenterPoint Industrial Uses	29,976
Motor vehicles – Community Commercial	7,239
Onsite rail	38
Natural gas	1,007
Indirect electricity	24,130
Water transport	392
Waste	1,496
Refrigerants	12,068
Total	**204,601**

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
Source: Michael Brandman Associates, 2010.

Motor vehicles: The carbon dioxide emissions were estimated using URBEMIS 2007 as discussed in Impact AIR-1. The emissions represent the emissions that would occur within the State of California. An addition of 5 percent was added to the carbon dioxide emissions to account for methane, nitrous oxide, and hydrofluorocarbons (from leaking air conditioning units in vehicles). The trip generation rates for the CenterPoint Intermodal Facility are from the Transportation Impact Study (Appendix J) and do not reflect reductions attributable to internalization between the CenterPoint Intermodal Facility and the Lathrop Intermodal Terminal. As stated in the Transportation Impact Study, some Lathrop Intermodal Terminal truck trips will travel to/from the CenterPoint Intermodal Facility versus traveling externally. The Transportation Impact Study assumes that 20 percent of the Lathrop truck trips would travel to or from the CenterPoint Intermodal Facility. Therefore, by locating the CenterPoint facility so close to the Lathrop facility, truck trips are reduced. If the CenterPoint facility were located elsewhere, this would result in increased trips. Therefore, this efficiency and reduction in truck trips are considered a project design feature and are not included in the business as usual emissions.

Onsite Rail: Onsite rail emissions refer to switching movements that would occur between the Lathrop Intermodal Terminal and CenterPoint Intermodal Facility.

Natural Gas: Natural gas emissions refer to the emissions that occur when natural gas is burned on the project site. Natural gas may be used on the project for heating water, space heating, or other uses. Carbon dioxide emissions were estimated using URBEMIS. Methane and nitrous oxide emissions were estimated using the procedures outlined in Appendix C.

Indirect Electricity: Indirect electricity refers to the emissions generated by offsite power plants to supply the electricity required for the project. Electricity usage was obtained from the Public Services and Utilities section of the EIR and was converted to greenhouse gas emissions using emission factors presented in Appendix C.

Water Transport: There would be greenhouse gas emissions generated from the electricity required to transport and treat the water to be used on the project site. The water to be used by the project was obtained from the Public Services and Utilities section of this EIR. Refer to Appendix C for details.

Waste: There would be emissions from decomposing waste from the waste generated from the project. The waste generated was obtained from the Public Services and Utilities section of this EIR. The emissions were estimated by the EPA WARM model.

Refrigerants: There can be leakages of refrigerants (hydrofluorocarbons) from air conditioners and refrigerators. An average global warming potential of 2,065 for refrigerators and 1,513 for air conditioning is assumed.

Mitigation Measures in Other Impact Areas that would Reduce Emissions

Mitigation measures in other impact areas that would reduce greenhouse gas emissions are as follows:

- Mitigation Measure PSU-3a requires use of recycled water for irrigation when recycled water is available.
- Mitigation Measure PSU-3b requires that all appropriate and feasible water conservation measures be incorporated into the project, such as drought-tolerant landscaping; water-efficient irrigation systems; and sensor-activated, low-flow fixtures (faucets, urinals, toilets).
- Mitigation Measure PSU-6a requires construction and demolition debris recycling.
- Mitigation Measure PSU-6b requires that the project applicant provide information to the City regarding how the project will recycle.
- Mitigation Measure AIR-1a would reduce emissions from construction equipment.
- Mitigation Measure AIR-1d would reduce some onsite emissions from trucks; however, this reduction is negligible so no reduction is taken for this measure.
- Mitigation Measure TRANS-6a would require transit facilities and services, as appropriate, for the light industrial uses. No reduction is taken for this measure.
- Mitigation Measure TRANS-6b would require bicycle facilities, as appropriate, for the light industrial uses. No reduction is taken for this measure.
- Mitigation Measure TRANS-6c would require pedestrian facilities, as appropriate, for the light industrial uses. No reduction is taken for this measure.

- Mitigation Measure TRANS-6d would require pedestrian, bicycle, and transit facilities in the community commercial area. According to the SJVAPCD Greenhouse Gas Mitigation Measures spreadsheet, this measure would reduce emissions by 1.5 percent.

Project Design Features that would Reduce Emissions

In order to get credit for the reductions the Master Plan is intending to achieve, the project design features will be included with reductions from mitigation measures. The Master Plan contains the following project design features that would attempt to reduce emissions.

- Provide high efficiency HVAC systems, when required, with non-HCFC refrigerants. This feature will reduce energy. Although this feature may reduce refrigerant leakages, the feature does not refer to HFCs (such as R-404a), which are commonly used as refrigerants.
- Capture and direct storm water to landscape areas prior to release. This feature will reduce water use.
- Design buildings that use natural ventilation with the goal of minimizing air-conditioned areas. This feature will reduce energy use.
- Design building orientation and shading to minimize solar gain and maximize daylight within the building work areas. This feature will reduce energy use.
- Include photo-sensors and localized lighting controls to reduce the amount of artificial light used within indoor spaces. This feature will reduce energy use.
- The CenterPoint property would utilize rail access. It is anticipated that three buildings would be rail-served, and each building would receive one inbound and one outbound train movement a week. Rail transportation has significantly lower emissions on a ton-mile basis than trucks.

As shown in Table 3.3-16, total reductions are approximately 39 percent, which is a greater reduction than the threshold of 29 percent. The Master Plan uses' greenhouse gas emissions would not conflict with AB 32 and the Scoping Plan, which has the purpose to reduce greenhouse gas emissions to 1990 levels by the year 2020. This is a less than significant impact with incorporation of mitigation.

Table 3.3-16: Operational Greenhouse Gas Emissions (With Mitigation, Project Design Features, and Regulations)

Source	Emissions ($MTCO_2e$ per year)		
	Unmitigated	Reduction (%)	Mitigated, with Regulations
Motor vehicles - CenterPoint	128,255	Pavley/LCFS: 27 Mitigation/PDF: 20	67,975
Motor vehicles – Non-CenterPoint light industrial	29,976	Pavley/LCFS: 25	22,482
Motor vehicles – Community Commercial	7,239	Pavley/LCFS: 25 Mitigation/PDF: 1.5	5,321
Onsite rail	38	0	38
Natural gas	1,007	Regulation: 9	916
Indirect electricity	24,130	Regulation: 15 Mitigation/PDF: 1	20,269
Water transport	392	Mitigation/PDF: 5	372
Waste	1,496	Mitigation: 50	748
Refrigerants	12,068	Regulation: 50	6,034
Total	**204,601**	**Total: 39%**	**124,155**
Significance Threshold	**—**	**29% Reduction**	**—**
Significant Impact?	**—**	**No**	**—**

Notes:
Mitigation/PDF refers to mitigation measures and project design features that would reduce emissions.
Pavley/LCFS refers to the reduction from the Pavley regulations and the low carbon fuel standard regulation (see Regulatory section for more information). The reductions differ based on type of vehicle; the reductions are estimated with the Bay Area Air Quality Management District Greenhouse Gas Model, version 1.1.9 Beta.
Natural gas regulation refers to the CARB Scoping Plan measure Energy Efficiency; business as usual emissions in the State are 46.7 $MMTCO_2e$ with reductions of 4.3 $MMTCO_2e$, or 9 percent.
Regulation for the electricity sector refers to the Scoping Plan measure, Renewables Portfolio Standards. The state business as usual inventory for California is 139.2 $MMTCO_2e$; the emissions reductions from the Renewables Portfolio Standards are 21.3 $MMTCO_2e$, or 15 percent.
The waste reduction estimated by the EPA WARM model (output is contained in Appendix C) was more than a 100-percent reduction; therefore, a 50-percent reduction is taken for this item.
The regulation for refrigerants refers to the High-Global Warming Potential Stationary Source Refrigerant Management Program. Beginning in 2011, the rule will require leak inspection, repairs, required service practices, and recordkeeping for large commercial and industrial systems that use more than 50 pounds of refrigerant for a single unit.
Source: Michael Brandman Associates, 2010.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to emit additional sources of greenhouse gas emissions beyond existing levels. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measures AIR-1a, AIR-1d, PSU-3a, PSU-3b, PSU-6a, PSU-6b, TRANS-6a, TRANS-6b, TRANS-6c, and TRANS-6d.

Level of Significance After Mitigation

Less than significant impact.

Climate Change Adaptation

Impact AIR-8:	**The project may be affected by climate change through a reduction in the quality and supply of water available within the State or increased flooding.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to be exposed to climate change effects.

Background

Although human understanding of the Earth's climate is increasing, it is accepted by the majority of climate change researchers that anthropogenic sources of greenhouse gases are influencing climate patterns. There are several negative potential environmental effects associated with climate change. Worldwide, average temperatures are estimated by some researchers to increase by 1.8 degrees centigrade (°C) to 4°C, or 3 degrees Fahrenheit (°F) to 7°F, by the end of the 21st century. However, a global temperature increase does not translate to a uniform increase in temperature in all locations on the earth. Regional climate changes are dependent on multiple variables, such as topography. One region of Earth may experience increased temperature, increased incidents of drought and similar warming effects, whereas another region may experience a relative cooling. According to the United Nations Intergovernmental Panel on Climate Change's Working Group II Report, climate change impacts to North America may include:

- Diminishing snowpack
- Increasing evaporation
- Exacerbation of shoreline erosion
- Sea level rise
- Increased risk and frequency of wildfire
- Increased risk of insect outbreaks
- Increased experiences of heat waves
- Rearrangement of ecosystems as species and ecosystems shift northward and to higher elevations

The California Climate Change Center published a report that assesses the risks of climate change to California. In addition, the California Natural Resources Agency published the 2009 California Climate Adaptation Strategy in December 2009 in response to the Governor's Executive Order S-13-2009. The document contains strategies for addressing impacts to public health, biodiversity and habitat, ocean and coastal resources, water management, agriculture, forestry, and transportation and energy infrastructure.

Water Supply

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

One of the major impacts of climate change is a loss of natural snowpack, particularly the Sierra Nevada snowpack. Snowmelt provides an annual average of 15 million acre-feet of water, released between April and July each year, according to a paper by the Department of Water Resources. The California Department of Water Resources projects that the Sierra snowpack will experience a 25- to 40-percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack.

To conserve water, effective January 1, 2010, all development must meet the State Model Water Efficient Landscape Ordinance requirements that establish landscape design requirements for most new and rehabilitated landscape areas. Public landscapes and private development projects including developer installed single-family and multi-family residential landscapes with at least 2,500 square feet of landscape area are subject to the Model Ordinance. Homeowner provided landscaping at single-family and multi-family homes are subject to the Model Ordinance if the landscape area is at least 5,000 square feet.

Sea Level Rise and Flooding

Climate change could result in sea level rises and increased flooding, as explained in the following excerpts from a paper published by the California Climate Change Center in 2006 and a paper prepared by Moser et al. in 2009.

Sea level rise is already affecting much of California's coastal region, including the Southern California coast, the Central California open coast, and the San Francisco Bay and upper estuary. During the past century, sea levels along California's coast have risen about 7 inches. The rate of sea level rise observed at the gauges along the California coast is similar to the estimate for global mean sea level. Sea levels are likely to increase by up to 35 inches by the year 2100, depending on the magnitude of climate warming. Elevations of this magnitude would inundate coastal areas with salt

water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

Although levees have been built to contain the 100-year flood, a 12-inch increase in sea levels (projected for the medium warming range of temperatures) would mean storm surge-induced flood events at the 100-year level would likely occur once every 10 years. Despite extensive engineering efforts, major floods have repeatedly breached levees that protect freshwater supplies and islands in the San Francisco Bay Delta as well as fragile marine estuaries and wetlands throughout the State. Continued sea level rise will further increase vulnerability to levee failures. Some of the most extreme flooding during the past few decades has occurred during El Niño winters, when warmer waters fuel more intense storms. During the winters of 1982–1983 and 1997–1998, for example, abnormally high seas and storm surges caused millions of dollars' worth of damage in the San Francisco Bay area. Highways were flooded as 6-foot waves crashed over waterfront bulkheads, and coastal real estate was destroyed. Climate change will require major changes in flood management. In many regions such as the Central Valley, where urbanization and limited river channel capacity already exacerbate rising flood risks, flood damage and flood control costs could amount to several billion dollars.

Research has shown that rapid greenhouse gas emission reductions cannot prevent substantial sea level rise because ocean waters store heat effectively and will expand for centuries, long after air temperatures have been stabilized. Therefore, adaptation is necessary to manage the threat of sea level rise to coastal areas.

Master Plan

Water Supply

As discussed in Impact PSU-3, the Water Supply Assessment concluded that the City of Manteca has a sufficient supply of groundwater and surface water to serve the proposed Master Plan uses. Because the Water Supply Assessment's conclusions partially rely on the assumption of water conservation and reclaimed water use, Mitigation Measures PSU-3a and PSU-3b are proposed requiring that the Master Plan uses implement appropriate and feasible measures to reduce potable water consumption. With the implementation of mitigation, impacts from climate change to the project would be less than significant.

Sea Level Rise

The Master Plan area is not located near the coastal area and is at sufficient elevation to not be impacted by rising sea levels.

Flooding

As discussed in Impact HYD-5, the project area is outside of the FEMA designated 100-year floodplain and, therefore, is not exposed to a 100-year flood hazard. However, much of the Master Plan area is shown to be susceptible to flooding in a 500-year event, and a small portion near the

southwestern end of the site is within the limits protected from the 100-year flood by a provisionally accredited levee. In the case of the levee protected portion, if data and documentation yet to be submitted to FEMA fails to demonstrate that the levees in the area are adequate for 100-year level flood protection, this area could potentially be included in the designated 100-year floodplain in the near future. This would be a potentially significant impact.

It is also important to note that the recent and more stringent state floodplain legislation for the San Joaquin River region will result in stricter building standards in the near future. For example, urban areas that reside behind levees are required to have a 200-year level of flood protection by the year 2012 when the Central Valley Flood Protection Plan is adopted. According to the Department of Water Resources Best Available Map, a very small section of the project area adjacent to the outlet canal is potentially susceptible to a 200-year level flood.

Mitigation Measure HYD-5a requires provision of 100-year level of flood protection to the Master Plan area. Mitigation Measure HYD-5b requires demonstration that the developed portions of the Master Plan are outside of the anticipated 200-year flood hazard area or incorporate measures into the Master Plan to achieve a 200-year level of flood protection for any site installations that will occur in 2012 or later.

Wildfires

As discussed in Section 7, Effects Found Not to be Significant, wildfires would not pose a hazard to the project. Any increases in wildfires as a result of climate change would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexation areas would not be at any greater risk of climate change effects than beyond what currents exists. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measures HYD-5a, HYD-5b, PSU-3a, and PSU-3b.

Level of Significance After Mitigation

Less than significant impact.

3.4 - Biological Resources

3.4.1 - Introduction

This section describes the current regulatory framework of federal, state, and local regulations applying to the City of Manteca and San Joaquin County that would apply to the project. This section also establishes the existing biological setting and potential effects from project implementation on the site and its surrounding area and how these impacts relate to the regulatory framework. The analysis in this section is based on biological record searches conducted by Michael Brandman Associates and the Delineation of Jurisdictional Waters and Wetlands prepared by Michael Brandman Associates. Both documents are provided in Appendix D.

3.4.2 - Environmental Setting

The project area is located at the northwestern edge of the City of Manteca. The primary biological study area encompasses approximately 300 acres. The southern portion of the Master Plan area is bisected by the Cal Suprema cheese manufacturing/processing facility (Cheese Factory), which features nine settling/percolation basins totaling 109.5 additional acres. Field access to 109.5-acre portion was restricted during the survey dates.

In addition to the cheese manufacturing/processing, land uses include flood-irrigated agricultural fields and rural residences. Agricultural fields were planted in alfalfa (*Medicago sativa*) or were fallow at the time the surveys were conducted.

Most of the study area has been leveled for agricultural uses. Topographic features within the study area include slightly elevated berms, a shallow roadside ditch, and a perennially flowing irrigation drainage canal (drainage canal, DC-1) that conveys irrigation water east to west along the south central portions of the property immediately south of the cheese manufacturing facility. The Cheese Factory also includes a series of nine infiltration/evaporation ponds (ponds) that are located immediately north of the Drainage Canal. The ponds are hydrologically separated from the drainage canal by a large levee.

The drainage canal (DC-1) enters the Master Plan area through a grated culvert located near the eastern property boundary, in the southern half of the Master Plan area. The Drainage Canal is part of the South San Joaquin Irrigation District (SSJID). Average elevation is approximately 40 feet above mean sea level (msl). The feature flows due west before veering to the northwest, eventually reaching its confluence with French Camp Drain immediately west of the site's western property boundary. Once offsite, flows continue due north connecting to French Camp Slough, which ultimately connects to the San Joaquin River (a United States Army Corps of Engineers [USACE]-designated "Traditionally Navigable Water"). The roadside ditch and the settling ponds do not exhibit clear indicia of surface connectivity to French Camp Slough or any other hydrogeomorphic surface feature. Some of the ponds may periodically contain water for sufficient time to provide

seasonal habitat for aquatic resources; however, the roadside ditch lacks any discernable aquatic resource value.

Adjacent Land Uses/Wildlife Corridors

The Master Plan area is bordered by significant residential development to the northwest, southwest, and southeast. Heavy industrial uses are located immediately to the west with light industrial uses directly south of the Master Plan area. The remaining areas, primarily to the northeast and east, are zoned as urban reserve/agricultural or low-density residential and support various agricultural uses, including croplands and cattle farms.

No natural plant or habitat communities are located adjacent or near the property. The Master Plan area is located approximately 2.68 miles (14,156 lineal feet) from the San Joaquin River and, therefore, is outside the San Joaquin River Wildlife Corridor. The Master Plan area neither is located within nor otherwise disrupts the continuous San Joaquin kit fox corridor.

Plant Communities – Associated with Agricultural/Upland Resources

The study area contains no natural plant communities. The area is primarily an actively cultivated field used for row crops; although there are walnut orchards present at the southern boundary of the site as well as a small inclusion located centrally. There are also a few rural residences at the eastern edge of the study area along Airport Way with associated irrigated pastures of a few acres or less.

Plant species observed within the study area include almond (*Prunus dulcis*), wild oat (*Avena barbata*), rip-gut brome (*Bromus diandrus*), alfalfa (*Medicago sativa*), Russian thistle (*Salsola tragus*), sun cup (*Camissonia* sp.), sunflower (*Helianthus annuus*), umbrella sedge (*Cyperus* sp.), verbena (*Verbena lasiostachys*), pigweed (*Amaranthus albus*), sorghum (*Sorghum halapense*), nightshade (*Solanum* sp.), caltrop (*Tribulus terrestris*), telegraph weed (*Heterotheca grandiflora*), prickly lettuce (*Lactuca serriola*), barley (*Hordeum* sp.), and heliotrope (*Heliotropium curassavicum*).

Plant Communities – Associated with Aquatic Resources

The Master Plan area has been used extensively for agricultural purposes and does not contain any evidence of vernal pool habitat or wetlands adjacent (extending outside the ordinary high water mark (OHWM) of any stream (canal) or pond. However, one of the infiltration ponds and a drainage canal located in the south-central portion of the property support a mix of upland (facultative upland, upland) and hydrophytic (facultative, facultative wet, or obligate) vegetation within the OHWM.

Indicative species include echinochloa (*Echinochloa crus-galli*), watercress (*Rorippa nasturtius-aquaticum*), prickly lettuce (*Lactuca serriola*) curly dock (*Rumex crispus*), Bermuda grass (*Cynodon dactylon*), water plantain (*Alisma plantago-aquatica*), and field mustard (*Brassica rapa*).

Wildlife

Field surveys provided evidence suggesting the Master Plan area may support populations of terrestrial vertebrates, including small mammals and avian species. These are listed below.

Mammalian Species:

- Coyote (*Canis latrans*)
- California ground squirrel (*Spermophilus beecheyi*)
- California vole (*Microtus californicus*)
- Deer mouse (*Peromyscus maniculatus*)
- Western harvest mouse (*Reithrodontomys megalotis*)

Avian Species:

- American crow (*Corvus brachyrhnchos*)
- Common raven (*Corvus corax*)
- American kestrel (*Falco sparverius*)
- European starling (*Sturnus vulgaris*)
- Red-tailed hawk (*Buteo jamaicensis*)
- Red-shouldered hawk (*Buteo lineatus*)

Special-Status Species – Plants and Wildlife

Sensitive species are native species that have been accorded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Special-Status Species:

- Endangered Species Act (50 Code of Federal Regulations 17.11): Animals listed or proposed for listing as threatened or endangered
- Endangered Species Act (50 Code of Federal Regulations 17.12): Plants listed or proposed for listing as threatened or endangered
- Endangered Species Act (70 Federal Register 24870): Species identified as candidates for future listing as threatened or endangered

State and Local Special-Status Species:

- California Endangered Species Act (14 California Code of Regulations 670.5): Species listed or proposed for listing as threatened or endangered by the State of California
- California Department of Fish and Game (Fish & Game Code Section 1900): Plants listed as rare

- California Department of Fish and Game (Fish & Game Code Section 3511): Fully protected birds
- California Department of Fish and Game (Fish & Game Code Section 4700): Fully protected mammals
- California Department of Fish and Game (Fish & Game Code Section 3511): Fully protected reptiles and amphibians
- California Department of Fish and Game (Fish & Game Code Section 3511): Fully protected fish
- California Department of Fish and Game (DFG): Animal species of special concern to DFG—birds (Remsen, 1978), mammals (Williams, 1986), amphibians and reptiles (Jennings and Hayes 1994)
- California Native Plant Society (lists 1B and 2): Plants listed by CNPS as "rare, threatened, or endangered" in California
- California Native Plant Society (Lists 3 and 4): Plants identified by the CNPS as needing further information to determine status
- CEQA (Public Resources Code Section 15380): Species meeting the definition of rare or endangered under CEQA
- San Joaquin County Multi-Species Habitat Conservation and Open Space Plan: Covered species

With respect to the Master Plan area, a summary of potential special-status plant species is provided in Table 3.4-1. A summary of potential special-status wildlife species is provided in Table 3.4-2.

Designated Critical Habitat

No designated critical habitat occurs onsite. However, the onsite drainage canal has indirect connectivity to the San Joaquin River, which includes designated critical habitat for the Delta smelt (*Hypomesus transspacificus*) and steelhead trout (*Oncorhynchus mykiss*).

The San Joaquin River is located approximately 8.0 river miles from the onsite drainage canal. Neither Delta smelt nor steelhead trout were observed in the onsite drainage/irrigation canal during the field surveys. Irrigation channels and drains within the Master Plan area are maintained by SSJID and do not support fish species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.

Table 3.4-1: Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
Amsinckia grandiflora Large-flowered fiddleneck	FE/CE/1B.1	Cismontane woodland and valley and foothill grassland habitats. 275 to 550 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only active agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	April–May
Astragalus tener var. *tener* Alkali milk-vetch	—/—/1B.2	Playas, valley and foothill grassland in adobe clay, and vernal pools. Restricted to alkaline substrates. 1 to 60 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	March–June
Atriplex joaquiniana San Joaquin spearscale	—/—/1B.2	Chenopod scrub, meadows and seeps, playas, and valley and foothill grassland. Restricted to alkaline soils. 1 to 835 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	April–October
Atriplex minuscula Lesser saltscale	—/—/1B.1	Chenopod scrub, playas, and valley and foothill grassland. Restricted to alkaline, sandy soils. 15 to 200 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	May–October

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
Blepharizonia plumosa Big tarplant	—/—/1B.1	Valley and foothill grassland. 30 to 505 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	July–October
California macrophylla Round-leaved filaree	—/—/1B.1	Cismontane woodland and valley and foothill grassland habitats. 15 to 1,200 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	March–May
Carex comosa Bristly sedge	—/—/2.1	Coastal prairie and valley and foothill grassland habitats in clay soils. 0 to 625 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	May–September
Cirsium crassicaule Slough thistle	—/—/1B.1	Chenopod scrub, marshes and swamps, and riparian scrub habitats. 3 to 100 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There is a recorded occurrence of this species 3 miles southwest of the site.	May–August

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
Cordylanthus palmatus Palmate-bracted bird's-beak	FE/CE/1B.1	Chenopod scrub and valley and foothill grasslands in alkaline soils. 5 to 155 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	May–October
Delphinium recurvatum Recurved larkspur	—/—/1B.2	Chenopod scrub, cismontane woodland, and valley and foothill grassland habitats in alkaline soils. 3 to 750 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	March–June
Eryngium racemosum Delta button-celery	—/CE/1B.1	Riparian scrub in vernally mesic clay depressions. 3 to 30 meters in elevation.	**None**. There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There is a recorded occurrence of this species 3 miles southwest of the site.	June–October
Eschscholzia rhombipetala Diamond-petaled California poppy	—/—/1B.1	Valley and foothill grassland habitat in alkali, clay soils.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	March–April

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
Hisbiscus lasiocarpos Woolly rose-mallow	—/—/2.2	Freshwater marshes and swamps. 0 to 120 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. Irrigation channels within the Master Plan area are regularly maintained through dredging. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	June–September
Lathyrus jepsonii var. *jepsonii* Delta tule pea	—/—/1B.2	Freshwater and brackish marshes and swamps. 0 to 4 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. Irrigation channels within the Master Plan area are regularly maintained through dredging. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	May–July
Lilaeopsis masonii Mason's lilaeopsis	—/Rare/1B.1	Riparian scrub and brackish or freshwater marshes and swamps. 0 to 10 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. Irrigation channels within the Master Plan area are regularly maintained through dredging. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	April–November

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
Limosella subulata Delta mudwort	—/—/2.1	Marshes and swamps. 0 to 3 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. Irrigation channels within the Master Plan area are regularly maintained through dredging. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	May–August
Sagittaria sanfordii Sanford's arrowhead	—/—/1B.2	Assorted shallow freshwater marshes and swamps. 0 to 2,132 feet in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. Irrigation channels within the Master Plan area are regularly maintained through dredging. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	May–October
Senecio aphanactis Chaparral ragwort	—/—/2.2	Chaparral, cismontane woodland, and coastal scrub habitats; sometimes in alkaline soils. 15 to 800 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	January–April

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
Symphyotrichum lentum Suisun Marsh aster	—/—/1B.2	Brackish and freshwater marshes and swamps. 0 to 3 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. Irrigation channels within the Master Plan area are regularly maintained through dredging. There is an 1892 occurrence record from the extreme southwestern corner of the site.	May–November
Trichocoronis wrightii var. *wrightii* Wright's trichocoronis	—/—/2.1	Meadows and seeps, marshes and swamps, riparian forest, and vernal pools. Restricted to alkaline substrates. 5 to 435 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. Irrigation channels within the Master Plan area are regularly maintained through dredging. There is an occurrence record for this species 4 miles southwest of the site, although the species has not been documented here since 1914.	May–September
Tropidocarpum capparideum Caper-fruited tropidocarpum	—/—/1B.1	Valley and foothill grasslands on alkaline hills. 1 to 455 meters in elevation.	**None.** There are no natural habitats within the Master Plan area; the site contains only agricultural fields and orchards. There are no recorded-occurrences of this species within 5 miles of the Master Plan area.	March–April

Table 3.4-1 (cont.): Summary of Special-Status Plant Species Review

Scientific Name Common Name	Listing Status* USFWS/ CDFG/CNPS	General Habitat Description	Potential for Presence**	Period of Identification
***Status Codes:**				
Federal FE = Federally Endangered FT = Federally Threatened FD = Federally Delisted	**State** CE = State Endangered CT = State Threatened SSC = State Species of Special Concern	**CNPS** 1A = Presumed extinct in California 1B.X = Rare, threatened, or endangered in California and elsewhere 2.X = Rare, threatened, or endangered in California, but more common elsewhere Threat rank: 0.1 = Seriously threatened in California 0.2 = Fairly threatened in California 0.3 = Not very threatened in California		
****Potential for Presence**				
High = Species was observed, or suitable habitat is present and the species has been recorded recently within or adjacent to the Master Plan area. **Medium** = Species is locally common and suitable habitat is present. **Low** = Habitat is marginal, or suitable habitat is present but species is rare or locally uncommon. **Very Low** = Habitat is poor or absent, or species is very rare and has not been recorded within 5 miles of the Master Plan area. **None** = Habitat is absent and/or site is not within range of this species. Source: California Natural Diversity Database, 2010.				

Table 3.4-2: Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Invertebrates				
Branchinecta conservatio Conservancy fairy shrimp	FE/—/—	Vernal pools, swales, and ephemeral freshwater habitats.	**None.** The Master Plan area contains no vernal pools, swales, or other ephemeral freshwater habitats suitable for this species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Branchinecta lynchi Vernal pool fairy shrimp	FT/—/—	Vernal pools, seasonally ponded swales, and ephemeral freshwater habitats.	**None.** The Master Plan area contains no vernal pools, swales, or other ephemeral freshwater habitats suitable for this species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT/—/—	Elderberry shrubs (*Sambucus mexicana*).	**None.** Suitable habitat is not present. Elderberry shrubs were not detected during surveys. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Lepidurus packardi Vernal pool tadpole shrimp	FE/—/—	Vernal pools and ephemeral freshwater habitats.	**None.** The Master Plan area contains no vernal pools, swales, or other ephemeral freshwater habitats suitable for this species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Fishes				
Acipenser medirostris Green sturgeon	FT/SSC/—	Anadromous species; large portions of life history are spent in the ocean. Migrations by adults into freshwater occur between late February and late July, with a spawning period generally ranging from March to July. Spawning takes place in deep, fast-moving water with temperatures between 46.5 and 57˚F. Preferred spawning substrate is likely large cobble, but can range from clean sand to bedrock. Juveniles typically migrate out to sea before the end of their second year, primarily during summer and fall.	**None.** Irrigation channels and drains within the Master Plan area are maintained by the South San Joaquin Irrigation District (SSJID) and do not support fish species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Hypomesus transpacificus Delta smelt	FT/CT/—	Sacramento-San Joaquin Delta.	**None.** Irrigation channels and drains within the Master Plan area are maintained by SSJID and do not support fish species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Mylopharodon conocephalus Hardhead	—/SSC/—	Sacramento-San Joaquin Delta.	**None.** Irrigation channels and drains within the Master Plan area are maintained by SSJID and do not support fish species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Oncorhynchus mykiss Central Valley steelhead	FT/—/—	Sacramento and San Joaquin rivers and their tributaries.	**None.** Irrigation channels and drains within the Master Plan area are maintained by SSJID and do not support fish species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Onchorhynchus tshawytscha Central Valley spring-run chinook	FT/CT/—	Sacramento and San Joaquin rivers and their tributaries.	**None.** Irrigation channels and drains within the Master Plan area are maintained by SSJID and do not support fish species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Onchorhynchus tshawytscha Central Valley winter-run chinook	FE/CE/—	Sacramento and San Joaquin rivers and their tributaries.	**None.** Irrigation channels and drains within the Master Plan area are maintained by SSJID and do not support fish species. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Amphibians				
Ambystoma californiense California tiger salamander	FT/CC/—	Annual grassland habitat and grassy understory of valley-foothill hardwood habitats. Uncommon along streamcourses in valley-foothill riparian habitats. Adults spend most of the year in subterranean refugia, especially burrows of California ground squirrels. Migrate to vernal pools and other temporary rainwater ponds to breed and lay eggs.	**None.** The Master Plan area and surrounding lands are active agricultural fields and orchards. There are no upland aestivation habitats or any aquatic habitats suitable for breeding. There is a recorded occurrence of this species 4 miles south of the Master Plan area.	March to May (aquatic larval sampling) October through winter *(drift fence surveys)*
Rana boylii Foothill yellow-legged frog	—/CSC/—	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	**None.** Aquatic habitats onsite are irrigation channels and drains maintained by the	April–July (breeding season survey)

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
			SSJID, and are not suitable for this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	
Rana draytonii California red-legged frog	FT/CSC/—	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent vegetation.	**None.** Aquatic habitats onsite are irrigation channels and drains maintained by the SSJID, and are not suitable for this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	January through February (breeding season survey)
Spea hammondii Western spadefoot toad	—/CSC/—	Grasslands with temporary pools.	**None.** The Master Plan area and surrounding lands are active agricultural fields and orchards. There are no habitats suitable for this species. There are no recorded occurrences of this species within 5 miles of the site.	January–May (adult visual survey)
Reptiles				
Actinemys marmorata Western pond turtle	—/CSC/—	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. My move overland up to 325 feet for egg laying.	**None.** Aquatic habitats onsite are irrigation channels and drains maintained by the SSJID, and are not suitable for this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Masticophis flagellum ruddocki San Joaquin whipsnake	—/SSC/—	Grassland, savanna, chaparral, and woodland.	**None.** The Master Plan area and surrounding lands are active agricultural fields and orchards. There are no habitats suitable for this species. There are no recorded occurrences of this species within 5 miles of the site.	Year-round
Phrynosoma coronatum California horned lizard	—/SSC/—	Common in lowlands along sandy washes with scattered low shrubs to provide cover and open areas for basking and loose soils in which they can bury themselves.	**None.** The Master Plan area and surrounding lands are active agricultural fields and orchards. There are no habitats suitable for this species. There are no recorded occurrences of this species within 5 miles of the site.	April to September
Thamnophis gigas Giant garter snake	FT/CT/—	Marshes, sloughs, irrigation channels, and occasionally in slow-moving streams. Requires emergent vegetation for cover.	**None.** Suitable habitat is not present. The Master Plan area does not contain any aquatic habitat suitable for this species. There is a recorded occurrence of this species approximately 4 miles northeast of the Master Plan area.	Mid-March to October
Birds				
Accipiter striatus Sharp-shinned hawk	—/CSC/—	Winter resident throughout much of the state; permanent at higher elevations. Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers but is not restricted to riparian habitats.	**Moderate.** This species does not nest within the region, although the site may be used for foraging. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round
Agelaius tricolor Tricolored blackbird	—/CSC/—	Largely endemic to California, most numerous in the Central Valley and nearby vicinity. Breeds near fresh water,	**Low.** There are no emergent wetlands suitable for nesting, although this species may	April–July

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
		preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats.	forage on the site. There are recorded occurrences of this species within 5 miles of the site, the nearest of which is approximately 2.5 miles to the south.	
Aquila chrysaetos Golden eagle	—/CFP/—	Breeds on cliffs or in large trees or electrical towers, forages in open habitats.	**None.** The Master Plan area is located in a relatively urbanized region that is unsuitable for this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round
Athene cunicularia Western burrowing owl	—/CSC/—	Open, dry annual or perennial grasslands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals.	**High.** Berms adjacent to agricultural fields may be suitable for this species, and much of the site is suitable for foraging. There are several recorded occurrences of this species within 5 miles of the site, the nearest of which is a sizeable population in Sharpe Army Depot, adjacent to the site on the west.	December 1 to January 31 and April 15 to July 15
Branta hutchinsii leucopareia Cackling goose	FD/—/—	Preferred habitats include lacustrine, fresh emergent wetlands, and moist grasslands, croplands, pastures, and meadows. Occurs mainly during winter in Del Norte county, the San Francisco bay-delta, and southern Central Valley.	**None.** This species does not nest in the region, and is not typically associated with urbanized regions. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	October–February
Buteo swainsoni Swainson's hawk	—/CT/—	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Breeds in open stands in juniper-sage flats, riparian areas, and in oak savannah in the Central	**Moderate.** Suitable foraging habitat is present in agricultural fields, and trees associated with residences may be used for nesting. There are several recorded occurrences of this species within 5 miles of the Master	March to September

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
		Valley. Forages in adjacent grasslands, grain or alfalfa fields, or livestock pastures.	Plan area, the nearest of which is 1 mile to the north.	
Buteo regalis Ferruginous hawk	—/CSC/—	Forages in grasslands and occasionally in other open habitats during migration and winter.	**Low.** This species does not breed in California, although the area is suitable for foraging. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	September to April
Circus cyaneus Northern harrier	—/CSC/—	Winter resident throughout most of the state; year-round in the Central Valley and Coast Range. Forages in marshes, grasslands, and ruderal habitats; nests in extensive marshes and wet fields or grasslands.	**High.** Suitable nesting and foraging habitat is present throughout grassland portions of the Master Plan area. This species was observed during the field assessment. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	April to September (breeding)
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FC/CE/—	Uncommon to rare summer resident of valley foothill and desert riparian habitats. Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow is almost always a dominant component of the vegetation. In Sacramento Valley, also utilizes adjacent orchards, especially walnut.	**None.** The Master Plan area does not contain and is not in proximity to any dense riparian habitats. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	April to September

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Dendroica petechia Yellow warbler	—/CSC/—	Requires riparian thickets of willow and other brushy tangles near watercourses for cover. Nests in dense shrubs along streams or rivers.	**None.** The Master Plan area does not contain and is not in proximity to any dense riparian habitats. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	April–September
Elanus leucurus White-tailed kite	—/CFP/—	Year-round resident. Nests or roosts in dense, broad-leafed deciduous trees. Forages in herbaceous lowlands with variable tree growth and dense populations of voles.	**Moderate.** Agricultural fields within the Master Plan area are suitable for foraging, and trees associated with residences may be suitable for nesting. There are no recorded occurrences of this species within 5 miles of the area.	January to August (breeding)
Falco columbarius Merlin	—/CSC/—	Uncommon winter migrant. Seldom found in heavily wooded areas or open deserts. Frequents open habitats at low elevations near water and tree stands. Favors coastlines, lakeshores, and wetlands. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats.	**Low.** This species does not breed in California, although suitable foraging habitat is present in agricultural fields. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	September to May
Falco mexicanus Prairie falcon	—/CSC/—	Year-round resident throughout much of the state; winters in the Central Valley and along the coast. Occurs in open habitats such as grasslands, desert scrub, rangelands, and croplands. Nests in a scrape on a sheltered ledge of a cliff overlooking a large, open area.	**Low.** This species does not breed in the region, although suitable foraging habitat is present in agricultural fields. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Falco peregrinus anatum American peregrine falcon	FD/CE/—	Forages in marshes and grasslands. Nesting habitat includes high, protected cliffs and ledges, also utilizes human-made structures. Winters at lower elevations; year-round resident through much of the state.	**None.** The Master Plan area contains no habitat suitable for nesting or for foraging by this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Consult agency
Haliaeetus leucocephalus Bald eagle	FT/CFP/—	Year-round at ocean shorelines, lake margins, and river courses. Nests in large, old-growth, or dominant live tree with open branchwork, especially ponderosa pine.	**None.** The Master Plan area contains no habitat suitable for nesting or for foraging by this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Consult agency
Icteria virens Yellow-breasted chat	—/CSC/—	Breeds in riparian habitats having dense understory vegetation, such as willow and blackberry.	**None.** The Master Plan area contains no habitat suitable for nesting or for foraging by this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	April–July
Lanius ludovicianus Loggerhead shrike	—/CSC/—	Found in a variety of habitats with open areas, available perches, and dense shrubs for nesting.	**Low.** The Master Plan area is suitable for foraging, although there are no dense shrubs for nesting. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	March to August
Pandion haliaetus Osprey	—/—/—	Ocean shore, bays, freshwater lakes, and larger streams. Generally nests in treetops within 15 miles of fish-producing body of water.	**None.** The Master Plan area contains no habitat suitable for nesting or for foraging by this species. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	March–September

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Progne subis Purple martin	—/CSC/—	An uncommon to rare summer resident in a variety of wooded, low-elevation habitats; a rare migrant in spring and fall, absent in winter. Breeding habitat includes old-growth, multi-layered, open forest, and woodland with snags; forages over riparian areas, forest, and woodlands. Drain holes in bridges and overpasses now commonly used for nesting in urban habitats.	**Low.** The Master Plan area does not contain old-growth forest or woodland habitat suitable for nesting, although the area is suitable for foraging. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	April–September
Xanthocephalus xanthocephalus Yellow-headed blackbird	—/CSC/—	Breeds commonly east of Cascade Range and Sierra Nevada, in Imperial and Colorado River valleys, in the Central Valley, and at selected locations in the coast ranges. Nests in fresh emergent wetland with dense vegetation and deep water, often along borders of lakes or ponds. Forages in emergent wetland and moist, open areas, especially cropland and muddy shores of lacustrine habitat.	**None.** The Master Plan area contains no fresh emergent habitat suitable for nesting or foraging. There is a recorded occurrence of this species approximately 1 mile to the southwest, but the record is from 1894.	April–July (breeding)
Mammals				
Antrozous pallidus Pallid bat	—/CSC/High	Occurs in a variety of habitats throughout the state to 6,000 feet in elevation. It is most abundant is xeric ecosystems. Pallid bats roost alone, and in both large and small groups. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees, and human structures such as bridges, barns, porches, bat boxes, and buildings. This species also has been found roosting on or near the ground under stone piles, rags, and	**None.** The Master Plan area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	April to October

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
		baseboards. Pallid bat is a gregarious species and often roost in colonies of 20 to several hundred individuals. Non-migratory. Hibernate during winter, with very little activity.		
Corynorhinus townsendii Townsend's big-eared bat	—/CSC/High	Occurs throughout the State to 11,000 feet in elevation. Distribution correlated with availability of caves and cave-like roosting habitat. Roosts in colonies in caves, mines, tunnels, or buildings in mesic habitats. The species forages along habitat edges, gleaning insects from bushes and trees. Seasonal movement patterns not well understood. There may be local migration along altitudinal gradients. Hibernate during winter, with very little activity.	**None.** The Master Plan area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Consult agency
Euderma maculata Spotted bat	—/CSC/High	Distribution is extremely patchy and is correlated closely with prominent rock features. Non-migratory, although there may be local migration along altitudinal gradients. Depends upon rock-faced cliff roosting habitat. Thought to roost singly during the day. Forages throughout the night, so it does not utilize night roosts.	**None.** The Master Plan area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round
Eumops perotis californicus Greater western mastiff bat	—/CSC/High	Roosts in rock crevices of vertical cliffs and less commonly in buildings. Does not migrate or hibernate.	**None.** The Master Plan area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Lasiurus blossevillii Western red bat	—/CSC/High	Western red bat is a solitary, foliage-roosting species. Day roosts in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. Closely associated with riparian habitats; cottonwood stands are preferred roost areas. Roosts behind foliage and hidden from sight. Females do not form maternity colonies, but give birth singly in trees. Migrates south in the winter, and returns north for breeding.	**None.** The Master Plan area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	April to October
Myotis thysanodes Fringed myotis	—/—/High	Widely distributed throughout California in all habitat types. Known to migrate, but very little information available regarding migration patterns. Most abundant in xeric woodlands, such as oak and pinyon-juniper forests. Roosts in caves, buildings, underground mines, rock crevices in cliff faces, and bridges in groups ranging from 10 to 2,000. Hibernates in buildings or underground mines	**None.** The Master Plan area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round
Myotis volans Long-legged myotis	—/—/High	Found primarily in forested areas, especially blue oak-foothill pine, montane hardwood-conifer, ponderosa pine, and Sierran mixed conifer. Migrates short distances to hibernation areas. Roosts in abandoned buildings, cracks in the ground, bridges, cliff crevices, exfoliating tree bark, and hollows within snags. Females form large maternity colonies of hundreds of individuals. Hibernates in winter in caves and mines.	**None.** The Master Plan area contains no roosting habitat, and this species is not commonly associated with agricultural areas. There are no recorded occurrences of this species within 5 miles of the Master Plan area.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Neotoma fuscipes riparia Riparian woodrat	FE/—/—	The riparian woodrat is the only subspecies found on the floor of the Central Valley and it is restricted today to small remnant patches of riparian forest along the Stanislaus river. Highly arboreal, requiring evergreen or live oaks and other thick-leaved trees and shrubs.	**None.** The Master Plan area contains no riparian habitat. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Sylvilagus bachmani riparius Riparian brush rabbit	FE/CE/—	Historically occurred in riparian forests along the San Joaquin River and Stanislaus rivers. Currently found only along the Stanislaus River in Caswell Memorial State Park	**None.** The Master Plan area contains no riparian habitat and is not located within proximity to the known population in Caswell Memorial State Park. There is a 1932 occurrence record of this species 4 miles southwest of the site.	Year-round
Taxidea taxus American badger	—/SSC/—	Herbaceous, shrub, and open stages of most habitats with dry, friable soils.	**None.** The Master Plan area contains no natural, open habitats. There are no recorded occurrences of this species within 5 miles of the project.	Year-round
Vulpes macrotis mutica San Joaquin kit fox	FE/CT/—	Occur in annual grasslands or grassy open stages of vegetation dominated by scattered brush, shrubs, and scrub with loose-textured, sandy, and loamy soils.	**Very Low.** There is no suitable habitat for this species within the Master Plan area. The Master Plan area contains active agricultural fields and orchards. However, this species may disperse across the site. There are no recorded occurrences of this species within 5 miles of the project.	Year-round

Table 3.4-2 (cont.): Summary of Special-Status Wildlife Species Review

Scientific Name Common name	Listing Status USFWS/ CDFG/WBWG	General Habitat Description	Potential for Presence	Period of Identification
Status Codes				
Federal FE = Federally Endangered FT = Federally Threatened FD = Federally Delisted	**State** CE = State Endangered CT = State Threatened CSC = State Species of Special Concern CC = State Candidate	**WBWG** High = Species imperiled or at high risk of imperilment. Medium = Lack of information prevents assessment of status and should be considered a threat.		
****Potential for Presence**				
High = Species was observed, or suitable habitat is present and the species has been recorded recently within or adjacent to the Master Plan area. **Medium** = Species is locally common and suitable habitat is present. **Low** = Habitat is marginal, or suitable habitat is present but species is rare or locally uncommon. **Very Low** = Habitat is poor or absent, or species is very rare and has not been recorded within 5 miles of the Master Plan area. **None** = Habitat is absent and/or site is not within the range of this species. Source: California Natural Diversity Database, 2010.				

3.4.3 - Regulatory Framework

Federal

Federal Endangered Species Act (FESA)

The purposes of this Act are to provide a means to conserve the ecosystems that endangered and threatened species depend on and to provide a program for conservation and recovery of these species. The Federal Endangered Species Act (FESA) defines species as "endangered" and "threatened" and provides regulatory protection for any species so designated. Section 9 of the FESA prohibits the take of species listed by the U.S. Fish and Wildlife Service (USFWS) as threatened or endangered. As defined in the FESA, take means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." Harm is defined by the USFWS to encompass "an act which actually kills or injures wildlife." Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 Code of Federal Regulations Section 17.3). Thus, some instances of habitat modification can constitute prohibited "take" if it can be shown that such modification can be expected to result in injury or death to one or more individuals of a listed species.

In recognition that take cannot always be avoided, Section 10(a) of the FESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10 (a)(1)(B) permits (incidental take permits) may be issued if taking is incidental and will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

Section 7(a)(2) of the FESA requires any federal agency taking an action, including the USFWS, to evaluate a proposed project with respect to any species proposed for listing or already listed as endangered or threatened and their critical habitat, if any is proposed or designated. Federal agencies must undertake programs for the conservation of endangered and threatened species, and are prohibited from authorizing, funding, or carrying out any action that will jeopardize a listed species or destroy or modify its "critical habitat." As defined in the FESA, "individuals, organizations, states, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding."

The term critical habitat for a threatened or endangered species means either (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of FESA Section 1533 on which are found those physical or biological features (Constituent elements) that are (a) essential to the conservation of the species and (b) which may require special management considerations or protections; and (2) species outside the geographical outside the geographical area occupied by the species at the time it is listed, which has been determined to be essential for the conservation of the species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union. As with the FESA, the Migratory Bird Treaty Act authorizes the Secretary of the Interior to issue permits for incidental take.

Federal Clean Water Act: Sections 404 and 401

Section 404 of the Federal Clean Water Act, which is administered by the United States Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into waters of the United States (U.S.). The definition of "Waters of the U.S." is set forth in the Title 33 Code of Federal Regulations (CFR) 328.3. The term "waters of the United States" means (1) navigable waters, (2) inter state waters, (3) intrastate waters with an interstate commerce nexus, (4) impoundments of the these waters, (5) non-navigable tributaries, including non-relatively permanent waters (intermittent, ephemeral streams) that exhibit a significant chemical, physical or biological nexus to downstream jurisdictional waters, (6) territorial seas, and (7) wetlands adjacent to otherwise jurisdictional waters.

With respect to adjacent wetlands, the USACE defines "adjacent" to mean "bordering, contiguous or neighboring." Typically, wetlands within the floodplain of jurisdictional features (lakes, rivers, tributaries, etc.) will be considered "adjacent." According to the USACE, wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions (33 CFR 328.3(b)). Wetlands generally include swamps, marshes, bogs, and similar areas.

Any project impacting jurisdictional waters/wetlands must obtain a dredge/fill (404) permit from the USACE prior to commencement of activities affecting those resources.

In connection with notification to the USACE under Section 404 of the Clean Water Act (CWA), pursuant to 33 CFR Part 330, a written request for Section 401 water quality certification must be submitted to the RWQCB to ensure that no degradation of water quality will result from the proposed project. Subject to CWA section 401(a)(1), the USACE cannot issue a section 404 dredge/fill permit until such time as a CWA section 401 Water Quality Certification has been approved by the applicable RWQCB. In the nationwide permitting program, compliance with the Section 401 is set forth in general condition (GC 21).

In order to meet the requirements of the RWQCB for issuance of a 401-water quality certification, the project proponent must provide assurances that the project will not adversely affect the water quality of receiving water bodies. A written request for 401 water quality certification must be prepared and submitted to the RWQCB for review. The request will include a detailed project description, a description of proposed impacts, identification and discussion of beneficial uses of affected receiving

waters (as described within the appropriate Basin Plan), a water quality plan identifying project-specific Best Management practices (BMPs), discussion of other approvals and certifications being obtained, a conceptual restoration plan, and a completed notification form.

State

California Endangered Species Act (CESA)

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. The State considers a threatened species as one present in such small numbers throughout its range that it is considered likely to become an endangered species in the near future in the absence of special protection or management. A rare species is considered as present in such small numbers throughout its range that it may become endangered if its present environment worsens. The designation "rare species" applies only to California native plants. State threatened and endangered species include both plants and wildlife (not including invertebrates) and are legally protected against "take" as this term is defined in the CESA (California Fish & Game Code Section 2050, et seq.). "Species of Special Concern" is an informal designation used by the CDFG for some declining wildlife species that are not officially listed as endangered, threatened, or rare. This designation does not provide legal protection, but it signifies that these species are recognized as vulnerable by CDFG.

Sections 1600–1603 of the State Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the California Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife and has jurisdiction over dry washes that carry water ephemerally during storm events.

Sections 2080 and 2081 of the State Fish and Game Code

Section 2080 of the State Fish and Game Code states that no person shall import into this state (California), export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act, or the California Desert Native Plants Act. Under Section 2081 of the Code, the CDFG may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if (1) the take is incidental to an otherwise lawful activity, (2) impacts of the authorized take are

minimized and fully mitigated, (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) the applicant ensures adequate funding to implement the measures required by CDFG. CDFG shall make this determination based on the best scientific and other information that is reasonably available and shall include consideration of the species' capability to survive and reproduce.

Section 3503 of the State Fish and Game Code

Section 3503 of the State Fish and Game Code states, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

Natural Community Conservation Planning Program

The Natural Community Conservation Planning Program, managed by CDFG, is designed to conserve multiple species and their habitats, while also providing for the compatible use of private land. Through local planning, the Natural Community Conservation Planning Program process protects wildlife and habitat before the landscape becomes so fragmented or degraded by development that listings are required under the FESA. Instead of saving small, disconnected units of habitat for just one species at a time, agencies, local jurisdictions, and other interested parties have an opportunity, through the Natural Community Conservation Planning Program, to work cooperatively to develop plans that consider broad landscapes, or "ecosystems," and the needs of many species. Partners enroll in the programs and, by mutual consent, habitat areas with high conservation values are set aside and may not be developed. Partners also agree to study, monitor, and develop management plans for these reserve areas. The program provides a process for fostering economic growth by allowing approved development in enrolled areas with lower conservation values.

Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The definition of "rare and endangered" differs from those contained in CESA. However, the list of native plants afforded protection pursuant to this act includes those listed as rare and endangered under the CESA. The Native Plant Protection Act provides limitations on take as follows: "No person shall import into this state, or take, possess, or sell within this state" any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFG at least 10 days in advance of changing land uses to allow the CDFG to salvage any rare or endangered native plant material.

California Native Plant Society

The CNPS is a statewide resource conservation organization that has developed an inventory of California's special-status plant species. This inventory is a summary of information on the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory consists of four lists. CNPS presumes that List 1A plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers List 1B plants as rare, threatened, or

endangered throughout their range. List 2 plant species are considered rare, threatened, or endangered in California, but more common in other states. Plant species on lists 1A, 1B, and 2 meet CDFG criteria for endangered, threatened, or rare listing. Plant species for which CNPS requires additional information in order to properly evaluate their status are included on List 3. List 4 plant species are those of limited distribution in California whose susceptibility to threat is considered low at the current time.

Local

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which encompasses all of San Joaquin County, provides a strategy for balancing habitat and open space conservation with the needs of economic development. The City of Manteca is a signatory to the SJMSCP. The SJMSCP objectives include balancing the need to conserve open space and the need to convert open space to non-open space uses while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed or may be listed in the future under FESA or CESA; providing and maintaining multiple-use open spaces that contribute to the quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing costs to project proponents and society at large.

The SJMSCP, in accordance with FESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the conversion of open space to non-open space uses that affects the plant, fish and wildlife species covered by the plan.

The mitigation ratios and compensation fees are determined on the basis of the type of lands that are being converted. The plan has established four land cover types: (1) Agricultural Habitat Lands, (2) Natural Lands (non-wetlands), (3) Natural Lands (vernal pools), and (4) Natural Lands (non-vernal pool wetlands).

Projects seeking coverage through the SJMSCP as an Unmapped Land Use Projects must complete the "Section 8.2.1(1) Checklist for Unmapped SJMSCP Projects." SJMSCP Coverage for a project will apply if it is determined that the proposed project is consistent with the SJMSCP and the accordant Biological Opinion.

City of Manteca Heritage Tree Ordinance (Title 17.19.060)

Existing trees over 6 inches in trunk diameter, measured 4.5 feet above ground level (DBH), shall be protected or replaced with like sized specimens of the same species/type. The City of Manteca's Parks and Recreation Department and Planning Department shall be notified of any planned construction or grade change within the proximity of existing mature trees. Agricultural and farming orchard areas of 1 acre or more are exempt from the ordinance.

3.4.4 - Methodology

Vegetation communities are classified according to A Manual of California Vegetation. This system classifies communities based upon floristic components, which are the plant taxa making up the vegetation of a given area. The floristically based system classifies communities at the lower units of the series or association, thereby allowing for a finer-scale description of the community and a better understanding of community function.

The Master Plan area was surveyed on two separate dates by Debra Stout, MBA Biologist. The entire project area was surveyed on foot. During the biological resource assessment, the property was also evaluated for the presence of state and federal jurisdictional waters.

3.4.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, biological resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a.) 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?

b.) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c.) 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?

d.) 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 wildlife nursery sites?

e.) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f.) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.4.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Special-Status Species

Impact BIO-1:	**Development activities contemplated by the Master Plan may have a substantial adverse effect, either directly or through habitat modifications, on special-status wildlife species.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect special-status species.

Master Plan

Biological surveys determined that there are no sensitive species within the Master Plan area and that the Master Plan area does not contain suitable habitat for most potential species. There is a moderate to high potential for several sensitive raptor species to utilize the Master Plan area for foraging, including sharp-shinned hawk, Swainson's hawk, northern harrier (observed onsite), white-tailed kite, and western burrowing owl. With the exception of the Swanson's hawk (California threatened), none of these species is listed as threatened or endangered under the FESA or CESA.

No designated critical habitat occurs onsite. However, the onsite drainage canal indirectly connects to the San Joaquin River, which includes designated critical habitat for the Delta smelt (*Hypomesus transspacificus*) and steelhead trout (*Oncorhynchus mykiss*). The San Joaquin River is located approximately 8 river miles downstream from the on onsite drainage canal. Neither Delta smelt nor steelhead trout were observed in the onsite drainage/irrigation canal during the field surveys. Irrigation channels/drains within the Master Plan area are maintained by SSJID and do not support natural fish populations. There are no recorded occurrences of this species within 5 miles of the Master Plan area.

The onsite drainage is an artificial conveyance, which though soft-bottomed does not exhibit pools, riffles, riparian (refugia) cover or surrounding adjacent wetland habitat that might otherwise support listed aquatic or semi-aquatic vertebrates (such as giant garter snake, Western spadefoot toad, Western pond turtle, California tiger salamander, foothill yellow legged frog, or California red-legged frog). For these reasons and the because of the absence of suitable upland habitat, the settling ponds on the Cal Suprema Cheese factory, do not provide suitable habitat for these species. There are no recorded occurrences of these species within 5 miles of the site.

In summary, several sensitive raptor species have the potential to use the Master Plan area for foraging. Mitigation Measures BIO-1a and BIO-1b require pre-construction surveys for these species. In the event that these species are observed to be onsite, avoidance measures must be implemented. Therefore, with the implementation of mitigation, impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, to the extent that special-status plant or wildlife species are present within these areas, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-1a If ground clearing or vegetation removal activities occur during the nesting season (February 15 through August 31), then pre-construction surveys for nesting birds shall be conducted in all area suitable for nesting that are located within 250 feet of the Master Plan area. Surveys shall be conducted no more than 15 days prior to the beginning of ground disturbance. If an active nest is located, a 250-foot buffer shall be delineated and maintained around the nest until a qualified biologist has determined that fledging has occurred. Alternatively, CDFG may be consulted to determine if the protective buffer can be reduced based upon individual species responses to disturbance. This mitigation measure does not apply if ground clearing or vegetation removal activities occur outside of the nesting season (September 1 through February 14).

MM BIO-1b No more than 30 day prior to the beginning of ground disturbance, a pre-construction survey for burrowing owls shall be conducted by a qualified biologist in general accordance with the Burrowing Owl Survey Protocol and Mitigation Guidelines by the California Burrowing Owl Consortium. Should the surveys be scheduled to occur during the period extending from February 1 through May 1, then surveys shall be conducted no more that 15 days prior to the start of ground disturbance. Surveys shall be conducted from 2 hours before sunset to 1 hour after sunset, or from 1 hour before sunrise to 2 hours after sunrise, and shall be conducted during weather conducive to observing owls outside of their burrows. No surveys shall occur during heavy rain, high winds, or dense fog. If occupied burrows are found, mitigation for potential impacts shall follow the guidelines outlined by the Burrowing Owl Survey Protocol and Mitigation Guidelines, including passive relocation.

Level of Significance After Mitigation

Less than significant impact.

Riparian Habitat and Sensitive Natural Communities

Impact BIO-2: Development activities contemplated by the Master Plan may have a substantial adverse effect on riparian habitat.

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect riparian habitat and sensitive natural communities.

Master Plan

There are no areas of riparian habitat or sensitive natural communities within the Master Plan area.

The Master Plan area contains a Drainage Canal (1.14 acres), which is subject to state jurisdiction under Fish and Game Code 1600/1602. Similarly, The Cal Suprema Cheese Factory contains nine settling basins (12.49 acres) which may support sufficient aquatic resources to establish CDFG Jurisdiction. The ponds are hydrologically isolated from downstream resources, and do exhibit surface connectivity. As such, Mitigation Measure BIO-2 is proposed requiring the project applicant to obtain necessary approvals from the appropriate agencies with jurisdiction over the drainage canals. A provision in the mitigation measure requires the applicant to mitigate the loss of impacted resources through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 1:1 ratio. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

The onsite roadside ditches support a dominance of upland plant species, including non-native grasses and weeds (ripgut brome, tumbleweed, rescue grass), with sporadic facultative species such as sunflower and Bermuda grass. The roadside ditches have insufficient indicia of aquatic resources to established CDFG jurisdiction.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, to the extent that riparian habitat or sensitive natural communities are present within these areas, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-2 Prior to issuance of grading permits within any impacted resource area, the project applicant shall obtain all required authorization from agencies with jurisdiction over the drainage canals within the Master Plan area. Such agencies may include but are not limited to the United States Army Corps of Engineers, the California Department

of Fish and Game, and the Central Valley Regional Water Quality Control Board. Impacted resources shall be offset through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 1:1 ratio.

Level of Significance After Mitigation

Less than significant impact.

Wetlands

Impact BIO-3: Development activities contemplated by the Master Plan may have a substantial adverse effect on federally protected wetlands.

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect wetlands.

Master Plan

The delineation of waters of the U.S. identified one feature, the drainage canal (DC-1), that supports relatively permanent flows and exhibits indirect downstream connectivity to the San Joaquin River (a jurisdictional, navigable water). As such, the drainage feature is subject to USACE jurisdiction under Section 404 of the Clean Water Act. Accordingly, Mitigation Measure BIO-3 is proposed requiring the project applicant to obtain necessary approvals from the appropriate agencies with jurisdiction over the drainage canals. A provision in the mitigation measure requires the applicant to mitigate the loss of impacted resources through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 1:1 ratio. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

The Drainage Canal did support a dominance of hydrophytic vegetation (including echinicholoa, water cress, prickly lettuce, curly dock, and water plantain); however, none of these hydrophytes extended above the OHWM of the feature. No adjacent wetlands were observed onsite. Similarly, no vernal pools, depressional seasonal wetlands or other wetland types were observed within the flood plain or anywhere on the Master Plan area.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, to the extent that wetlands are present within these areas, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

MM BIO-3 Prior to issuance of grading permits, the project applicant shall obtain all required authorization from agencies with jurisdiction over the drainage canals within the Master Plan area. This authorization may involve approvals from the United States Army Corps of Engineers and the Central Valley Regional Water Quality Control Board. Impacted features shall be offset through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 1:1 ratio.

Level of Significance After Mitigation

Less than significant impact.

Wildlife or Fish Movement

Impact BIO-4: Development activities contemplated by the Master Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species.

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect wildlife or fish movement.

Master Plan

The Master Plan area is within a broader area of mixed industrial, agricultural, and residential uses. The Master Plan would not substantially interfere with movement of native resident wildlife species. The existing agricultural areas to the east of the Master Plan area allows for north to south wildlife movement. Immediately west of the site, the existing presence of the Union Pacific Railroad Oakland Subdivision and Lathrop Intermodal Terminal effectively block any east-west migration/movement of terrestrial species. As such, the Master Plan would not change this existing condition.

No fish were observed within the drainages within the Master Plan area; therefore, no substantial interference with migratory fish would occur.

The onsite drainage canal (DC-1) is part of an SSJID system that conveys irrigation return water and regional nuisance flows to French Camp Slough and ultimately to the San Joaquin River. The water is initially diverted from the Stanislaus River approximately 10 miles to the southeast, and is then pumped into agricultural fields through out the area. The onsite drainage canal is actively maintained by SSJID and does not support natural fish populations.

Though the San Joaquin River (8.0 river miles downstream) does support protected populations of Delta smelt and steelhead, there are no recorded occurrences of this species within 5 miles of the project. Similarly, the project is outside the Corridor/species movement corridors established in the SJMSCP for the San Joaquin River Wildlife Corridor, San Joaquin kit fox, and giant garter snake.

In summary, the Master Plan area is not suitable for use for wildlife or fish movement; therefore, the development of the Master Plan would not substantially interfere with these activities. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Properties within these areas contain existing developed land uses. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, to the extent that wildlife or fish movement occurs within these areas, these activities would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Conflicts With Local Biological Policies or Ordinances

Impact BIO-5:	**Development activities contemplated by the Master Plan may conflict with local biological policies or ordinances.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to conflict with local biological policies or ordinances.

Master Plan

The City of Manteca tree ordinance (17.19.060) requires notification, protection, and/or replacement of any trees with truck diameters over 6 inches and measuring 4.5 feet above ground level. Agricultural and farming orchard areas of 1 acre or more are exempt from Section 17.19.030.

The general Master Plan area (farmed area) does not presently support existing trees meeting the height requirement; however, the Cal Suprema Cheese factory and residential properties have a number of trees that would meet the size requirement set forth in the ordinance.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Properties within these areas contain existing developed land uses. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Note that these properties would become subject to the City of Manteca's biological policies and ordinances;

however, as previously noted, the annexations themselves do not pose any conflicts with such policies or ordinances. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-5 Prior to issuance of grading permits for any activities that would remove one or more trees subject to City of Manteca Ordinance 17.19.060, the applicant shall prepare and submit a tree removal and replacement plan to the City of Manteca for review and approval. The plan shall identify all trees proposed for removal and proposed replacement tree species and locations. Replacement shall occur at no less than a 1:1 ratio. All replacement trees shall be no less than a 24-inch box size species.

Level of Significance After Mitigation

Less than significant impact.

Conservation Plan

Impact BIO-6: Development activities contemplated by the Master Plan may conflict with the provisions of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to conflict with the applicable provisions of the SJMSCP.

Master Plan

The Master Plan area is within the boundaries of the SJMSCP and is subject to the plan requirements. The San Joaquin Council of Governments (COG), the agency that oversees the SJMSCP, submitted a Notice of Preparation response letter dated March 4, 2010 to the City of Manteca outlining the steps necessary to achieve plan compliance.

The COG letter indicates that the Master Plan would be classified as an "Unmapped Land Use Project" and states that the project applicant is required to complete the "Section 8.2.1 (10) Checklist for Unmapped SJMSCP Projects." As part of the checklist submittal process, the applicant is required to provide all relevant biological review documentation. (Note that the information contained in this EIR would be part of the documentation.) Upon receipt of the checklist and supporting information, San Joaquin COG would peer-review the documentation for adequacy. COG's Technical Advisory Committee would ultimately consider approval of the checklist.

The Technical Advisory Committee's decision must be based on criteria outlined in the SJMSCP. Table 3.4-3 provides a consistency analysis with the criteria set forth in the SJMSCP. As shown in the table, the proposed Master Plan is consistent with applicable criteria.

Table 3.4-3: SJMSCP Consistency Analysis

No.	Criterion	Consistency Determination
1	Coverage for the proposed project is consistent with the overall SJMSCP biological intent and conservation program.	**Consistent:** The Master Plan area is mapped as "Agriculture" by the SJMSCP. The plan contemplates the conversion of 1,899 acres of agricultural land to urban use over the 50-year life of the plan. The City of Manteca General Plan contemplates urban development within the Master Plan area; therefore, the conversion of this area from agricultural to urban use is accounted for in the SJMSCP. The SJMSCP requirements payment of fees to permanently preserve agricultural land elsewhere in San Joaquin County at a ratio of 1:1. This requirement is codified in Mitigation Measure BIO-6. Therefore, the proposed Master Plan is consistent with the overall SJMSCP biological intent and conservation program.
2	Coverage for the proposed project is consistent with the SJMSCP Biological Opinion.	**Consistent:** The SJMSCP Biological Opinion reflects the activities covered by the SJMSCP. Because the conversion of the Master Plan area from agricultural to urban use is accounted for in the SJMSCP, the Biological Opinion would reflect this activity. Furthermore, mitigation is required for all development activities that adversely affect special-status species and waterways, which is consistent with the SJMSCP. Therefore, the proposed Master Plan is consistent with the SJMSCP Biological Opinion.
3	Biological impacts and Incidental Take associated with the proposed project are within the scope of the environmental analyses adopted in conjunction with the SJMSCP.	**Consistent:** The Master Plan area is mapped as "Agriculture" by the SJMSCP. The plan contemplates the conversion of 1,899 acres of agricultural land to urban use over the 50-year life of the plan. The City of Manteca General Plan contemplates urban development within the Master Plan area; therefore, the conversion of this area from agricultural to urban use is accounted for in the SJMSCP. As such, the proposed Master Plan's biological impacts are within the scope of the SJMSCP environmental analyses.
4	The project does not introduce significant new biological conditions into the Plan area (i.e., impacts of the proposed project are less than or equal to those described in the SJMSCP and its supporting environmental documents).	**Consistent:** The Master Plan area is mapped as "Agriculture" by the SJMSCP. The plan contemplates the conversion of 1,899 acres of agricultural land to urban use over the 50-year life of the plan. The City of Manteca General Plan contemplates urban development within the Master Plan area; therefore, the conversion of this area from agricultural to urban use is accounted for in the SJMSCP. As such, the proposed Master Plan would not introduce significant new biological conditions into the SJMSCP boundaries.

Table 3.4-3 (cont.): SJMSCP Consistency Analysis

No.	Criterion	Consistency Determination
5	The project acres have been analyzed based on habitat type (e.g., Natural Land, Agricultural Habitat Land or Multi-Purpose project are less than or equal to those described in the SJMSCP and its supporting environmental documents).	**Consistent:** The Master Plan area is mapped as "Agriculture" by the SJMSCP. The plan contemplates the conversion of 1,899 acres of agricultural land to urban use over the 50-year life of the plan. The City of Manteca General Plan contemplates urban development within the Master Plan area; therefore, the conversion of this area from agricultural to urban use is accounted for in the SJMSCP. As such, the proposed Master Plan's conversion of agricultural land is equal or less than those described in the SJMSCP.
6	The project meets at least one of the following criteria: • The project is adjacent to existing city limits; or • The project is adjacent to the boundaries of defined communities; or • The project is adjacent to existing airport facilities, or • The project is within an area designated as Freeway Service Commercial, or • The project is an expansion of an existing industrial or urbanized area in the unincorporated county, or • The project is proposed for annexation to a jurisdiction.	**Consistent:** The Master Plan meets three of the listed criteria: 1. The Master Plan area is adjacent to the Manteca city limits. 2. The Master Plan would develop light industrial uses that would interface with the existing Union Pacific Railroad Lathrop Intermodal Terminal, which is located in unincorporated San Joaquin County. As such, it would represent an expansion of existing industrial or urbanized area in the unincorporated county. 3. The Master Plan area is proposed for annexation into the City of Manteca.
7	The project is not one of the projects specifically exempted from SJMSCP Coverage as identified in SJMSCP Section 8.2.2.	**Consistent:** The Master Plan is not one of the projects specifically exempted from SJMSCP Coverage as identified in SJMSCP Section 8.2.2.
8	The project does not disrupt a corridor used by the giant garter snake, riparian brush rabbit, riparian woodrat, the San Joaquin kit fox, or fisheries as identified in the SJMSCP.	**Consistent:** As indicated in Impact BIO-4, the Master Plan area is not suitable for use as a wildlife movement corridor by the giant garter snake, riparian brush rabbit, riparian woodrat, the San Joaquin kit fox, or any fish species.
9	The project does not interfere with the San Joaquin River Wildlife Corridor as established in Section 5.5.2.3.	**Consistent:** The Master Plan area is located more than 2.5 miles from the San Joaquin River Wildlife Corridor. Intervening urban development and infrastructure exists between the Master Plan area and the San Joaquin River. As such, the development of the Master Plan would not interfere with the San Joaquin River Wildlife Corridor.
10	The project does not include installation of a linear barrier to species dispersal as defined in Section 5.5.8.	**Consistent:** The Master Plan does not propose any transportation improvements that would create a linear barrier to species dispersal (e.g., median barrier installation or freeway widening).

Table 3.4-3 (cont.): SJMSCP Consistency Analysis

No.	Criterion	Consistency Determination
11	The Technical Advisory Committee may consider and make additional findings for an individual project to determine if SJMSCP coverage for a project in this category is consistent with the overall biological intent of the SJMSCP and is consistent with the Biological Opinion.	**Consistent:** The Master Plan does not contain any provisions that would preclude the Technical Advisory Committee from considering and making additional findings.
Source: Michael Brandman Associates, 2010.		

Mitigation Measure BIO-6 is proposed requiring the project applicant to obtain coverage under the SJMSCP prior to issuance of the first grading or building permit. A provision in the measure requires the payment of all applicable fees. With the implementation of mitigation, impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Properties within these areas contain existing developed land uses. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, they would not conflict with any of the provisions of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-6 Prior to issuance of the first grading or building permit for the Master Plan, the project applicant shall obtain coverage under the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. Coverage shall consist of approval of the Master Plan-specific "Section 8.2.1 (10) Checklist for Unmapped SJMSCP Projects" by the San Joaquin Council of Governments Technical Advisory Committee. The applicant shall pay all required fees to the San Joaquin Council of Governments prior to the commencement of construction activities.

Level of Significance After Mitigation

Less than significant impact.

3.5 - Cultural Resources

3.5.1 - Introduction

This section describes the existing cultural resources setting and potential effects from project implementation on the site and its surrounding area that are based on information contained in the Section 106 Cultural Resource Assessment, prepared in July 2010 by Michael Brandman Associates, included in this EIR as Appendix E, Section 106 Cultural Resource Assessment. This section assesses potential impacts related to historic resources, archaeological resources, paleontological resources, and human remains.

3.5.2 - Environmental Setting

Overview

The term "cultural resources" encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Paleontological Resources:** Paleontology is the study of plant and animal fossils.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

Cultural Setting

Prehistory

Early archaeological investigations in central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area. The initial archaeological reports typically contained descriptive narratives, with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on variations of inter-site assemblages. Research during the 1930s identified temporal periods in central California prehistory and provided an initial chronological sequence. In 1939, it was noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in central California. In the late 1940s and early 1950s, Beardsley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became know as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession. To address some of the flaws in

the CCTS system, a revision that incorporated a system of spatial and cultural integrative units was introduced. The cultural, temporal, and spatial units were separated from each other and assigned to six chronological periods: Paleo-Indian (10000 to 6000 B.C.); Lower, Middle and Upper Archaic (6000 B.C. to A.D. 500), and Emergent (Upper and Lower, A.D. 500 to 1800). In addition, several patterns—a general way of life shared within a specific geographical region—were defined. These patterns include:

- Windmiller Pattern or Early Horizon (3000 to 1000 B.C.)
- Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)
- Augustine Pattern or Late Horizon (A.D. 500 to historic period)

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmiller Pattern or Early Horizon (3000 to 1000 B.C.)

Characterized by the Windmiller Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicates an extensive trade network that may represent the arrival of Utian populations into central California. Also indicative of this period are rectangular Haliotis and Olivella shell beads, and charmstones that usually were perforated.

Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. It is suggested that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. During this period, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. It is believed that the Berkeley Pattern reflects gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

Augustine Pattern or Late Horizon (A.D. 500 to Historic Period)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation. It has been suggested that the Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations. Although debate continues over a single model or sequence for central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

Native American Background

At the time of European contact, most of the San Joaquin Valley and the foothills of the western slope of the Sierra Nevada were occupied by the Yokuts, who are generally recognized as having three major subgroups: the Northern Valley, the Foothill, and the Southern Valley. Each of these ethnolinguistic groups was composed of autonomous, culturally and linguistically related tribes or tribelets. Ethnographic evidence suggests the project area was part of the Northern Valley Yokuts territory.

The Northern Valley Yokuts, who lived along the San Joaquin River and its tributaries and within the vicinity of the project area, are one of the least known of the California Indian groups. This is due to the almost complete destruction of their tribal life in the early 19th century.

What can be gleaned from the diaries and reports of Spanish soldiers and priests is that fish, waterfowl, and acorns were important food resources for the Northern Valley Yokuts. The local rivers and their tule marshes contained salmon, sturgeon, perch, suckers, and pike, which were caught using nets, weighted with stone sinkers and bone harpoons. Waterfowl, such as geese, ducks, and other aquatic birds, were abundant in the marshes and probably played a major role in the Northern Valley Yokuts subsistence base. Wild plant resources, especially acorns, were of prime importance and in a good year, a valley oak could produce 300 to 500 pounds of acorns, which were then ground into meal and cooked into porridge. Tule reed roots were likewise gathered and ground into meal that was traditionally served as porridge.

Stone mortars and pestles, milling stones, hammers, choppers, and projectile points were manufactured from local rock sources. Notably, although obsidian was imported into the area, it was

used infrequently for tools or weapons. Bone tools, particularly awls, were used in basket manufacture.

Most villages were built near rivers on elevated land to avoid flooding during heavy rains or spring runoff from the Sierras. Archaeological excavations indicate that houses were single-family dwellings, probably made with an oval framework of lightweight poles covered by mats of tule reeds. Hard-packed earthen floors 25 to 40 feet in diameter were constructed several feet below ground level. Communities typically contained a sweathouse and sometimes a large ceremonial structure. The size of the Yokuts communities is uncertain, but estimates indicate that the principal settlements contained 200-250 inhabitants. Contact with Europeans was particularly devastating for the Northern Valley Yokuts. This group was adversely impacted by missionization in the early 1800s, European diseases, and the influx of miners and settlers as a result of the 1849 Gold Rush.

Contact with the Spanish commenced early in the 19th century and normally consisted of sporadic visits by small exploration parties. However, between 1805 and the 1820s, Franciscan priests from the coastal missions began recruiting converts from further inland, and a large portion of the Yokuts population was taken to various missions in San Jose, Santa Clara, Soledad, San Juan Bautista, and San Antonio. Many neophytes deserted and returned to their homes, but were sought and brought back by Spanish soldiers.

A decade after the Mexican government claimed independence from Spain in 1822, the missions were converted into parish churches, and many Native Americans were released and returned to their former territory, though not necessarily to the specific location from which they came.

After the American conquest of California in 1846, the remaining Northern Valley Yokuts were driven off their land by miners heading south, farmers pursuing the locally rich soil, and the construction of various railroads. By the time scholars were interested in gathering information on California native groups, there were few people left to provide descriptions of native life before European contact.

Historic Background

The history of the southern San Joaquin Valley can be divided into several periods of influence; pertinent historic periods are briefly summarized below.

Spanish Period

In 1772, Captain Pedro Fages, a Spanish soldier, entered the San Joaquin Valley area searching for military deserters. His diary was one among many that documented the environmental landscape and the cultural setting of the San Joaquin Valley. Fages entered the area from the south, and as he emerged from the lower portion of Tejon Pass, he saw the beautiful lakes, rivers, and plains and named the most prominent lake Buena Vista (beautiful view). In 1776, Padre Francisco Garces, traveled through the San Joaquin Valley in hopes of discovering a more direct route to Monterey.

The most drastic and permanent change to the local Northern Valley Yokuts way of life was the establishment of the Spanish Mission system. By the early 1800s, the mission fathers began a process of cultural change that brought the majority of the local Native Americans into the missions. At the expense of traditional skills, the Native Americans were taught the pastoral and horticultural skills of the Hispanic tradition. Spanish missionaries traveled into the San Joaquin Valley to recapture escaped neophytes and recruit inland Native Americans for the coastal missions. In 1834, the Mission system was officially secularized, and the majority of the mission Native American population dispersed to local ranches, villages, or nearby pueblos. Following the collapse of the mission system, many of the local Native Americans returned to the San Joaquin Valley, bringing with them language and agricultural practices learned from the Spanish. During the second half of the 19th century, the size of all Yokuts populations dwindled dramatically due to the spread of European settlements and the diseases the Europeans brought with them.

Mexican Period

With the declaration of Mexican independence in 1821, Spanish control of Alta California ended, although little change actually occurred. Political change did not take place until mission secularization in 1834, when Native Americans were released from missionary control and the mission lands were granted to private individuals. Mission secularization removed the social protection and support on which Native Americans had come to rely and exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos. Following mission secularization, the Mexican population grew as the Native American population continued to decline. Euro-American settlers began to arrive in California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants.

European Expansion

In 1826, Jedediah Smith was among the first trappers to explore the San Joaquin Valley, but other fur-trapping expeditions soon followed. In 1848, as a result of the Treaty of Guadalupe Hidalgo, California became a United States territory. Also in 1848, John Marshall found gold at Sutter's Mill, which marked the start of the Gold Rush. The influx of miners and entrepreneurs increased the population of California, not including Native Californians, from 14,000 to 224,000 in just four years. This, in turn, stimulated commercial growth in the San Joaquin Valley as eager entrepreneurs set up business to support the miners and mining operations. When the Gold Rush was over, many of the miners settled in the San Joaquin Valley and established farms, ranches, and lumber mills.

History of the City of Manteca

The City of Manteca was first settled in the mid-1800s by a small number of pioneer farmers who realized the area had an excellent combination of good soils, a mild climate, and readily available water which that were key to prosperous farming. Although Manteca was not in the heart of the gold country at the time of the Gold Rush, gold miners looking for a place to settle moved into the area to buy large and small tracts of land where they grew grain crops and raised cattle. During the 1860s,

Manteca was called Cowell Station, named after Joshua Cowell who was later known as the "father of Manteca." Cowell arrived in Manteca in 1861 and bought land in what is now the center of town, at the corner of Yosemite and Main streets. At one time, Cowell owned most of Manteca and in 1918 when the town was incorporated, Cowell was elected its first mayor.

In 1873, the Central Pacific Railroad was constructed with a track laid through the center of the Cowell Farm. The original train station was a boxcar with the name Cowell Station displayed on its side. Because there was another Cowell Station south of the town of Tracy named after Wright Cowell, Joshua Cowell's brother, the railroad and the local farmers agreed to a name change. It was decided that the new name would be Monteca. The citizens of the town were justifiably dismayed when the first railroad tickets had misspelled the name "Manteca" (Spanish for "lard") instead of Monteca. The local citizens were unhappy with the error, but it was never changed.

The City of Manteca began to grow as more farmers moved into the area and Manteca's first school was built in 1857. In 1913, the school was destroyed by fire, and it was not until 1923 that a new high school building was dedicated, which remained a city landmark until it was demolished in 1969. The East Union Cemetery in Manteca was first built in 1872 and today is one of the oldest landmarks in San Joaquin County.

In 1902, J. J. Overshiner built the first general store and barbershop in Manteca. However, the City of Manteca remained a small town; even in 1910, there were only a few homes with a population of about 100 people. Shortly after the opening of the first store in 1902, the local citizens petitioned for a post office.

Cost-effective, reliable irrigation for agricultural crops and livestock was essential for the development of the general Manteca area. In 1909, an election was held to form the South San Joaquin Irrigation District (District) and to authorize bonds to provide funds for constructing the District. Although it was generally believed that irrigation would help the small community to grow, the bonds were not issued until 1913. Irrigation water was diverted from the Stanislaus River at a point about 36 miles northeast of Manteca. The District built lateral ditches in preparation of delivering water to every 40-acre tract of land that marked the beginning of the town's growth.

Development of an industrial hub in Manteca began with the establishment in 1914 of the Manteca Canning Company, which was one of the major components of Manteca's industrial sector until it closed in 1964. The Spreckles Sugar Company plant opened in the downtown commercial area in 1918 to process sugar beets. The plant included office buildings, a clubhouse, landscaped grounds, and housing for its permanent employees. The downtown commercial district began to expand and soon included five restaurants, three hotels, grocery stores, drug stores, a movie theater, and various stores and shops. The Kraft Foods Company opened a cheese plant in the commercial district in 1935 and substantially expanded it in 1937. It ceased operations in 1957.

Of particular relevance to the project is the 724-acre Sharpe Army Depot (Depot) that is located adjacent to the project area to the west. The site is a Defense Logistics Agency facility that since 1941 has supplied the Department of Defense with storage, shipping, packaging, and maintenance of general supplies. Construction of the major facilities at the Depot began during World War II, and additional facilities were added during the Korean War and the Vietnam Conflict. More recently, additional facilities in the form of a distribution center (Western Distribution Center) were constructed in 1988, which added significantly to the capacity of the Depot.

Between 1941 and 1975, chemical wastes were generated at the Depot site (currently referred to as the Defense Distribution Depot San Joaquin) as a result of maintenance activities for aircraft, army vehicles, industrial equipment, and medical equipment. The waste materials generated from these activities were disposed of onsite in several areas and contaminated both the soil and groundwater. All maintenance activities have ceased at the site and the waste areas are no longer used. Cleanup of the Depot site started in 1987 and included groundwater treatment and disposal of contaminated soil.

Changes to the City of Manteca came slowly up through the 1970s, but today it is has become a favored area for high-tech industries, partly because of its affordable housing and small-town amenities. During the past 10 years, Manteca has experienced phenomenal growth, with its population now over 64,000 residents.

3.5.3 - Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966, as amended, established the National Register of Historic Places, which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 Code of Federal Regulations 60, a property is recommended for possible inclusion on the National Register if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the National Register, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and

cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

State

California Register of Historical Resources

As defined by Section 15064.5(a)(3)(A-D) of the CEQA Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources. The California Register of Historical Resources and many local preservation ordinances have employed the criteria for eligibility to the National Register as a model, since the National Historic Preservation Act provides the highest standard for evaluating the significance of historic resources. A resource that meets the National Register criteria is clearly significant. In addition, a resource that does not meet the National Register standards may still be considered historically significant at a local or state level.

California Environmental Quality Act

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA guidelines direct lead agencies to evaluate archaeological sites to determine if they meet the criteria for listing in the California Register. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the California Register, potential adverse impacts to it must be considered. If an archaeological site is considered not to be an historical resource but meets the definition of a "unique archeological resource" as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

Local

City of Manteca General Plan

The General Plan established the following goals and policies related to cultural resources that are applicable to the proposed project:

- **Goal RC-11:** Preserve and enhance Manteca's archaeological and historic resources for their aesthetic, educational and cultural values.
- **Goal RC-12:** Protect Manteca's Native American heritage.
- **Policy RC-P-37:** The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without consulting the California Archaeological Inventory at Stanislaus State University, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendation of a qualified archeologist. City implementation of this policy shall be guided by the California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA).
- **Policy RC-P-38:** The City shall require that the proponent of any development proposal in an area with potential archaeological resources, and specifically near the San Joaquin River and Walthall Slough, and on the east side of State Highway 99 at the Louise Avenue crossing, shall

consult with the California Archaeological Inventory, Stanislaus State University to determine the potential for discovery of cultural resources, conduct a site evaluation as may be indicated, and mitigate any adverse impacts according to the recommendation of a qualified archaeologist. The survey and mitigation shall be developer funded.

- **Policy RC-P-39:** The City shall set as a priority the protection and enhancement of Manteca's historically and architecturally significant buildings.
- **Policy RC-P-40:** The City shall work with property owners seeking registration of historical structures as Historic Landmarks or listing on the Register of Historic Sites.
- **Policy RC-P-41:** The City shall prepare and adopt a Historical Preservation Ordinance.
- **Policy RC-P-42:** The City and Redevelopment Agency shall support the efforts of property owners to preserve and renovate historic and architecturally significant structures. Where such buildings cannot be preserved intact, the City shall seek to preserve the building facades.

3.5.4 - Methodology

This section is based on the information contained in the Section 106 Cultural Resource Assessment, prepared in February 2010 by Michael Brandman Associates, included in this EIR as Appendix E, Below is a summary of the investigation.

Record Searches

Central California Information Center (CCIC) Record Search

On May 28, 2009, staff at the CCIC conducted a records search (CCIC File #7408 L) to identify previously recorded historic resources within the project area and a 0.25-mile radius. The search included current inventories of the National Register of Historic Places (NRHP), the California Register of Historic Resources (CR), the California Historical Landmarks (CHL), the California Points of Historical Interest (CPHI), and the California State Historic Resources Inventory (HRI).

The results of the records search indicated that six previous investigations have been conducted within the project area (SJ-729, SJ-3141, SJ-4786, SJ-5309, SJ-5953, and SJ-6625) and 15 have been conducted within a 0.25-mile radius (SJ-731, SJ-732, SJ-768, SJ-815, SJ-1435, SJ-1836, SJ-2245, SJ-2936, SJ-4161, SJ-5582, SJ-6064, SJ-6146, SJ-6147, SJ-6418, and SJ-6419).

No prehistoric or historic resources have been previously recorded within the project area. Three historic structures have been recorded within a 0.25-mile radius of the project area: a portion of the Western Pacific Railroad, a portion of a drainage canal, and a small bungalow-style residence and barn. Brief descriptions of these resources are provided below.

- A portion of the Western Pacific Railroad[1] (Site P-39-000098) was recorded to the south of the Master Plan area but it is not listed in the Historic Property Data File. In addition, when the

[1] The Western Pacific Railroad was acquired by the Union Pacific Railroad in 1983, and Site P-39-000098 appears to be associated with the present-day Oakland Subdivision.

portion was recorded in 1993, it was determined that it did not meet the eligibility criteria for listing in the NRHP.

- A small portion of one of the drainage canals operated by the South San Joaquin Irrigation District (SSJID) is within the project area, but when it was recorded in 1993, it was determined that it did not meet the eligibility criteria for listing in the NRHP.
- The residence and associated barn at 14580 Airport Way were recorded in 2004 but were considered "not eligible" for listing on the CR or the NRHP.

In addition to these historic structures, the Sharpe General Depot[2], which is adjacent to the project area to the west, was previously recorded as a historic district (P-39-000612 and HRI No. 5331-1-999) although the CCIC notes that many of the buildings within the Depot have been moved or demolished.

Native American Heritage Commission Record Search

On May 27, 2009, MBA sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. The response from the NAHC was received on June 5, 2009. The record search failed to indicate the presence of Native American cultural resources in the immediate project area. The name of one Native American representative, Katherine Perez, who may have additional information about the project site was sent with the results. On June 15, 2009, a letter was sent to Ms. Perez requesting further information about the project area. As of this date, no response has been received from her or any other Native American representatives.

Tribal Consultation

Senate Bill 18 (SB 18) established tribal consultation requirements for projects that involve General Plan and Specific Plan amendments. The intent of SB 18 is to provide all tribes, whether federally recognized or not, an opportunity to consult with local governments for the purpose of preserving and protecting their sacred places. The legislation obligates the lead agency to facilitate the consultation. Note that SB 18 tribal consultation requirements are independent of CEQA; however, this EIR acknowledges this requirement in the interests of informed decision-making.

The proposed Master Plan involves a General Plan Amendment and, therefore, triggers SB 18 tribal consultation requirements. Manteca city staff sent a letter to NAHC on February 9, 2010 requesting a consultation list. After receiving the list from NAHC, staff sent a consultation request to the North Valley Yokuts tribe and the Southern Sierra Miwuk Nation on March 17, 2010. At the time of Draft EIR release, the City has not received a response from either tribe.

[2] The Sharpe General Depot is also known as the Sharpe Army Depot.

Pedestrian Survey

MBA's Senior Project Archaeologist surveyed the Master Plan area on June 30 and July 1, 2009. The project area was surveyed using 20- to 25-meter transects when possible, walked in a zigzag pattern to ensure proper coverage.

The Master Plan area consisted of flat terrain that was primarily agricultural land. Although much of the Master Plan area was planted with alfalfa, the alfalfa had been mowed and the bales removed, which provided good to very good ground visibility.

The northern portion of the Master Plan area was predominantly plowed alfalfa fields with numerous irrigation canals with weirs and locks to regulate the flow and direction of the irrigation water. In the central portion of the Master Plan area were several residences and the privately owned industrial site of the Cal Suprema Cheese Company, Inc. (also referred to as "RCCI PTP"). Immediately south of the Cal Suprema Cheese Company buildings was an alfalfa field that had not been mowed, so ground surface visibility was less than 5 percent. Since the vegetation was so dense and the ground surface visibility was so poor, a cursory survey to the western edge of the field and back was the extent of the survey coverage in this particular field. At the southern end of the Master Plan area is the Aufdermaur Dairy farm with a small, older residence with an associated barn and a newer residence south of the older home.

Southwest of the Master Plan area is a privately owned cement plant that was in operation during the course of the survey. North of the cement plant and partially within the Master Plan boundaries is a small apricot orchard that was in production at the time of the survey. West of the Master Plan area is the South San Joaquin Irrigation District French Camp Outlet Canal.

During the course of the pedestrian survey, no historic or prehistoric resources eligible for listing on the NRHP or the CR were discovered.

3.5.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, cultural resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a.) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

b.) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c.) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d.) Disturb any human remains, including those interred outside of formal cemeteries?

3.5.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Historical Resources

Impact CUL-1: The proposed project may cause a substantial adverse change in the significance of a historical resource.

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect historical resources.

Master Plan

According to the record search results received from the CCIC, no historic resources have been previously recorded within the Master Plan area. In addition, during the course of the pedestrian survey, no historic resources were discovered within the Master Plan area. However, there is always the possibility that ground-disturbing activities during project development could potentially impact previously unknown historic resources. As such, Mitigation Measure CUL-1 requires standard inadvertent discovery procedures to be implemented in the event that subsurface historical resources are encountered during construction. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. No recorded historical resources exist within these areas. The annexations would not change any existing land use activities or confer any development rights that would allow new construction to occur. Therefore, to the extent that previously undiscovered historical resources may be present within these areas, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-1 If potentially significant historic resources are encountered during subsurface excavation activities for any Master Plan use, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate California Department of Parks and Recreation forms and evaluated for significance in terms of California

Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials.

Level of Significance After Mitigation

Less than significant impact.

Archaeological Resources

Impact CUL-2:	**Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered archaeological resources.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect archaeological resources.

Master Plan

The results of the CCIC record search indicate that no archaeological resources have been previously recorded within the Master Plan project area or within a 0.25-mile radius of the project area. In addition, no archaeological resources were discovered during the pedestrian field survey. The results of the NAHC record search failed to indicate the presence of Native American cultural resources in the immediate vicinity of the Master Plan project area. Additionally, the Master Plan project area has been highly disturbed by row crop agriculture and other development and is considered to have a low sensitivity for archaeological resources.

However, there is always the possibility that ground-disturbing activities during project development could potentially impact previously unknown prehistoric or historic archaeological resources. Prehistoric resources can include flaked-stone tools (such as projectile points, knives, and choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (such as midden soil containing heat-affected rock, ash, and charcoal, shellfish remains, and animal bones); and stone milling equipment (such as mortars, pestles, grinding slicks). Historical materials can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse.

As such, Mitigation Measure CUL-2 requires standard inadvertent discovery procedures to be implemented in the event that subsurface archaeological resources are encountered during construction. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. No recorded archaeological resources exist within these areas. The annexations would not change any existing land use activities or confer any development rights that would allow new construction to occur. Therefore, to the extent that previously undiscovered archaeological resources may be present within these areas, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-2 If potentially significant archaeological resources are encountered during subsurface excavation activities, all construction activities within a 100-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan for the resource. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials.

Level of Significance After Mitigation

Less than significant impact.

Paleontological Resources

Impact CUL-3:	**Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered paleontological resources.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect paleontological resources.

Master Plan

Although a record search for paleontological resources was not conducted for this project, impacts to significant paleontological resources in undisturbed surface or subsurface Pleistocene sediments are considered nominal, due to the floodplain conditions associated with the Master Plan project area. In addition, no paleontological resources were discovered during the course of the field survey. Nonetheless, the possibility exists that subsurface construction activities may encounter previously undiscovered paleontological resources. Therefore, this would be a potentially significant impact.

As such, Mitigation Measure CUL-3 requires standard inadvertent discovery procedures to be implemented in the event that subsurface paleontological resources are encountered during construction. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. No recorded paleontological resources exist within these areas. The annexations would not change any existing land use activities or confer any development rights that would allow new construction to occur. Therefore, to the extent that previously undiscovered paleontological resources may be present within these areas, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-3 In the event that plant or animal fossils are discovered during subsurface excavation activities for the proposed project, all excavation within 50 feet of the fossil shall cease until a qualified paleontologist has determined the significance of the find and provides recommendations in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the City of Manteca to determine procedures to be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the City determines that avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The

plan shall be submitted to the City for review and approval. Upon approval, the plan shall be incorporated into the project.

Level of Significance After Mitigation

Less than significant impact.

Human Remains

Impact CUL-4:	**Subsurface construction activities associated with the proposed project may damage or destroy previously undiscovered human remains.**

Impact Analysis

This impact will evaluate the potential for the Northwest Airport Way Master Plan and non-master plan annexations to adversely affect paleontological resources.

Master Plan

There are no known burial sites within the Master Plan project area. The pedestrian survey did not find any evidence of human remains or burial goods within the project area. In addition, none of the previous surveys that included the Master Plan project area or were within a 0.25-mile radius reported finding any human remains. Nonetheless, the possibility exists that subsurface construction activities may encounter previously undiscovered human remains. Accordingly, this is a potentially significant impact.

As such, Mitigation Measure CUL-4 requires standard inadvertent discovery procedures to be implemented in the event that subsurface cultural resources are encountered during construction. With the implementation of mitigation, impacts would be reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. No recorded burial sites exist within these areas. The annexations would not change any existing land use activities or confer any development rights that would allow new construction to occur. Therefore, to the extent that previously undiscovered burial sites may be present within these areas, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-4 If previously unknown human remains are encountered during construction activities, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:

In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. Once project-related ground disturbance begins and if there is accidental discovery of human remains, the following steps shall be taken:

- There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner's Office is contacted to determine if the remains are Native American and if an investigation into cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations 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.

Level of Significance After Mitigation

Less than significant impact.

3.6 - Geology, Soils, and Seismicity

3.6.1 - Introduction

This section describes the existing geology, soils, and seismicity setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on the Preliminary Geotechnical Investigation, dated September 15, 2009, prepared by Neil O. Anderson and Associates and included in this EIR as Appendix F, Preliminary Geotechnical Investigation. The City of Manteca General Plan, the San Joaquin County General Plan Background Report - Public Review Draft, and the current edition of the California Building Code provided additional information.

3.6.2 - Environmental Setting

Regional Geology

The City of Manteca is located in the northern San Joaquin Valley. The San Joaquin Valley is the southern section of the Great Central Valley of California; the Sacramento Valley is the northern section. The Great Central Valley is a sedimentary basin, with the Coast Range to the west and the Sierra Nevada to the east. Almost all of the sediments that fill the Great Central Valley eroded from the Sierra Nevada. The oldest of these sediments are full of fragments of volcanic rocks eroded from ancient volcanoes. As erosion stripped the cover of volcanic rocks from the granites of the Sierra Nevada, their detritus of pale quartz and feldspar sand began to wash into the Great Central Valley.

Drainage into the San Joaquin Valley is mainly from the Sierra Nevada. The sediments on the valley floor were deposited within the past 1 to 2-million years, some within the past few thousand years.

Regional Seismicity

The term seismicity describes the effects of seismic waves that are radiated from an earthquake as it ruptures. While most of the energy released during an earthquake results in the permanent displacement of the ground, as much as 10 percent of the energy may dissipate immediately in the form of seismic waves. The probability of one or more earthquakes of magnitude 6.7 (Richter scale) or higher occurring in the project area has been evaluated by the U.S. Geological Survey (USGS). Based on the results of the USGS evaluation, there is a 62-percent likelihood that such an earthquake event will occur in the Bay Area between 2003 and 2032. The faults with the greater probability of movement with a magnitude of 6.7 or higher earthquake are the Hayward Fault at 27 percent, the San Andreas Fault at 21 percent, and the Calaveras Fault at 11 percent. To understand the implications of seismic events, a discussion of faulting and seismic hazards is provided below.

Faulting

Faults form in rocks when stresses overcome the internal strength of the rock, resulting in a fracture. Large faults develop in response to large, regional stresses operating over a long time, such as those stresses caused by the relative displacement between tectonic plates. According to the elastic rebound theory, these stresses cause strain to build up in the earth's crust until enough strain has built up to

exceed the strength along a fault and cause a brittle failure. The slip between the two stuck plates or coherent blocks generates an earthquake. Following an earthquake, strain will build once again until the occurrence of another earthquake. The magnitude of slip is related to the maximum allowable strain that can be built up along a particular fault segment. The greatest buildup in strain that is due to the largest relative motion between tectonic plates or fault blocks over the longest period of time will generally produce the largest earthquakes. The distribution of these earthquakes is a study of much interest for both hazard prediction and the study of active deformation of the earth's crust. Deformation is a complex process, and strain caused by tectonic forces is not only accommodated through faulting but also by folding, uplift, and subsidence, which can be gradual or in direct response to earthquakes.

Faults are mapped to determine earthquake hazards, since they occur where earthquakes tend to recur. A historic plane of weakness is more likely to fail under stress and strain than a previously unbroken block of crust. Faults are, therefore, a prime indicator of past seismic activity, and faults with recent activity are presumed to be the best candidates for future earthquakes. However, since slip is not always accommodated by faults that intersect the surface along traces, and since the orientation of stresses and strain in the crust can shift, predicting the location of future earthquakes is complicated. Earthquakes sometimes occur in areas with previously undetected faults or along faults previously thought inactive.

The northern San Joaquin Valley has generally not been seismically active in the last 10,000 years. Most faults in the project region with known or estimated activity during the Holocene epoch are generally located in the Bay Area, approximately 40 miles to the west, and lie within the Coast Ranges geomorphic province. Active faults nearest to Manteca are summarized in Table 3.6-1.

Table 3.6-1: Fault Summary

Fault	Fault Classification	Direction	Distance From Project Site (miles)	Maximum Credible Earthquake (magnitude)
Great Valley	Active	Southwest	22	6.7
Greenville/Marsh Creek/Clayton	Active	West	37	6.9
Ortigalita	Active	South	45	6.9
Calaveras	Active	West	59	6.8
Hayward	Active	West	62	7.1
Concord	Active	Northwest	56	6.9
Green Valley	Active	Northwest	62	6.9
San Andreas	Active	West	70	7.9
Source: California Geological Survey, City of Manteca, County of San Joaquin.				

Seismic Hazards

Seismicity describes the effects of seismic waves that are radiated from an earthquake as it ruptures. While most of the energy released during an earthquake results in the permanent displacement of the ground, as much as 10 percent of the energy may dissipate immediately in the form of seismic waves. To understand the implications of seismic events, a discussion of faulting and seismic hazards is provided below.

Seismic hazards pose a substantial danger to property and human safety and are present because of the risk of naturally occurring geologic events and processes impacting human development. Therefore, the hazard is influenced as much by the conditions of human development as by the frequency and distribution of major geologic events. Seismic hazards present in California include ground rupture along faults, strong seismic shaking, liquefaction, ground failure, landsliding, and slope failure.

Fault Rupture

Fault rupture is a seismic hazard that affects structures sited above an active fault. The hazard from fault rupture is the movement of the ground surface along a fault during an earthquake. Typically, this movement takes place during the short time of an earthquake, but it also can occur slowly over many years in a process known as creep. Most structures and underground utilities cannot accommodate the surface displacements of several inches to several feet commonly associated with fault rupture or creep.

Ground Shaking

The severity of ground shaking depends on several variables such as earthquake magnitude, epicenter distance, local geology, thickness, seismic wave-propagation properties of unconsolidated materials, groundwater conditions, and topographic setting. Ground shaking hazards are most pronounced in areas near faults or with unconsolidated alluvium.

Based on observations of damage from recent earthquakes in California (e.g., San Fernando 1971, Whittier-Narrows 1987, Landers 1992, Northridge 1994), ground shaking is responsible for 70 to 100 percent of all earthquake damage. The most common type of damage from ground shaking is structural damage to buildings, which can range from cosmetic stucco cracks to total collapse. The overall level of structural damage from a nearby large earthquake would likely be moderate to heavy, depending on the characteristics of the earthquake, the type of ground, and the condition of the building. Besides damage to buildings, strong ground shaking can cause severe damage from falling objects or broken utility lines. Fire and explosions are also hazards associated with strong ground shaking.

While Richter magnitude provides a useful measure of comparison between earthquakes, the moment magnitude is more widely used for scientific comparison since it accounts for the actual slip that generated the earthquake. Actual damage is due to the propagation of seismic or ground waves as a

result of initial failure, and the intensity of shaking is as much related to earthquake magnitude as is the condition of underlying materials. Loose materials tend to amplify ground waves, while hard rock can quickly attenuate them, causing little damage to overlying structures. For this reason, the Modified Mercalli Intensity (MMI) Scale provides a useful qualitative assessment of ground shaking. The MMI Scale is a 12-point scale of earthquake intensity based on local effects experienced by people, structures, and earth materials. Each succeeding step on the scale describes a progressively greater amount of damage at a given point of observation. The MMI Scale is shown in Table 3.6-2, along with relative ground velocity and acceleration.

Table 3.6-2: Modified Mercalli Intensity Scale

Richter Magnitude	Modified Mercalli Intensity	Effects	Average Peak Ground Velocity (centimeters/seconds)	Average Peak Acceleration
0.1–0.9	I	Not felt. Marginal and long-period effects of large earthquakes	—	—
1.0–2.9	II	Felt by only a few persons at rest, especially on upper floors of building. Delicately suspended objects may swing.	—	—
3.0–3.9	III	Felt quite noticeable in doors, especially on upper floors of building, but many people do not recognize it as an earthquake. Standing cars may rock slightly. Vibration like passing a truck. Duration estimated.	—	0.0035–0.007 g
4.0–4.5	IV	During the day, felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensations like heavy truck striking building. Standing cars rocked noticeably.	1–3	0.015–0.035 g
4.6–4.9	V	Felt by nearly everyone, many awakened. Some dishes, windows, broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.	3–7	0.035–0.07 g
5.0–5.5	VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of falling plaster and damaged chimneys. Damage slight.	7–20	0.07–0.15 g

Table 3.6-2 (cont.): Modified Mercalli Intensity Scale

Richter Magnitude	Modified Mercalli Intensity	Effects	Average Peak Ground Velocity (centimeters/seconds)	Average Peak Acceleration
5.6–6.4	VII	Everyone 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 cars.	20–60	0.15–0.35 g
6.5–6.9	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, monument walls, and heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving in cars disturbed.	60–200	0.35–0.7 g
7.0–7.4	IX	Damage considerable in specially designed structures; well-designed frame strictures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	200–500	0.7–1.2 g
7.5–7.9	X	Some well-built structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Railway lines bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks.	≥ 500	>1.2 g
8.0–8.4	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.		
≥ 8.5	XII	Total damage. Waves seen on ground. Lines of sight and level distorted. Objects thrown into the air.		
Source: United States Geologic Survey.				

Ground Failure

Ground failure includes liquefaction and the liquefaction-induced phenomena of lateral spreading, and lurching.

Liquefaction is a process by which sediments below the water table temporarily lose strength during an earthquake and behave as a viscous liquid rather than a solid. Liquefaction is restricted to certain geologic and hydrologic environments, primarily recently deposited sand and silt in areas with high groundwater levels. The process of liquefaction involves seismic waves passing through saturated granular layers, distorting the granular structure, and causing the particles to collapse. This causes the granular layer to behave temporarily as a viscous liquid, resulting in liquefaction.

Liquefaction can cause the soil beneath a structure to lose strength, which may result in the loss of foundation-bearing capacity. This loss of strength commonly causes the structure to settle or tip. Loss of bearing strength can also cause light buildings with basements, buried tanks, and foundation piles to rise buoyantly through the liquefied soil.

Lateral spreading is lateral ground movement, with some vertical component, caused by liquefaction. In effect, the soil rides on top of the liquefied layer. Lateral spreading can occur on relatively flat sites with slopes less than 2 percent, under certain circumstances, and can cause ground cracking and settlement.

Lurching is the movement of the ground surface toward an open face when the soil liquefies. An open face could be a graded slope, stream bank, canal face, gully, or other similar feature.

Landslides and Slope Failure

Landslides and other forms of slope failure form in response to the long-term geologic cycle of uplift, mass wasting, and disturbance of slopes. Mass wasting refers to a variety of erosional processes from gradual downhill soil creep to mudslides, debris flows, landslides and rock fall—processes that are commonly triggered by intense precipitation, which varies according to climactic shifts. Often, various forms of mass wasting are grouped together as landslides, which are generally used to describe the downhill movement of rock and soil.

Geologists classify landslides into several different types that reflect differences in the type of material and type of movement. The four most common types of landslides are translational, rotational, earth flow, and rock fall. Debris flows are another common type of landslide similar to earth flows, except that the soil and rock particles are coarser. Mudslide is a term that appears in non-technical literature to describe a variety of shallow, rapidly moving earth flows.

Soils

The United States Department of Agriculture Natural Resources Conservation Service indicates that Timor, Tinnin, and Veritas underline the project site. The soil properties are summarized in Table 3.6-3.

Table 3.6-3: Soil Properties Summary

Soil Name	Surface Texture	Source Material	Hydrologic Group	Drainage Class
Timor	Loamy sand, 0–2% slopes	Alluvium derived from granitic rock sources	Group A—High infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.	Moderately well drained.
Tinnin	Loamy coarse sand, 0–2% slopes	Alluvium derived from granitic rock sources	Group A—High infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.	Well drained
Veritas	Fine sandy loam, 0–2% slopes	Alluvium derived from mixed rock sources	Group B—Moderate infiltration rate (medium runoff potential) when thoroughly wet. Moderately deep or deep, moderately well drained or well drained soil.	Moderately well drained.
Source: United States Department of Agriculture, Natural Resources Conservation Service, 2010.				

Subsurface Conditions

A field investigation was conducted within the Master Plan boundaries. The field investigation consisted of drilling five exploratory borings carried to depths of 11.5 to 41.5 feet below the existing ground surface. Borings were taken with the proposed building footprints for the CenterPoint Intermodal Center within the Northwest Master Plan area. Four bulk subgrade soil samples were obtained from the proposed pavement areas for R-value testing. Additionally, six percolation tests were also performed at depths of about four and six feet below ground surface within the storm detention basin areas to aid in the design parameters for drainage basins. Boring samples were field and laboratory tested. The findings of these investigations are summarized below.

Subsurface Profile

The soils encountered during the field investigation were fairly uniform between test holes. Based on the soil boring data, the soils within the Master Plan boundaries consist of medium dense silty sand, stiff sandy silt, very stiff lean clay, stiff sandy clay, silty clay, very stiff to hard fat clay, and loose sandy silt. Cemented (hardpan) areas were encountered between 3.5 and 10 feet in certain areas.

Groundwater

Groundwater was encountered in the test borings at depths ranging between 10 and 22 feet below the existing ground surface at the time the test holes were drilled. A San Joaquin County groundwater map was reviewed and indicated groundwater in the area could be at a depth of 17 feet below ground surface.

Liquefaction

A detailed analysis of earthquake-induced liquefaction for the proposed site was completed. Liquefaction is a loss of strength in soil when a cyclic stress, such as that caused by an earthquake, is subjected to typical soils, such as loose saturated sands and silts. The cyclic stress attempts to densify the soil causing an immediate increase in pore pressure. A cyclic stress subjected to these soils may result in excessive pore pressures stimulating the soil to behave as a liquid. Factors that affect the potential for liquefaction include the age and density of the deposits, depths to subsurface water, and the potential site ground acceleration from a seismic event.

The analysis of the potential for liquefaction at the site was performed using two methods (both are based on blow count result values obtained during drilling activities). The first method used is most common and is that proposed by the National Center for Earthquake Engineering Research (NCEER). This method results in a calculated factor of safety against liquefaction. The second method is a newer method proposed by R. B. Seed and results in a calculated probability of liquefaction. Besides data obtained during field and laboratory testing, a value of peak ground acceleration at the site and a magnitude of the earthquake responsible for the peak ground acceleration are required. A magnitude of 6.9 was selected as the design earthquake (Greenville Fault located 37 miles away from the site), and a peak horizontal ground acceleration of 0.277g was calculated and used in the liquefaction analysis. The shear wave velocity was estimated to be 670 feet per second (approximately 200 meters per second) based on correlations with blow count values. Saturated conditions were assumed to exist at a depth of 15 feet, due to the depth of groundwater measured in the boring holes, San Joaquin County groundwater maps, and the potential for fluctuating groundwater depths in the future. The liquefaction analysis based on soils encountered and test results obtained in from boring B1 are provided in Table 3.6-4.

Table 3.6-4: Liquefaction Analysis

Layer, depth below ground surface (feet)	Factor of Safety Based on NCEER method[1]	Probability of Liquefaction based on Seed, et al. method[2]	Comments
0–11	1.97	0.00	Very low potential for liquefaction, no groundwater.
11–15	4.56	0.00	Very low potential for liquefaction, no groundwater, and significant amount of fines.

Table 3.6-4 (cont.): Liquefaction Analysis

Layer, depth below ground surface (feet)	Factor of Safety Based on NCEER method[1]	Probability of Liquefaction based on Seed, et al. method[2]	Comments
15–20	0.42	0.00	Low potential for liquefaction due to very stiff soil conditions, low amount of fines, and high blow counts.
20–25	1.19	0.24	Very low potential for liquefaction due to stiff soil conditions, amount of fines, and high blow counts.
25–30	0.25	0.00	Low potential for liquefaction due to very stiff soil conditions, amount of fines, and high blow counts.
30–35	1.20	0.22	Very low potential for liquefaction due to very stiff soil conditions, amount of fines, and high blow counts.
35–39	2.12	0.00	Very low potential for liquefaction due to dense soil conditions and high blow counts.
39–41.5	0.72	1.00	Moderate potential for liquefaction due to low blow counts.

Notes:
[1] A value less than 1.0 indicates liquefaction is predicted.
[2] The closer the value is to 1.0, the more probable liquefaction becomes.
Source: Neil O. Anderson and Associates, 2009.

The results of both of these methods need to be evaluated further, because they have only taken into account fine content and do not differentiate between silt and clay size particles. Although the analysis shows the potential for liquefaction, further assessment of the clay content of the soil layer needs to be considered. The Modified Chinese Criteria was used to determine if the fine-grained soil layers would indeed have the potential to liquefy. This criterion states that if the soil behavior indicates a liquid limit of approximately 32 percent, a water content of less than 0.9ll percent, or a percent finer than 0.005 mm greater than or equal to 15 percent, the potential for liquefaction is low. This criterion was used in conjunction with the analysis to evaluate the potential for liquefaction to occur in specific soil layers.

The analysis indicates that, due to the depth of liquefiable soils (39 feet below ground surface), the total settlement should be less than 1 inch. Differential settlement should be less than half the total settlement, since the potential for liquefaction to occur is at a depth of 39 feet below ground surface, and it is overlain by a 20-foot stratum of very stiff clayey material that will help bridge any settlement

in the underlying soils, and will likely occur globally across the site. Liquefaction may potentially occur in soils below those encountered in the field investigation; if deeper soils do liquefy, the potential for settlement of the site may increase.

Because of the relatively flat nature of the site and the lack of a free-face condition, damage of the buildings from lateral spreading is not expected. However, ground oscillation and "limited" lateral displacements may still occur.

3.6.3 - Regulatory Framework

Federal

Federal Earthquake Hazards Reduction Act

In 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program. The act established the National Earthquake Hazards Reduction Program (NEHRP). The National Earthquake Hazards Reduction Program Act (NEHRPA) significantly amended this program in 1990 by refining the description of the agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation and the USGS.

U.S. Uniform Building Code

The U.S. Uniform Building Code (UBC) provides site development and construction standards. The UBC is widely used throughout the United States, and is generally adopted on a district-by-district or state-by-state basis. The UBC has been modified for California conditions with more detailed and more stringent regulations.

State

California Building Standards Code

The California Building Standards Code establishes building requirements for construction and renovation. The most recent version of the California Building Standards Code was adopted in 2007 by the California Building Standards Commission and took effect January 1, 2008, and it is based on the International Code Council's Building and Fire Codes. Included in the California Building Standards Code are the Electrical Code, Mechanical Code, Plumbing Code, Energy Code, and Fire Code.

The State of California provides minimum standards for building design through the California Building Standards Code (California Code of Regulations, Title 24). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. Finally, the 2007 California Building Standards Code regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Section 1690-2699.6) addresses seismic hazards other than surface rupture, such as liquefaction and induced landslides. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

Alquist-Priolo Earthquake Fault Zoning Act

In response to the severe fault rupture damage of structures by the 1971 San Fernando earthquake, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. This act required the State Geologist to delineate Earthquake Fault Zones along known active faults that have a relatively high potential for ground rupture. Faults that are zoned under the Alquist-Priolo Act must meet the strict definition of being "sufficiently active" and "well-defined" for inclusion as an Earthquake Fault Zones. The Earthquake Fault Zones are revised periodically, and they extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board (SWRCB) administers the federal Environmental Protection Agency's promulgated regulations (55 Code of Federal Regulations 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Eliminations System (NPDES). In turn, the SWRCB's jurisdiction is administered through Regional Water Quality Control Boards. Pursuant to these federal regulations, an operator must obtain a General Permit under the NPDES Stormwater Program for all construction activities with ground disturbance of one acre or greater. The General Permit requires the implementation of best management practices (BMPs) to reduce pollutant loads into the waters of the State and measures to reduce sediment and erosion control. In addition, a Stormwater Pollution Protection Plan (SWPPP) must be prepared. The SWPPP addresses water pollution control during construction. SWPPPs require that all stormwater discharges associated with construction activity, where clearing, grading, and excavating results in soil disturbances, must by law be free of site pollutants.

Local

City of Manteca

General Plan

The City of Manteca General Plan established the following goals and policies related to geology and soils that are applicable to the proposed project:

- **Goal S-1:** Prevent loss of lives, injury, and property damage due to geological hazards and seismic activity.
- **Goal S-2:** Prevent loss of lives, injury, and property damage due to the collapse of buildings and critical facilities, and to prevent disruption of essential services in the event of an earthquake.
- **Policy S-P-1:** The City shall require preparation of geological reports and/or geological engineering reports for proposed new development located in areas of potentially significant geological hazards, including potential subsidence (collapsible surface soils) due to groundwater extraction.
- **Policy S-P-2:** The City shall require new development to mitigate the potential impacts of geologic hazards through Building Plan review.
- **Policy S-P-3:** The City shall require new development to mitigate the potential impacts of seismic induced settlement of uncompacted fill and liquefaction (water-saturated soil) due to the presence of a high water table.
- **Goal RC-6:** Preserve and maintain Manteca's soils to avoid pollution of surface waters, decreased air quality, and loss of soil.
- **Policy RC-P-10:** Minimize soil erosion and loss of topsoil from land development activities, wind, and water flow.

The Safety Element of the City General Plan states that all new development shall comply with the current California Building Standards Code requirements and with California Health and Safety Code Section 19100, et seq. (Earthquake Protection Law). The Resource Conservation Element of the City General Plan states that all new development shall comply with the current California Building Standards Code requirements for construction standards for specific soil types and with Chapter 70 regulating grading activities including drainage and erosion control. The City requires site-specific land management and development practices for proposed development projects, including appropriate mitigation measures to avoid or reduce erosion.

General Permit

The City of Manteca regulates grading and construction through General Permits for construction activity that disturbs a land totaling 1 acre or more, or less than 1 acre but part of a larger common plan of development. In addition, the City requires all new development to comply with the requirements of the current version of the California Building Standards Code that stipulate building structural material and reinforcement.

3.6.4 - Methodology

Neil O. Anderson and Associates prepared a Preliminary Geotechnical Report, dated September 15, 2009 to provide preliminary geotechnical recommendations for the site development and initial building design. The report summarized the findings of a field investigation and laboratory testing. The field investigation consisted of site reconnaissance and the drilling of borings using a truck-mounted, 6-inch-diameter, hollow-stem continuous flight auger drill. Five borings were drilled within the proposed building footprints to a depth of 41.5 feet below ground surface to evaluate subsurface soil profile. Four bulk subgrade soil samples were obtained from the proposed pavement areas for R-value testing. In addition, six percolation tests were performed within the storm detention basin areas. All samples were returned to the laboratory for evaluation and appropriate testing.

Boring logs and laboratory testing results are provided in Appendix G.

3.6.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, geology, soils, and seismicity impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a.) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

   i. 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? Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking?
   iii. Seismic-related ground failure, including liquefaction?
   iv. Landslides?

b.) Result in substantial soil erosion or the loss of topsoil?

c.) 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?

d.) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

e.) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (Refer to Section 7, Effects Found Not To Be Significant.)

3.6.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Seismic Hazards

Impact GEO-1:	Development of the proposed project may expose persons or structures to seismic hazards.

Impact Analysis

This impact evaluates potential exposure of the Northwest Airport Way Master Plan and non-master plan area annexations to seismic hazards, including fault rupture, strong ground shaking, ground failure and liquefaction, and landslides.

Master Plan

Fault Rupture

There are no Alquist-Priolo Earthquake Fault Zone within the Master Plan boundaries. In addition, the Preliminary Geotechnical Investigation indicated that there are no faults within the Master Plan boundaries. This condition precludes the possibility of the proposed project being exposed to fault rupture. No impacts would occur.

Strong Ground Shaking

According to the United States Geological Survey's Probabilistic Hazard Map, ground shaking in San Joaquin County is predicted to have a 10-percent probability that a seismic event would produce horizontal ground shaking of 10 to 25 percent within a 50-year period.

The California Geological Survey maintains a web-based computer model that estimates probabilistic seismic ground motions for any location with California. The computer model estimates the "Design Basis Earthquake" ground motion, which is defined as the peak ground acceleration with a 10-percent chance of exceedance in 50 years (475-year return period). For an alluvium soil type, on which the project site is located, the estimated peak ground acceleration is approximately 0.273g.

The Master Plan area may be exposed to strong ground shaking during an earthquake in the general region. The project would implement all applicable requirements of the most recent California Building Standards Code, which provides criteria for the seismic design of buildings. Seismic design criteria account for peak ground acceleration, soil profile, and other site conditions, and they establish corresponding design standards intended primarily to protect public safety and secondly to minimize property damage. Mitigation is proposed that would require the project applicant to submit site plans to City of Manteca for review and approval that demonstrate that proposed project's plans incorporate all applicable seismic design criteria of the most recent California Building Standards Code. Accordingly, potential ground shaking impacts would be reduced to a level of less than significant.

Ground Failure and Liquefaction

Liquefaction occurs when saturated soil loses shear strength and deforms as a result of increased pore water pressure induced by strong ground shaking during an earthquake. As the excess pore pressure dissipates, volume changes are produced within the liquefied soil layer that can manifest at the ground surface as settlement of structures, floating of buried structures, and failure of retaining walls. Soil types most susceptible to liquefaction are saturated, loose, sandy soils. The soils within the Master Plan area consist of medium-dense silty sand, stiff sandy silt, very stiff lean clay, stiff sandy clay, silty clay, very stiff to hard fat clay, and loose sandy silt. The analysis indicates that the potential for liquefaction is low, which is due to the depth of liquefiable soils (39 feet below ground surface), and that the liquefiable soils areas are overlain by a 20-foot stratum of very stiff clayey material that will help bridge any settlement in the underlying soils. These characteristics indicate that the Master Plan area would not be susceptible to ground failure, liquefaction, or liquefaction-related phenomena. Impacts would be less than significant.

Landslides

There are no substantial slopes on or near the project site. This condition precludes the possibility of landslides inundating the project site. No impacts would occur.

Non-Master Plan Annexations

Fault Rupture

There are no Alquist-Priolo Earthquake Fault Zones within the East and South areas. This condition precludes the possibility of the East and South areas being exposed to fault rupture. No impacts would occur.

Strong Ground Shaking

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, to the extent that these areas are susceptible to strong ground shaking, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Ground Failure or Liquefaction

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, to the extent that these areas are susceptible to ground failure or liquefaction, they would not be adversely affected by the proposed annexations. Impacts would be less than significant.

Landslides

There are no substantial slopes on or near the East and South areas. This condition precludes the possibility of landslides inundating the East and South areas. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 Prior to issuance of building permits for each Master Plan use, the project applicant shall submit a design-level geotechnical study and building plans to the City of Manteca for review and approval. The building plans shall demonstrate that they incorporate all applicable recommendations of the design-level geotechnical study and comply with all applicable requirements of the most recent version of the California Building Standards Code. A licensed professional engineer shall prepare the plans, including those that pertain to soil engineering, structural foundations, pipeline excavation, and installation. The approved plans shall be incorporated into the proposed project. All onsite soil engineering activities shall be conducted under the supervision of a licensed Geotechnical Engineer or Certified Engineering Geologist.

Level of Significance After Mitigation

Less than significant impact.

Erosion

Impact GEO-2: Construction activities associated with the proposed project have the potential to create erosion and sedimentation.

Impact Analysis

This impact evaluates the Northwest Airport Way Master Plan's and non-master plan area annexations' potential to create erosion and sedimentation.

Master Plan

Construction activities associated with the proposed project would involve vegetation removal, grading, and excavation activities that could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation. NPDES stormwater permitting programs regulate stormwater quality from construction sites, which includes erosion and sedimentation. Under the NPDES permitting program, the preparation and implementation of an SWPPP is required for construction activities that would disturb an area of 1 acre or more. The SWPPP must identify potential sources of erosion or sedimentation that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement Best Management Practices (BMPs) that ensure the reduction of these pollutants during stormwater discharges. Typical BMPs intended to control erosion include sand bags, detention basins, silt fencing, storm drain inlet protection, street sweeping, and monitoring of water bodies.

These requirements have been incorporated into the proposed project as mitigation. The implementation of an SWPPP and its associated BMPs would reduce potential erosion impacts to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, no construction activities would occur pursuant to the annexations; therefore, no potential would exist to create erosion or sedimentation. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure HYD-1.

Level of Significance After Mitigation

Less than significant impact.

Unstable Geologic Units or Soils

Impact GEO-3:	**The proposed project would not expose persons or structures to hazards associated with unstable geologic units or soils.**

Impact Analysis

This impact evaluates the Northwest Airport Way Master Plan's and non-master plan area annexations' potential to expose persons or structures to hazards associated with unstable geologic units or soils.

Master Plan

The Preliminary Geotechnical Report concluded that the onsite soils are suitable to support the development of the proposed project. As previously discussed in Impact GEO-1, the project site would not be susceptible to liquefaction or liquefaction-related phenomena. Therefore, the development of the proposed project would not expose persons or structures to hazards associated with unstable geologic units or soils.

As part of the proposed project, the project site would be graded, and the area underlying the building pad would be soil engineered in accordance the recommendations of a design-level geotechnical study and the requirements of the California Building Standards Code. This requirement is established by Mitigation Measure GEO-1. This process would involve removal of unsuitable soils, the placement of engineered fill, and compaction in order to ensure that the proposed structure is adequately supported. These practices would ensure that the proposed project is located on stable soils, and geologic units and would not be susceptible to settlement or ground failure. Therefore, the

implementation of Mitigation Measure GEO-1 would reduce impacts to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, no construction activities would occur pursuant to the annexations; therefore, persons or structures would not be exposed to hazards associated with unstable geologic units or soils. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure GEO-1.

Level of Significance After Mitigation

Less than significant impact.

Expansive Soils

Impact GEO-4:	**Development of the proposed project would not expose persons or structures to hazards associated with expansive soils.**

Impact Analysis

This impact evaluates the Northwest Airport Way Master Plan's and non-master plan area annexations' potential to expose persons or structures to hazards associated with expansive soils.

Master Plan

According to regional mapping of the Master Plan area, the site is not located in an area with expansive soils. The United States Department of Agriculture Natural Resources Conservation Service indicates that Timor, Tinnin, and Veritas underline the project site. These soils have a have a very low shrink/swell potential and are not considered expansive. Therefore, the development of the project would not expose persons or structures to hazards associated with shrinking and welling of expansive soils. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, no construction activities would occur pursuant to the annexations; therefore, persons or structures persons or structures would not be exposed to hazards associated with expansive soils. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.7 - Hazards and Hazardous Materials

3.7.1 - Introduction

This section describes the existing hazards and hazardous materials setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on the Phase I Environmental Site Assessments and the Phase II Limited Soil Sampling Letter Reports prepared by Conestoga-Rovers & Associates (CRA) and included in this EIR as Appendix G.

3.7.2 - Environmental Setting

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic – causes human health effects
- Ignitable – has the ability to burn
- Corrosive – causes severe burns or damage to materials
- Reactive – causes explosions or generates toxic gases

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Phase I Environmental Site Assessments and Phase II Limited Soil Sampling Programs

Phase I Environmental Site Assessments (ESA) were conducted by Conestoga-Rovers & Associates (CRA) on October 2007, November 2007, and February 2008 for a majority of acreage within the Master Plan area. The Environmental Site Assessments revealed two specific areas of concern: (1) the potential for residual agriculturally related compounds in soils for Parcels 1 and 5 and (2) the potential for adverse impacts to soils adjacent to the above ground storage tanks (ASTs) on the Aufdermaur Property. CRA completed two Phase II Limited Soil Sampling Programs in October 2007 and January 2008 to address these concerns. The purpose of the Environmental Site Assessments was to document recognized environmental conditions on the property related to current and historical uses of the area and to evaluate the potential for release of hazardous materials from onsite or offsite sources that could significantly affect environmental conditions at the subject

property. Details and findings of the Phase I Environmental Site Assessments and Phase II Limited Soil Sampling Programs are summarized in Table 3.7-1.

Table 3.7-1: Environmental Site Assessments

Site Name and Location	Acreage	Site Description	Technical Study	Date
Aufdermaur Property 14755 South Airport Way Manteca, California	77.9	A single parcel of land improved with two residences, two barns and a storage building. Approximately 3 acres are in use for site residences, site equipment storage and for cattle. The remainder of the site is used for agricultural crop production.	Phase 1 ESA Limited Soil Sampling Letter Report	October 2007 January 2008
Parcels 1 and 5 11801 and 13340 South Airport Way Manteca, California	254.8	The site consists of two parcels of land improved with four residences and associated storage buildings. Approximately 3-4 acres are in use for site residences and storage; the remainder of the site is used for agricultural crop production.	Phase 1 ESA Limited Soil Sampling Letter Report	November 2007 October 2007
Parcels 2 and 3 13225 South Airport Way Manteca, California	25.0	The site consists of two parcels used for agricultural production. Both parcels are part of the Riella Farms site.	Phase 1 ESA	February 2008
Total Acreage	**357.7**			

Notes:
The area encompassed by the Environmental Site Assessments listed in this table includes land that is outside the boundaries of the Master Plan area.
Source: Conestoga-Rovers & Associates, 2007, 2008

The Environmental Site Assessments performed by CRA encompasses the majority of the Master Plan area; record searches and reviews of historical aerial photography and topographical maps revealed that the surrounding properties that comprise the entirety of the Master Plan area have been similarly configured since the 1950s as the properties investigated.

A Phase I Environmental Assessment was not performed for the non-Master Plan annexation areas. However, the California Department of Toxic Substance Control's (DTSC's) EnviroStor database was queried about any information about the East and South areas. The EnviroStor database is an online search and Geographic Information System tool for identifying sites that have known

contamination or sites for which there may be reasons to investigate further. It also identifies facilities that are authorized to treat, store, dispose, or transfer hazardous waste. No records were found for any of the properties within these areas

Records Search

Environmental Data Resources, Inc. (EDR) performed a search of federal, state, and local databases listing contaminated sites, brownfield sites (a development site having the presence or potential presence of hazardous substance, pollutant, or contaminant), underground storage tank (UST) sites, waste storage sites, toxic chemical sites, contaminated well sites, clandestine drug lab sites, and other sites containing hazardous materials. The record search results are discussed below.

Master Plan Area

The Master Plan area was not found to be listed in any of the databases mentioned above. Furthermore, no adjacent properties were listed in any of those databases. The environmental site assessments revealed no evidence of recognized environmental concerns.

Surrounding Land Uses

Table 3.7-2 summarizes recorded sites within 0.5 mile of the Master Plan area. Each site is discussed below.

Table 3.7-2: Search Results of Surrounding Land Uses

Name	Location	Database(s)
Sharpe Army Depot Sharpe General Depot (Field Annex) Sharpe Defense Depot	700 East Roth Road	NPL, CERCLIS, CORRACTS, DOD, RCRA-TSDF, RODS, US Engineering Controls, US Institutional Controls, EnviroStor
Triple J Trucking	14762 South Airport Way	CA FID, UST, HIST UST, SWEEPS UST
Con-Fab Corporation	2444 East Lathrop Road	EnviroStor
Xtra Lease	755 East Roth Road	EnviroStor
H&M Transport, Inc.	707 East Roth Road	EnviroStor
Lathrop Quinones Armed Forces	400 East Roth Road	EnviroStor

Notes:
CA FID = Facility Inventory Database. Contains active and inactive underground storage tank locations.
CERCLIS = The CERCLIS List contains data on potentially hazardous waste sites that may have been reported to the U.S. EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of CERCLA.
CORRACTS = The CORRACTS Database identifies hazardous waste handlers with RCRA corrective action activity.
DOD = This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.
ENVIROSTOR = Sites that have known contamination or sites for which there may be reason to investigate further.
HIST UST = Hazardous Substance Storage Container Database. Historical listing of undergoing storage tank sites.
NPL = The NPL is a USEPA listing of the nation's worst uncontrolled or abandoned hazardous waste sites.
RCRA-TSDF = The RCRA-TSDF Database contains information regarding those facilities that treat, store, or dispose of USEPA-regulated hazardous waste.
ROD = ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.
SWEEPS UST = Statewide Environmental Evaluation and Planning System. Lists underground storage tank locations.
US Engineering Controls = The US Engineering Controls Database is a listing of sites with engineering controls in place.
US Institutional Controls = A listing of sites with institutional controls in place.
Source: Environmental Data Resources, Inc., 2007, 2008.

Of the six sites listed in Table 3.7-2, the one of most concern is the Sharpe Army Depot because it is on the National Priority List. Sharpe Army Depot fence line is within 1,000 feet of the Master Plan area. The concrete-lined French Camp Outlet Canal and Union Pacific Railroad Lathrop Intermodal Terminal are located between the Master Plan area and the Sharpe Army Depot. Information from available Sharpe environmental documents shows contaminant plume migrating to the west-northwest. Given the direction of the plume migration and the presence of the concrete-lined drainage canal, it would be unlikely that the Master Plan area would be susceptible to any risks associated with the plume.

The Phase I ESAs indicated that none of the sites listed in Table 3.7-2 posed a risk to the project site because of distance or direction, violation history, or remediation status.

Aerial Photographs

Aerial photographs of the project area dating to 1957 were obtained as part of the Phase I ESA process. The changes that occur to the project site and surroundings are summarized in Table 3.7-3.

Table 3.7-3: Aerial Photograph Summary

Site Name and Location	Year	Scale (inches:feet)	Description
Aufdermaur Property 14755 South Airport Way Manteca, California	1957	1:555	The site is currently in use for agricultural crop production and as a rural residence. The adjacent properties are similarly configured. To the north there appears to be an industrial type facility. The aerial photograph does not cover the adjacent properties to the west.
	1982	1:690	The site and surrounding properties are in identical configuration as was observed in the 1957 aerial photograph. There are no observable site changes. This aerial photograph again does not cover the adjacent properties to the west.
	1993	1:666	The site is in use as agricultural land and rural residences. There are very few observable changes when compared with the previous aerial photographs, with the exception of a new building near the residences. As to the surrounding areas, the industrial area adjacent to the site's north side has been expanded. To the west, the army depot can be seen.
	1998	1:666	The site and adjacent properties are in a similar configuration as shown in the 1993 aerial photograph. No discernable changes were observed.

Table 3.7-3 (cont.): Aerial Photograph Summary

Site Name and Location	Year	Scale (inches:feet)	Description
Parcels 1 and 5 11801 and 13340 South Airport Way Manteca, California	1957	1:555	The site is in use for agricultural crop production and as a rural residence; as it is currently.
	1963	1:555	The photograph only shows the northern portion of Parcel 1 and the surrounding properties appear in the same configuration as they did in the 1957 aerial photograph.
	1970	1:333	The photograph only shows the northern portion of the site. This portion of Parcel 1 and the surrounding properties appear unchanged from previous depictions. The only observable difference is a housing development to the far northeast.
	1982	1:690	This photograph shows all of Parcel 1. The parcel is in use for agricultural crop production with rural residences in the northeast and southeast portions. Rural residences and agricultural properties surround the parcel. To the north is a dairy.
	1993	1:666	This photograph shows all of Parcel 1. This parcel and the surrounding properties appear unchanged when compared with the previous aerial photographs.
	1998	1:666	This photograph shows all of Parcel 1. With the exception of the construction of the Intermodal Terminal to the west, the site and surrounding properties appear unchanged from the conditions observed in previous photographs.
	2002	1:416	This photograph shows only the northern portion of Parcel 1. This portion of the parcel and the surrounding properties are shown in the same configuration as is presented in the 1998 aerial photograph.
Parcels 2 and 3 13225 South Airport Way Manteca, California	1957	1:555	The site is currently in use for agricultural crop production. The adjacent properties are similarly configured.
	1963	1:555	The site is in a similar configuration as shown in the 1957 aerial photograph.
	1982	1:690	The site is in use for agricultural crop production. Agricultural properties surround the site.
	1993	1:666	The site and surrounding properties are unchanged when compared with previous aerial photographs.

Table 3.7-3 (cont.): Aerial Photograph Summary

Site Name and Location	Year	Scale (inches:feet)	Description
	1998	1:666	With the exception of the construction of the Intermodal Terminal to the west, the site and surrounding properties appear unchanged from the conditions observed in previous photographs.
Source: Environmental Data Resources, 2007, 2008			

Topographic Maps

Topographic maps of the project area dating to 1915 were obtained as part of the Phase I ESA process. The changes that occur to the project site and surroundings are summarized in Table 3.7-4.

Table 3.7-4: Topographic Map Summary

Site Name and Location	Year	Scale (inches:feet)	Description
Aufdermaur Property 14755 South Airport Way Manteca, California	1915	1:31,680	The scale provided was inadequate to determine specific site uses.
	1952	1:24,000	The topographic map shows the site and surrounding properties in use for agricultural crop production and rural residences. The site is bounded to the north by an unnamed irrigation canal and the San Joaquin Irrigation District Canal to the west. Further west is Sharpe Army Depot.
	1968	1:24,000	The topographic maps shows the site and surrounding properties in the same configuration as the 1952 topographic map with the only difference being an additional building on the site.
	1976, 1987, 1994	1:24,000	The topographic maps shows the site and surrounding properties in the same configuration as the 1968 topographic map.
	1996	1:24,000	The topographic map shows the site and surrounding area in similar configuration as was observed since 1968.
Parcels 1 and 5 11801 and 13340 South Airport Way Manteca, California	1915	1:31,680	The scale provided was inadequate to determine specific site uses.
	1952	1:24,000	The topographic map shows the site and surrounding properties in use for agriculture crop production and rural residences. The site is bounded to the north by Roth Road and the San Joaquin Irrigation District Canal to the west. Further west is Sharpe Army Depot.

Table 3.7-4 (cont.): Topographic Map Summary

Site Name and Location	Year	Scale (inches:feet)	Description
Parcels 1 and 5 11801 and 13340 South Airport Way Manteca, California (*cont.*)	1968	1:24,000	The topographic map shows the site and surrounding areas in the same configuration as the 1952 topographic map.
	1976, 1987, 1994	1:24,000	The topographic map shows the site and surrounding properties in the same configuration as the 1968 map.
	1996	1:24,000	The topographic map shows the site and surrounding area in similar configuration as was observed since 1968.
Parcels 2 and 3 13225 South Airport Way Manteca, California	1915	1:31,680	The scale provided was inadequate to determine specific site uses.
	1952	1:24,000	The topographic map shows the site and surrounding properties in use for agriculture crop production and rural residences. Agricultural properties surround the site on all sides; further west is Sharpe Army Depot.
	1968	1:24,000	The topographic map shows the site and surrounding areas in the same configuration as the 1952 topographic map.
	1976, 1987, 1994	1:24,000	The topographic map shows the site and surrounding properties in the same configuration as the 1968 map.
	1996	1:24,000	The topographic map shows the site and surrounding area in similar configuration as was observed since 1968.
Source: Environmental Data Resources, 2007, 2008			

Common Hazardous Materials

Below are descriptions of common hazardous materials that may be found on developed and agricultural sites. The likelihood of encountering these materials is evaluated, based on site reconnaissance observations by CRA.

Asbestos

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties, such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is commonly used as an acoustic insulator, thermal insulation, fireproofing, and in other building materials. Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials are damaged or disturbed. When these fibers get into the air, they may be inhaled into the lungs, where they can cause significant health problems. The California Occupational Health and Safety Administration (CalOSHA) defines asbestos-containing construction materials as any material that contains more than 0.1 percent asbestos by weight.

As the project is built out, structures onsite would be scheduled for demolition. The Aufdermaur Property contains residential structures dating back to the 1960s. Parcels 1 and 5 contain residential structures dating back from early 1930s to the 1950s. Because of the age of the structures onsite, there is a potential for asbestos-containing material (ACM) to be present. Prior to demolition, an Asbestos Survey will need to be completed pursuant to EPA, AHERA and NESHAP regulations.

Lead

Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably in paint. Lead may cause a range of health effects, from behavioral problems and learning disabilities to seizures and death. Primary sources of lead exposure are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated soil. Both the U.S. EPA and the California Department of Health Services define lead paint as containing a minimum of 0.5 percent by weight. Lead-containing waste materials with a concentration greater than 0.1 percent are considered hazardous waste by California law.

Because of the age of the structures onsite, there is the potential for lead-based paints (LBP) to be present. Prior to demolition, a Lead-Based Paint Survey will need to be completed in accordance with the U.S. Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) guidelines.

Occupational exposure to lead is regulated by both the federal OSHA (29 CFR 1926.62) and the California OSHA (Title 8, General Industry Safety Order (GISO) 5198 and Construction Safety Order (CSO) 1532.1). Based on federal and California OSHA standards, when disturbing paints that contain lead (in any detectable amount), OSHA and CalOSHA regulations should be followed.

Polychlorinated Biphenyls (PCBs)

Polychlorinated biphenyls (PCBs) are mixtures of synthetic chemicals with similar chemical structures. PCBs can range from oily liquids to waxy solids. Because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other applications. More than 1.5 billion pounds of PCBs were manufactured in the United States prior to cessation of production in 1977.

Electricity is provided to the site by PG&E via pole-mounted transformers located across South Airport Way from the site. These transformers were not labeled with regard to PCB content. No staining or evidence of releases was observed associated with the transformers. As the owner of the transformers, PG&E would be responsible for any inspections, testing, reporting and release response.

Before EPA banned the manufacture of PCBs in 1978, PCBs were commonly incorporated in the manufacture of fluorescent light ballasts. Based on the age of the buildings on the project site, there

may be fluorescent light ballasts in the residences that may have PCB-containing capacitors. Proper disposal of fluorescent light ballasts will be required prior to demolition. Arrangements may be made with various PCB transporters or PCB commercial storers for shipment of ballast, PCB-soiled items, or fluorescent fixtures containing PCBs to an EPA-approved chemical waste processing site. Alternatively, household hazardous waste collection centers can accommodate fluorescent light ballasts containing PCBs. San Joaquin County's Permanent Household Hazardous Waste Consolidation Facility in Stockton, California can accommodate the hazardous waste.

Mercury

Mercury is a naturally occurring element that is found in air, water, and soil that has traditionally been used to make products such as fluorescent lamps, switches, and thermometers. Mercury exposure at high levels can harm the brain, heart, kidneys, lungs, and immune system of people of all ages. Scientific studies have shown that high levels of mercury in the bloodstream of unborn babies and young children may harm the developing nervous system, making a child less able to think and learn.

As the project is built out, structures onsite would be scheduled for demolition. Based on the age of the buildings on the project site, there may be mercury-containing fluorescent lights and switches. Therefore, building materials containing mercury may be an environmental concern at the project site. Proper disposal of potential mercury-containing building materials will be required prior to demolition.

The Limited Soil Sampling Program conducted as part of the environmental site assessment indicated that mercury levels in the soil were not detected above the method detection level. The complete analytical results are contained in Appendix G. In summary, there is no evidence of mercury in the soil.

Chlorofluorocarbons (CFCs)

CFCs were developed in the early 1930s and are used in a variety of industrial, commercial, and household applications. These substances are non-toxic, non-flammable, and non-reactive with other chemical compounds. These desirable safety characteristics, along with their stable thermodynamic properties, make them ideal for many applications—as coolants for commercial and home refrigeration units, aerosol propellants, electronic cleaning solvents, and blowing agents. CFCs contribute to depletion of the ozone layer and, consequently, to skin cancer and cataracts. CFCs also are greenhouse gases and contribute to global climate change.

CRA observed no CFC equipment present at the project site. Therefore, CFC-containing equipment does not appear to be a significant environmental concern at the site.

Radon

Radon is a carcinogenic, radioactive gas resulting from the natural breakdown of uranium in soil, rock, and water. Radon gas enters a building through cracks in foundations and walls. Once inside

the building, radon decay products may become attached to dust particles and inhaled, or the decayed radioactive particles alone may be inhaled and cause damage to lung tissue. The U.S. EPA has established a safe radon exposure threshold of 4 picoCuries per liter of air (pCi/l).

According to site personnel, the Master Plan area has not used any sources of ionizing radiation in site operations. CRA did no observe any labeled radiation sources during the Phase I ESA. Site personnel were unaware of any radon gas testing have been conducted at the site.

The California Department of Health Services indicates that seven indoor radon samples taken in the 95336 and 95337 zip codes (Manteca area zip codes) yielded no concentrations above 4 pCi/l.

High-Voltage Power Lines

High-voltage power lines emit electromagnetic fields (EMFs), which have been alleged to be a cause of cancer. However, scientific research has never conclusively established a link between EMFs and cancer.

Pacific Gas and Electric Company (PG&E) 47-kilovolt (kv) overhead power lines are located on the east side of Airport Way running north-south along the Master Plan area eastern border between the curb and edge of the right-of-way. In addition, PG&E overhead electrical lines are located along Lathrop Road and Roth Road. These power lines are not considered high-voltage power lines.

Hydrocarbons/Aboveground and Underground Storage Tanks

Petroleum hydrocarbons are derived from crude oil, which is refined into various petroleum products such as diesel, gasoline, kerosene, lubricants, and heavy fuel oils. Hydrocarbons constituents include benzene, N-heptane, and toluene, and generate health effects such as cancer, leukemia, asthmatic bronchitis, kidney damage, and eye irritation. Hydrocarbons are stored in ASTs and USTs. Leaking ASTs and USTs can result in contamination of groundwater sources or fire and explosion.

The Phase I ESA indicated that no evidence of USTs were observed on the project site during the site reconnaissance. However, septic system are associated with the residential structures onsite. The Phase I ESA of the Aufdermaur Property revealed the historic use of UST, which was removed in the early 1970s. The UST is currently in use at the Aufdermaur Property as an AST; therefore, it had not leaked underground. CRA did not observe any evidence of USTs during the site inspection. The site was not listed in the UST or LUST databases as containing USTs or having releases from USTs. According to the San Joaquin County Environmental Health Department, no USTs are present onsite.

Four ASTs are currently in use at the Aufdermaur Property: three metal, fuel ASTs and a large, polyethylene water AST. The three fuel ASTs include:

- 500-gallon steel—red dye diesel
- 350-gallon steel—diesel
- 100-gallon steel—gasoline

The fuel ASTs are situated on a concrete pad without secondary containment. The fuel is dispensed via a metered fuel dispenser also situated on the pad. CRA did observe minimal staining of the AST pad but did not observe any soil staining adjacent to the pad.

See discussions above regarding the potential impact of fueling activities at the Aufdermaur site.

Aviation

The Stockton Metropolitan Airport is the closest airport to the project site. The Master Plan area is 2.5 miles from the Stockton Metropolitan Airport. The East and South areas are 3.7 and 3.9 miles from the Stockton Metropolitan Airport, respectively. The Master Plan and East areas are within the Airport Influence Area, but not within any of the land use compatibility zones. The South area is not within the Airport Influence Area.

3.7.3 - Regulatory Framework

Federal

U.S. Environmental Protection Agency

The EPA leads the nation's environmental science, research, education and assessment efforts. The EPA's mission is to protect human health and to safeguard the natural environment, related to air, water, and land. The EPA works closely with other federal agencies, state and local governments, and Indian tribes to develop and enforce regulations under existing environmental laws. The EPA is primarily responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits, and monitoring and enforcing compliance. When national standards are not met, the EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality. The EPA also works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts.

EPA Region 9 has jurisdiction over Manteca and the southwestern United States (Arizona, California, Nevada, and Hawaii).

EPA programs related to hazardous materials include:

- Community Right-to-Know Information
- Pesticide Management
- Toxic Release Inventory
- Brownfields (CalSites Database)
- Cleanup Technologies
- Compliance Assistance
- Emergency Response
- Hazardous Waste
- Oil Spills

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs complied with the required standards.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. The act deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

U.S. Department of Transportation

The Hazardous Materials Transportation Act of 1974, as amended, is the basic statute regulating hazardous materials transportation in the United States. This law gives the U.S. Department of Transportation and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials.

State agencies are authorized to designate highways for the transport of hazardous materials. Where highways have not been designated, hazardous materials must be transported on routes that do not go through or near heavily populated areas.

State

California State Aeronautics Act

The State Aeronautics Act, Public Utilities Code (PUC) Section 21001, et seq. is the foundation for the California Department of Transportation's Division of Aeronautics aviation policies. The Division issues permits for and annually inspects hospital heliports and public-use airports, makes recommendations regarding proposed school sites within 2 miles of an airport runway, and authorizes

helicopter-landing sites at/near schools. Aviation system planning provides for the integration of aviation into transportation system planning on a regional, statewide, and national basis. The Division of Aeronautics administers noise regulation and land use planning laws that foster compatible land use around airports and encourages environmental mitigation measures to lessen noise, air pollution, and other impacts caused by aviation. The Division of Aeronautics also provides grants and loans for safety, maintenance, and capital improvement projects at airports.

California Health and Safety Code

The California Environmental Protection Agency has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, et seq. incorporate the requirements of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Risk Management Plan (RMP). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the EPA for review and approval.

CEQA and the Cortese List

The Cortese List (Hazardous Waste and Substances Site List) is a planning document used by the state, local agencies, and developers to comply with CEQA requirements to consider Government Code Section 5962.5 in evaluating proposed development projects. Section 65962.5 states that

> The list should contain all hazardous waste facilities subject to corrective action , all hazardous waste property or border zone property designations, all information received on hazardous waste disposals on public land, all hazardous substance release sites listed pursuance to Government Code Section 25356, and all sites that were included in the former Abandonment Site Assessment Program.

California Environmental Protection Agency (Cal EPA)

Government Code Section 65962.5 requires the California Environmental Protection Agency (Cal EPA) to develop a Cortese List at least annually. The Department of Toxic Substances Control is responsible for a portion of the information on the list, and other local and state government agencies are required to provide additional information. Cal EPA operates the Air Resources Board, the Department of Pesticide Regulation, Department of Toxic Substances Control, Integrated Waste Management Board, Office of Environmental Health Hazard Assessment, and the State Water Resources Control Board. The function of each of these six offices is discussed below:

Air Resources Board (CARB): To promote and protect public health, welfare and ecological resources through the effective and efficient reduction of air pollutants in recognition and consideration of the effects on the economy of the State.

Department of Pesticide Regulation (DPR): Regulates all aspects of pesticide sales and use to protect the public health and the environment for the purpose of evaluating and mitigating impacts of pesticide use, maintaining the safety of the pesticide workplace, ensuring product effectiveness, and encouraging the development and use of reduced risk pest control practices.

Department of Toxic Substances Control (DTSC): The Department's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention. DTSC protects residents from exposures to hazardous wastes. DTSC operates programs to:

- Deal with the aftermath of improper hazardous waste management by overseeing site cleanups.
- Prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store and dispose of wastes do so properly.
- Take enforcement actions against those who fail to manage hazardous wastes appropriately.
- Explore and promote means of preventing pollution, and encourage reuse and recycling.
- Evaluate soil, water and air samples taken at sites, and develop new analytical methods.

Integrated Waste Management Board (IWMB): Protects the public health and safety and the environment through waste prevention, waste diversion, and safe waste processing and disposal. The IWMB is responsible for managing California's solid waste stream. The Board is helping California divert its waste from landfills by:

- Developing waste reduction programs.
- Providing public education and outreach.
- Assisting local governments and businesses.
- Fostering market development for recyclable materials.
- Encouraging used oil recycling.
- Regulating waste management facilities.
- Cleaning up abandoned and illegal dump sites.

Office of Environmental Health Hazard Assessment (OEHHA): OEHHA is responsible for developing and providing risk managers in state and local government agencies with toxicological and medical information relevant to decisions involving public health. OEHHA also works with federal agencies, the scientific community, industry and the general public on issues of environmental as well as public health. Specific examples of OEHHA responsibilities that directly relate to Manteca include:

- Developing health-protective exposure standards for air, water, and land to recommend to regulatory agencies, including ambient air quality standards for the Air Resources Board and drinking water chemical contaminant standards for the Department of Health Services.
- Assessing health risks to the public from air pollution, pesticide and other chemical contamination of food, seafood, drinking water, and consumer products.
- Providing guidance to local health departments, environmental departments, and other agencies with specific public health problems, including appropriate actions to take in emergencies that may involve chemicals.

State Water Resources Control Board (SWRCB): Preserves and enhances the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The SRWQCB maintains the Leaking Underground Storage Tank Information System (LUTIS) Database, which contains information on registered leaking underground storage tanks (LUSTs) in the State.

California Occupational Safety and Health Agency (CalOSHA)

CalOSHA sets and enforces standards that insure safe and healthy working conditions for California's workers. The Division of Occupational Safety & Health is charged with the jurisdiction and supervision over workplaces in California that are not under federal jurisdiction. CalOSHA regulates issues involving unsafe workplace conditions, worker exposure to chemicals, illness due to workplace exposure, or improper training.

State Regulatory Programs Division (SRPD)

The SRPD oversees the technical implementation of the State's Unified Program; a consolidation of six environmental programs at the local level, and conducts reviews of Unified Program agencies to ensure their programs are consistent statewide, conform to standards, and deliver quality environmental protection at the local level. SRPD also carries out the State's hazardous waste recycling and resource recovery program designed to facilitate recycling and reuse of hazardous waste. SRPD conducts a corrective action oversight program that assures any releases of hazardous constituents at generator facilities that conduct onsite treatment of hazardous waste are safely and effectively remediated, and oversees the hazardous waste generator and onsite waste treatment surveillance and enforcement program carried out by local Unified Programs.

California Department of Transportation (Caltrans) and California Highway Patrol

The California Vehicle Code Section 31303 requires that hazardous materials be transported via routes with the least overall travel time, and prohibits the transportation of hazardous materials through residential neighborhoods. In California, the California Highway Patrol (CHP) is authorized to designate and enforce route restrictions for the transportation of hazardous materials. To operate in California, all hazardous waste transporters must be registered with the Department of Toxic

Substances Control (DTSC). Unless specifically exempted, hazardous waste transporters must comply with the California Highway Patrol Regulations, the California State Fire Marshal Regulations, and the United States Department of Transportation Regulations. In addition, hazardous waste transporters must comply with Division 20, Chapter 6.5, Article 6 and 13 of the California Health and Safety Code, and the Title 22, Division 4.5, Chapter 13 of the California Code of Regulations, both of which are administered by DTSC.

Central Valley Regional Water Quality Control Board (RWQCB)

There are nine Regional Water Quality Control Boards (RWQCBs) throughout the State. The Central Valley RWQCB has jurisdiction over the City of Manteca, with offices in Stockton. Individual RWQCBs function as the lead agencies responsible for identifying, monitoring, and cleaning up LUSTs. Storage of hazardous materials in USTs is regulated by the State Water Resources Control Board (SWRCB), which oversees the nine RWQCBs.

Local

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over the City of Manteca and deals with pollutants, including hazardous air pollutants such as asbestos. Information on the SJVAPCD and air quality is provided in Section 3.3, Air Quality of this EIR.

San Joaquin County

Certified Unified Program Agencies (CUPA)

Senate Bill 1082 (1993) required the establishment of a unified hazardous waste and hazardous materials management program. The result was Cal EPA's United Program, which consolidates the actions of the Department of Toxic Substances Control, the State Water Resources Control Board, the Regional Water Quality Control Board, the Office of Emergency Services, and the State Fire Marshall. The Department of Toxic Substances Control oversees the implementation of the hazardous waste generator and onsite treatment program, one of six environmental programs at the local level, through Certified Unified Program Agencies (CUPAs). CUPAs have authority to enforce regulations, conduct inspections, administer penalties, and hold hearings. San Joaquin County implements the CUPA that has enforcement authority over the City of Manteca. Offices are located in Stockton.

Hazardous waste programs are managed and implemented locally through the San Joaquin County's Certified Unified Program Agency (CUPA). The County hosts a variety of hazardous waste collection events throughout the County in an effort to deter improper disposal of hazardous wastes. Household Hazardous Waste (HHW) Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators. Household wastes include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that should not go into a regular municipal landfill.

San Joaquin County Public Health Services monitors the possible groundwater and soil contamination from underground tanks. Its funding mechanism is a billing contract with the State Water Quality Control Board. Public Health Services clean-up enforcement falls under Title 23, California Code of Regulations. Case workers monitor site-specific development, and must be contacted prior to development.

Airport Land Use Compatibility Plan

The 2009 San Joaquin County Airport Land Use Plan establishes land use recommendations for properties within San Joaquin County that are located near five aviation facilities: Byron Airport[1], Kingdon Executive Airport, Lodi Airpark, Lodi Airport, New Jerusalem Airport, and Tracy Municipal Airport. The 2009 Airport Land Use Plan does not address Stockton Metropolitan Airport, as a separate master plan is being prepared for this facility and will address land use compatibility for surrounding areas. As such, the previously adopted 1993 San Joaquin County Airport Land Use Plan serves as the airport land use planning document for Stockton Metropolitan Airport until the master plan is adopted.

The Master Plan area and the East non-master plan area are within the Stockton Metropolitan Airport Influence Area, but they are not within any of the land use compatibility zones. The South non-master plan area is not within the Airport Influence Area. (Lathrop Road is the southern limit of the Airport Influence Area.)

City of Manteca

General Plan

The City of Manteca General Plan established the following goals and policies related to hazardous materials that are applicable to the proposed project:

- **Goal S-5:** The City shall protect the health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials.
- **Policy S-P-15:** The City shall maintain an awareness of hazardous materials throughout the Manteca region.
- **Policy S-P-16:** City approvals of all new development shall consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.
- **Policy S-P-17:** Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Manteca residents.
- **Goal S-6:** Ensure that City emergency procedures are adequate in the event of potential natural or man-made disasters.

[1] The Byron Airport is located in Contra Costa County, approximately 3.5 miles west of the San Joaquin County line and 20 miles west of the Master Plan area. In recognition that aviation activities associated with this airport have the potential to affect land uses in San Joaquin County, the 2009 Airport Land Use Plan establishes land use planning recommendations for land uses in nearby parts of San Joaquin County.

3.7.4 - Methodology

This section is based upon the Phase I ESAs prepared by CRA, dated October 2007, November 2007, and February 2008, and the Phase II ESAs Limited Soil Sampling Program Letter Reports, prepared by CRA, dated October 2007 and January 2008. The Phase I ESAs included a review of the project site's prior-use history; a review of neighboring properties based on reasonably ascertainable local, state, and federal regulatory agency environmental databases compiled by EDR; a review of historic aerial photographs, topographic maps, and business directories compiled by EDR; a visual reconnaissance for hazardous material contamination; a search for ASTs and USTs; and completion of questionnaires by the current landowners. CRA personnel performed site reconnaissance of the project site in October 2007, November 2007 and February 2008 to document existing conditions and potential environmental hazards. The Phase II ESA Limited Soil Sampling Programs investigated the potential impacts of fuel ASTs on the Aufdermaur Property and residual, agriculturally related compounds in the soil of three Centerpoint Properties located along Airport Way.

3.7.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hazards and hazardous materials impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a.) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b.) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

c.) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Refer to Section 7, Effects Found Not To Be Significant.)

d.) 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?

e.) 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, would the project result in a safety hazard for people residing or working the project area?

f.) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Refer to Section 7, Effects Found Not To Be Significant.)

g.) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h.) 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? (Refer to Section 7, Effects Found Not To Be Significant.)

3.7.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Past or Present Site Usage

Impact HAZ-1:	**Development of the proposed project does not have the potential to expose human health and the environment to hazardous materials associated with past or present usage of the project site or surrounding land uses.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to expose persons or the environment to hazardous materials associated with past and current uses of the project site, as well as from activities at surrounding land uses

Master Plan

The Master Plan area is not listed on any hazardous materials sites compiled pursuant to Government Code Section 65962.5.

The Master Plan area consists of agricultural operations, industrial uses, and rural residences. According to the Phase I ESAs, the Master Plan area has been similarly configured since the 1950s. CRA conducted a search of multiple hazardous materials databases and the project site was not listed on any regulatory databases reviewed as part of the environmental site assessment. According to the Phase I ESAs, there were no recognized environmental concerns associated with the project site.

Although the Phase I ESAs did not identify any recognized environmental concerns, they did identify others issues associated with past and present uses of the project site that could potentially result in the exposure of persons and environment to hazardous materials. These issues include soil impacts from hazardous materials storage vessels, agricultural chemicals, septic systems, asbestos-containing materials, lead paint, and hazardous waste-containing building materials in residences. Each is discussed below.

Hazardous Materials Storage

The fuel AST on the Aufdermaur site were identified a potential hazardous materials concern by CRA. The ASTs are located on a concrete pad without secondary containment. To determine if there been adverse impacts to the soils adjacent to the fueling area, a Phase II Limited Soil Sampling Program was conducted by CRA. These samples were analyzed for compounds of concerns, total petroleum hydrocarbons as diesel (TPH-D) and benzene, toluene, ethylbenzene and xylene (BTEX). The concentrations of compounds detected were compared with published regulatory criteria and the

TPH-D concentrations in the shallow soils at all three locations and in the deep soil at location exceeded regulatory criteria. The complete analytical results are presented in the Limited Soil Sampling Letter Report contained in Appendix G. Based on these results, it is recommended that additional limited soil sampling be conducted to delineate the horizontal and vertical extent of the TPH-D presence in the soils near the deep soil sample location.

Mitigation is proposed requiring additional soil sampling to delineate the horizontal and vertical extent of the TPH-D in order to implement a soil remediation program. Remediation will be conducted in accordance with Department of Toxic Substances Control guidelines. The implementation of this mitigation measure would reduce impacts to a level of less than significant.

Agricultural Chemicals

Based on the current and historic use of the Master Plan area as cultivated farmland, agricultural chemicals such as pesticides, herbicides and fertilizer would historically have been used on the site. Information for the current use, storage and application rates was obtained; however, information regarding historic use, storage or application rates was not available. If the chemicals were applied in accordance with manufacturer recommendations, residuals remaining in site soils would be expected to be similar to other area properties. A Phase II Limited Soil Sampling Program was conducted for three parcels situated within CenterPoint Properties sites located along Airport Way. The purpose of the limited soil sampling program was to determine if the use of the parcels for agricultural purposes had resulted in residual agriculturally related compounds in the soil. CRA collected a total of 20 soil samples from the three CenterPoint Properties parcels. For each of the three parcels, only the shallow soil samples and one randomly selected deep soil sample were laboratory analyzed. The remaining deep soil samples were held pending the results of the initial sample analytical data. Each sample designated for analysis was analyzed for organochlorine pesticides (OCPs) utilizing methodology in accordance with DTSC guidelines. The complete analytical results are presented the Limited Soil Sampling Letter Report contained in Appendix G. No OCP compounds were detected in any of the samples analyzed.

The samples were also analyzed for 17 California Assessment Manual (CAM-17) metals, including mercury and arsenic. The CAM-17 metal concentrations detected were consistent among the three parcels. The CAM-17 metals concentrations were compared with both the EPA Region 9's Preliminary Remedial Goals and the California Human Health Screening Levels (CHHSLs). The California Office of Environmental Health Hazard Assessment and the Cal EPA publish the CHHSLs. The CHHSLs were developed to provide a preliminary evaluation of potential risk and hazard to human health.

The only regulatory criteria exceeded was for arsenic, which was detected at concentrations ranging from 1.20 mg/kg to 2.10 mg/kg. The CHHSLs for arsenic are 0.07 mg/kg (residential) and 0.24 mg/kg (industrial). The Screening Levels are considered guidelines. If exceeded, a comparison with area background concentrations must be made to determine if they are naturally occurring or site-

specific. The arsenic concentration in the Lathrop/Stockton/Manteca area ranges up to 6 mg/kg. Therefore, the detected concentrations at the parcels, while in excess of Screening Levels, are not a concern, since they reflect background, naturally occurring arsenic concentrations in the region.

Other parcels within the Master Plan area were not specifically sampled. However, because they have be used for similar land use activities, similar concentrations of these substances would be expected to be present.

For these reasons, the development of the Master Plan uses would not expose human health or the environment to substantial risks associated with agricultural chemicals.

Wells and Septic Systems

The Master Plan area contains onsite wells and septic systems associated with the existing rural residential uses. Improperly abandoned wells and septic tanks can create risks to human health and the environment. The San Joaquin County Environmental Health Department requested in its Notice of Preparation comment letter (dated March 4, 2010) that existing wells and septic systems be destroyed prior to the commencement of development activities. Accordingly, this request is incorporated as mitigation. With the implementation of this mitigation measure, impacts would be reduced to a level of less than significant.

Asbestos-Containing Materials

This project involves the demolition of existing facilities. Therefore, the project is required to comply with San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4002 (National Emissions Standards for Hazardous Air Pollutants) and Rule 3050 (Asbestos Removal Fees). The applicant is required to determine if the structures are considered "regulated facilities" under National Emissions Standards for Hazardous Air Pollutants (NESHAP) by contacting the SJVAPCD. If there are regulated facilities to be demolished, the facilities must be inspected to determine if any ACM are present. If ACM are present, the project must follow the SJVAPCD requirements and, potentially, Cal OSHA and Cal-EPA regulations.

Based on the age of the structures onsite, there is the likelihood of encountering building materials containing asbestos. Mitigation is proposed requiring that these materials be properly removed and disposed of by a certified contractor prior to demolition activities. The implementation of this mitigation measure would reduce impacts to a level of less than significant.

Lead-Based Paint

Based on the age of the structures onsite, it is likely that lead-based paint (LBP) may exist onsite. Mitigation is proposed requiring that these materials be properly removed and disposed of by a certified contractor prior to demolition activities. The implementation of this mitigation measure would reduce impacts to a level of less than significant.

Other Hazardous Waste Containing Building Materials

Based on the age of the structures on site there is the potential to encounter fluorescent lights with PCB-containing ballasts and light switches containing mercury. Mitigation is proposed requiring that these materials be properly removed and disposed of by a certified contractor prior to demolition activities. The implementation of this mitigation measure would reduce impacts to a level of less than significant.

Non-Master Plan Annexations

The East and South areas are not listed on any hazardous materials sites compiled pursuant to Government Code Section 65962.5.

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to increase existing risks associated with past or present land use activities. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HAZ-1a Prior to grading activities for any Master Plan use in areas where THP-D has been detected, the applicant shall conduct soil sampling to delineate the horizontal and vertical extent of the TPH-D in order to implement a soil remediation program. Soil remediation shall be conducted in accordance with California Department of Toxic Substances Control (DTSC) guidelines. Contaminated soil shall be excavated and disposed of at an approved disposal facility. Following excavation, confirmation sampling shall be conducted to confirm whether remaining soil meets acceptable applicable regulatory levels. The excavation shall be backfilled with clean soil.

MM HAZ-1b Prior to grading activities for any Master Plan use, any onsite wells or septic systems intended to be removed shall be destroyed under permit and inspection with San Joaquin County Environmental Health Department.

MM HAZ-1c Prior to demolition activities of any structures located within the Master Plan area, the project applicant shall retain a certified hazardous waste contractor to determine the presence or absence of building materials or equipment that contains hazardous waste, including asbestos, lead-based paint, mercury, and PCBs. If such substances are found to be present, the contractor shall properly remove and dispose of these hazardous materials in accordance with federal and state law. All removal activities shall be completed prior to commencement of demolition activities.

Level of Significance After Mitigation

Less than significant impact.

Risk of Upset

Impact HAZ-2:	**The proposed project would not 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.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to create hazards caused by 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.

Master Plan

Short-Term Impacts

Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. In addition, Mitigation Measure HYD-1 requires the project applicant to implement a Stormwater Pollution Prevention Plan during construction activities to prevent contaminated runoff from leaving the project site. Therefore, no significant impacts would occur during construction activities.

Because of the age of the onsite structures, there is the potential for exposure to hazardous waste containing building materials and equipment, which if disrupted can become a hazard. As discussed in Impact HAZ-1, mitigation is proposed to require the proper removal and disposal of these hazardous materials in accordance with federal and state law. The implementation of this mitigation would reduce impacts to a level of less than significant.

Long-Term Impacts

Typically, light industrial/warehouse and commercial/retail land uses do not generate, store, or dispose of significant quantities of hazardous materials. Such uses also do not normally involve dangerous activities that could expose persons onsite or in the surrounding areas to large quantities of hazardous materials. While the specific tenants are not known, general landscaping and maintenance will include the use of pest control, herbicide, and janitorial products such as commercial cleaners.

Small quantities of hazardous materials would be used onsite, including cleaning solvents (such as degreasers, paint thinners, and aerosol propellants), paints (both latex- and oil-based), acids and bases (such as many cleaners), disinfectants, and fertilizers. These substances would be stored in secure areas and would comply with all applicable storage, handling, usage, and disposal requirements. The

potential risks posed by the use and storage of these hazardous materials are primarily limited to the immediate vicinity of the materials. Transport of these materials would be performed by commercial vendors who would be required to comply with various federal and state laws regarding hazardous materials transportation.

In summary, the proposed project would not potentially create a significant hazard to the public or the environment from routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to increase the potential for risk of upset associated with existing land use activities. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure HAZ-1c.

Level of Significance After Mitigation

Less than significant impact.

Airports

Impact HAZ-3:	**The proposed project would not result in an aviation safety hazard for people residing or working within the Stockton Metropolitan Airport Influence Area.**

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations potential to create aviation safety hazards for persons residing or working within the Stockton Metropolitan Airport Influence Area.

Master Plan

The Master Plan area is located within the Stockton Metropolitan Airport Influence Area, but is not located within any designated airport land use zones set forth in the Airport Land Use Plan. The zones established in the Airport Land Use Plan reflect potential exposure to overflight safety risks. Because the Master Plan area is not within any of the zones set forth in the Airport Land Use Plan, it can be concluded that the development of the Master Plan would not create safety risks for persons residing or working within the vicinity of Stockton Metropolitan Airport. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The East area is located within the Airport Influence, while the South area is not. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would have no potential to increase aviation safety risks to persons residing or working in the vicinity of Stockton Metropolitan Airport. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Emergency Response and Evacuation

Impact HAZ-4:	**The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

Impact Analysis

This impact will evaluate the proposed Master Plan's and non-master plan annexations' potential to impair or physically interfere with an emergency response plan or emergency evacuation plan.

Master Plan

There are no adopted emergency response plans or emergency evacuation plans that are directly applicable to the proposed Master Plan. As such, this impact will address the general issue of emergency response and evacuation.

The proposed Master Plan would provide adequate emergency vehicular access throughout the Master Plan area via driveway connections with adjoining roadways and an internal circulation network. All driveways and internal roadways would be designed to accommodate large emergency vehicles such as fire engines. These improvements would contribute to effective emergency response and evacuation, and they would promote efficient circulation in the project vicinity. Furthermore, the proposed Master Plan does not propose any permanent road closures, lane reductions, or other adverse circulation conditions that may adversely affect emergency response or evacuation in the project vicinity. Therefore, impacts would be less than significant.

Non-Master Plan Annexations

There are no adopted emergency response plans or emergency evacuation plans that are directly applicable to the East and South area. As such, this impact will address the general issue of emergency response and evacuation.

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Furthermore, the annexations would not result in any permanent road closures, lane reductions, or other adverse circulation conditions that may adversely affect emergency response or evacuation in the project vicinity. Therefore, the proposed annexations would have no potential to interfere with emergency evacuation or response in the project vicinity. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.8 - Hydrology and Water Quality

3.8.1 - Introduction

This section describes the existing hydrology and water quality setting and potential effects from project implementation on the site and its surrounding area. The existing water resource conditions in the project area were evaluated using published scientific and project-specific reports and maps, and information gathered during a site visit. Descriptions and analysis in this section are based largely on information from the Western Regional Climate Center, the Federal Emergency Management Agency (FEMA), the California Department of Water Resources (DWR), the United States Geological Survey (USGS), the State Water Resources Control Board (SWRCB), the San Joaquin County Office of Emergency Services, and the City of Manteca General Plan.

3.8.2 - Environmental Setting

Climate

The City of Manteca is characterized by a Mediterranean climate with warm summers, mild winters, and moderate precipitation. Temperatures range from an average monthly high of 93.2 degrees Fahrenheit (ºF) in July to an average monthly low of 35.4ºF in December. Average annual rainfall is 10.4 inches with the majority occurring from November to March. General meteorological data for the Manteca area, as measured at the Manteca weather station, are presented in Table 3.8-1.

Table 3.8-1: Regional Climate Summary

Month	Temperature (°F)		Average Total Precipitation (inches)
	Average High	Average Low	
January	53.7	36.3	1.65
February	61.1	39.3	1.35
March	66.3	42.1	1.52
April	72.4	45.2	0.95
May	80.9	50.5	0.21
June	88.6	55.9	0.09
July	93.2	59.2	0.12
August	91.5	58.5	0.23
September	87.7	55.9	0.24
October	77.7	49.2	0.97
November	61.1	40.4	1.58
December	53.8	35.4	1.51
Annual Average	**74.2**	**47.5**	**10.41**

Notes:
Averages derived from measurements taken between 1971 and 2000 at Manteca, California (#045303).
Source: Western Regional Climate Center, 2010.

Watershed and Surface Water Features

The Master Plan area is located within the 32,000-square-mile San Joaquin River Watershed. The valley portion of the watershed, which includes the project area, consists of urbanized areas growing within a larger agricultural setting. The San Joaquin River spans roughly 300 miles, beginning along the western slopes of the Sierra Nevada and joined by eight major tributaries as it moves northwest to its confluence with the Sacramento River in the Delta. The Master Plan area is located just outside and east of the official boundary of the Sacramento-San Joaquin Delta. The Master Plan area is a little over 3 miles east of the Lower San Joaquin River and north of one of its main tributaries, the Stanislaus River and south of another large tributary, the Calaveras River, which runs through the City of Stockton. Two other San Joaquin River tributaries, Littlejohns Creek and Lone Tree Creek, lie north of the project area.

The San Joaquin River downstream of its confluence with the Stanislaus River becomes tidally influenced and eventually splits into several tributaries within the Delta. The 1944 Flood Control Act for the lower San Joaquin River resulted in miles of federal project levees and several large dams and reservoirs built along the San Joaquin River and many of its tributaries, such as Friant Dam, on the upper San Joaquin River in the Sierra foothills and New Melones Dam on the Stanislaus River.

Drainage

The Master Plan area encompasses generally flat terrain with an elevation range of approximately 20 to 25 feet (National Geodetic Vertical Datum 1929). The Master Plan area was likely graded for agricultural operations, negating any natural onsite drainages within the project boundary. There are four South San Joaquin Irrigation District (SSJID) cast-in-place concrete pipes and one open channel drain that cross the Master Plan area from east to west conveying irrigation water and stormwater runoff through the site and into the SSJID French Camp Outlet Canal. The outlet canal runs parallels the eastern edge of the Union Pacific Railroad Oakland Subdivision, and flows northward to French Camp Slough and ultimately to the San Joaquin River; refer to Exhibit 3.8-1. Before releasing to SSJID facilities, which have limited capacity, the City of Manteca typically meters stormwater flows via detention basins. There appears to be a group of settling ponds in the south-central portion of the Master Plan area related to the cheese factory operations.

Surface Water Quality

No water quality monitoring data was obtained for the Master Plan area, but in light of the past agricultural land use practices in the area, it is likely that there are increased levels of certain pollutants. There may be increased levels of pesticides and herbicides associated with maintenance and operation of the agricultural fields that could be introduced into the onsite and adjacent drainages. The reach of the San Joaquin River from the Stanislaus River to the Delta Boundary is listed as impaired on the 2006 Clean Water Act 303(d) list for boron, DDT, electrical conductivity, Group A pesticides, mercury, and toxaphene. These pollutants are a result of agriculture practices and in the case of mercury, resource extraction. The same reach of the San Joaquin River is listed for approved

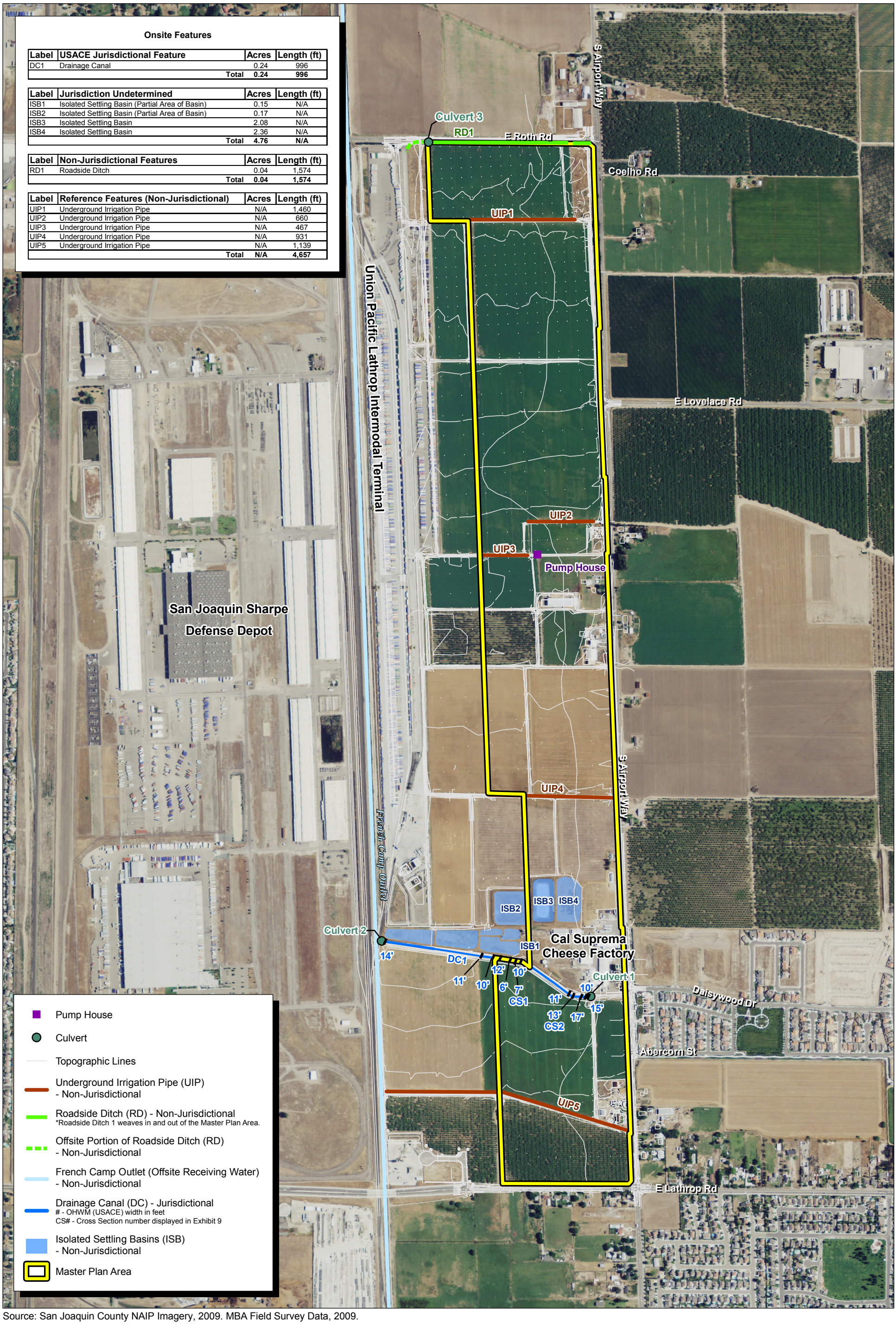
Onsite Features

Label	USACE Jurisdictional Feature	Acres	Length (ft)
DC1	Drainage Canal	0.24	996
	Total	**0.24**	**996**

Label	Jurisdiction Undetermined	Acres	Length (ft)
ISB1	Isolated Settling Basin (Partial Area of Basin)	0.15	N/A
ISB2	Isolated Settling Basin (Partial Area of Basin)	0.17	N/A
ISB3	Isolated Settling Basin	2.08	N/A
ISB4	Isolated Settling Basin	2.36	N/A
	Total	**4.76**	**N/A**

Label	Non-Jurisdictional Features	Acres	Length (ft)
RD1	Roadside Ditch	0.04	1,574
	Total	**0.04**	**1,574**

Label	Reference Features (Non-Jurisdictional)	Acres	Length (ft)
UIP1	Underground Irrigation Pipe	N/A	1,460
UIP2	Underground Irrigation Pipe	N/A	660
UIP3	Underground Irrigation Pipe	N/A	467
UIP4	Underground Irrigation Pipe	N/A	931
UIP5	Underground Irrigation Pipe	N/A	1,139
	Total	**N/A**	**4,657**



Source: San Joaquin County NAIP Imagery, 2009. MBA Field Survey Data, 2009.

NORTH

800 400 0 800

Feet

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Exhibit 3.8-1
Local Drainage

U.S. Environmental Protection Agency (EPA) Total Maximum Daily Loads (TMDLs) for chlorpyrifos, diazinon, and selenium, also agricultural pollutants.

Groundwater

According to the DWR, the San Joaquin County and City of Manteca areas rely heavily upon groundwater, with roughly 30 percent of the region's annual supply used for agricultural and urban purposes.

The San Joaquin County Department of Environmental Health indicates that there are groundwater wells located within various properties within the Master Plan area. Irrigation and stormwater runoff is conveyed via the SSJID concrete pipes and drainage channels that crisscross the site. Sediments in the project area consist of loamy sand and fine sandy loam, moderately well-draining soils. Dry season groundwater levels in the project area are roughly 20 to 30 feet below ground surface (bgs) and generally flow towards the northeast.

Basin Boundaries and Hydrology

The Master Plan area is located within the 1,105-square-mile Eastern San Joaquin Subbasin of the San Joaquin Valley Groundwater Basin. The DWR Bulletin 118 reports a decline in groundwater levels in San Joaquin County in the past 40 years, averaging a loss of 1.7 feet per year. Because of groundwater overdraft, there is a significant cone of depression extending to depths of 60 feet or more east of Stockton and northeast of the Master Plan area. Groundwater flow now converges on the depression with steep gradients moving poorer quality water with typically higher total dissolved solids (TDS) and chloride levels eastward from the Delta. The Northeastern San Joaquin County Groundwater Banking Authority reports that projected rates of this saline front's eastward migration are approximately 150 to 250 feet per year and threaten the long-term sustainability of a critical public and agricultural water resource for San Joaquin County.

Groundwater Level Trends

Two DWR long-term monitored groundwater wells near the Master Plan area, one irrigation well just north of Roth Road and the other of undetermined use near Airport Way, show water level averages of 24 and 12 feet bgs, respectively. Levels ranged from 12 to 39 feet bgs for the irrigation well and 7 to 27 feet bgs for the undetermined well, with both wells showing the greatest depth to groundwater occurrence in the fall of 1977. According to a 2009 Groundwater Monitoring Report, all 17 SSJID wells showed a decrease in groundwater levels in the range of 0.5 to 3.5 feet from fall 2008 to fall 2009.

Groundwater Quality

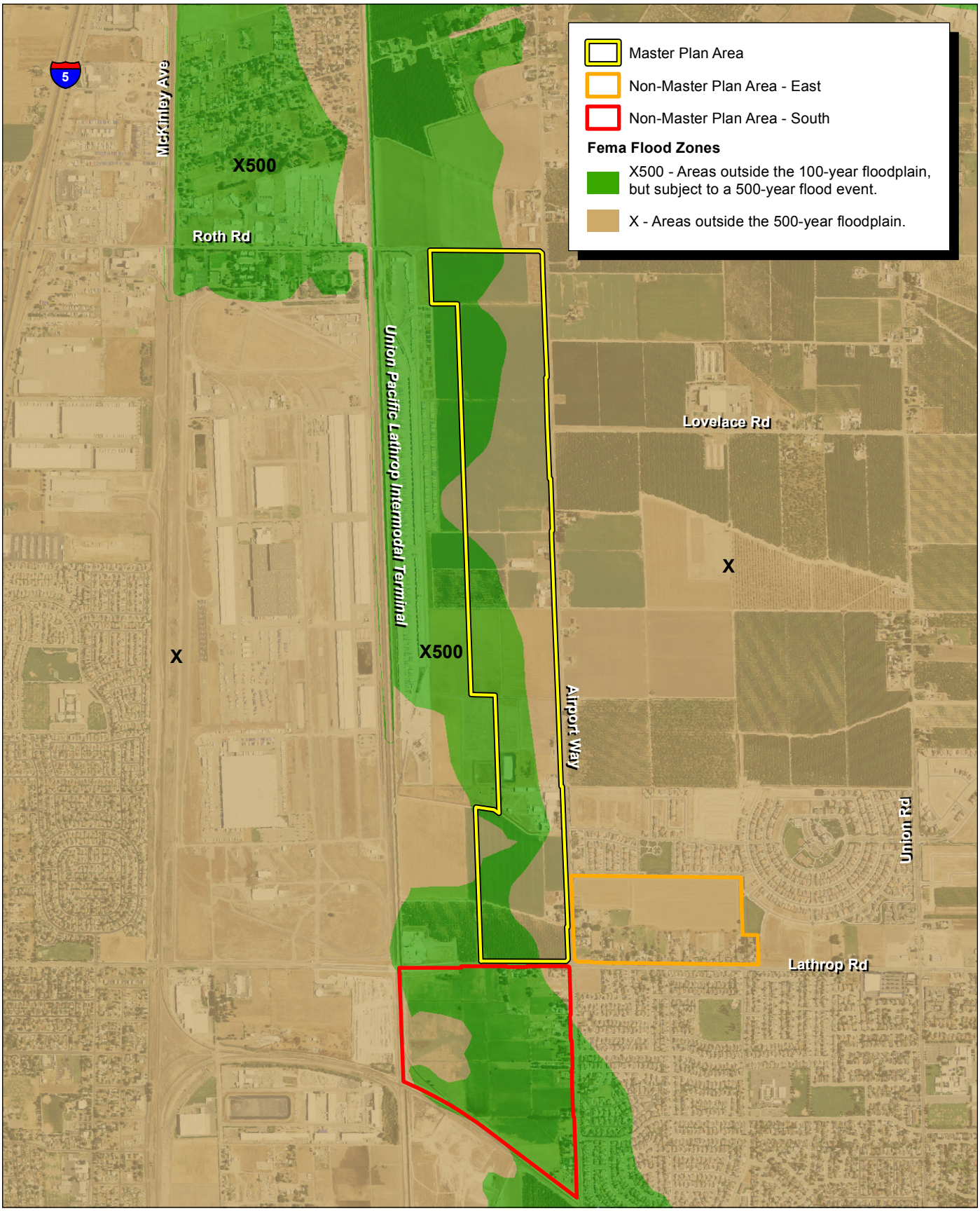
In general, Bulletin 118 states that groundwater quality in the San Joaquin River Hydrologic Region is suitable for most urban and agricultural uses with some localized exceptions. Primary constituents of concern are TDS, nitrate, boron, chloride, and organic compounds.

The majority of groundwater in the Eastern San Joaquin Subbasin is characterized by calcium-magnesium bicarbonate and calcium-sodium bicarbonate. Because of declining water levels and eastward movement of high salinity water, the management and maintenance of groundwater quality is a continual challenge. According to the San Joaquin County 2009 Groundwater Report, saline intrusion from the west is a continuing concern for groundwater quality in the basin. Analysis of 174 water supply wells in the subbasin showed TDS in the range of 30 to 1,632 mg/L with an average of 310 mg/L and specific conductance from 78 to 5,390 µmhos/cm with a mean value of 685 µmhos/cm and the highest values occurring along the western margins. Large areas south of Stockton and east of Manteca, which likely include the project area, show elevated levels of nitrate in the groundwater.

Flood Plain Mapping

Located at the downstream end of the San Joaquin River Basin, much of San Joaquin County is in natural floodplains surrounded by an intertwining system of rivers, streams, sloughs, and drainage ditches, all of which are susceptible to flooding. Floods typically occur from prolonged rain events during the months of November through April. With increased risks of future flooding related to aging infrastructure and expected climate change and new stricter floodplain regulations, San Joaquin County is working closely with the DWR and the United States Army Corps of Engineers (USACE) to improve upon flood control management and infrastructure. The San Joaquin River Flood Control System, part of the federal project initiated by the 1944 Flood Control Act includes miles of levees on the lower San Joaquin River, Calaveras River, Stanislaus River, Lone Tree Creek, and Littlejohns Creek, the majority of which are maintained by local reclamation districts. Even after Friant Dam on the San Joaquin River and the major flood protection facilities were constructed, major floods have continued to occur in the County. Major flood events occurred along the San Joaquin River in December 1955, 1962–63, 1968–69 and four times since 1980, including the January 1997 event where levees failed in 27 locations.

The Master Plan area is outside of the Federal Emergency Management Agency's (FEMA) Special Flood Hazard Area, a regulated area considered subject to flooding by a 1-percent annual chance flood (i.e., 100-year flood event). There are, however large portions of the project area identified as Zone X, which signifies they occur in the 500-year floodplain or in some cases that they are protected from the 100-year event by existing levees (Exhibit 3.8-2). According to the DWR Levee Flood Protection Zone Map for the project area, a portion of the site near the southwest end would be inundated to an unknown depth if the project levees in the area were subjected to waters reaching the top of the levee and causing failure. According to an October 2008 Preliminary Best Available Floodplain Data Map (BAM) provided by DWR for informational purposes only, Reclamation District 17 was granted a Provisionally Accredited Levee (PAL) status for this area by FEMA. The PAL designation was created by FEMA to facilitate the certification process for communities behind levees that are reasonably expected to continue to provide a 100-year level of flood protection. The BAM also shows a very small section of the project area adjacent to the outlet canal as potentially susceptible to a 200-year level of flood hazard.



Source: NAIP for San Joaquin County (2009) & FEMA NFHL Data (November 2009).

NORTH

2,000 1,000 0 2,000 Feet

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Exhibit 3.8-2
Special Flood Hazard Areas

Dam Failure

A remote—but potentially catastrophic—threat to areas in San Joaquin County is from the large quantities of water held in reservoirs behind 14 major dams on the Mokelumne, Calaveras, and Stanislaus rivers. Complete or partial failure of any of these dams would cause inundation and flooding across vast areas of agricultural, residential, and urban landscapes. According to dam inundation maps, the Master Plan area would be completely inundated by failure of the New Melones Dam on the Stanislaus River about 60 miles upstream of its confluence with the San Joaquin River in Calaveras County with a maximum storage capacity of 2.4 million acre-feet. If this dam failed, its predicted flood wave would arrive at the City of Manteca in roughly 8 hours. The Master Plan area appears partially inundated upon failure of the San Luis Dam located in Merced County (approximately 50 miles to the south) with a maximum storage capacity of just over 2 million acre-feet. This flood wave is predicted to reach Manteca in approximately 30 hours.

3.8.3 - Regulatory Framework

Federal

Clean Water Act

Section 303 of the 1972 Federal Clean Water Act (CWA) requires states to adopt water quality standards for all surface waters of the United States. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. (See a description of State Porter-Cologne Water Quality Control Act, below.) Standards are based on the designated beneficial use(s) of the water body. Where multiple uses exist, water quality standards must protect the most sensitive use.

Section 402 of the CWA mandates that certain types of construction activity comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than 1 acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the SWRCB, implemented, and enforced by the nine RWQCBs. The Master Plan area is within the boundaries of the Central Valley RWQCB. Effective July 1, 2010, all dischargers whose project includes clearing, grading or stockpiling activities expected to disturb 1 or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2009-0009-DWQ.

This General Permit requires all dischargers, where construction activity disturbs 1 or more acres, to take the following measures:

1. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and storm water collection and discharge points, and pre- and post- project topography;
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect storm water quality.
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.

To obtain coverage, the landowner must file a Notice of Intent (NOI) with the SWRCB. The notice is required to include the requirements listed above. When project construction is completed, the landowner must file a notice of termination.

The law requires that a permit (Section 404) be obtained from the USACE for any dredge or fill materials into wetlands or waters of the United States.

Floodplain Regulations

Executive Order 11988 for Floodplain Management (May 24, 1977) directs all federal agencies to evaluate potential effects of any actions it may take in the floodplain and to avoid all adverse impacts associated with modifications to floodplains. It also directs federal agencies to avoid floodplain development whenever there is a practicable alternative and to restore and preserve the natural and beneficial values served by the floodplains.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) oversees floodplains and administers the National Flood Insurance Program adopted under the National Flood Insurance Act of 1968. The program makes federally subsidized flood insurance available to property owners within communities that participate in the program. Areas of special flood hazard (those subject to inundation by a 100-year flood) are identified by FEMA through regulatory flood maps titled Flood Insurance Rate Maps. The National Flood Insurance Program mandates that development cannot occur within the regulatory floodplain (typically the 100-year floodplain) if that development results in an increase of more than 1 foot in flood elevation. In addition, development is not allowed in delineated floodways within the regulatory floodplain.

United States Army Corps of Engineers

The USACE constructs and operates regional scale flood protection systems in cooperation with State and local agencies. The USACE is responsible for the Lower San Joaquin River Flood Control Project built in the 1960s.

Special Districts

Reclamation and Levee Districts are special districts responsible for reclaiming and/or maintaining land subject to frequent flooding via levee and dike systems within urban and rural areas. The USACE was responsible for constructing much of the levee system in the early to mid-1900s, but then turned it over to the local Reclamation and Levee Districts for maintenance. Reclamation and Levee Districts are responsible for preventing flooding within their jurisdiction by maintaining levees and related facilities such as pump stations. Reclamation and Levee Districts are authorized to operate through DWR and USACE.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the Clean Water Act Section 303, indicating that water quality standards have to be set for certain waters by adopting water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans for areas in the region, identifying water quality objectives, and issuing NPDES permits and Waste Discharge Requirements (WDRs). Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits.

The Central Valley RWQCB's Basin Plan states the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. Regional plan objectives and discharge requirements are implemented through the issuance of WDRs or NPDES permits.

Section 303(d) of the CWA requires that the SWRCB identify surface water bodies within California that do not meet established water quality standards. Once identified, the affected water body is included in the SWRCB's "303(d) Listing of Impaired Water Bodies," and a comprehensive program must then be developed to limit the amount of pollutant discharges into that water body. This program includes the establishment of "total maximum daily loads" (TMDL) for pollutant discharges into the designated water body. The most recent 303(d) listing for California was approved by the EPA in 2006.

As was mentioned under Surface Water Quality, the lower San Joaquin River is listed for various agricultural pollutants. Because of its listing, TMDLs are being developed for the watershed with three are already established, including chlorpyrifos and diazinon from pesticide use and the mineral Selenium. The TMDLs for the remaining pollutants in the San Joaquin River are expected to be released in the near future, since their target dates range from 2004 to 2020.

Table 3.8-2: Section 303(d) Pollutants for the San Joaquin River from Its Confluence with Stanislaus River to the Delta Boundary

Pollutant/Stressor	Potential Source	Proposed TMDL Completion Date
Boron	Agriculture	2004
DDT	Agriculture	2011
Electrical Conductivity	Agriculture	2004
Group A Pesticides	Agriculture	2011
Mercury	Resource Extraction	2020
Toxaphene	Source Unknown	2019
Unknown Toxicity	Agriculture	2019
Source: Central Valley Regional Water Quality Control Board, 2006.		

The Central Valley RWQCB's primary function is to protect the quality of waters within the region for all beneficial uses by prescribing and enforcing requirements on all agricultural, domestic, and industrial waste discharges. The Central Valley RWQCB implements the following major programs relevant to San Joaquin County and the proposed project:

1. San Joaquin River Basin Plan. Provides the framework for the Regional Board's activities including designation of beneficial uses of waters, water quality objectives to meet those uses and actions such as water quality standards that are to be implemented to achieve those objectives. The following issues are high priority under the Basin Plan: (1) regulatory guidance to address water bodies dominated by NPDES discharges, (2) regulatory guidance for salinity and boron discharges to the San Joaquin River, (3) organophosphate (OP) pesticide control efforts, (4) mercury load reduction program, (5) dissolved oxygen problems in the San Joaquin River near Stockton, and (6) regulatory policies for selenium in the San Joaquin River.
2. Total Maximum Daily Load (TMDL). Section 303(d) of the Federal Clean Water Act requires the Regional Board to submit lists of impaired water bodies to the EPA for approval. Load reduction plans, defined as TMDLs are required to then be developed for those water bodies. Elements of a TMDL include a problem statement, numeric target, source analysis, allocations, description of how allocations relate to meeting targets, margin of safety, and monitoring and implementation plan.
3. National Pollutant Discharge Elimination System (NPDES) Program. NPDES discharges can be permitted with an individual permit or covered under a general permit. Individual permits are completed to address specific design and applicable water quality standards to an individual facility, while general permits authorize a category of discharges within a geographical region. The majority of construction sites are permitted under a general NPDES permit. In California, the newly released General NPDES Permit for construction activities

that disturb 1 or more acres (Construction General Permit Order 2009-0009-DWQ) goes into effect July 1, 2010, and is described in more detail under the federal regulations section above.

4. Water Quality Certification: By federal law, every applicant for a federal permit for an activity that may result in a discharge into a water body must request state certification that the proposed activity will not violate state and federal water quality standards.

California Department of Water Resources

The California Department of Water Resources (DWR) is a state agency that constructs and operates regional-scale flood protection systems in partnership with USACE and local agencies. DWR provides technical, financial, and emergency response assistance related to flood hazard and safety to local agencies and evaluates maintenance of federal project levees by local reclamation and levee districts (SJC 2009).

DWR initiated various studies in support of implementing repairs and improvements to the State Plan of Flood Control in 2008. DWR is developing technical information to assist cities and counties with developing flood protection standards for new development that will be tied to the Central Valley Flood Protection Plan to become effective in 2012. Once adopted, new urban development within a flood hazard zone will be required to show that it is protected from a 1 in 200 chance of flooding. Under Assembly Bill 156, DWR prepared Levee Flood Protection Zone Maps for areas protected by the state–federal project levees in the Central Valley. DWR is also providing Best Available Maps for planning purposes to show the 100-and 200-year floodplains based on best available information. Both types of maps that include the project area are completed and available for public viewing.

Assembly Bill 5 and Senate Bill 17

Central Valley Flood Protection Board

In 2007, Assembly Bill 5 (AB 5) renamed the Reclamation Board as the Central Valley Flood Protection Board (CVFPB) and established the CVFPB as independent of DWR. CVFPB's directive is to control flooding along the Sacramento and San Joaquin rivers in cooperation with the USACE, to coordinate the establishment, operation, and maintenance of flood control infrastructure with various agencies and to maintain the integrity of the existing flood control system and floodways through authorization of encroachment permits. Senate Bill 17 (SB 17) similarly renamed the agency and directed the DWR to prepare and the CVFPB to adopt a State Plan of Flood Control (SJC 2009).

Other provisions to be implemented by DWR under AB 5 that may have relevance to this project include:

- Inspect all project levees, determine whether there are any deficiencies or risks of failure, make recommendations for improvements, and provide in a flood control system status report.

- Prepare maps of levee protection zones by December 31, 2008 and update the maps periodically.
- Notify all landowners whose property are fully or partially within a zone protected by a levee by September 2010 about the risks associated with flooding and provide information regarding flood insurance.
- Impose requirements on local jurisdictions to upgrade levees that protect an area where more than 1,000 people live before any funds are spent and after July 2008, the local levee maintenance agency and the city or county with jurisdiction over the affected area must sign an agreement to prepare a safety plan within 2 years. DWR is to take over maintenance of any levees it determines are not being maintained according to regulations.

Relevant provisions under SB 17 to be implemented by DWR and CVFPB include:

- Collaborate with local jurisdictions and provide them with flood information and technical assistance.
- Propose updated requirements for construction in areas protected by flood protection facilities and will include requirements for buildings in areas where flood levels during 200-year events are expected to exceed 3 feet.
- Develop preliminary 100- and 200-year floodplain maps based on best available information for lands protected by levees contained in the State Plan of Flood Control and provide those maps to local jurisdictions for planning purposes.
- Prepare the Central Valley Flood Protection Plan for approval by July 2012 and update the plan every 5 years.
- Implement flood protection improvements in urban areas before the Central Valley Flood Protection Plan is completed.

Senate Bill 5

Another key flood management bill recently enacted is Senate Bill 5 (SB 5) that requires San Joaquin County to update its General Plan within two years after the CVFPB adopts the Central Valley Flood Protection Plan to contain the following:

- Location of State Plan of Flood Control facilities, other flood management facilities, and flood hazard zones.
- Feasible implementation measures designed to carry out the goals for protection of lives and property.
- Amend zoning ordinances to be consistent with the General Plan within 36 months of adoption of the Central Valley Flood Protection Plan.

SB 5 prohibits a city or county within the Central Valley Flood Protection Plan area from approving a development agreement, discretionary permit or entitlement, tentative map or parcel map for any property within a flood hazard zone unless the city or county finds, based on substantial evidence one of the following:

- The property is protected by flood management facilities to urban levels of flood protection;
- The city or county has imposed conditions on the development that will protect the property to Central Valley Flood Protection Plan standards or;
- The local flood management agency has made adequate progress on the construction of a flood protection system that will result in flood protection equal or better than standards of the Central Valley Flood Protection Plan.

SB 5 also requires that the urban level of flood protection be achieved for urban and urbanizing areas by 2025.

Assembly Bill 70

Assembly Bill 70 (AB 70) states that local jurisdictions that approve new development in previously undeveloped areas protected by a state flood control project will share liability with the State for any flood damage that occurs to properties in new developments, unless reasonable precautions are taken to protect the development (SJC 2009).

FloodSAFE California

FloodSAFE California is a program launched in 2006 by DWR to guide the development of regional flood management plans to better identify and address flood hazards and to improve integrated flood management systems statewide with an emphasis on the Central Valley.

California Dam Safety Act

The State of California Dam Safety Act requires submittal of inundation maps to the California Office of Emergency Services (OES) for any dams whose total failure would result in loss of life or personal injury. This law also requires local jurisdictions to adopt emergency procedures for the evacuation and control of populated areas below such dams. The San Joaquin County OES has a 2003 Dam Failure Plan that includes descriptions of the dams, anticipated direction, timing and depths of floodwaters and responsibilities of the jurisdictions that would be affected (SJC 2009).

Local

San Joaquin Area Flood Control Agency

The San Joaquin Area Flood Control Agency (SJAFCA) is a Joint Powers Authority between the City of Stockton, San Joaquin County, and the San Joaquin County Flood Control and Water Conservation District formed in 1995 to fund and manage flood control projects. The SJAFCA is currently

working on a feasibility study for the Lower San Joaquin River for submittal and approval by the USACE (SJC 2009).

San Joaquin County Flood Control and Water Conservation District

The San Joaquin County Flood Control and Water Conservation District (District) was established in 1956 to construct, operate, maintain, and design flood control, water supply, drainage, and groundwater recharge projects for San Joaquin County to ensure economic and environmental sustainability of the area.

City of Manteca

General Plan

According to the City of Manteca General Plan, the capacity of the French Camp Outlet Canal (i.e., the waterway where all local drainages lead to) is the limiting factor that sets the flow rates for drainage systems in the City, and regardless of position along the outlet canal, each tributary subarea along the system is provided the same level of service. The City's target level of service is a 10-year storm drainage protection for all development and a 100-year storm drainage protection for all structures. The General Plan requires all stormwater to flow to detention basins in order to control quality and quantity of storm discharges.

The City of Manteca General Plan establishes the following goals and policies related to hydrology, water quality and flood hazard that are applicable to the proposed project:

- **Goal (Major Drainage) PF-9:** Maintain an adequate level of service in the City's drainage system to accommodate runoff from existing and projected development and to prevent property damage due to flooding.
- **PF-P-27:** The City shall require the dedication and improvement of drainage detention basins as a condition of development approval according to the standards of the Drainage Master Plan. The responsibility for the dedication and improvement of detention basins shall be based on the prorated share of stormwater runoff resulting from each development.
- **PF-P-28:** Storm drainage systems within new development areas shall include open drainage corridors where feasible to supplement or replace an underground piped drainage system. The drainage systems would provide for short-term stormwater detention, stormwater conveyance for stormwaters exceeding a 10-year event, stormwater quality treatment, bike and pedestrian paths, and visual open space within neighborhoods. The width and length of the corridors would be determined by the stormwater management requirements. The drainage systems would provide a pedestrian connection between parks and access to open space from residential neighborhoods. The neighborhoods would be designed with homes orientated to, rather than backing on the open space corridor.
- **Goal (Water Quality) RC-7:** To protect water quality in the San Joaquin River and in the area's groundwater basin.
- **RC-P-11:** Minimize sedimentation and loss of topsoil from soil erosion.

- **RC-P-12:** Minimize pollution of waterways and other surface water bodies from urban runoff.
- **RC-P-13:** Protect the quality of Manteca's groundwater.
- **RC-P-15:** Once sewer service has been extended to incorporated areas, new septic tanks shall not be permitted.
- **RC-I-20:** The City shall not approve new industrial or commercial development that has a significant potential for adversely affecting water quality in the San Joaquin River or in the area's groundwater basin.
- **RC-I-22:** Maintain a buffer area between waterways and urban development to protect water quality and riparian areas.
- **RC-I-23:** Utilize cost-effective urban runoff controls including Best Management Practices (BMPs) to limit urban pollutants from entering the water courses.
- **RC-I-24:** Comply with the RWQCB's regulations and standards to maintain and improve groundwater quality in Manteca.
- **Goal (Flood Safety) S-3:** Prevent loss of lives, injury, and property damage due to flooding.
- **Goal (Flood Safety) S-4:** Pursue flood control solutions that minimize environmental impacts.
- **S-P-7:** Regulate all uses and development in areas subject to potential flooding through zoning and other land use regulations.
- **S-P-9:** Combine flood control, recreation, water quality and open space functions where feasible.
- **S-P-10:** Ensure that any existing structures subject to the 100-year flood provide adequate protection from flood hazards.
- **S-P-11:** Ensure that the impacts of potential flooding are adequately analyzed when considering areas for future urban expansion.
- **S-P-12:** New residential development, including mobile homes, shall be constructed so that the lowest floor is at least one foot above the 100-year flood level.
- **S-P-13:** Non-residential development shall be anchored and flood-proofed in accord with FEMA standards to prevent damage or causing damage due to a 100-year flood or, alternatively, elevated to at least one foot above the 100-year flood level.
- **S-I-4:** The City shall continue to participate in the National Flood Insurance Program. To this end, the City shall ensure that local regulations are in full compliance with standards adopted by FEMA. The City shall adopt and implement local flood management development standards.
- **S-I-6:** Discourage large continuous paved areas unless provided with engineered drainage facilities.
- **S-I-7:** Where feasible, require the use of pervious paving materials, such as brick or stepping stones with sand joints.
- **S-I-8:** New development shall be required to maintain natural stream courses and adjacent habitat and combine flood control, recreation, water quality and open space functions.

Stormwater Management Plan

In 2003, the City of Manteca submitted to the Central Valley RWQCB and is now in the stages of implementing a Stormwater Management Plan to fulfill the requirements of General Permit Number CAS000004; Water Quality Order No. 2003-0005-DWQ issued April 30, 2003. The plan describes six minimum control measures, each with its own set of tasks and applied BMPs established by the State Water Resources Control Board for Phase II stormwater discharges and summarized below.

1. Public Education and Outreach on Stormwater Impacts Program
2. Public Involvement/Participation Program
3. Illicit Discharge Detection and Elimination Program
4. Construction Site Stormwater Runoff Control Program
5. Post-Construction Stormwater Management in New Development and Redevelopment Program
6. Pollution Prevention/Good Housekeeping for Municipal Operations

Municipal Code

The City of Manteca Municipal Code includes several measures regarding stormwater management, flood protection, and water quality. The most relevant measures to the proposed project are summarized below:

Stormwater Management and Water Quality Protection

Section 13.28.010 of the Code establishes minimum stormwater management requirements to protect and safeguard general public health and safety. Objectives include:

- Minimize increases in stormwater runoff from any development in order to reduce flooding, siltation and stream bank erosion and maintain the integrity of drainage channels;
- Minimize increases in non-point source pollution caused by stormwater runoff from development that would otherwise degrade local water quality;
- Minimize the total annual volume of surface water runoff that flows from any specific site during and following development to not exceed the pre-development hydrologic regime to the maximum extent practicable; and
- Reduce stormwater runoff rates and volumes, soil erosion and non-point source pollution wherever possible through stormwater management controls. Ensure that these management controls are properly maintained and pose no threat to public safety.

Section 13.28.060 encourages compliance with construction activity NPDES permits by requiring that proof of compliance may be required as a condition of a subdivision map, site plan, building permit,

or development plan and that a copy of the NOI and SWPPP are to be submitted prior to issuance of a construction permit.

Section 13.28.070 includes requirements to prevent, control, and reduce stormwater pollutants.

- The City may adopt requirements identifying appropriate design standards and BMPs to control volume, rate, and potential pollutant load of stormwater runoff from new development projects as may be appropriate to minimize the generation, transport and discharge of pollutants. The City shall incorporate such requirements in any land use entitlement and construction or building-related permits to be issued relative to such development.
- Regardless of any City standardized BMPs, any person engaged in activities or operations or owning facilities or property which may result in pollutants entering stormwater shall implement BMPs to the extent they are technologically achievable to prevent and reduce such pollutants.
- All structural and non-structural permanent stormwater BMPs shall have an enforceable maintenance agreement and shall specify responsible parties to ensure the system functions as designed.

Section 13.28.080 requires that any land area not covered by an impervious surface, where the natural vegetation cover has been disturbed by development activities, shall be landscaped within 10 days from the substantial completion of such clearing and construction. Impervious materials such as plastic are not to be used in meeting the landscaping requirement.

Flood Management

Section 8.30.040 lists methods for reducing flood losses, including:

- Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction
- Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- Control filling, grading, dredging and other development which may increase flood damage and
- Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Section 8.30.130 requires a development permit be obtained from the City floodplain administrator before any construction or other development begins within an area identified as FEMA's Special Flood Hazard Area. Lists of construction standards for development within a FEMA floodplain are provided in Section 8.30.170.

3.8.4 - Methodology

Michael Brandman Associates analyzed the proposed project's potential to cause adverse impacts on hydrology and water quality utilizing several resources. The Western Regional Climate Center provided climate information; the FEMA October 16, 2009 Flood Insurance Rate Map number 06077C0610F provided flood hazard information; the February 2010 Wetland Delineation Report contained information about local drainage; and the California Department of Water Resources, Groundwater Bulletin 118 – 2006 Update provided groundwater information. The Northwest Airport Way Master Plan and conceptual plans for the proposed development area were reviewed to understand building and pavement areas at full buildout, proposed open space and detention pond sizes and locations, and probable post-buildout drainage patterns. Documents used for this assessment include the City of Manteca 2003 Stormwater Management Plan and 2023 General Plan, the San Joaquin County 2010 General Plan and newly released Background Reports, the San Joaquin County 2009 Final Stormwater Control Criteria Plan, and the San Joaquin County Office of Emergency Services 2003 Dam Failure Plan. Finally, an MBA hydrologist conducted a site visit on February 24, 2010.

3.8.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hydrology and water quality impacts resulting from implementation of the proposed project would be considered significant if the project at various phases and up to full buildout would:

a.) Violate any water quality standards or waste discharge requirements?

b.) 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 level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c.) Substantially alter the existing drainage pattern of the site or 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?

d.) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

e.) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f.) Otherwise, substantially degrade water quality?

g.) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h.) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

i.) 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?

j.) Inundation by seiche, tsunami, or mudflow? (Refer to Section 7, Effects Found Not To Be Significant.)

3.8.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Short-Term Water Quality

Impact HYD-1:	**Construction activities associated with the proposed project have the potential to degrade water quality in downstream water bodies.**

Impact Analysis

This impact evaluates short-term water quality impacts.

Master Plan

The Master Plan would facilitate the development of approximately 4.7 million square feet of light industrial and commercial uses on approximately 300 acres. Construction of the various uses contemplated by the Master Plan would require extensive grading of the Master Plan area to construct the buildings and associated parking areas, accompanying open space drainages and detention basins, utility installations, pipeline replacements, internal pathways, and roadways. The majority of grading would occur within fairly flat agricultural fields and an extensive area of earth disturbance would occur adjacent to existing open drainage channels, the SSJID French Camp Outlet Canal and Drain 3.

Construction activities in and around the outlet canal, Drain 3, and the newly proposed drainages and detention basins have the potential to directly introduce sediment and other pollutants into surface water and ultimately into the San Joaquin River potentially degrading water quality. Temporary stockpiles of sediment or other materials also have the potential to erode and be carried into the stormwater system and waterways. Construction activities will likely involve the use of gasoline and diesel-powered vehicles and equipment that pose a potential risk of accidental fuel and related chemical releases that could enter the drainage system and degrade water quality. The extensive

trenching activities for various utilities may require dewatering and the need for temporary BMPs to protect water quality during construction. This would be a potentially significant impact.

BMPs will need to be implemented and maintained just before and during any project construction activities to protect surface water in the drainages and the San Joaquin River during all earthwork activities. After July 1, 2010, any construction project that will result in the disturbance of more than 1 acre is required by the SWRCB to obtain a NPDES Construction General Permit Order 2009-0009-DWQ permit prior to project initiation. As part of the NPDES permit, the project applicant must prepare and implement an SWPPP. The SWPPP must identify potential sources of pollution that are reasonably expected to affect the quality of stormwater discharges and identify, locate, and implement BMPs to ensure reduction of these pollutants during storm events. The SWPPP must include a monitoring plan for either visual or chemical monitoring depending upon the types of pollutants expected.

The City of Manteca Municipal Code Section 13.28.060 also requires that any person subject to a construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit and proof of compliance may be required in a form acceptable to the public works director prior to or as a condition of a building permit or development plan. A copy of the Notice of Intent and the SWPPP must be submitted to the City prior to issuance of a construction permit.

By implementing and maintaining proper BMPs, the potential for short-term sediment introduction should be minimized.

Mitigation is proposed that would require the project applicant to prepare and implement separate SWPPPs for each proposed project within the Master Plan footprint for review and approval by the City of Manteca prior to the issuance of grading or building permits. The SWPPPs shall include specific measures to protect the onsite and offsite drainages and waterways during construction of the individual proposed developments. The implementation of the mitigation measure would ensure that potential, short-term, water quality impacts from construction of each project are reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, no construction activities would occur pursuant to the annexations; therefore, no potential would exist for short-term water quality impacts. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-1 Prior to the issuance of grading or building permits for each proposed activities within the Master Plan area, the project applicant shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) to the City of Manteca that identifies specific actions and Best Management Practices (BMPs) to prevent stormwater pollution during construction activities. The SWPPP shall identify a practical sequence for BMP implementation, monitoring, and maintenance; site restoration; contingency measures; responsible parties; and agency contacts. The SWPPP shall include but not be limited to the following elements:

- Temporary erosion control measures shall be employed for disturbed areas.
- Specific measures shall be identified to protect the onsite open drainages during construction of the proposed resort.
- Specific measures shall be identified to protect the French Camp Outlet Canal and Drain 3 during any construction activities.
- No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.
- Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.
- The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains.
- BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (such as inadvertent petroleum release) is required by the RWQCB to determine adequacy of the measure.
- In the event of significant construction delays or delays in final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season.

Level of Significance After Mitigation

Less than significant impact.

Long-Term Water Quality

Impact HYD-2: Operational activities associated with the proposed project have the potential to degrade water quality in downstream water bodies.

Impact Analysis

This impact evaluates long-term water quality impacts.

Master Plan

The Master Plan would facilitate the development of approximately 4.7 million square feet of light industrial and commercial uses. The CenterPoint Intermodal Facility is expected to be developed first, with the remaining portions of the Master Plan being developed in later phases.

Development of the proposed Master Plan uses project would convert roughly 300 acres to light industrial and commercial use, which will include impervious coverage associated with buildings, roadways, parking areas, and pathways. This substantial increase in impervious coverage would generate increased stormwater runoff and a greater potential for discharge of urban stormwater pollutants such as heavy metals, oil and grease, and sediment into nearby surface water bodies—including Drain 3, the French Camp Outlet Canal, and the San Joaquin River—over the life of the project. This would be a potentially significant impact.

One of the proposed project's mandatory requirements is the layout of an open space grid containing a series of drainage swales and detention basins that will collect stormwater conveyance, provide holding capacity, and serve to diminish peak flows. These areas will serve secondarily as recreational areas.

The proposed project states that the regional detention basins will address peak flow issues, while the independent sites will address the water quality issues and that the project will meet all RWQCB, SSJID, and City NPDES permit and storm drain requirements. The proposed project requires each individual building site to treat its stormwater runoff prior to entering the regional storm drain conveyance system without providing any specific information on what types of treatments (targeting sediments, oil and grease, etc.) and what performance measures if any will be required. This is a critical step, since the basins themselves are not necessarily adequate for the treatment of expected pollutants such as hydrocarbons, leaving surface waters and groundwater susceptible to degradation, and they have the potential to fill in if sediment is not adequately contained upstream. Paved roadways are also potential sources for polluted runoff reaching open channels such as Drain 3 and French Camp Outlet Canal.

Mitigation is proposed that would require the project applicant to prepare and submit a stormwater quality control plan for the project as a whole to the City of Manteca for review and approval that would demonstrate adequate water quality protection prior to issuance of building or grading permits. The plan would be required to document the expected target pollutants and types of treatments that would be required of each building site to address those pollutants during operation. The expected polluted runoff from paved roadways and proposed treatment should be included in the plan. The plan would also describe any monitoring effort and performance measures required and what entity would provide oversight to ensure that stormwater quality is sufficiently treated so as not to impede downstream detention basin performance or degrade water quality downstream.

The implementation of these mitigation measures would ensure that potential, long-term, operational water quality impacts are reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, the annexations would not have the potential to have an adverse impact on long-term water quality. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-2 Prior to the issuance of building or grading permits for any development activities that occur pursuant to the Master Plan, the project applicant shall submit a stormwater quality control plan to the City of Manteca for review and approval. The plan shall include a detailed drainage plan and identify expected site-specific pollutants and required measures to treat those pollutants before they reach the regional detention basins and, ultimately, the French Camp Outlet Canal and San Joaquin River. The approved measures shall be incorporated into the proposed project. The plan will describe monitoring and performance measures and standards required in order to ensure water quality is adequately protected during operation of all proposed sites within the project area. Examples of stormwater pollution prevention measures and practices to be incorporated into the plan include but are not limited to:

- Strategically placed bioswales and landscaped areas that promote percolation of runoff
- Pervious pavement
- Roof drains that discharge to landscaped areas
- Trash enclosures with screen walls and roofs
- Stenciling on storm drains
- Curb cuts in parking areas to allow runoff to enter landscaped areas
- Rock-lined areas along landscaped areas in parking lots
- Catch basins
- Oil/water separators
- Regular sweeping of parking areas and cleaning of storm drainage facilities
- Employee training to inform maintenance personnel of stormwater pollution prevention measures

Level of Significance After Mitigation

Less than significant impact.

Groundwater

Impact HYD-3:	The proposed project would not deplete groundwater supplies or substantially interfere with groundwater recharge.

Impact Analysis

This impact evaluates potential impacts on groundwater supplies and recharge.

Master Plan

The project area currently experiences some groundwater recharge from excess irrigation from the SSJID laterals and precipitation and infiltration in the existing agricultural fields.

The Master Plan area is located in the Eastern San Joaquin Subbasin. As stated earlier, groundwater levels in Eastern San Joaquin County have been in decline, due to overdraft, and there is a significant cone of depression east of Stockton and northeast of the project area. There may be some contribution from the site in support of agricultural or domestic uses, but there are no onsite or nearby domestic wells that would be directly affected.

There would be a measurable decrease in immediate recharge that is due to construction of impervious surfaces within the 300-acre Master Plan area; however, the proposed regional detention ponds, open channel swale, and preservation of Drain 3 would maintain local recharge capabilities. The specific volume, location, and seasonal timing of recharge would vary from existing conditions, but the net local effect would not be expected to adversely impact overall groundwater supply in the area; therefore, this project does not have the potential to significantly interfere with groundwater recharge.

The Master Plan uses would be served with potable water for domestic purposes, irrigation, and fire flow from the City of Manteca, through the City's Municipal Well System and an agreement with SSJID for treated surface water. A Water Supply Assessment was prepared by the City of Manteca and concluded that adequate long-term water supplies exist to serve the Master Plan uses (refer to Section 3.11, Public Services and Utilities for further discussion). As such, the Master Plan uses would not contribute to groundwater overdraft. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Currently, many if not all of these properties use groundwater wells for water supply. The annexations would not alter any existing land use activities or confer new development rights and, therefore, would not result in any impacts to groundwater supplies or recharge. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Drainage

Impact HYD-4:	**The proposed project would increase impervious surface coverage, which may result in increased stormwater runoff volumes and peak flows.**

Impact Analysis

This impact addresses the potential for development activities to increase runoff and susceptibility to downstream flooding and/or erosion that is due to increased volumes or peak flows.

Master Plan

This impact focuses on hydrologic changes that are due to increases in stormwater runoff generated by the proposed project. The proposed project would increase stormwater runoff generated onsite as a result of increased impervious surfaces associated with buildings, paved roadways, pathways, and parking areas. This increase in stormwater runoff could result in flooding and erosion problems.

To counteract the increase in stormwater runoff, the proposed project would have as a mandatory requirement a predetermined layout of open space containing a series of drainage swales and detention basins that would collect stormwater conveyance, provide holding capacity, and diminish peak flows. These areas will serve secondarily as recreational areas. The proposed grid includes a 40-foot-wide, north-south bioswale in the interior of the Master Plan area that will convey storm drainage to three onsite detention basins with a combined capacity of roughly 102 acre-feet.

Upstream of the regional storm drain detention basins, the conveyance system will consist of a network of underground pipes and open channels where feasible. The existing SSJID irrigation laterals—Lateral T, Lateral RGC, and Lateral RG—will be replaced with rubber-gasketed, reinforced concrete pipe (RGRCP), in accordance with SSJID specifications, either in their existing location or with some rerouting. Lateral RJ will be plugged and removed west of Airport Way. It is assumed that the project proponent is working with SSJID on all modifications to existing laterals and that adequate analysis and determination has been made to ensure the existing Lateral RJ can be removed without detriment to overall conveyance. A 30-foot easement along each remaining lateral centerline will be provided to SSJID for maintenance access. Drain 3 will be preserved in its existing condition as partially piped to open ditch as it moves from east to west, and box culverts will be constructed at all crossings to Drain 3 to prevent any flow constrictions.

As proposed, the detention basins are sized to attenuate a 10-year, 48-hour storm event and the open channels are sized to convey a 10-year peak storm pursuant to the City of Manteca's design criteria. Under a 100-year event, the open channels are proposed to serve as backup storage to any flows in excess of a 10-year event. The basins are designed in accordance with City of Manteca design standards with a 5-foot maximum water depth, 8:1 side slopes, and pump stations designed to drain each basin over a 96-hour period.

Unless a drainage plan is designed and implemented properly, runoff volumes and peak flows generated within the Master Plan area could increase significantly and potentially cause erosion, sedimentation, ponding or flooding along natural and constructed drainages both on- and offsite. As such, it is recommended that the applicant implement a plan that would keep the volume of runoff equal to or less than existing conditions in order to avoid these potential impacts.

To ensure that such a system is implemented, mitigation is proposed requiring the project applicant, as part of the stormwater quality control plan under Mitigation Measure HYD-2, include a drainage plan that demonstrates attainment of pre-project runoff volumes and peak flows prior to release at the outlet canal and describes the volume reduction measures and treatment controls used to reach attainment. With the implementation of this mitigation measure, drainage impacts would be reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, no increases in runoff would occur; therefore, no potential for downstream flooding or the need for new drainage facilities would exist. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-4 Prior to the issuance of building or grading permits for the proposed project, the project applicant shall submit a stormwater quality control plan for the project as a whole to the City of Manteca for review and approval. The plan shall include a detailed drainage plan that demonstrates attainment of pre-project runoff requirements prior to release at the outlet canal and describes the volume reduction measures and treatment controls used to reach attainment. The drainage plan shall identify all expected flows from the project area and the location, size, and type of facilities used to retain and treat the runoff volumes and peak flows to meet pre-project conditions. The approved drainage plan shall be incorporated into the proposed project.

Level of Significance After Mitigation

Less than significant impact.

100-Year Flood Hazards

Impact HYD-5:	**The proposed project may place structures within a 100-year flood hazard area that may have the potential to divert flood flows or be subjected to flood hazard.**

Impact Analysis

This impact evaluates the potential for the proposed projects to locate structures within a 100-year flood hazard area.

Master Plan

As shown in Exhibit 3.8-2, the project area is outside of the FEMA designated 100-year floodplain and, therefore, is not exposed to a 100-year flood hazard. However, much of the Master Plan area is shown to be susceptible to flooding in a 500-year event, and a small portion near the southwest end of the site is within the limits protected from the 100-year flood by a provisionally accredited levee. In the case of the levee protected portion, if data and documentation yet to be submitted to FEMA fails to demonstrate that the levees in the area are adequate for 100-year level flood protection, this area could potentially be included in the designated 100-year floodplain in the near future. This would be a potentially significant impact.

It is also important to note that the recent and more stringent state floodplain legislation for the San Joaquin River region will result in stricter building standards in the near future. For example, urban areas that reside behind levees are required to have a 200-year level of flood protection by the year 2012 when the Central Valley Flood Protection Plan is adopted. According to the DWR Best Available Map, a very small section of the project area adjacent to the outlet canal is potentially susceptible to a 200-year level flood.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, there would be no potential for the annexations to result in the placement of structures in a 100-year or 200-year flood hazard zone. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HYD-5a Prior to the issuance of grading or building permits, the project applicant must revisit the status of the provisionally accredited levees providing 100-year level of flood protection to the Master Plan area to determine it is still the case and the Master Plan remains outside of the 100-year flood hazard.

MM HYD-5b Prior to the issuance of grading permits, the project applicant shall either demonstrate that the developed portions of the Master Plan are outside of the anticipated 200-year flood hazard area or incorporate measures into the Master Plan to achieve a 200-year level of flood protection for any site installations that will occur in 2012 or later.

Level of Significance After Mitigation

Less than significant impact.

Levee or Dam Failure

Impact HYD-6: The proposed project may expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam.

Impact Analysis

This impact addresses flooding from levee or dam failure.

Master Plan

As stated in previous section, a small portion of the Master Plan area near the southwestern end is within the limits protected from the 100-year flood by a provisionally accredited levee; therefore, there is a chance that flooding could occur in the area if the levees were to fail. The area that would be affected by levee failure is small in proportion to the entire Master Plan area and appears to be close to the proposed southern detention basins that could potentially absorb some of the floodwaters.

According to dam inundation maps, the entire Master Plan area could be flooded from partial or complete failure of the New Melones Dam on the Stanislaus River in Calaveras County, and part of the Master Plan area could be flooded by failure of the San Luis Dam in Merced County. Because of adherence to federal and state dam safety and structural requirements, the likelihood of dam failure is considered extremely low. In addition, in response to the risk, the FloodSAFE California program is guiding development of regional flood management plans to improve integrated flood management systems, particularly in the Central Valley, and the San Joaquin County Office of Emergency Services has developed the Dam Failure Plan that includes responsibilities and actions of the various jurisdictions affected and continues to work with local jurisdictions to improve the plan.

This is considered a less than significant impact.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer new development rights. As such, there would no potential for the annexations to increase exposure to flooding associated with levee or dam failure beyond existing levels. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.9 - Land Use

3.9.1 - Introduction

This section describes the existing land use and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on site reconnaissance performed by Michael Brandman Associates personnel and review of the City of Manteca General Plan, the Manteca Municipal Code, the proposed Northwest Airport Way Master Plan, the San Joaquin County Airport Land Use Plan, the San Joaquin Local Agency Formation Commission annexation criteria, and the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

3.9.2 - Environmental Setting

Land Use

Project Site - Northwest Airport Way Master Plan

The Northwest Airport Way Master Plan (Master Plan) area consists of agricultural operations, industrial uses, and rural residences. Agricultural uses consist of orchards, row crops, grazing, and fallow fields. Industrial uses consist of a cheese factory and associated settling ponds. Rural residences are located in various places along the Airport Way frontage.

Exhibits 2-3a and 2-3b provide photographs of the project site.

Surrounding Area - Northwest Airport Way Master Plan

West

The Union Pacific Railroad Lathrop Intermodal Terminal forms the western boundary of the Master Plan area. West of the terminal is the French Camp Outlet Canal, the Union Pacific Railroad Oakland Subdivision (a rail line connecting the Bay Area with Sacramento) and the Sharpe Army Depot. The depot is located in the City of Lathrop. In addition, the Calaveras Materials cement plant is located west of the Master Plan area near the Lathrop Road overcrossing of the Oakland Subdivision.

North

Roth Road forms the northern boundary of the Master Plan area. North of the roadway are agricultural uses located within unincorporated San Joaquin County. These uses are located within the City of Stockton's Sphere of Influence.

East

Airport Way forms the eastern boundary of the Master Plan area. East of the roadway is agricultural land and low-density residential uses located within unincorporated San Joaquin County, and the Union Ranch single-family residential development located within the Manteca city limits. The unincorporated agricultural and residential uses are within the City of Manteca's Sphere of Influence. The agricultural and residential uses located between Union Ranch and Lathrop Road are designated as the "East" non-master plan area.

South

Lathrop Road forms the southern boundary of the Master Plan area. South of the roadway are agricultural and residential uses located within unincorporated San Joaquin County. These uses are located within the City of Manteca's Sphere of Influence. This area is designated as the "South" non-master plan area.

Project Site - Non-Master Plan Annexations

The non-master plan area consists of two areas, "East" and "South," within unincorporated San Joaquin County adjacent to the Master Plan Area and contiguous to the Manteca city limits.

The 77-acre East area contains agricultural uses and low-density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts Union Ranch.

The 144-acre South Area contains agricultural uses and low-density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts the Union Pacific Railroad Oakland and Fresno Subdivisions.

Photographs of the East and South non-master plan areas are provided in Exhibit 2-3c.

Surrounding Area - Non-Master Plan Annexations

West

Airport Way forms the western boundary of the East non-master plan area. The Master Plan area is on the west side of Airport Way.

The Union Pacific Railroad Oakland Subdivision and the French Camp Outlet Canal form the western boundary of the South non-master plan area. The City of Lathrop is located west of the railroad tracks.

North

Union Ranch forms the northern boundary of the East non-master plan area.

Lathrop Road forms the northern boundary of the South non-master plan area. The Master Plan area is on the north side of Airport Way.

East

Union Ranch forms the eastern boundary of the East non-master plan area.

Airport Way forms the eastern boundary of the South non-master plan area. Residential uses located within the City of Manteca are located on the east side of Airport Way.

South

Lathrop Road forms the southern boundary of the East non-master plan area. Residential uses located within the City of Manteca are on the south side of Lathrop Road.

The Union Pacific Railroad Fresno Subdivision forms the southern boundary of the South non-master plan area. Industrial uses and the Manteca Unified School District Farm Laboratory located within the City of Manteca are on the south side of the railroad tracks.

Land Use Designations

Project Site - Northwest Airport Way Master Plan

The San Joaquin County General Plan currently designates the Master Plan area General Agriculture. The San Joaquin County Zoning Ordinance designates the Master Plan area General Agriculture, 40-Acre Minimum Parcel Size (AG-40).

The City of Manteca General Plan currently designates the Master Plan area Light Industrial and Urban Reserve. The City of Manteca does not identify zoning designations for areas outside of the city limits.

Surrounding Land Uses - Northwest Airport Way Master Plan

Table 3.9-1 provides General Plan and Zoning designations for land uses surrounding the Master Plan Area.

Table 3.9-1: Surrounding Land Use Designations – Northwest Airport Way Master Plan

Land Use	Relationship to Master Plan Area	Jurisdiction	Land Use Designation	
			General Plan	Zoning
Union Pacific Railroad Lathrop Intermodal Terminal	West	County of San Joaquin	General Agriculture[1]	General Agriculture – 40-acre minimum parcel size[2]
French Camp Outlet Canal	West	County of San Joaquin	General Agriculture[1]	General Agriculture – 40-acre minimum parcel size[2]
Union Pacific Railroad Oakland Subdivision	West	City of Lathrop	N/A	N/A
Sharpe Army Depot	West	City of Lathrop	Limited Industrial[3]	Limited Industrial[4]
Calaveras Materials Cement Plant	West	County of San Joaquin	General Agriculture[1]	General Agriculture – 40-acre minimum parcel size[2]
Agriculture	North	County of San Joaquin	General Agriculture[1]	General Agriculture – 40-acre minimum parcel size[2]

Table 3.9-1 (cont.): Surrounding Land Use Designations – Northwest Airport Way Master Plan

Land Use	Relationship to Master Plan Area	Jurisdiction	Land Use Designation	
			General Plan	Zoning
Airport Way	East	County of San Joaquin	N/A	N/A
Agriculture and Low Density Residential	East	County of San Joaquin	General Agriculture[1]	General Agriculture – 40-acre minimum parcel size[2]
Low Density Residential (Union Ranch)	East	City of Manteca	Low Density Residential	Single Family Residential
Low Density Residential and Agriculture	South	County of San Joaquin	General Agriculture; Limited Industrial[1]	General Agriculture, 40-acre Minimum (AG-40); Limited Industrial (I-L/S-11A)[2]

Notes:
[1] County of San Joaquin General Plan designation
[2] County of San Joaquin zoning designation
[3] City of Lathrop General Plan designation
[4] City of Lathrop zoning designation
Source: City of Manteca, 2010; County of San Joaquin, 2010; City of Lathrop, 2010.

Project Site - Non-Master Plan Annexations

The San Joaquin County General Plan currently designates the East area as Low Density Residential. The San Joaquin County Zoning Ordinance designates the East area as Agriculture- Urban Reserve, 20-acre Minimum (AU-20). The San Joaquin County General Plan currently designates the South area as General Agriculture and Limited Industrial. The San Joaquin County Zoning Ordinance designates part of the South area as General Agriculture, 40-acre Minimum (AG-40) Reserve, Limited Industrial (I-L/S-11a).

The City of Manteca General Plan currently designates the East area as Neighborhood Commercial, Low Density Residential, Medium Density Residential, High Density Residential, and Park. The City of Manteca General Plan currently designates the South area as Light Industrial. The City of Manteca does not identify zoning designations for areas outside of the city limits.

Surrounding Land Uses - Non-Master Plan Annexations

Table 3.9-2 and Table 3.9-3 provide General Plan and Zoning designations for land uses surrounding the non-master plan annexation areas.

Table 3.9-2: Surrounding Land Use Designations – East Area Non-Master Plan Annexation

Land Use	Relationship to East Area	Jurisdiction	Land Use Designation	
			General Plan	Zoning
Agriculture and Low Density Residential (Master Plan area)	West	County of San Joaquin	General Agriculture[1]	General Agriculture – 40-acre minimum parcel size[2]
Low Density Residential (Union Ranch)	North	City of Manteca	Low Density Residential	Single Family Residential
Low Density Residential (Union Ranch)	East	City of Manteca	Low Density Residential	Single Family Residential
Low Density Residential	South	City of Manteca	Low Density Residential, Neighborhood Commercial, Park	Single Family Residential, Open Space

Notes:
[1] County of San Joaquin General Plan designation
[2] County of San Joaquin zoning designation
Source: City of Manteca, 2010; County of San Joaquin, 2010.

Table 3.9-3: Surrounding Land Use Designations – South Area Non-Master Plan Annexation

Land Use	Relationship to South Area	Jurisdiction	Land Use Designation	
			General Plan	Zoning
Union Pacific Railroad Oakland Subdivision	West	City of Lathrop	N/A	N/A
Agriculture and Low Density Residential (Master Plan area)	North	County of San Joaquin	General Agriculture[1]	General Agriculture – 40-acre minimum parcel size[2]
Low Density Residential	East	City of Manteca	Low Density Residential, Neighborhood Commercial, Park	Single Family Residential, Open Space
Union Pacific Railroad Subdivision	South	County of San Joaquin	N/A	N/A
Manteca Unified School District Farm Laboratory	South	City of Manteca	Public/Quasi-Public	N/A
Industrial	South	City of Manteca	Heavy Industrial	Heavy Industrial (M-2)

Table 3.9-3 (cont.): Surrounding Land Use Designations – South Area Non-Master Plan Annexation

Land Use	Relationship to South Area	Jurisdiction	Land Use Designation	
			General Plan	Zoning

Notes:
[1] County of San Joaquin General Plan designation
[2] County of San Joaquin zoning designation
Source: City of Manteca, 2010; County of San Joaquin, 2010.

Stockton Metropolitan Airport

Stockton Metropolitan Airport is located approximately 2.0 miles north of the Master Plan area. The County-owned and -operated airport features two parallel runways, with primary runway 11L/29R totaling 10,650 feet in length and secondary runway 11R/29L totaling 4,454 feet in length. The airport includes a 44,355-square-foot terminal building with six air carrier gates.

Stockton Metropolitan Airport hosts commercial, general, and military aviation activities. The airport averages 168 operations per day, with transient general aviation accounting for 65 percent of operations and local general aviation accounting for 28 percent.

San Joaquin County Airport Land Use Plan

The San Joaquin County Airport Land Use Plan (1993) establishes land use recommendations for the area surrounding Stockton Metropolitan Airport. The Master Plan area and the East non-master plan annexation area are within the Airport Influence Area for Stockton Metropolitan Airport. The South non-master plan annexation area is not within the Airport Influence Area.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) provides a strategy for balancing the desires to conserve open space, maintaining the agricultural economy, and allowing development in San Joaquin County. The City of Manteca is a signatory to the SJMSCP. The Master Plan area is designated "Agriculture" by the SJMSCP.

3.9.3 - Regulatory Framework

The land use planning and zoning authority of local jurisdictions in California are set forth in the state's planning laws. The Master Plan area and non-master plan annexation areas are located in unincorporated San Joaquin County, but within the City of Manteca's Sphere of Influence, 10-Year Planning Horizon, and Primary Urban Service Boundary. The City of Manteca is proposing to annex the Master Plan area and non-master plan annexation areas into the city limits. For this reason, the analysis of the regulatory setting focuses on the relevant policies of the City of Manteca.

State

General Plans

California Government Code Section 65300, et seq. establish the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

Zoning

The State Zoning Law (California Government Code Section 65800, et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code, Section 65860, subd.(c)).

State Aeronautics Act

The State Aeronautics Act requires each county with an airport to establish an Airport Land Use Commission to regulate land use around airports, in order to protect public safety and ensure that land uses near airports do not interfere with aviation operations. The San Joaquin County Airport Land Use Compatibility Plan (1993) regulates land use around the Stockton Metropolitan Airport, as well as six other aviation facilities in the County, by requiring compliance with the policies of the plan. In certain circumstances, local governments have the ability to overrule the determinations of the Airport Land Use Commission.

Local

San Joaquin County

Local Agency Formation Commission

The San Joaquin County Local Agency Formation Commission (LAFCo) is responsible for coordinating changes in local governmental boundaries including annexations, detachments of territory, and incorporations of cities. The San Joaquin County LAFCo is also charged with developing and updating spheres of influence for each city. Spheres are planning tools used to provide guidance for individual proposals involving jurisdictional changes and are intended to encourage efficient provision of community services and prevent duplication of service delivery. An

area must be within a city sphere of influence for a city to annex it. The mission of the San Joaquin County LAFCo is to encourage the orderly development and reorganization of local government agencies, to preserve agricultural land, and to discourage urban sprawl.

San Joaquin County Airport Land Use Plan

The 2009 San Joaquin County Airport Land Use Plan establishes land use recommendations for properties within San Joaquin County that are located near five aviation facilities: Byron Airport[1], Kingdon Executive Airport, Lodi Airpark, Lodi Airport, New Jerusalem Airport, and Tracy Municipal Airport. The 2009 Airport Land Use Plan does not address Stockton Metropolitan Airport, as a separate master plan is being prepared for this facility and will address land use compatibility for surrounding areas. As such, the previously adopted 1993 San Joaquin County Airport Land Use Plan serves as the airport land use planning document for Stockton Metropolitan Airport until the master plan is adopted.

The Master Plan area and the East non-master plan area are within the Stockton Metropolitan Airport Influence Area, but it are not within any of the land use compatibility zones. The South non-master plan area is not within the Airport Influence Area. (Lathrop Road is the southern limit of the Airport Influence Area).

Below is a summary of the applicable recommendations that apply to all land uses within the Airport Influence Area.

- All occupied structures within the Airport Influence Area must be soundproofed to reduce interior noise to 45 dB.
- Reflective materials are not permitted to avoid distracting pilots.
- Power lines must be located underground.
- New residential uses (5 units or more) must record an avigation easement in favor of the airport.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)

The SJMSCP provides a strategy for balancing the desire to conserve open space, maintain the agricultural economy, and allow development in San Joaquin County. It was developed to avoid, minimize, and mitigate impacts on plant and wildlife habitat projected to occur in San Joaquin County between 2001 and 2051, resulting from the anticipated conversion of as much as 109,300 acres of open space land to uses other than open space uses. Ninety-seven species are covered by the SJMSCP, which is intended to provide comprehensive mitigation, in accordance with local, state, and

[1] The Byron Airport is located in Contra Costa County, approximately 3.5 miles west of the San Joaquin County line and 20 miles west of the Master Plan area. In recognition that aviation activities associated with this airport have the potential to affect land uses in San Joaquin County, the 2009 Airport Land Use Plan establishes land use planning recommendations for land uses in nearby parts of San Joaquin County.

federal regulations, for impacts on these species from SJMSCP-permitted activities. The United States Fish and Wildlife Services and the Department of Fish and Game participated in development of the SJMSCP, approved the mitigation, and agreed to issue incidental take permits for species and activities covered by the SJMSCP.

Participation in the SJMSCP confers authorization for activities that result in (or may result in) incidental take of covered state-listed or federally listed species, as well as other covered but unlisted sensitive species that may otherwise require a federal or state incidental take authorization.

The approach of the SJMSCP is to minimize the potential for take through implementation of take avoidance and minimization measures and compensation for incidental take and habitat conversion through payment of fees (or in-lieu land dedication) for conversion of open space lands. These fees shall be used to preserve and create natural habitats to be managed in perpetuity through the establishment of habitat preserves.

Participation in the SJMSCP is voluntary for local jurisdictions and project proponents. The City of Manteca adopted the SJMSCP on February 5, 2001, and has signed the implementation agreement. As a result, a Section 10(a)(1)(B) permit was issued by the United States Fish and Wildlife Service to the City of Manteca. This Section 10 permit also constitutes a special-purpose permit for species covered by the federal Migratory Bird Treaty Act. A Section 2081 permit was also issued by the Department of Fish and Game to the City of Manteca. As a result of the City of Manteca's participation in the SJMSCP and issuance of these permits, project proponents within the City of Manteca's jurisdiction have the opportunity to seek coverage under the SJMSCP.

The Master Plan will need to comply with Section 8.2.1(10) Unmapped SJMSCP Projects in order to seek coverage for the project under the SJMSCP to mitigate for project impacts and obtain incidental take authorization for SJMSCP-covered species under the City of Manteca's Section 10(a) and Section 2081 permits. The Section 10(a) permit also serves as a special-purpose permit for the incidental take of those species that are also covered under the Migratory Bird Treaty Act. Coverage under the SJMSCP would fully mitigate all impacts on special-status wildlife species addressed in this section. Impacts on sensitive habitats (e.g., waters of the United States) and protected trees are not covered by the SJMCSP.

Compensation for significant impacts on all SJMSCP-covered species would be accomplished through payment of development fees for conversion of open space lands that may provide habitat for these species. These fees would be used to preserve and/or create habitat in preserves to be managed in perpetuity. Development fees would be paid to the San Joaquin Council of Governments (San Joaquin COG) in the amount specified by the San Joaquin COG, which administers the SJMCSP. Development fees for the SJMSCP are continually being revised; therefore, a specified amount cannot be provided at this time. In addition, incidental take avoidance and minimization measures for

species that could be significantly affected as a result of the project would be implemented, as determined by the San Joaquin COG, and in accordance with requirements of the SJMSCP.

City of Manteca

General Plan

The City of Manteca General plan provides a blueprint for growth within the Manteca city limits and sphere of influence. The Manteca City Council adopted the most recent General Plan in October 2003. The General Plan contains eleven topical elements: Land Use, Community Design, Circulation, Economic Development, Public Facilities and Services, Safety, Resource Conservation, Noise, Air Quality, Administration and Implementation, and Housing. Each element establishes goals and policies to guide future land use activities and development within the General Plan boundaries.

Light Industrial/Urban Reserve-Light Industrial

The Northwest Airport Way Master Plan area is designated Light Industrial and Urban Reserve-Light Industrial by the City of Manteca General Plan. The General Plan describes the purpose and intent of the Light Industrial and Urban Reserve-Light Industrial land use designations as follows:

> The Light Industrial designation provides for industrial parks, warehouses, distribution centers, light manufacturing, public and quasi-public uses and similar and compatible uses. Urban Reserve is applied to many properties around the perimeter of the City. In most instances, the Urban Reserve category overlies another land use category. In these instances, the underlying land use is the intended use when the land is ultimately annexed to the City.

The non-master plan annexation-East area is designated as Neighborhood Commercial, Low Density Residential, Medium Density Residential, and High Density Residential by the City of Manteca General Plan. The non-master plan annexation-South area is designated Light Industrial by the City of Manteca General Plan. The purpose and intent of the proposed land use designations are as follows:

Neighborhood Commercial

> This designation provides for locally oriented retail and service uses, offices, restaurants, and service stations, public and quasi-public uses and similar and compatible uses. The mix of uses anticipated in these centers includes supermarket/drug store configuration including associated smaller retail stores and services. Pad sites will provide restaurant and service station opportunities.

Low Density Residential

> The Low Density Residential land use will establish a mix of dwelling unit types and character determined by the individual site and market conditions. The density range

of 2.1 to 8.0 dwelling units per gross acre allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs. The type of dwelling units anticipated in this density range includes small lots and clustered lots as well as conventional large lot detached residences.

Medium Density Residential

The medium density residential use includes single-family homes, smaller scale multi-family developments, including garden apartments, townhouses, and cluster housing. The density range of 8.1 to 15 dwelling units per gross acre will accommodate small-lot single-family homes that will typically be smaller in size and more affordable to residents.

High Density Residential

The high density residential use includes multi-family apartment style housing. The density range is 15.1 to 25 dwelling units per acre. The multi-family dwelling sites are typically located with direct access to arterial streets. The sites have access to the pedestrian and bikeway network along the street corridor and are located along the conceptual route of a public transportation shuttle route. Most sites are near a neighborhood park and a neighborhood commercial center or larger commercial facility.

Park

This designation provides for neighborhood, community and regional parks, golf courses, and other outdoor recreational facilities within urban development. Specific uses include public recreation sites, including ball fields, tot lots and play apparatus, adult softball and soccer playing fields, swimming pools, community center buildings, meeting facilities, libraries, art centers, after school care facilities, art in public places, facilities for night-time recreation, trails benches, interpretive markers, picnic areas, barbecue facilities, landscaping, irrigation, city wells, trees and natural habitat areas.

Light Industrial

The Light Industrial designation provides for industrial parks, warehouses, distribution centers, light manufacturing, public and quasi-public uses and similar and compatible uses.

Proposed Land Uses

The project applicant is proposing to re-designate the Master Plan area to Light Industrial, Community Commercial, and Open Space land uses. The General Plan describes the purpose and intent of these land use designation as follows:

Light Industrial

The Light Industrial designation provides for industrial parks, warehouses, distribution centers, light manufacturing, public and quasi-public uses and similar and compatible uses.

Community Commercial

This designation provides for locally oriented retail and service uses, offices, restaurants, and service stations, public and quasi-public uses and similar and compatible uses. The mix of uses anticipated in these centers includes supermarket/drug store configuration including associated smaller retail stores and services. Pad sites will provide restaurant and service station opportunities. The Floor Area Ratio (FAR) shall not exceed 0.6 outside the Central Business District.

Open Space

The Open Space category encompasses habitat, open space, natural areas, lands of special status species, wetlands and riparian areas. These areas are set aside as permanent open space preserves to protect environmentally sensitive areas.

The proposed annexation of the non-master plan areas would bring these areas into the Manteca city limits and involve associated General Plan Amendments and pre-zoning approvals. The City of Manteca General Plan land use designations would apply to the non-master plan annexation areas.

Municipal Code

The City of Manteca Municipal Code provides regulation of land and structures in order to promote health, safety, and welfare of the public, and to insure the orderly development of the City. The City of Manteca does not designate zoning for areas outside the City limit. The Master Plan and the non-master plan annexation areas are currently outside the City limits. The City of Manteca would annex the Master Plan area, and the land uses proposed in the Master Plan will constitute the permitted uses for the area. The Master Plan document will be adopted as an overlay district to the Manteca Municipal Code.

The non-master plan areas would also be annexed to the City of Manteca. The proposed annexations would bring these areas into the Manteca city limits and involve associated General Plan Amendments and pre-zoning approvals. Once annexed, the project site would be subject to the planning jurisdiction of the City of Manteca.

3.9.4 - Methodology

Michael Brandman Associates (MBA) evaluated the potential for land use impacts through site reconnaissance and review of applicable land use policy documents. MBA personnel performed site reconnaissance on the project site and surrounding land uses in June 2009 and February 2010.

Photographs were taken of the project site and surrounding land uses to document existing conditions. MBA reviewed the City of Manteca General Plan, the Manteca Municipal Code, San Joaquin County Airport Land Use Plan (1993), Government Code Section 56668, and the SJMSCP to identify applicable policies and provisions that pertain to the proposed project. The proposed Northwest Airport Way Master Plan was reviewed to evaluate consistency with the aforementioned policy documents.

3.9.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, land use impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a.) Physically divide an established community?

b.) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c.) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

3.9.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Division of an Established Community

Impact LU-1:	**The proposed project would not physically divide an established community.**

Impact Analysis

This impact addresses the potential for the Northwest Airport Way Master Plan and non-master plan area annexations to divide an established community.

Master Plan

The proposed Master Plan would encompass approximately 300 acres of land currently used for agricultural and industrial uses. Six residences exist within the Master Plan boundaries, with four grouped in the center of the Master Plan area and the remaining two in the northern portion of the area. Various agricultural-related buildings are near the residences. In addition, a cheese factory is located in southern half of the Master Plan area. The balance of the Master Plan area is occupied by undeveloped land or agricultural land. Given these characteristics, the removal of the existing uses would not constitute the division of an established community.

There are no public roadways, trails, or other formal or informal paths of travel through the Master Plan boundaries. Therefore, the development of the Master Plan uses would not sever a linkage between established communities.

Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the annexations would not divide an established community. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

General Plan Consistency

Impact LU-2:	**The proposed project would be consistent with applicable provisions of the City of Manteca General Plan.**

Impact Analysis

This impact addresses the potential for the Northwest Airport Way Master Plan and non-master plan area annexations to conflict with the City of Manteca General Plan.

Master Plan

The proposed Master Plan's consistency with the City of Manteca will be assessed in three separate ways:

- Consistency with the General Plan's amendment criteria
- Consistency of the Master Plan's proposed uses with the stated provisions for those uses in the General Plan
- Consistency of the Master Plan with applicable goals and policies set forth in the General Plan

General Plan Amendment Criteria

The Master Plan requires a General Plan Amendment to re-designate all parcels within the Master Plan boundary to different land uses. Table 3.9-4 summarizes the proposed General Plan land use

map amendments. The existing designations are shown in Exhibit 2-5 and the proposed designations are shown in Exhibit 2-6.

Table 3.9-4: Proposed General Plan Land Use Map Amendments

Existing		Proposed (Master Plan)	
General Plan Designation	**Acres**	**General Plan Designation**	**Acres**
Light Industrial	222.3	Light Industrial	248.3
Urban Reserve Light Industrial	77.4	Community Commercial	18.1
—		Open Space	33.9
Source: City of Manteca, 2010.			

The proposed General Plan Amendment would be consistent with widely accepted planning principles of facilitating logical and orderly growth, ensuring compatibility with surrounding uses, and ensuring consistency with the goals and policies of the General Plan. Each of these planning principles is evaluated below.

- **Logical and orderly growth:** The Master Plan area is within the City of Manteca's Sphere of Influence and is contiguous to the existing city limits. The Master Plan is part of a comprehensive planning process, which serves to implement the City of Manteca General Plan. The Master Plan identifies goals, principles, mandatory requirements, and design standards and guidelines. The detailed nature of the Master Plan is intended to simplify the subsequent planning process and to allow for more efficient and timely approvals of uses within in the Master Plan Area that are consistent with the Master Plan. Adoption of the Master Plan by the City establishes and defines the planning criteria that will be used to guide the subsequent phases of development, when initiated by applicants. As such, the Master Plan would facilitate logical and orderly growth.
- **Compatibility with surrounding land uses:** The Master Plan area is surrounded by light industrial uses to the west (Union Pacific Railroad Lathrop Intermodal Terminal), agricultural uses to the north and east, and single-family residential uses to the east and south. The Master Plan proposes light industrial uses in the northern and central portions of the plan area, near the existing light industrial and agricultural uses, and community commercial uses in the southern portion of the plan area near the existing single-family residential uses. This land use plan seeks to is intended to locate compatible Master Plan uses adjacent to the existing uses (e.g., community commercial near single-family residential). Furthermore, the Master Plan establishes setback and landscaping requirements along all roadway frontages to minimize aesthetic, light, and noise impacts. Finally, the Master Plan contains buffering and phasing provisions to avoid the premature conversion of agricultural land to non-agricultural use and, thereby, avoid land use conflicts between urban and agricultural uses. For these reasons, the Master Plan would be compatible with surrounding land uses.

- **Consistency with goals and policies of the General Plan:** As shown in Table 3.9-5, the Master Plan is consistent with applicable goals and policies of the General Plan.

Proposed Uses

The Master Plan proposes Light Industrial, Community Commercial, and Open Space land uses.

Light Industrial

Light Industrial land use accounts for more than 80 percent of the Master Plan area. The light industrial zone allows business and professional uses, uses involving heavy trucks, automobile services, mini-storage, various agricultural industries, industrial manufacturing or assembly uses, industrial storage, and truck and motor freight uses.

The northern area is expected to develop primarily with warehouse/distribution facilities uses and limited light industrial uses (95 percent warehouse distribution, 5 percent light industrial). The southern area is expected to be developed with a majority of warehouse/distribution facilities, and some light industrial uses and limited retail development (80 percent warehouse/distribution, 15 percent light industrial and 5 percent commercial).

The General Plan establishes a Floor Area Ratio (FAR) limit of 0.7 for Light Industrial uses. The Master Plan contemplates development of 4,453,141 square feet of light industrial land uses on 248.3 acres, which equates to a FAR of 0.41 (4,453,141 square feet/[248.3 acres x 43,560 square feet/acre]). Therefore, the Master Plan Light Industrial uses would be within the FAR limit of 0.7.

Community Commercial

The Community Commercial land use would serve as a focal point for residents of the area and workers in the industrial portion of the development. A 18.1-acre, community-scale shopping center is envisioned for this area at the Lathrop Road/Airport Way intersection. The Community Commercial zone allows a wide variety of permitted or conditionally permitted commercial uses, such as commercial office and retail uses.

The General Plan establishes a FAR limit of 2.0 in the Central Business District and 0.6 outside the Central Business District. The Master Plan contemplates development of 205,820 square feet of community commercial land uses on 18.1 acres, which equates to a FAR of 0.26 (205,820 square feet/[18.1 acres x 43,650 square feet/acre]). Therefore, the Master Plan Community Commercial land uses would be within the FAR limit of 0.6.

In summary, the Master Plan is consistent with the proposed land use designations. Impacts would be less than significant.

Open Space

The Master Plan includes 33.9 acres of open space. Open space is primarily achieved through landscape corridors, low-impact drainage landscape corridors, and detention basins. Park areas in the

Master Plan will be developed to include private recreational amenities such as benches, picnic areas, shade structures, and landscaping for the use of the Master Plan area occupants in conformance with City of Manteca standards. The open spaces in the Plan Area will also serve as corridors for onsite stormwater treatment and detention facilities that are part of an overall framework of open areas in the Master Plan.

General Plan Goals and Policies

Table 3.9-5 summarizes the Master Plan's consistency with the applicable goals and policies of the General Plan. As shown in the table, the Master Plan would be consistent with all applicable goals and policies of the General Plan. Impacts would be less than significant.

Table 3.9-5: Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
2 – Land Use	Goal LU-1	To provide for orderly, well-planned, and balanced growth consistent with the limits imposed by the city's infrastructure and the city's ability to assimilate new development.	**Consistent:** The Master Plan contains provisions that address land use, design, infrastructure, and phasing to ensure that development occurs in a logical, orderly, and planned manner. This would ensure that the Master Plan uses are served by adequate services and infrastructure and do not unduly burden the City of Manteca.
	Policy LU-P-1	Growth shall mitigate its own impacts and shall provide a positive benefit to the City of Manteca.	**Consistent:** The Master Plan uses would provide the full cost of necessary onsite infrastructure and utility improvements and would provide development fees to public service providers. The Master Plan uses would also create new jobs and generate new tax revenues that would accrue to the City of Manteca. As such, the Master Plan is anticipated to provide a positive benefit to the City of Manteca.
	Policy LU-P-2	Growth must contribute to a strong diversified economic base and an effective balance between employment and housing opportunities for all income levels.	**Consistent:** The Master Plan has a maximum buildout potential of approximately 4.7 million square feet of light industrial and commercial uses. As discussed in Section 2, Project Description, the Master Plan uses are expected to employ as many as 2,588 workers. Collectively, these uses and characteristics would contribute to a strong diversified economic base and an effective balance between employment and housing opportunities.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
2 – Land Use (*cont.*)	Policy LU-P-3	The City shall encourage a pattern of development that promotes the efficient and timely development of public services and facilities.	**Consistent:** The Master Plan contains provisions that address land use, design, infrastructure, and phasing to ensure that development occurs in a logical, orderly, and planned manner. This would ensure that the Master Plan uses are served by adequate services and infrastructure and do not unduly burden the City of Manteca.
	Policy LU-P-4	The City shall encourage a development pattern that is contiguous with the boundary of the City.	**Consistent:** The Master Plan area is contiguous to the existing Manteca city limits.
	Policy LU-P-5	The City shall establish and maintain a Primary Urban Service Boundary line designating lands eligible for annexation and urban development prior to the year 2013.	**Consistent:** The Master Plan area is within the Primary Urban Service Boundary line. As such, annexation of and urban development within the Master Plan area into the city limits would be consistent with this policy.
	Policy LU-P-9	The City will consider applications for annexations that: • are contiguous with city boundaries and provide for a logical expansion of the city; • create clear and reasonable boundaries; • ensure the provision of adequate municipal services; • reflect a long-term fiscal balance to the city and its residents, when reviewed cumulatively with other annexations; • are consistent with State law and San Joaquin County Local Agency Formation Commission standards; and • are consistent with the General Plan.	**Consistent:** The Master Plan is consistent with the criteria set forth in this policy for the following reasons: 1) The Master Plan area is contiguous to the existing city limits and is within the City's Sphere of Influence; 2) The Master Plan boundaries are formed by easily identifiable reference points (roadways, a canal, and an intermodal facility); 3) The Master Plan contains standards for the provision of adequate municipal services; 4) The Master Plan uses would create new jobs, generate new tax revenues, and pay the full cost of all onsite infrastructure improvements. 5) As discussed in Impact LU-5, the Master Plan is consistent with all state and LAFCo requirements. 6). As discussed in Impact LU-2, the Master Plan is consistent with all applicable provisions of the General Plan.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
2 – Land Use (*cont.*)	Policy LU-P-12	The City will encourage the use of specific plans as needed to ensure orderly, well-planned growth.	**Consistent:** Although the Master Plan is not a specific plan, it is consistent with the objective of using a comprehensive planning tool to guide urban development in an orderly, well-planned manner.
	Goal LU-3	Provide adequate land for the development of commercial uses that provide goods and services to Manteca residents and Manteca's market area.	**Consistent:** The Master Plan provides approximately 18 acres of commercial retail uses that would provide goods and services to Manteca residents and Manteca's market area. In addition, the approximately 248 acres of light industrial uses would provide goods and services to Manteca residents and Manteca's market area, albeit to a lesser extent than the commercial retail uses.
	Policy LU-P-19	The City shall promote and assist the maintenance and expansion of Manteca's commercial sector to meet the needs of both Manteca residents and those living within Manteca's market area.	**Consistent:** The Master Plan provides approximately 18 acres of commercial retail uses that would serve Manteca residents and those living within Manteca's market area. In addition, the approximately 248 acres of light industrial uses would serve Manteca residents and those living within Manteca's market area, albeit to a lesser extent than the commercial retail uses.
	Policy LU-P-20	The City shall promote the establishment, maintenance and expansion of businesses in Manteca that generate high retail sales taxes as important contributors to the local economy.	**Consistent:** The Master Plan provides approximately 18 acres of commercial retail uses that would generate high retail sales taxes.
	Policy LU-P-24	New commercial development shall be designed to avoid the appearance of strip development.	**Consistent.** The Master Plan contains design standards and guidelines that require high-quality building design, landscaping along street frontages, and screening of parking areas from streets. These standards would avoid the appearance of strip development.
	Goal LU-4	Provide for land uses that expand employment, education, recreation and cultural opportunities for	**Consistent.** The Master Plan would guide the development of approximately 4.7 million square feet of light industrial and commercial

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		residents and enhance Manteca as the commercial and service center for southern San Joaquin County.	uses. These uses would create an estimated 2,588 employment opportunities and enhance Manteca as the commercial and service center for southern San Joaquin County.
	Goal LU-5	To provide adequate land for development of public and quasi-public uses to support existing and new residential, commercial, and industrial land uses.	**Consistent.** The Master Plan would develop a comprehensive open space network that can also act as a network of channels for stormwater treatment, conveyance, and detention.
	Policy LU-P-30	The City shall promote, cooperate in, and assist in the maintenance and expansion of Manteca's industrial sector employment development within the City of Manteca and in the south San Joaquin County area that will help reduce the home-to-work commute distance for Manteca residents.	**Consistent.** The Master Plan would allow the development of approximately 4.5 million square feet of light industrial uses. Most of this square footage would be associated with the CenterPoint Intermodal Facility, which would interface with the Union Pacific Railroad Lathrop Intermodal Terminal. In total, it is estimated that the Master Plan's light industrial use would employ an estimated 2,176 persons (refer to Table 2-4 in Section 2, Project Description).
	Policy LU-P-31	New employment centers that may include office, business, professional, research and development, and light industrial or industrial development and shall be located in areas served by full City services or served by suitable facilities approved by the City. Employment centers should be located along major arterials with easy freeway access and with access from public transit, and accessible to bicyclists and pedestrians.	**Consistent:** The Master Plan would allow a maximum of approximately 4.7 million square feet of light industrial and commercial uses that are estimated to employ 2,588 persons. The Master Plan area is served by three major arterial roadways and is approximately 1 mile from the I-5/Roth Road interchange. The Master Plan requires that adequate levels of public services and infrastructure be provided. Public transit, bicycle, and pedestrian facilities would be provided, as appropriate.
	Policy LU-P-33	The City shall promote the development of "clean" industries that do not create problems or pose health risks associated with water and air pollution or potential leaks	**Consistent:** The Master Plan light industrial uses would primarily consist of high cube warehouse uses, which are regarded as "cleaner" than other types of industrial development such as cement production, chemical

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		or spills. However, the City will designate appropriate locations that accommodate light industrial and heavy industrial uses.	processing, heavy manufacturing, mineral extraction, rendering, and refining. Furthermore, the light industrial uses include several characteristics intended to minimize or eliminate diesel truck trips, including the use of rail-served buildings and a direct, internal connection with the adjacent Lathrop Intermodal Facility. The reduction in truck trips would be expected to yield reductions in tailpipe emissions. Finally, as discussed in Section 3.7, Hazards and Hazardous Materials, the Master Plan uses would not be large quantity users of hazardous materials and, therefore, do not have the potential to expose human health and the environment to impacts in this regard.
	Policy LU-P-40	Development shall be managed to ensure that adequate public facilities and services, as defined in the Public Services and Facilities Element, are planned and provided.	**Consistent:** The Master Plan contains provisions for minimum standards of public facilities and services. In addition, the Master Plan uses would provide the full cost of necessary onsite infrastructure and utility improvements and would provide development fees to public service providers. Refer to Section 3.10, Public Services and Utilities for further discussion.
	Goal LU-6	Provide open space as a framework for the city, and meet the active and passive recreational needs of the community.	**Consistent:** The Master Plan will develop a comprehensive open space network that would include recreational opportunities.
	Goal LU-7	Reinforce land use and development patterns that encourage walking and the use of public transit within the community.	**Consistent.** The Master Plan uses would provide public transit, bicycle, and pedestrian facilities, as appropriate. This is consistent with the objective of encourage walking and the use of public transit.
	Goal LU-8	To reinforce strong urban design	**Consistent.** The Master Plan contains design standards and guidelines that set parameters to guide future development and ensure quality development with limited visual impacts.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
	Policy LU-P-49	The City shall give priority to in-fill development and new development contiguous to existing developed areas	**Consistent.** The Master Plan area is contiguous to both the Union Pacific Lathrop Intermodal Terminal and Union Ranch, which are existing developed areas.
3 – Community Design Element	Goal CD-2	Maintain a memorable City identity characterized by distinctive, high quality buildings and streetscapes.	**Consistent.** The Master Plan contains design standards and guidelines that ensure that development will employ distinctive, high quality buildings and streetscapes. Such standards include building design, landscaping, and parking lot screening requirements. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Goal CD-8	Upgrade and enhance the visual quality of Manteca's arterial and collector streets.	**Consistent.** The Master Plan establishes special design standards for buildings that are located along the Airport Way frontage, the longest street frontage within the Master Plan area. In addition, landscaping is required along all street frontages. These characteristics would upgrade and enhance the visual quality of Manteca's streets. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-15	Major arterial streets shall include a common landscape theme that includes primary street trees, groundcover, sidewalks, bus shelters where required, and lighting applied throughout the City.	**Consistent.** The Master Plan establishes standards for street sections that include landscaping, sidewalks, and lighting. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-16	The City shall develop special design standards for the perimeter road system comprising Lathrop Road, Austin Road, Woodward Avenue, and Airport Way to ensure their development as divided roadways.	**Consistent:** The Master Plan establishes special design standards for areas within view of Lathrop Road and Airport Way, including building design and landscaping requirements. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
3 – Community Design Element (*cont.*)	Goal CD-9	Establish a durable sustainable community that utilizes resources efficiently.	**Consistent.** The Master Plan includes sustainable building design standard guidelines to encourage the efficient use of resources. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-32	New buildings shall be designed to be responsive to the local climate in a manner that provides shelter from sun and rain for pedestrians.	**Consistent.** The Master Plan includes building design standard guidelines that emphasize the use of covered walkways, arcades, canopies, storefronts or awnings along the public faces of buildings. These features would provide shelter from sun and rain for pedestrians. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-33	Passive solar design features are encouraged whenever possible. Design of buildings should consider energy-efficient concepts such as natural heating and/or cooling, sun and wind exposure and orientation, and other solar energy opportunities.	**Consistent.** The Master Plan includes sustainable building design standard guidelines that encourage the design of buildings that use natural ventilation and are oriented to minimize solar gain and maximize daylight within the building work areas. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-35	Architectural elements that contribute to a building's character, aid in climate control, and enhance pedestrian scale are encouraged. Examples include canopies, roof overhangs, projections or recessions of stories, balconies, reveals, and awnings.	**Consistent.** The Master Plan design standards and guidelines encourage the use of architectural features such as parapets, canopies, and awnings. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-36	Encourage the creation of an urban forest comprised of street trees, residential lot trees, and trees in non-residential parking lots and other public open space.	**Consistent.** The Master Plan landscaping standards and guidelines include the use of trees along the roadways and within the parking lots. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
3 – Community Design Element (*cont.*)	Goal CD-10	Establish a pedestrian and bicycle friendly environment in neighborhoods and commercial and office land use areas.	**Consistent.** The Master Plan would provide an internal pedestrian circulation system and provide improvements to adjoining roadways, including half-width improvements. Such half-width improvements would include sidewalks along all roadway frontages. In addition, Class II bicycle lanes would be provided along Airport Way and 14-foot curb lanes would be provided along Lathrop Road and Roth Road that would be suitable for use by bicycles. The Master Plan uses also would facilitate bicycle access through the provision of storage facilities.
	Policy CD-P-37	Commercial centers should provide for convenient, attractive pedestrian access from street fronts and from adjacent commercial, office, and residential land uses.	**Consistent.** The Master Plan provides an internal pedestrian circulation system and requires half-width improvements including sidewalks along Lathrop Road, Airport Way, and Roth Road. In addition, the Master Plan commercial design standards and guidelines emphasize convenient pedestrian access between buildings and promote the use of enhanced paving to highlight entries and pedestrians areas. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-38	Commercial centers should provide for convenient, attractive pedestrian access within the center with dedicated pedestrian ways between all buildings and pedestrian spaces such as plazas, courtyards, and terraces at natural gathering areas within the site.	**Consistent.** The Master Plan commercial design standards require a design that provides a strong sense of entry and orientation through the provision of a central space, such as a plaza or a focal point, that is connected to buildings with pedestrian facilities. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-39	Integrating the pedestrian elements (walkways, plazas, and terraces) with the buildings will enhance the pedestrian experience. The pedestrian relationship to buildings should be comfortable, convenient, and	**Consistent.** The Master Plan commercial design standards and guidelines encourage the use of covered walkways, arcades, canopies, storefronts, or awnings along the public faces of buildings. These features would provide for a comfortable pedestrian experience

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		protected from extremes of sun and wind.	and protect such individuals from extremes of sun and wind. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-40	Outdoor plazas or other common areas that provide space for special landscaping, public art, food service, outdoor retail sales, or seating areas for patrons are encouraged in retail settings appropriate to such pedestrian activity. The plaza or other common area shall be appropriately scaled to the retail use and shall be directly connected to primary walkway.	**Consistent.** The Master Plan commercial design standards require a design that provides a strong sense of entry and orientation through the provision of a central space, such as a plaza or a focal point, that is connected to buildings with pedestrian facilities. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-44	Provide minimal levels of street, parking, building, site and public area lighting to meet safety standards and provide direction.	**Consistent.** The Master Plan commercial design standards and guidelines address the provision of adequate parking and lighting. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-45	Provide directional shielding for all exterior lighting to minimize the annoyance of direct or indirect glare.	**Consistent.** The Master Plan commercial design standards and guidelines adhere to the City lighting requirement, including the requirement to shield exterior lighting. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-46	Provide automatic shut-off or motion sensors for lighting features in newly developed areas.	**Consistent.** The Master Plan commercial design guidelines encourages the use of photo-sensors and localized lighting controls to reduce the amount of artificial light used within indoor spaces Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.
	Policy CD-P-47	The City shall adopt light and glare standards that minimize the creation of new light source and the annoyance of direct and indirect glare.	**Consistent.** The Master Plan includes design standards and guidelines that require lighting to comply with footcandle standards established in the Manteca Municipal Code. Refer to Section 3.1, Aesthetics, Light, and Glare for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
4 – Circulation Element	Goal C-1	Provide for a circulation system that allows for the efficient movement of people, goods, and services within and through Manteca, based on land use and current improvement standards in conformance with the Public Facilities Implementation Plan.	**Consistent.** The Master Plan provides an internal circulation network, including roadways and pedestrian facilities to allow for efficient movement of people and goods with the Master Plan area. The internal circulation network would be entirely funded by the project applicants. In addition, the Master Plan includes improvements to adjoining roadways, including half-width improvements. These improvements would also be entirely funded by the project applicants. Finally, applicants who ultimately develop the Master Plan uses would be obligated to provide fair-share fees for offsite roadway improvements, including those contemplated by the Public Facilities Implementation Plan.
	Goal C-2	Maintain a safe vehicular circulation system.	**Consistent.** The Master Plan provides an internal circulation system and would provide improvements to adjoining roadways, including half-width improvements. The Master Plan applicants would also be obligated to provide fair-share fees for offsite roadway improvements. Collectively, these characteristics would be consistent with the objective of maintaining a safe vehicular circulation system.
	Goal C-5	Ensure the adequate provision of both on-street and off-street parking.	**Consistent.** The Master Plan design standards and guidelines require the provision of adequate off-street parking. No on-street parking is proposed along any of the roadways adjoining the Master Plan area.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
4 – Circulation Element (*cont.*)	Goal C-6	Provide a safe secure bicycle route system.	**Consistent.** The Master Plan would provide improvements to adjoining roadways, including half-width improvements. Such half-width improvements would include Class II bicycle lanes along Airport Way and 14-foot curb lanes along Lathrop Road and Roth Road that would be suitable for use by bicycles.
	Goal C-8	Provide for safe and convenient pedestrian circulation.	**Consistent.** The Master Plan provides an internal pedestrian circulation system and requires half-width improvements including sidewalks along Lathrop Road, Airport Way, and Roth Road.
	Policy C-P-1	The City shall strive to attain the highest possible traffic levels of service (LOS) consistent with the financial resources available and the limits of technical feasibility. The impact of new development and land use proposals on LOS should be considered in the review process.	**Consistent.** The Draft EIR's traffic analysis assessed traffic operations using the City's established LOS standards. The traffic analysis identifies all feasible mitigation measures and the applicant is obligated to provide its fair share of the cost of necessary improvements. Refer to Section 3.12, Transportation for further discussion.
	Policy C-P-2	Manteca's target for transportation LOS is to provide City-wide average LOS of C or better, and a minimum of LOS D at any individual location. LOS C, LOS D, and the other Level of Service ratings as defined in current traffic engineering standards. This "C average, D minimum" shall be accomplished by attempting to provide LOS C at all locations, but accepting LOS D under the following circumstances: a. Where constructing facilities with enough capacity to provide LOS C is found to be unreasonably expensive. b. Where it is difficult or impossible to maintain	**Consistent.** The Draft EIR's traffic analysis assessed traffic operations using the City's established LOS standards. The traffic analysis identifies all feasible mitigation measures and the applicant is obligated to provide its fair share of the cost of necessary improvements. Refer to Section 3.12, Transportation for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse. c. Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes. d. Where maintaining LOS C will be a disincentive to use of existing alternative modes or to the implementation of new transportation modes that would reduce vehicle travel.	
	Policy C-P-3	Streets shall be dedicated, widened, extended, and constructed according to the Street cross-section diagrams established in the City Improvement Standards. Dedication and improvement of full rights-of-way as shown in the Street Standards shall not be required in existing developed areas where the City determines that such improvements are either infeasible or undesirable.	**Consistent.** The Master Plan would provide improvements to adjoining roadways, including half-width improvements to Lathrop Road, Airport Way, and Roth Road that must be in place prior to occupancy.
	Policy C-P-5	Development which would necessitate roadway improvements prior to the development of lands abutting those roadway improvements shall be required to make such improvements, or participate in such improvements, as a condition of approval.	**Consistent.** The Master Plan would provide improvements to adjoining roadways, including half-width improvements to Lathrop Road, Airport Way, and Roth Road that must be in place prior to occupancy.
	Policy C-P-6	New development will pay a fair share of the costs of street and other traffic and transportation improvements based on traffic generation and impacts on levels of	**Consistent.** The Master Plan applicants would pay all transportation fees in accordance with the latest adopted fee schedule, including those associated with the Public Facilities Implementation

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		service in conformance with the standards and policies established in the Public Facilities Implementation Plan.	Program. In addition, the Master Plan applicants would contribute fair-share fees for all offsite roadway improvements necessary to mitigate Master Plan-related impacts.
	Policy C-P-8	Street improvements will be designed to provide multiple, direct, and convenient traffic routes.	**Consistent.** The half-width improvements along Lathrop Road, Airport Way, and Roth Road would provide additional travel and turn lanes, and pedestrian and bicycle facilities. As such, these improvements are consistent with the objective of providing multiple, direct, and convenient traffic routes.
	Policy C-P-12	The City shall promote development of a perimeter road system along Lathrop Road, Austin Road, Woodward Avenue, and Airport Way	**Consistent:** The half-width improvements along Lathrop Road and Airport Way would facilitate the improvement of these roadways to their ultimate buildout widths and, therefore, would be consistent with objectively of developing a perimeter road.
	Policy C-P-18	In accord with the PFIP the City shall assess development fees for traffic signals and highway interchanges sufficient to fund system wide improvements. The development fee schedule for these traffic improvements shall be periodically reviewed, and revised as necessary.	**Consistent:** The Master Plan applicants would pay all transportation fees in accordance with the latest adopted fee schedule, including those associated with the Public Facilities Implementation Program. Such fees may be used for system wide roadway improvements.
	Policy C-P-26	The city shall require all new development to provide an adequate number of off-street parking spaces to accommodate the typical parking demands of the type of development on the site. In the downtown area, the City is responsible for development of parking facilities and new development is not required to provide parking.	**Consistent.** The Master Plan design standards and guidelines provide for the adequate provision of off-street parking.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
4 – Circulation Element (*cont.*)	Policy C-P-29	Ensure that there is adequate parking for normal commercial activities.	**Consistent.** The Master Plan design standards and guidelines provide for the adequate provision of off-street parking for the commercial retail component.
	Policy C-P-36	Provide adequate bicycle parking facilities at commercial, business/professional and light industrial uses.	**Consistent.** The Master Plan design standards and guidelines provide for bicycle parking at commercial and light industrial uses.
	Policy C-P-37	Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians. Provide shade and/or protection from wind and other weather conditions when possible.	**Consistent.** The Master Plan would provide an internal pedestrian network, that would include amenities including landscaping. The Master Plan also requires improvements to adjoining roadways, including half-width improvements. Such half-width improvements would include Class II bicycle lanes along Airport Way and sidewalks along Lathrop Road, Airport Way, and Roth Road. Roadway frontages would be landscaped.
	Policy C-P-48	The City shall encourage the provision of rail service into industrial development.	**Consistent:** The CenterPoint Intermodal Facility component of the Master Plan would feature rail-served buildings. In addition, both the CenterPoint and non-CenterPoint light industrial uses would interface with the adjoining Union Pacific Railroad Lathrop Intermodal Terminal.
	Policy C-P-54	Establish and maintain a working relationship between the City administration and the local management of the Union Pacific Railroad regarding expansion of freight and passenger rail service and economic development of the region.	**Consistent:** The Master Plan uses, including the CenterPoint Intermodal Facility, would interface with the Union Pacific Railroad Lathrop Intermodal Terminal. The City and CenterPoint have coordinated their efforts with Union Pacific and the County of San Joaquin. This is consistent with maintaining a working relationship between the City and Union Pacific Railroad regarding expansion of rail service and economic development of the region.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
5 – Economic Development Element	Goal ED-1	Provide for adequate land for a wide range of commercial activities. Industrial, office and retail land should be designated in an appropriate mix to provide a full range of employment and opportunities that match the skills of Manteca residents as well as shopping to meet the needs of residents.	**Consistent:** The Master Plan includes light industrial and community commercial land uses that are anticipated to provide approximately 2,588 employment opportunities at full buildout. These jobs would range from part-time, entry-level positions to highly skilled career positions and, therefore, would be consistent with providing a full range of employment opportunities. In addition, the commercial retail land uses would provide additional shopping opportunities for local residents.
	Policy ED-P-2	Designate land in sufficient quantities to provide for a community with adequate jobs for its residents. The goal of a ratio of jobs to employed residents should be 1 job for each employed resident.	**Consistent.** At buildout, the Master Plan is anticipated to provide 2,588 jobs, which would range from part-time, entry-level positions to highly skilled career positions. This would be consistent with achieving the desired jobs-to-employed-residents ratio.
	Policy ED-P-3	Provide land use designations that anticipate and address the type, location, and infrastructure needs of future development.	**Consistent.** The Master Plan identifies necessary infrastructure improvements for circulation, utilities, and drainage facilities.
	Policy ED-P-5	Provide appropriate buffers between commercial and residential uses to preserve both the commercial feasibility and residential quality.	**Consistent.** The Master Plan employs the use of setbacks and landscaping along Airport Way and Lathrop Road serve to buffer non-residential uses from the residential uses located on the opposite side of both roadways.
	Goal ED-3	Expand, retain, and attract stable employment opportunities available to broad income levels.	**Consistent.** The Master Plan would facilitate the development of approximately 4.7 million square feet of light industrial and commercial uses. These uses are anticipated to create as many as 2,588 jobs, which would range from part-time, entry-level positions to highly skilled career positions.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
5 – Economic Development Element (*cont.*)	Policy ED-P-6	Expand job opportunities available in Manteca so that residents may choose to work locally instead of commuting.	**Consistent.** The Master Plan uses are anticipated to create as many as 2,588 jobs, which would range from part-time, entry-level positions to highly skilled career positions. This is consistent with the objective of expanding local job opportunities so that residents may choose to work locally instead of commuting.
	Policy ED-P-7	Attract and retain a broad base of businesses and industries to provide a variety of jobs allowing career growth potential.	**Consistent:** The Master Plan uses are anticipated to create as many as 2,588 jobs, which would range from part-time, entry-level positions to highly skilled career positions. This is consistent with the objective of attracting and retaining a broad base of businesses and industries to provide a variety of jobs allowing career growth potential.
	Goal ED-5	Attract new industries that are compatible with the character of the City.	**Consistent.** The Master Plan would include an integrated logistics center that would interface with the Lathrop Intermodal Terminal (CenterPoint), which is an industrial land use that currently does not exist in Manteca. The CenterPoint use is consistent with the allowed uses of the General Plan Light Industrial land use designation and, therefore, compatible with the character of the City.
	Goal ED-6	Protect and promote the overall commercial service and retail business sectors of the local economy.	**Consistent.** The Master Plan would facilitate the development of a 205,820-square-foot commercial retail center at the intersection of Lathrop Road/Airport Way. This is consistent with protecting and promoting commercial service and retail business sectors.
	Policy ED-P-10	Encourage new employment base industries that provide for additional employment opportunities for existing residents to locate within Manteca.	**Consistent:** The Master Plan uses are anticipated to create as many as 2,588 new jobs and, therefore, would be considered "employment base" industries. It would be expected that local residents would fill most of the new job opportunities.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
5 – Economic Development Element (*cont.*)	Policy ED-P-11	Assist industries to remain, expand, or to locate in Manteca.	**Consistent:** The Master Plan is intended to facilitate the development of approximately 4.7 million square feet of light industrial and commercial uses. Such uses would consist of new or existing businesses that relocate to Manteca.
	Policy ED-P-14	Support business formation in Manteca.	**Consistent.** The Master Plan is intended to facilitate the development of approximately 4.7 million square feet of light industrial and commercial uses. Such uses would consist of new or existing businesses that relocate to Manteca. As such, this is consistent with the objective of supporting business formation in Manteca.
	Policy ED-P-15	Provide for sufficient parking areas to serve commercial and industrial uses.	**Consistent.** The Master Plan design standards and guidelines require sufficient off-street parking.
	Goal ED-15	Promote and protect qualities and resources that make the Manteca area special, identifiable, unique, and attractive.	**Consistent.** This EIR identifies necessary mitigation measures for impacts to agricultural resources, biological resources, cultural resources, and hydrological resources. The implementation of these mitigation measures would be consistent with the objective of protecting natural resources that are of value to the Manteca area.
	Goal ED-16	Maintain and enhance the physical beauty of the Community and surrounding landscape.	**Consistent.** The Master Plan sets forth design standards and guidelines that would ensure that the Master Plan uses provide a high-quality appearance that maintain and enhance the physical beauty of the community and surrounding landscape.
	Policy ED-P-21	Enhance community identity and beauty.	**Consistent.** The Master Plan sets forth design standards and guidelines that would ensure that the Master Plan uses provide a high-quality appearance that enhances community identify and beauty.
	Policy ED-P-23	Infrastructure needed to serve new development shall be the responsibility of new	**Consistent.** The Master Plan identifies necessary infrastructure improvements for circulation,

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		development and not existing residents.	utilities, and drainage facilities. The Master Plan applicants are required to pay the full cost of all infrastructure necessary to serve the Master Plan uses. In addition, the applicants are required to pay development fees in accordance with the City's latest adopted fee schedule.
	Goal ED-17	Assure adequate public infrastructure is available at the right place and the right time to serve economic development opportunities.	**Consistent.** The Master Plan identifies necessary infrastructure improvements for circulation, utilities, and drainage facilities. All necessary infrastructure must be in place prior to occupancy.
	Goal ED-19	Assure that new development provides funding for necessary infrastructure.	**Consistent.** The Master Plan applicants are required to pay the full cost of all infrastructure necessary to serve the Master Plan uses. In addition, the applicants are required to pay development fees in accordance with the City's latest adopted fee schedule.
	Policy ED-P-26	Freight rail access should be provided to industrial areas where possible and appropriate.	**Consistent.** The CenterPoint Intermodal Facility component of the Master Plan would feature rail-served buildings. In addition, both the CenterPoint and non-CenterPoint light industrial uses would interface with the adjoining Union Pacific Railroad Lathrop Intermodal Terminal.
6 – Public Facilities and Services Element	Goal PF-3	Facilities improvements and services required to serve development will not place an economic burden on existing residents of the City. Development will pay a fair share of all costs of required public infrastructure and services.	**Consistent.** The Master Plan applicants would provide the full cost of all necessary infrastructure necessary to serve the Master Plan uses. In addition, The Master Plan applicants would provide development fees in accordance with the latest adopted fee schedules. These requirements would ensure that improvements and services required to serve the Master Plan uses will not place an economic burden on existing residents of the City.
	Goal PF-4	Public improvements and facilities will be designed to enhance, rather than	**Consistent.** The drainage improvements contemplated by the Master Plan seek to create private,

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		degrade, the natural environment in the City and surrounding area.	multi-use facilities that are also available for open space and recreation use by Master Plan occupants. This is consistent with the objective of designing improvements to enhance the natural environment and surrounding area.
	Policy PF-P-2	Encourage comprehensive development rather than incremental, single project development.	**Consistent.** The Master Plan provides a comprehensive approach towards planning an approximately 300-acre area to ensure that the end uses are compatible with each other and surrounding land uses.
	Policy PF-P-12	The City shall continue to assess a water development fee on all new commercial, industrial, and residential development sufficient to fund system-wide capacity improvements. The water development fee schedule shall be periodically reviewed and revised as necessary.	**Consistent.** The Master Plan applicants will be required to pay the water development fee.
	Policy PF-P-13	Ensure that all new development provides for and funds a fair share of the costs for adequate water distribution, including line extensions, easements, and plant expansions.	**Consistent:** The Master Plan applicants will provide the full cost of all water infrastructure improvements necessary to serve the Master Plan uses.
	Policy PF-P-17	The City of Manteca shall consider incremental increases in the demands on groundwater supply and water quality when reviewing development applications.	**Consistent.** The City of Manteca prepared a Water Supply Assessment that evaluated the Master Plan uses' demand for potable water. The Water Supply Assessment concluded that adequate supplies were available. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy PF-P-20	The City shall develop new sewage treatment and trunk line capacity as necessary to serve new development.	**Consistent.** The Master Plan identifies proposed improvements to sewer mains. The Master Plan applicants will provide the full cost of all wastewater infrastructure improvements necessary to serve the Master Plan uses.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
6 – Public Facilities and Services Element (*cont.*)	Policy PF-P-21	City sewer services will not be extended to unincorporated areas, except in extraordinary circumstances. Existing commitments for sewer service outside the city limits shall continue to be honored.	**Consistent:** The Master Plan area will be annexed into the City of Manteca. Therefore, the extension of sewer service to the Master Plan area is consistent with this policy.
	Policy PF-P-24	Ensure that all new development provides for and funds a fair share of the costs for adequate sewer distribution, including line extensions, easements, and plant expansions.	**Consistent.** The Master Plan applicants will provide the full cost of all wastewater infrastructure improvements necessary to serve the Master Plan uses.
	Goal PF-9	Maintain an adequate level of service in the City's drainage system to accommodate runoff from existing and projected development and to prevent property damage due to flooding.	**Consistent.** The Master Plan identifies onsite drainage improvements necessary to provide adequate storm drainage. The Master Plan applicants will provide the full cost of all drainage infrastructure improvements necessary to serve the Master Plan uses.
	Policy PF-P-27	The City shall require the dedication and improvement of drainage detention basins as a condition of development approval according to the standards of the Drainage Master Plan. The responsibility for the dedication and improvement of detention basins shall be based on the prorated share of stormwater runoff resulting from each development	**Consistent:** The Master Plan identifies onsite drainage improvements necessary to provide adequate storm drainage. These improvements include detention basins and reflect the standards of the Drainage Master Plan. The Master Plan applicants will provide the full cost of all drainage infrastructure improvements necessary to serve the Master Plan uses.
	Policy PF-P-28	Storm drainage systems within new development areas shall include open drainage corridors where feasible to supplement or replace an underground piped drainage system. The drainage systems would provide for short-term storm water detention, storm water conveyance for storm waters	**Consistent:** The Master Plan's identified drainage improvements include open drainage corridors and are designed to function as private, multi-use open space and recreation facilities for Master Plan occupants.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		exceeding a 10-year event, storm water quality treatment, bike and pedestrian paths, and visual open space within neighborhoods. The width and length of the corridors would be determined by the stormwater management requirements. The drainage systems would provide a pedestrian connection between parks and access to open space from residential neighborhoods. The neighborhoods would be designed with homes oriented to, rather than backing on the open space corridor.	
	Policy PF-P-39	The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response times for police calls.	**Consistent:** The Manteca Police Department was consulted about the Master Plan's demands on police protection. The Police Department indicated that it could accommodate the Master Plan's anticipated calls for service from its existing resources. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy PF-P-40	The City shall provide police services to serve the existing and projected population.	**Consistent:** The Manteca Police Department would provide police protection to the Master Plan uses. The Police Department indicated that it could accommodate the Master Plan's anticipated calls for service from its existing resources. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy PF-P-43	The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls.	**Consistent:** The Manteca Fire Department was consulted about the Master Plan's demands on fire protection and emergency medical services. The Fire Department indicated that with the completion of the planned station on Lathrop Road, the Master Plan uses would be served with adequate response times. As such, the Master Plan uses will be required to contribute development

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
			fees to the City to fund the development of the planned fire station. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy PF-P-44	The City shall provide fire services to serve the existing and projected population.	**Consistent.** The Manteca Fire Department would provide fire protection and emergency medical services to the Master Plan uses. The Fire Department indicated that with the completion of the planned station on Lathrop Road, the Master Plan uses would be served with adequate response times. As such, the Master Plan uses will be required to contribute development fees to the City to fund the development of the planned fire station. Refer to Section 3.11, Public Services and Utilities for further discussion.
7 – Safety Element	Goal S-1	Prevent loss of lives, injury, and property damage due to geological hazards and seismic activity.	**Consistent.** This Draft EIR evaluates the potential for loss of lives, injury, and property damage as a result of geologic hazards and seismic activity and identifies necessary mitigation measures. Refer to Section 3.6 Geology, Soils, and Seismicity for further discussion.
	Goal S-2	Prevent loss of lives, injury, and property damage due to the collapse of buildings and critical facilities, and to prevent disruption of essential services in the event of an earthquake.	**Consistent.** This Draft EIR evaluates the potential for loss of lives, injury, and property damage as a result of earthquakes and identifies necessary mitigation measures. Refer to Section 3.6 Geology, Soils, and Seismicity for further discussion.
	Policy S-P-1	The City shall require preparation of geological reports and/or geological engineering reports for proposed new development located in areas of potentially significant geological hazards, including potential subsidence (collapsible surface soils) due to groundwater extraction.	**Consistent.** A Preliminary Geotechnical Investigation was prepared by Neil O. Anderson and Associates, which is included in Appendix F. In addition, the Master Plan applicants will be required to submit a design-level geological engineering reports at the time building permits are sought. Refer to Section 3.6 Geology, Soils, and Seismicity for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
7 – Safety Element (*cont.*)	Policy S-P-2	The City shall require new development to mitigate the potential impacts of geologic hazards through Building Plan review.	**Consistent.** The Master Plan applicants will be required to demonstrate that all geological hazards can be mitigated through Building Plan review prior to issuance of building permits.
	Policy S-P-3	The City shall require new development to mitigate the potential impacts of seismic induced settlement of uncompacted fill and liquefaction (water-saturated soil) due to the presence of a high water table.	**Consistent.** The Preliminary Geotechnical Investigation evaluated the potential for settlement of uncompacted fill and liquefaction and concluded that this was unlikely to occur within the Master Plan area because of subsurface soil characteristics. Therefore, there is no need to mitigate for this potential impact. Refer to Section 3.6 Geology, Soils, and Seismicity for further discussion.
	Goal S-3	Prevent loss of lives, injury, and property damage due to flooding.	**Consistent.** The Master Plan area is not within a 100-year flood hazard area. However, a small portion of the Master Plan area is within a 200-year flood hazard area, and mitigation is proposed requiring that appropriate flood prevention measures be incorporated for any buildings proposed within this area. This is consistent with the objective of preventing loss of lives, injury, and property damage due to flooding.
	Goal S-4	Pursue flood control solutions that minimize environmental impacts.	**Consistent.** The Master Plan identifies necessary drainage improvements to ensure that adequate storm drainage is provided. This is consistent with the objective of pursuing flood control solutions that minimize environmental impacts.
	Policy S-P-9	Combine flood control, recreation, water quality, and open space functions where feasible.	**Consistent.** The Master Plan identifies necessary drainage improvements to ensure that adequate storm drainage is provided. These improvements include the use of open channels that could serve as private open space and recreational facilities for Master Plan occupants.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
7 – Safety Element (*cont.*)	Policy S-P-9 (*cont.*)	(*cont.*)	This is consistent with the objective of combining flood control, recreation, water quality, and open space functions.
	Policy S-P-10	Ensure that any existing structures subject to the 100-year flood provide adequate protection from flood hazards.	**Consistent.** The Master Plan area is outside the 100-year flood zone.
	Policy S-P-11	Ensure that the impacts of potential flooding are adequately analyzed when considering areas for future urban expansion.	**Consistent.** This Draft EIR evaluates impacts associated with flooding. Refer to Section 3.8, Hydrology and Water Quality for further discussion.
	Policy S-P-13	Non-residential development shall be anchored and flood-proofed in accord with Federal Emergency Management Agency (FEMA) standards to prevent damage or causing damage due to a 100-year flood level.	**Consistent.** The Master Plan area is not within a 100-year flood hazard area. However, a small portion of the Master Plan area is within a 200-year flood hazard area and mitigation is proposed requiring that appropriate flood prevention measures be incorporated for any buildings proposed within this area. This is consistent with requiring flood prevention measures in accordance with FEMA standards.
	Goal S-5	The City shall protect the health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials.	**Consistent.** This Draft EIR evaluates potential impacts associated with hazardous materials and identifies mitigation measure to reduce risks to acceptable levels. Refer to Section 3.7, Hazards and Hazardous Materials for further discussion.
	Policy S-P-16	City approvals of all new development shall consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.	**Consistent.** This Draft EIR evaluates potential impacts associated with hazardous materials and identifies mitigation measure to reduce risks to acceptable levels. Refer to Section 3.7, Hazards and Hazardous Materials for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
7 – Safety Element (*cont.*)	Policy S-P-17	Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Manteca residents.	**Consistent.** This Draft EIR evaluates potential impacts associated with hazardous materials and identifies mitigation measure to reduce risks to acceptable levels. Refer to Section 3.7, Hazards and Hazardous Materials for further discussion.
8 – Resource Conservation Element	Goal RC-1	Minimize the consumption of water to reasonable levels consistent with a high level of amenities and quality of life for City residents and visitors.	**Consistent.** This Draft EIR identifies water conservation measures and practices intended to reduce consumption of water to reasonable levels. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy RC-P-1	The City shall continue to implement water conservation standards for all commercial and industrial development, and for all existing and new residential development.	**Consistent.** This Draft EIR identifies water conservation measures and practices that must be implemented by the Master Plan uses. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy RC-P-3	The City shall protect the quantity of Manteca's groundwater.	**Consistent.** The Master Plan uses would implement stormwater pollution prevention management practices during construction and operations to prevent pollutants from entering the groundwater table. Refer to Section 3.8, Hydrology and Water Quality for further discussion.
	Policy RC-P-4	The City shall require water conservation in both City operations and private development to minimize the need for the development of new water resources.	**Consistent.** This Draft EIR identifies water conservation measures and practices. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Goal RC-3	The City shall ensure that land use and circulation improvements are coordinated to reduce the number and length of vehicle trips and thereby help conserve scarce or nonrenewable energy resources.	**Consistent.** The Master Plan includes several characteristics that would promote reductions in vehicle miles traveled. First, it would facilitate the development of an integrated logistics center that would interface with the adjacent Union Pacific Railroad Lathrop Intermodal Terminal. The adjacency of the two uses would create operational efficiencies that limit truck travel on surrounding roads or entirely

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
			eliminate the need for truck trips through the use of rail-served buildings. In addition, the Master Plan uses are located approximately 1 mile from the I-5/Roth Road interchange, allowing for convenient and direct access to this regional facility, thereby avoiding circuitous routing that contributes to longer trip lengths. The Master Plan also facilities the development of a 205,820-square-foot commercial retail center in a portion of Manteca that is largely unserved or underserved by commercial retail uses. As such, the provision of these retail uses would reduce trip lengths for residents who are currently driving to more distant retail nodes to shop. Finally, the Master Plan includes the development of public transit, bicycle, and pedestrian facilities that would provide alternatives to vehicle travel for employees and customers of the commercial uses.
	Goal RC-5	Promote energy efficiency in new development and in building design.	**Consistent.** The Master Plan design standards and guidelines include provisions for sustainable design features such as photo-sensors and localized lighting controls to reduce energy use.
	Policy RC-P-6	Comply with construction and design standards that promote energy conservation.	**Consistent.** The Master Plan design standards and guidelines include provisions for sustainable design features such as photo-sensors and localized lighting controls to reduce energy use.
	Policy RC-P-7	Conserve public utilities.	**Consistent.** The Master Plan and this Draft EIR identify a number of water and energy conservation measures that would promote the avoidable of inefficient, unnecessary, and wasteful consumption of public utilities.
	Policy RC-P-8	Conserve petroleum products.	**Consistent.** The Master Plan would promote the conservation of petroleum products through

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
			operational characteristics that reduce trip lengths (e.g., an interface with the Lathrop Intermodal Terminal) and the provision of transit, bicycle, and pedestrian facilities that provide alternatives to passenger vehicle use.
	Goal RC-6	Preserve and maintain Manteca's soils to avoid pollution of surface waters, decreased air quality, and loss of soil.	**Consistent.** This EIR sets forth stormwater pollution prevention management practices during construction and operations to prevent soil erosion and loss of topsoil. Refer to Section 3.8, Hydrology and Water Quality for further discussion.
	Policy RC-P-10	Minimize soil erosion and loss of topsoil from land development activities, wind, and water flow.	**Consistent.** This EIR sets forth stormwater pollution prevention management practices during construction and operations to prevent soil erosion and loss of topsoil. Refer to Section 3.8, Hydrology and Water Quality for further discussion.
	Policy RC-P-11	Minimize sedimentation and loss of topsoil from soil erosion.	**Consistent.** This EIR sets forth stormwater pollution prevention management practices during construction and operations to minimize sedimentation and loss of topsoil from soil erosion. Refer to Section 3.8, Hydrology and Water Quality for further discussion.
	Policy RC-P-12	Minimize pollution of waterways and other surface water bodies from urban runoff.	**Consistent.** This EIR sets forth stormwater pollution prevention management practices during construction and operations to prevent pollution from entering downstream waterways. Refer to Section 3.8, Hydrology and Water Quality for further discussion.
	Policy RC-P-13	Protect the quality of Manteca's groundwater.	**Consistent.** This EIR sets forth stormwater pollution prevention management practices during construction and operations to prevent pollution from entering the groundwater table. Refer to Section 3.8, Hydrology and Water Quality for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
8 – Resource Conservation Element (*cont.*)	Goal RC-8	To provide adequate land for open space as a framework for urban development, to meet the passive recreation needs of the community, and to set aside wildlife habitat.	**Consistent.** The Master Plan includes open space/drainage areas that serve a dual purpose of providing for stormwater drainage and private recreational needs for occupants of the Master Plan uses. The open space areas also provide habitat for wildlife.
	Policy RC-P-16	Provide public and private open space within urbanized parts of Manteca, in order to provide visual contrast with the built environment and to provide for the recreational needs of residents.	**Consistent.** The Master Plan includes open space/drainage areas that serve a dual purpose of providing for stormwater drainage and private recreational needs for occupants of the Master Plan uses. The open space provides a visual contrast to the urban development within the Master Plan area.
	Policy RC-P-18	New development shall maximize the potential for open space and visual experiences.	**Consistent.** The Master Plan includes open space/drainage areas that serve a dual purpose of providing for stormwater drainage and private recreational needs for occupants of the Master Plan uses. This is consistent with the objective of maximizing the potential for open space and visual experiences.
	Goal RC-9	To promote the continuation of agricultural uses in the Manteca area and to discourage the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca.	**Consistent.** The Master Plan contains phasing provisions that are intended to allow for the logical and orderly development of urban uses within the plan boundaries. As such, it would be expected that less economically viable agricultural land would be developed first and economically viable, prime agricultural land would developed later. This is consistent with the intent of discouraging the premature conversion of agricultural land to non-agricultural use.
	Policy RC-P-19	The City shall support the continuation of agricultural uses on lands designated for urban use, until development is imminent.	**Consistent.** The Master Plan contains phasing provisions that are intended to allow for the logical and orderly development of urban uses within the plan boundaries. As such, it would be expected that less

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
			economically viable agricultural land would be developed first and economically viable, prime agricultural land would developed later. This is consistent with the intent of discouraging the premature conversion of agricultural land to non-agricultural use.
	Policy RC-P-20	The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.	**Consistent.** The Master Plan contains phasing provisions that are intended to allow for the logical and orderly development of urban uses within the plan boundaries. As such, it would be expected that less economically viable agricultural land would be developed first and economically viable, prime agricultural land would developed later. This is consistent with the intent of discouraging the premature conversion of agricultural land to non-agricultural use.
	Policy RC-P-21	In approving urban development near existing agricultural lands, the City shall take actions so that such development will not unnecessarily constrain agricultural practices or adversely affect the viability of nearby agricultural operations.	**Consistent.** The Master Plan identifies the use of setbacks and landscaping to buffer the proposed light industrial and commercial uses from surrounding land uses, including agricultural uses. These buffers are consistent with the objective of avoiding the creation of constraints or pressures on nearby agricultural uses.
	Policy RC-P-24	Provide buffers at the interface of urban development and farmland; in order to minimize conflicts between these uses.	**Consistent.** The Master Plan identifies the use of setbacks and landscaping to buffer the proposed light industrial and commercial uses from surrounding land uses, including agricultural uses.
	Policy RC-P-25	The City shall ensure, in approving urban development near existing agricultural lands, that such development will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations.	**Consistent.** The Master Plan identifies the use of setbacks and landscaping to buffer the proposed light industrial and commercial uses from surrounding land uses, including agricultural uses. These buffers are consistent with the objective of avoiding the creation of constraints or pressures on nearby agricultural uses.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
	Policy RC-P-30	The City of Manteca will participate in a county-wide program to mitigate the conversion of Prime Farmland and Farmlands of Statewide Importance to urban uses.	**Consistent.** This EIR requires the Master Plan applicant to pay the City of Manteca Agricultural Mitigation Fee to mitigate for the loss of Important Farmland. This fee is the fee program contemplated by this policy. Refer to Section 3.2, Agricultural Resources for further discussion.
	Goal RC-10	Protect sensitive native vegetation and wildlife communities and habitat in Manteca.	**Consistent.** This EIR requires that mitigation for impacts to special-status species and jurisdictional features. These mitigation measures are consistent with the objective of protecting sensitive native vegetation and wildlife communities and habitat. Refer to Section 3.4, Biological Resources for further discussion.
	Policy RC-P-31	Minimize impact of new development on native vegetation and wildlife.	**Consistent.** This EIR requires that mitigation for impacts to special-status species and jurisdictional features. These mitigation measures are consistent with the objective of minimizing the impact of new development on native vegetation and wildlife. Refer to Section 3.4, Biological Resources for further discussion.
	Policy RC-P-34	Protect special status species and other species that are sensitive to human activities.	**Consistent.** This EIR requires that mitigation for impacts to special-status species and jurisdictional features. These mitigation measures are consistent with the objective of protecting special-status species. Refer to Section 3.4, Biological Resources for further discussion.
	Policy RC-P-36	Consider the development of new drainage channels planted with native vegetation, which would provide habitat as well as drainage.	**Consistent.** The Master Plan identifies a storm drainage system that will include open drainage channels, where possible. It is anticipated that native vegetation will be planed within the drainage channels.
	Goal RC-11	Preserve and enhance Manteca's archaeological and historic resources for their aesthetic, educational, and cultural values.	**Consistent.** This EIR evaluates potential impacts on archaeological and historic resources and sets forth mitigation measures to ensure that impacts are reduced to a level of less

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
			than significant. This is consistent with the objective of preserving and enhancing Manteca's archaeological and historic resources. Refer to Section 3.5, Cultural Resources for further discussion.
	Goal RC-12	Protect Manteca's Native American heritage.	**Consistent.** This EIR evaluates potential impacts on archaeological and historic resources and sets forth mitigation measures to ensure that impacts are reduced to a level of less than significant. This is consistent with the objective of protecting Manteca's Native American heritage. Refer to Section 3.5, Cultural Resources for further discussion.
	Policy RC-P-37	The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without consulting the California Archaeological Inventory at Stanislaus State University, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendation of a qualified archaeologist. City implementation of this policy shall be guided by the California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA).	**Consistent.** A Section 106 Cultural Resources Assessment was prepared for the Master Plan area and is provided in Appendix E. The assessment was prepared by a qualified archaeologist and is included consultation with the California Archaeological Inventory at Stanislaus State University, site evaluation of the Master Plan area, and recommendations for mitigating potential impacts. These recommendations have been incorporated as mitigation measures in this EIR. Refer to Section 3.5, Cultural Resources for further discussion.
	Policy RC-P-38	The City shall require that the proponent of any development proposal in an area with potential archaeological resources, and specifically near the San Joaquin River and Walthall Slough, and on the east side of State Highway 99 at the Louise Avenue crossing, shall consult with the California Archaeological Inventory, Stanislaus State	**Consistent.** Although the Master Plan area is not near the San Joaquin River, Walthall Slough, or the SR-99/Louise Avenue crossing, the Section 106 Cultural Resources Assessment was prepared by a qualified archaeologist and included consultation with the California Archaeological Inventory at Stanislaus State University, site evaluation of the Master Plan area, and recommendations for mitigating potential impacts. These

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		University to determine the potential for discovery of cultural resources, conduct a site evaluation as may be indicated, and mitigate any adverse impacts according to the recommendation of a qualified archaeologist. The survey and mitigation shall be developer funded.	recommendations have been incorporated as mitigation measures in this EIR. Refer to Section 3.5, Cultural Resources for further discussion.
9 – Noise Element	Goal N-1	Protect the residents of Manteca from the harmful and annoying effects of exposure to excessive noise.	**Consistent:** The Draft EIR's noise analysis evaluates potential construction and operational noise impacts to surrounding land uses and identifies mitigation measures where necessary to reduce noise levels to acceptable levels. This is consistent with the objective of protecting Manteca residents from the harmful and annoying effects of exposure to excessive noise. Refer to Section 3.10, Noise for further discussion.
	Goal N-5	Incorporate noise considerations into land use planning decisions, and guide the location and design of transportation facilities to minimize the effects of noise on adjacent land uses.	**Consistent.** The Draft EIR's noise analysis evaluates potential construction and operational noise impacts to surrounding land uses and identifies mitigation measures where necessary to reduce noise levels to acceptable levels. Furthermore, the Mater Plan incorporates noise attenuation features such as building setbacks, walls, and landscaping along roadways. The characteristics are consistent with the objective of incorporating noise considerations into land use planning decisions in order to minimize the effects of noise on adjacent land uses. Refer to Section 3.10, Noise for further discussion.
	Policy N-P-1	Areas within Manteca exposed to existing or projected exterior noise levels from mobile noise sources exceeding the performance standards in Table 9-1 shall be designated as noise-impacted areas.	**Consistent:** The Draft EIR's noise analysis found that existing long-term ambient noise levels within the Master Plan vicinity were 67.4 dBA L_{dn}, with most of the noise being attributable to mobile sources. Because existing ambient noise levels exceed 60 dBA L_{dn}, the Master Plan vicinity is eligible to be designated as

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
			a "noise impacted area." Refer to Section 3.10, Noise for further discussion.
	Policy N-P-2	New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to satisfy the performance standards in Table 9-1.	**Consistent:** The Master Plan's light industrial and commercial uses are not considered noise-sensitive land uses and, therefore, are considered to be acceptable uses within a "noise impacted area." Refer to Section 3.10, Noise for further discussion.
	Policy N-P-5	In accord with the Table 9-2 standards, the City shall regulate construction-related noise impacts on adjacent users.	**Consistent.** The Draft EIR's construction noise analysis assessed impacts based on the standards set forth in Table 9-2. Mitigation is proposed, where necessary, to reduce offsite noise exposure to acceptable levels. Refer to Section 3.10, Noise for further discussion
	Policy N-P-7	Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with noise performance levels of Table 9-1 and Table 9-2.	**Consistent.** The Draft EIR's noise analysis assessed impacts based on the standards set forth in Table 9-1 and Table 9-2. Mitigation is proposed, where necessary, to reduce offsite noise exposure to acceptable levels. Refer to Section 3.10, Noise for further discussion
10 – Air Quality Element	Goal AQ-1	Improve air quality by: • Achieving and maintaining ambient air quality standards established by the U.S. Environmental Protection Agency, the California Air Resources Board, and the San Joaquin Air Pollution Control District; • Minimizing public exposure to toxic or hazardous air pollutants; and • Minimizing public exposure to pollutants that create a public nuisance, such as unpleasant odors.	**Consistent:** The Master Plan uses will be subject to regulatory measures adopted to meet ambient air quality standards. Public exposure to toxic or hazardous air pollutants and odors are minimized through the use of buffers and segregation of land uses. Refer to Section 3.3, Air Quality for further discussion.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
10 – Air Quality Element (*cont.*)	Goal AQ-2	Integrate air quality planning with land use and transportation planning processes in order to reduce vehicle miles traveled in the City and by commuters.	**Consistent.** The Master Plan includes several characteristics that would promote reductions in vehicle miles traveled. First, it would facilitate the development of an integrated logistics center that would interface with the adjacent Union Pacific Railroad Lathrop Intermodal Terminal. The adjacency of the two uses would create operational efficiencies that limit truck travel on surrounding roads or entirely eliminate the need for truck trips through the use of rail-served buildings. In addition, the Master Plan uses are located approximately 1 mile from the I-5/Roth Road interchange, allowing for convenient and direct access to this regional facility, thereby avoiding circuitous routing that contributes to longer trip lengths. The Master Plan also facilities the development of a 205,820-square-foot commercial retail center in a portion of Manteca that is largely unserved or underserved by commercial retail uses. As such, the provision of these retail uses would reduce trip length for residents who are currently driving to more distant retail nodes to shop. Finally, the Master Plan includes the development of public transit, bicycle, and pedestrian facilities that would provide alternatives to vehicle travel for employees and customers of the commercial uses.
	Goal AQ-3	Increase opportunities for alternatives to internal combustion automobiles including, but not limited to, public transportation, bicycles, walking and alternative fuel vehicles including hybrid gas-electric, electric and compressed natural gas.	**Consistent.** The Master Plan includes the development of public transit, bicycle, and pedestrian facilities that would provide alternatives to vehicle travel. Additionally, the CenterPoint component would feature rail-served buildings, which would also avoid the need for truck trips.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
10 – Air Quality Element (*cont.*)	Goal AQ-4	Reduce air emissions through energy conversation.	**Consistent.** The Master Plan design standards and guidelines include provisions for sustainable design features such as photo-sensors and localized lighting controls to reduce energy use.
	Policy AQ-P-2	Develop a land use plan that will help to reduce the need for trips and will facilitate the common use of public transportation, walking, bicycles, and alternative fuel vehicles.	**Consistent.** The Master Plan includes several characteristics that would promote reductions in vehicle trips and facilitate the use of transit, bicycles, and walking. First, it would facilitate the development of an integrated logistics center that would interface with the adjacent Union Pacific Railroad Lathrop Intermodal Terminal. The adjacency of the two uses would create operational efficiencies that limit truck travel on surrounding roads or entirely eliminate the need for truck trips through the use of rail-served buildings. The Master Plan also facilities the development of a 205,820-square-foot commercial retail center in a portion of Manteca that is largely unserved or underserved by commercial retail uses. As such, the provision of these retail uses would reduce trip length for residents who are currently driving to more distant retail nodes to shop. Finally, the Master Plan includes the development of public transit, bicycle, and pedestrian facilities that would provide alternatives to vehicle travel for employees and customers of the commercial uses.
	Policy AQ-P-3	Segregate and provide buffers between land uses that typically generate hazardous or obnoxious fumes and residential or other sensitive land uses.	**Consistent:** The Master Plan includes setback and landscaping requirements for uses along Lathrop Road and Airport Way. These requirements would serve to segregate and buffer the Master Plan's non-residential uses from the residential uses on the opposite sides of these roadways.
	Policy AQ-P-4	Develop and maintain street systems that provide for	**Consistent.** The Master Plan includes an internal circulation

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
		efficient traffic flow and thereby minimize air pollution from automobile emissions.	system that is intended to facilitate efficient access between the Lathrop Intermodal Terminal and the light industrial uses, thereby reducing the number of external trips on surrounding roadways. In addition, the Master Plan includes half-width improvements along all roadway frontages that would include additional travel and turn lanes. Finally, the Master Plan applicants will be required to provide all traffic-related fees in accordance with the latest adopted fee schedule and also provide fair-share fees for offsite roadway improvements. Collectively, these characteristics would reduce tailpipe emissions.
	Policy AQ-P-5	Develop and maintain circulation systems that provide alternatives to the automobile for transportation, including bicycle routes, pedestrian paths, bus transit, and carpooling.	**Consistent:** The Master Plan includes the development of public transit, bicycle, and pedestrian facilities. Examples include an internal pedestrian network, sidewalks along street frontages, Class II bicycle lanes along Airport Way, and the provision of 14-foot-wide curb lanes along all roadways suitable for use by bicycles.
	Policy AQ-P-7	New construction will be managed to minimize fugitive dust and construction vehicle emissions.	**Consistent.** The development of projects within the Master Plan will be subject to SJVAPCD Regulation VIII, which requires fugitive dust control measures for construction projects and SJVAPCD Rule 9510, which requires emission reductions from construction vehicle emissions. Refer to Section 3.3, Air Quality for further discussion.
	Policy AQ-P-10	Encourage energy efficient building designs.	**Consistent.** The Master Plan design standards and guidelines include provisions for sustainable design features such as photo-sensors and localized lighting controls to reduce energy use.

Table 3.9-5 (cont.): Northwest Airport Way Master Plan General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
11 – Administration and Implementation Element	Policy AD-P-3	The General Plan may be amended no more than four times per year. Each amendment, however, may include multiple changes to the General Plan.	**Consistent.** The General Plan Amendment associated with the Master Plan will be process in accordance with this policy.
	Policy AD-P-4	The City's Zoning Ordinance and Subdivision Ordinance shall be reviewed and amended as necessary to ensure consistency with the General Plan.	**Consistent.** The City's Zoning Ordinance will be updated to incorporated applicable aspects of the Master Plan. In addition, the Zoning Map will be updated to reflect the zoning associated with the Master Plan.
	Policy AD-P-5	The City shall prepare and adopt, as deemed necessary, specific plans for new development areas.	**Consistent.** Although the Master Plan is not a specific plan, it is consistent with the objective of using a comprehensive planning tool to guide urban development in an orderly, well-planned manner.
Source: City of Manteca, 2010; Michael Brandman Associates, 2010.			

Non-Master Plan Annexations

The City of Manteca is proposing to annex two unincorporated areas (East and South) adjacent to the Master Plan area and contiguous to the Manteca City limits. Annexation of the lands encompassed by the Northwest Airport Way Master Plan would result in these areas becoming "unincorporated islands" within the Manteca city limits, a condition discouraged by LAFCo.

Proposed Uses

The General Plan land use designations for the East and South areas include Light Industrial, Neighborhood Commercial, Low Density Residential, Medium Density Residential, High Density Residential, and Park. No entitlements are being sought with the annexations; therefore, existing land use activities would remain unchanged. Existing land use activities consist of agricultural and low-density residential uses.

General Plan Goals and Policies

Table 3.9-6 summarizes the East and South areas annexations consistency with the applicable goals and policies of the General Plan. As shown in the table, the annexations would be consistent with all applicable goals and policies of the General Plan. Impacts would be less than significant.

Table 3.9-6: Non-Master Plan Annexation General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
2 – Land Use	Goal LU-1	To provide for orderly, well-planned, and balanced growth consistent with the limits imposed by the city's infrastructure and the city's ability to assimilate new development.	**Consistent:** The East and South areas are within the Primary Urban Boundary line and contiguous to existing urban development within the city limits. Annexation of these areas will prevent the creation of unincorporated islands. This is consistent with the objective of fostering orderly, well-planned, and balanced growth.
	Policy LU-P-4	The City shall encourage a development pattern that is contiguous with the boundary of the City.	**Consistent:** The East and South areas are contiguous to existing urban development within the city limits. Annexation of these areas represents the logical and orderly expansion of the city limits.
	Policy LU-P-5	The City shall establish and maintain a Primary Urban Service Boundary line designating lands eligible for annexation and urban development prior to the year 2013.	**Consistent:** The East and South areas are within the Primary Urban Boundary line and are contiguous to existing urban development within the city limits. Therefore, annexation of these areas is consistent with this objective.
	Policy LU-P-9	The City will consider applications for annexations that: • Are contiguous with city boundaries and provide for a logical expansion of the city; • Create clear and reasonable boundaries; • Ensure the provision of adequate municipal services; • Reflect a long-term fiscal balance to the city and its residents, when reviewed cumulatively with other annexations; • Are consistent with state law and San Joaquin County local agency formation commission standards; and • Are consistent with the general plan.	**Consistent:** The East and South areas are consistent with the criteria set forth in this policy for the following reasons: 1) The East and South areas are contiguous to the existing city limits and are within the City's Sphere of Influence. 2) The East and South areas boundaries are formed by easily identifiable reference points (roadways, railroad right-of-way, and the existing city limits). 3) The Municipal Service Review found that the City of Manteca's services were sufficient to accommodate existing and planned development, including annexations of existing unincorporated development. 4) The annexation of the East and South areas would not represent a significant burden to City of Manteca, as these are low intensity land uses.

Table 3.9-6 (cont.): Non-Master Plan Annexation General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
2 – Land Use (*cont.*)	Policy LU-P-9 (*cont.*)	(*cont.*)	5) As discussed in Impact LU-5, the non-master plan annexations are consistent with all state and LAFCo requirements. 6) As discussed in Impact LU-2, the non-master plan annexations are consistent with all applicable provisions of the General Plan.
	Goal LU-2	To provide adequate land in a range of densities to meet the housing needs of all income groups expected to reside in Manteca, and to regulate residential growth consistent with the capacities of City facilities and services and the ability of the community to assimilate new development.	**Consistent:** Portions of the East area are designated Low Density Residential, Medium Density Residential, and High Density Residential. These land use designations allow a wide range of residential development. Note that the annexations themselves do not confer any development rights that would allow new construction.
	Goal LU-3	Provide adequate land for the development of commercial uses that provide goods and services to Manteca residents and Manteca's market area.	**Consistent:** A portion of the East area is designated Neighborhood Commercial and all of the South area is designated Light Industrial by the General Plan. These land use designations allow a wide range of commercial uses. Note that the annexations themselves do not confer any development rights that would allow new construction.
	Policy LU-P-41	The City shall encourage the continuation of agricultural uses on lands within the Primary and Secondary Urban Services Boundary lines pending their development as urban uses consistent with the General Plan.	**Consistent:** Current land uses in the East and South areas include low-density residential and agricultural uses. The annexation of these areas into the City limits does not preclude the continuation of agricultural uses on these properties until higher and better uses are pursued.
3 – Community Design Element	Policy CD-P-48	Allow pockets of agricultural activity to remain within the urban areas of the city where such uses are compatible with the surrounding urban use.	**Consistent:** Current land uses in the East and South areas include low-density residential and agricultural uses. The annexation of these areas into the City limits does not preclude the continuation of agricultural uses on these properties until higher and better uses are pursued.

Table 3.9-6 (cont.): Non-Master Plan Annexation General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
5 – Economic Development Element	Goal ED-1	Provide for adequate land for a wide range of commercial activities. Industrial, office and retail land should be designated in an appropriate mix to provide a full range of employment and opportunities that match the skills of Manteca residents as well as shopping to meet the needs of residents.	**Consistent:** A portion of the East area is designated Neighborhood Commercial, and all of the South area is designated Light Industrial by the General Plan. These land use designations allow a wide range of commercial uses. Note that the annexations themselves do not confer any development rights that would allow new construction.
	Policy ED-P-2	Designate land in sufficient quantities to provide for a community with adequate jobs for its residents. The goal of a ratio of jobs to employed residents should be 1 job for each employed resident.	**Consistent:** A portion of the East area is designated Neighborhood Commercial and all of the South area is designated Light Industrial by the General Plan. These land use designations allow a wide range of commercial uses. Note that the annexations themselves do not confer any development rights that would allow new construction.
	Goal ED-10	Provide a variety of housing types to house all segments of the Manteca community in accordance with the Housing Element.	**Consistent:** Portions of the East area are designated Low Density Residential, Medium Density Residential, and High Density Residential. These land use designations allow a wide range of residential development. Note that the annexations themselves do not confer any development rights that would allow new construction.
	Policy ED-P-17	Plan for a broad range of housing types and densities to accommodate all income levels and job classifications.	**Consistent:** Portions of the East area are designated Low Density Residential, Medium Density Residential, and High Density Residential. These land use designations allow a wide range of residential development. Note that the annexations themselves do not confer any development rights that would allow new construction.

Table 3.9-6 (cont.): Non-Master Plan Annexation General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
6 – Public Facilities and Services Element	Policy PF-P-8	The City will provide water for future development to maintain a balance of jobs and housing.	**Consistent:** As part of annexation into the city limits, the parcels located within the East and South areas will be eligible to be served by the City of Manteca water system. The Municipal Service Review found that the city has adequate water supplies to serve existing and planned growth, including annexations of existing unincorporated development. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy PF-P-39	The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response times for police calls.	**Consistent:** As part of annexation into the city limits, the Manteca Police Department would provide police services to the East and South areas. The Police Department provided a written response indicating that its current staffing levels are adequate to handle the increase in calls for service associated with the non-master plan annexations. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy PF-P-43	The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls.	**Consistent:** As part of annexation into the city limits, the Manteca Fire Department would provide fire and emergency medical services to the East and South areas. The Fire Department provided a written response indicating that the opening of a planned fire station located within the 1400 block of Lathrop Road would ensure that adequate response times to the non-master plan area would be provided. Refer to Section 3.11, Public Services and Utilities for further discussion.
	Policy PF-P -44	The City shall provide fire services to serve the existing and projected population.	**Consistent:** As part of annexation into the city limits, the Manteca Fire Department would provide fire and emergency medical services to the East and South areas. The Fire Department provided a written response indicating that the opening of a planned fire station located within the 1400 block of Lathrop

Table 3.9-6 (cont.): Non-Master Plan Annexation General Plan Consistency Analysis

Chapter	Goal/Policy		Consistency Determination
	No.	Text	
			Road would ensure that adequate response times to the non-master plan area would be provided. Refer to Section 3.11, Public Services and Utilities for further discussion.
8 – Resource Conservation Element	Goal RC-9	To promote the continuation of agricultural uses in the Manteca area and to discourage the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca.	**Consistent:** Current land uses in the East and South areas include low-density residential and agricultural uses. The annexation of these areas into the City limits does not preclude the continuation of agricultural uses on these properties until higher and better uses are pursued.
	Policy RC-P-19	The City shall support the continuation of agricultural uses on lands designated for urban use, until development is imminent.	**Consistent:** Current land uses in the East and South areas include low-density residential and agricultural uses. The annexation of these areas into the City limits does not preclude the continuation of agricultural uses on these properties until higher and better uses are pursued.
	Policy RC-P-20	The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.	**Consistent:** Current land uses in the East and South areas include low-density residential and agricultural uses. The annexation of these areas into the City limits does not preclude the continuation of agricultural uses on these properties until higher and better uses are pursued.
Source: City of Manteca, 2003; Michael Brandman Associates, 2010.			

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Municipal Code Consistency

Impact LU-3:	**The proposed Master Plan and non-master plan annexations would be consistent with the applicable provisions of the Manteca Municipal Code.**

Impact Analysis

This impact will evaluate the consistency of the Northwest Airport Way Master Plan and non-master plan area annexations with the applicable portions of the Manteca Municipal Code.

Master Plan

The proposed project involves the adoption of a Master Plan. The Master Plan document will be adopted as overlay district to the Manteca Municipal Code. The Master Plan establishes the Light Industrial and Community Commercial land use categories that are identical to the zoning categories of the Municipal Code and corresponding categories of the City of Manteca General Plan. The Master Plan contains information on mandatory requirements and design guidelines. The Master Plan applies development standards that are modified, in some instances, from the Manteca Municipal Code, Title 17, Zoning. Modifications are described for all the proposed uses in the Master Plan Chapter 9, Design Standards & Guidelines. Development must comply with all provisions of the Municipal Code unless specifically modified by the Master Plan. Where differences occur, the Master Plan mandatory requirements and design guidelines shall prevail.

The proposed Master Plan that would be adopted as an overlay district to the Manteca Municipal Code would guide the development of the Master Plan area, consistent with the proposed General Plan designations of Light Industrial and Community Commercial. The Master Plan is organized into the following chapters:

- Chapter 1. Introduction
- Chapter 2. Northwest Airport Way Master Plan Components
- Chapter 3. Infrastructure Needs & Utility Description
- Chapter 4. Phasing Plan
- Chapter 5. City Services
- Chapter 6. Economic and Fiscal Impacts
- Chapter 7. Consistency with City Plans and Policies
- Chapter 8. Mandatory Requirements and Implementation
- Chapter 9. Design Standards and Guidelines
- Chapter 10. Report Preparation
- Chapter 11. References.

Of the chapters listed above, Chapters 2, 8 and 9 constitute the most significant portions of the Master Plan, as they set forth the permitted uses and development standards for the proposed uses. The relevant requirements of each chapter are discussed below.

Chapter 2. Northwest Airport Way Master Plan Components

The Master Plan land uses consist of light industrial and community commercial uses. The Master Plan establishes the following land use categories that are identical to the zoning categories of the Municipal Code. The Master Plan applies development standards that are modified, in some instances, from the Manteca Municipal Code, Title 17, Zoning.

Light Industrial

The light industrial zone allows business and professional uses, uses involving heavy trucks, automobile services, mini-storage, various agricultural industries, industrial manufacturing or assembly uses, industrial storage, and truck and motor freight uses. The Manteca Municipal Code indicates the permitted and conditionally permitted uses for Light Industrial. Relevant allowable uses in the Light Industrial District include:

- Truck and Motor Freight Transfer
- Warehouse
- Draying or Freight
- Cold Storage
- Equipment Building Material
- Moving and Storage
- Wholesale Distribution

Relevant allowable uses with a conditional use permit in the Light Industrial District include:

- Truck and Motor Freight Terminal
- Truck and Heavy Equipment
- Cold Storage for Agricultural Products
- Truck Service and Repair
- Machinery

Community Commercial

The Community Commercial zone allows a wide variety of permitted or conditionally permitted commercial uses, such as commercial office and retail uses. The Manteca Municipal Code indicates the permitted and conditionally permitted uses for Community Commercial. Relevant allowable uses in the Community Commercial District include:

- Offices – Business or Professional
- Financial Institution, including bank, savings and loan, or credit union
- Medical, dental, optical
- Health Club
- Bookstore
- Clothing and Apparel

- Department Store
- Supermarket
- Restaurant, café, or coffee shop

Relevant allowable uses with a conditional use permit in the Community Commercial District include:

- Restaurant, fast-food
- Restaurant, drive-in
- Convenience market

Open Space

The primary purpose of the Open Space district is to provide for very-low-intensity uses that are compatible with the natural, open space character of the area. Any use other than a park or other open space shall be clearly incidental and secondary to the primary open space character of the area. The Manteca Municipal Code identifies parks as an allowable in the Open Space District.

Chapter 8. Mandatory Requirements and Implementation

In order to achieve orderly development of the Master Plan, and to ensure that when fully developed, the area will have a balance of uses to enhance economic opportunity, each implementing project must adhere to certain elements of the plan. These mandatory requirements are discussed more fully below.

Land Use Master Plan Zoning

Developments within the Master Plan shall consist of land uses that are consistent with those set forth on Exhibit 6 of the Master Plan (Exhibit 2-6 in this EIR), and as discussed more fully in the Master Plan Chapter 2, B, 1. The land uses include light industrial, community commercial, and open space/drainage.

Circulation

Roadway Grid

Developments within the Master Plan shall be planned and constructed to accommodate, and as appropriate provide, the basic grid roadways as shown in Exhibit 2-9. This system of private internal roadways anticipates future truck traffic loads and includes two north-south internal connector roads and east-west connector roads. These roads are generally described in the Master Plan Chapter 2, B, 3, where the street cross-sections are provided. The roadway improvements will be required with each implementing project unless traffic studies conducted in conjunction with implementing projects suggest improvements are not required at that time, although such implementing projects may be required to fund their fair share of the cost of the improvements to these mandatory access improvements. Further, no implementing projects may be developed in a manner that would preclude the development of the roadway grid, in the general locations shown on Exhibit 2-9.

In recognition of the developed nature of the RCCI site, the extension of Daisywood Drive would only be required if the RCCI site is redeveloped. The internal drive planned for this property will, however, be required if the property owner proposes any expansions or substantial modifications to the property.

Access and Egress

Entrances to the Plan Area must be designed to ensure adverse impacts to or from traffic within and outside of the plan area do not occur. To this end, plan area intersections must meet certain configurations, and certain intersections will require the installation of traffic signals when warranted. The Master Plan identifies the intersections that, when warranted, will require signalization with implementation of the Master Plan. The improvements will be required unless traffic studies conducted in conjunction with implementing projects suggest improvements are not required at that time, although such implementing projects may be required to fund their fair share of the cost of the improvements to these mandatory access improvements.

Drainage and Open Space Grid

The Master Plan establishes an open space grid that not only provides open space between developments and recreational opportunities for pedestrians and bicyclists, but also serves as an integral part of the drainage plan for the area. This grid includes the system of drainage swales and detention basins that also serve as active recreational areas.

The 40-foot-wide, north-south bioswale bordering the west side of the internal private road "F" will convey storm drainage to the three large detention basins.

Utilities

The Master Plan establishes plans for the provision of water and sewer services to the Plan Area. Developers of projects within the Plan Area will be responsible for constructing improvements in the public right-of-way generally, or for funding improvements that have already been completed or that will be completed in the future, as determined on a project-by-project basis. Improvements will include the development of a grid of water mains in the Plan Area and the connection of the grid to existing and new mains in Airport Way, Roth Road, and Lathrop Road. Sewer improvements will include the extension of the sewer line in Airport Way, a new line in Roth Road, and lines in the private roadways connecting to the main in Airport Way. These latter lines would connect to the existing pump station and the force main in Airport Way and ultimately to the Wastewater Quality Control Facility.

The Master Plan also establishes stormwater drainage plans to serve the Plan Area. Developers of projects within the Plan Area will be responsible for constructing the improvements set forth in the plan or for funding improvements that have already been completed or that will be completed in the future. Improvements include upgrading existing SSJID laterals and mains as well as constructing

detention basins in the Plan Area and a network of piping and surface drainage channels that flow into the detention basins as appropriate to meet the requirements of the City's Storm Drain Master Plan.

Site Plan Review and Design Review

Development projects will be subject to the Site Plan Review and Design Review requirements of Manteca Municipal Code Section 17.49.040. While the Master Plan provides a certain amount of flexibility with respect to design elements, the process for review of these elements is a mandatory aspect of this Plan, and all applications shall be consistent with the Master Plan. Further, the City may impose, in connection with the site plan and design review process, reasonable conditions of approval if they are consistent with the Master Plan. The design standards and guidelines in Chapter 4 shall be used by the City staff in the review of each project submitted within the Plan Area.

The Design Standards are considered mandatory for the purpose of Site Plan Review and Design Review. These standards must be included in each development proposal. These are different from the Design Guidelines, which are encouraged but not considered mandatory.

Chapter 9. Design Standards and Guidelines

The Design Standards and Guidelines consist of architectural, planning, and site design criteria that apply to individual projects constructed in the Plan Area. Design standards are mandatory, while design guidelines are recommended. These standards and guidelines are intended to ensure compatibility of the various individual development projects undertaken to implement the Master Plan, and to establish a design identity that sets the Plan Area apart from other nearby areas.

The Design Standards contained in Chapter 9 of the Master Plan are to be applied to development within the Master Plan in conjunction with the development standards listed in the Manteca Municipal Code and applicable utility master plans. Where differences occur between the design standards of the Master Plan and the Manteca Municipal Code, the design standards of the Master Plan shall prevail.

The Design Guidelines contained in Chapter 9 of the Master Plan provide additional design criteria and serve as a framework to guide the City of Manteca in its review of proposed projects in the Plan Area, but are not mandatory. The Design Guidelines will help ensure a unified development character for the Plan Area while providing flexibility and guidance for individual, market-driven projects.

While the Master Plan envisions a certain amount of flexibility with respect to the design guidelines, the mandatory elements are expected of each implementing project.

Conclusion

The proposed Master Plan would facilitate the orderly and planned development of the proposed light industrial, community commercial and open space land uses on the project site. The permitted uses of the Master Plan (light industrial, community commercial, and open space) are consistent with the

allowed uses of the Light Industrial, Community Commercial, and Open Space land use designations. The maximum square footage of Light Industrial allowed by the Master Plan translates to a FAR of 0.41, well below the 0.7 FAR established by the General Plan for the Light Industrial use. The maximum square footage of Community Commercial allowed by the Master Plan translates to a FAR of 0.26, well below the 0.6 FAR established by the General Plan for the Community Commercial use. Finally, the Master Plan requires structures to be developed in accordance with a set of design standards and guidelines to encourage sensitive, integrated, innovative and sustainable project designs. In summary, the proposed Master Plan complies with all applicable requirements of the Manteca Municipal Code.

The proposed Master Plan would be incorporated into the Municipal Code and, therefore, represents a self-mitigating aspect of the proposed project. Because the Master Plan complies with all applicable requirements for such land use plan, it would be consistent and compatible with the Municipal Code. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The City will pre-zone these areas to designations that would be consistent with the overlying General Plan designations; therefore, these areas would also comply with the applicable requirements of the Municipal Code. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Airport Land Use Plan Consistency

Impact LU-4:	**The proposed project would be consistent with the applicable recommendations of the adopted San Joaquin County Airport Land Use Plan.**

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations' consistency with the applicable recommendations of the San Joaquin County Airport Land Use Plan (1993). At the time of this writing, the 1993 Airport Land Use Plan is the adopted plan for Stockton Metropolitan Airport Influence Area.

Master Plan

The Master Plan area is located within the Stockton Metropolitan Airport Influence Area, but it is not located within any designated airport land use zones set forth in the Airport Land Use Plan. Therefore, the Master Plan area is only subject to the following general recommendations that apply to all land uses within the Airport Influence Area:

- New residential uses (5 units or more) must record an avigation easement in favor of the airport.
- Occupied structures must be soundproofed to reduce interior noise to 45 dB.
- Reflective materials are not permitted to be used as structures or signs (excluding traffic control signs).
- Power lines must be located underground.

The Master Plan would develop industrial uses and commercial uses on approximately 300 acres. The Master Plan uses would consist of an integrated logistics center, high cube warehouse, and commercial retail. No residential uses are proposed within the Master Plan area. Therefore, no avigation easement is necessary.

The Master Plan area is located approximately 1.6 miles southwest of the nearest noise contour (60 dB CNEL) for the Year 2035 operation of Stockton Metropolitan Airport. Given this distance, aviation noise within the Master Plan area is well below 60 dB CNEL. Ambient noise measurements taken in the Master Plan area vicinity in February 2010 ranged between 56.5 and 72.2 dBA L_{eq}. Vehicular noise was the primary source of noise recorded in these measurements. The Master Plan buildings would be built primarily with concrete tilt-up construction. Such construction typically provides exterior-to-interior noise attenuation of approximately 30 dB. Applying this attenuation factor to the highest measured noise level of 72.2 dB yields an interior noise level of 42.2 dB. Therefore, interior noise levels for all occupied structures would be at or below 45 dB.

The Master Plan contains requirements in Chapter 9, Design Standards & Guidelines that prohibit the use of reflective materials. Examples of such requirements are listed below.

- **Building Design:** Exterior siding materials should be of masonry, plaster, wood, metal, or approved alternative material. Metal clad buildings should have baked-on enamel exterior finishes or equal. Mirrored or highly reflective glass is prohibited.
- **Signs:** Signs are to be illuminated only by backlighting of raised letters, internally illuminated individual letters, or by low intensity spotlights that are screened from direct view. Internally illuminated box or can signs are prohibited. Signs are to be glare free. Light fixtures must be screened from view.

- **Lighting:** Night lighting shall be limited to that necessary for operations, security, safety, and identification. Night lighting shall also be screened from adjacent residential areas and not be directed in an upward manner or beyond the boundaries of the parcel on which the buildings are located.

These requirements provide certainty that all Master Plan uses will conform to the recommendation concerning reflective materials.

Overhead utility lines, including 47-kilovolt (kv) electrical lines, exist along Roth Road, Airport Way, and Lathrop Road. All three roadways are within the Airport Influence Area. As acknowledged on page 9 of the Airport Land Use Plan, the San Joaquin County Airport Land Use Commission "has no authority to enforce removal of preexisting land uses, which do not conform to land use guidelines." Accordingly, the presence of these overhead power lines is an existing, non-conforming condition. Regardless, the Master Plan requires that overhead utility lines along street frontages be relocated underground and, therefore, achieves conformance with this recommendation.

Therefore, the development of the Master Plan would not pose any inconsistencies with the adopted San Joaquin County Airport Land Use Plan (1993). Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The East area is located within the Airport Influence, while the South area is not. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. To the extent that any existing land use activities conflict with the applicable recommendations of the adopted Airport Land Use Compatibility Plan, these non-conforming uses would not be further exacerbated by the proposed annexations. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Consistency with LAFCo Policies

Impact LU-5:	**The proposed project would not conflict with any of the applicable policies established by the San Joaquin County Local Agency Formation Commission.**

Impact Analysis

The proposed project involves the annexation of the Master Plan area and non-master plan areas into the City of Manteca. California Government Code Section 56668 establishes factors Local Agency Formation Commissions (LAFCo) must use in reviewing annexation proposals. Table 3.9-7 provides a consistency analysis with California Government Code Section 56668. As shown in the table, the proposed annexation of both the Master Plan area and non-master plan areas would be consistent with Section 56668. Impacts would be less than significant.

Table 3.9-7: California Government Code Section 56668 Consistency Analysis

Factor	Consistency Determination	
	Master Plan	Non-Master Plan Annexations
Population and population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; the likelihood of significant growth in the area, and in adjacent incorporated and unincorporated areas, during the next 10 years.	**Consistent:** The Master Plan is contiguous to the Manteca city limits on its eastern boundary. The Master Plan is within the City's 10-year Planning Horizon. The Master Plan area consists of agricultural operations, industrial uses, and rural residences. Agricultural uses consist of orchards, row crops, grazing, and fallow fields. Industrial uses consist of a cheese factory and associated settling ponds. Rural residences are located in various places along the Airport Way frontage. The Union Pacific Railroad Lathrop Intermodal Terminal forms the western boundary of the Master Plan area. West of the terminal is the Union Pacific Railroad Oakland Subdivision and the Sharpe Army Depot. The depot is located in the City of Lathrop. Roth Road forms the northern boundary of the Master Plan area. North of the roadway are agricultural uses located within unincorporated San Joaquin County. Airport Way forms the eastern boundary of the Master Plan area. East of the roadway is agricultural land and low-density residential uses located within unincorporated San Joaquin County, and Union Ranch located with the Manteca city limits. The unincorporated agricultural and residential uses	**Consistent:** The East and South areas are contiguous to city limits. The East and South areas are within the City's 10-year Planning Horizon. The 77-acre East area contains agricultural uses and low-density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts Union Ranch. The 144-acre South Area contains agricultural uses and low-density residential uses. Approximately 20 rural residences are located within this area, primarily along the Lathrop Road and Airport Way frontages. Agricultural land abuts the Union Pacific Railroad Oakland and Fresno Subdivisions.

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor	Consistency Determination	
	Master Plan	**Non-Master Plan Annexations**
(*cont.*)	are within the City of Manteca's Sphere of Influence. The agricultural and residential uses located between Union Ranch and Lathrop Road are designated as the "East" non-master plan area. Lathrop Road forms the southern boundary of the Master Plan area. South of the roadway are agricultural and residential uses located within unincorporated San Joaquin County. These uses are located within the City of Manteca's Sphere of Influence. This area is designated as the "South" non-master plan area.	(*cont.*)
The need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas. "Services," as used in this subdivision, refers to governmental services whether or not the services would be provided by local agencies subject to this division, and includes the public facilities necessary to provide those services.	**Consistent:** The Master Plan contemplates the development of approximately 4.7 million square feet of light industrial and commercial uses. Such uses require urban levels of public services, which currently are provided in limited form to the Master Plan area. The applicants that pursue development of the uses contemplated by the Master Plan will be obligated to pay the full cost of all infrastructure improvements necessary to serve these uses. Additionally, these applicants will be required to contribute fees for other services such as fire and police. Refer to Section 3.11, Public Services and Utilities for further discussion.	**Consistent:** The annexations themselves do not create a need for a higher level of organized community services, as they do not change any land use activities or confer development rights to any of the property owners within the East and South areas. Instead, the annexations are intended to prevent inadequate service delivery to the East and South areas that may occur as a result of the Master Plan area annexation. Without the concurrent annexation of the Master Plan area, East area, and South area into Manteca, these two latter areas would be rendered "unincorporated islands," a condition discouraged by LAFCo. Under this scenario, service delivery may become problematic and may trigger challenges associated with substandard emergency response times, the unavailability of potable water and sanitary sewer service, inadequate storm drainage facilities, and unimproved street frontages that result in residual adverse effects on areas within the city limits.

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor	Consistency Determination	
	Master Plan	**Non-Master Plan Annexations**
		For these reasons, the non-master plan annexations would be consistent with the objective of providing adequate organized community services.
The effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structure of the county.	**Consistent:** The proposed Master Plan would facilitate the development of higher and better uses within the Master Plan area. This would be expected to yield economic benefits in form of new jobs, an expanded tax base, and greater economic activity. The Master Plan would further social interests—albeit indirectly—largely as a result of the economic benefits. For example, the economic benefits (e.g., new jobs and tax revenues) may yield advancements in local health, safety, and welfare. In terms of impacts on the local governmental structure of the County, the primary change is that the Master Plan area would fall under the jurisdiction of the City of Manteca. The Master Plan area is currently within the City's Sphere of Influence; it had been contemplated that this area would ultimately join the City of Manteca at a future, undetermined date. As such, this would not represent a significant impact on the local governmental structure of the County.	**Consistent:** The non-master plan annexations would result in the annexation of two areas totaling 221 acres into the City of Manteca. These areas are currently occupied by residential and agricultural uses. The proposed annexations would further economic and social interests by allowing these areas to be served more efficiently with public services than if they were to remain unincorporated. This would avoid the shortcomings associated with sub-standard service delivery to "unincorporated islands," and, therefore, would be expected to accrue economic and social benefits to the affected residents. In terms of impacts on the local governmental structure of the county, the primary change is that these areas would fall under the jurisdiction of the City of Manteca. These areas are currently within the City's Sphere of Influence; it had been contemplated that these areas would ultimately join the City of Manteca at a future, undetermined date. As such, this would not represent a significant impact on the local governmental structure of the County.

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor		Consistency Determination	
		Master Plan	**Non-Master Plan Annexations**
The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, efficient patterns of urban development, and the policies and priorities set forth in Section 56377. (Section 56377 is reproduced below.)		**Consistent:** The Master Plan area contains approximately 262 acres of Important Farmland. Buildout of the Master Plan would result in the conversion of this farmland acreage to non-agricultural use. This conversion would be consistent with Section 56377 for the following reasons: 1) The Master Plan contains phasing provisions that are intended to allow for the logical and orderly development of urban uses within the plan boundaries. As such, it would be expected that less economically viable agricultural land would be developed first and economically viable, prime agricultural land would developed later. 2) The Master Plan area is bounded by urban uses to the west and east, including the Union Pacific Railroad Lathrop Intermodal Facility. Union Pacific is pursuing expansion of the intermodal facility, which would increase its footprint and diminish the agricultural viability of adjoining lands within the Master Plan area. 3) The Master Plan area is within the City of Manteca Sphere of Influence and within the 10-year Planning Horizon.	**Consistent:** The East and South areas contain Important Farmland. However, the proposed annexation of these areas would not alter any existing land use activities or confer development rights that would allow new construction to occur. Therefore, no conversion of Important Farmland would occur.
56377.	In reviewing and approving or disapproving proposals which could reasonably be expected to induce, facilitate, or lead to the conversion of existing open-space lands to uses other than open-space uses, the commission shall consider all of the following policies and priorities: (a) Development or use of land for other than open-space uses shall be guided away from existing prime agricultural lands in open-space use toward areas containing nonprime agricultural lands, unless that action would not promote the planned, orderly, efficient development of an area. (b) Development of existing vacant or nonprime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the sphere of influence of a local agency should be encouraged before any proposal is		

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor		Consistency Determination	
		Master Plan	**Non-Master Plan Annexations**
	approved which would allow for or lead to the development of existing open-space lands for non-open-space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency.		
The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Section 56016. (Section 56016 is reproduced below.)		**Consistent:** The Master Plan area contains approximately 262 acres of Important Farmland. The Master Plan contains phasing provisions that are intended to allow for the logical and orderly development of urban uses within the plan boundaries. As such, these phasing provisions would allow for economically viable agricultural land within the Master Plan to remain in production up until the point that higher and better uses are pursued. This is consistent with the objective of maintaining the physical and economic integrity of agricultural lands.	**Consistent:** The East and South areas contain agricultural uses. The proposed annexations would not change any existing land use activities or confer development rights that would allow for new construction to occur. Accordingly, the annexations themselves would not convert agricultural land to non-agricultural use and, therefore, would be consistent with the objective of maintaining the physical and economic integrity of agricultural lands.
56016.	"Agricultural lands" means land currently used for the purpose of producing an agricultural commodity for commercial purposes, land left fallow under a crop rotational program, or land enrolled in an agricultural subsidy or set-aside program.		
The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.		**Consistent:** The proposed Master Plan area is a largely rectangular-shaped, 300-acre area that is bounded by the Lathrop Intermodal Facility (west), Roth Road (north), Airport Way (east), and Lathrop Road (south). The boundaries of the Master Plan area annexation follow defined features and, therefore, would be considered logical and orderly. However, the annexation of this area may create unincorporated islands to the east and south, which the City of Manteca intends to avoid through proposed annexation of these areas (see right).	**Consistent:** The East and South areas would be rendered "unincorporated islands" by the Master Plan area annexation. Therefore, the City of Manteca is proposing to annex these areas concurrent with the Master Plan area annexation to prevent this adverse condition from occurring. Note that LAFCo must deem the non-master plan annexations to be feasible in order for this to occur.

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor		Consistency Determination	
		Master Plan	**Non-Master Plan Annexations**
Consistency with city or county general and specific plans.		**Consistent:** The proposed Master Plan is consistent with the City of Manteca General Plan. Refer to Impact LU-2.	**Consistent:** The proposed annexations are consistent with the City of Manteca General Plan. Refer to Impact LU-2.
The sphere of influence of any local agency that may be applicable to the proposal being reviewed.		**Consistent:** The Master Plan area is within the City of Manteca Sphere of Influence and 10-year Planning Horizon.	**Consistent:** The East and South areas are within the City of Manteca Sphere of Influence and 10-year Planning Horizon.
The comments of any affected local agency or other public agency.		**Consistent:** The Draft EIR and proposal will be circulated to local and affected agencies. Responses to comments will be provided in the Final EIR.	**Consistent:** The Draft EIR and proposal will be circulated to local and affected agencies. Responses to comments will be prepared in the Final EIR.
The ability of the newly formed or receiving entity to provide the services, which are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.		**Consistent:** The Master Plan area will be served with municipal services provided by the City of Manteca for fire/emergency medical services, police, water, sewer, and storm drainage. The Master Plan describes in detail the service and infrastructure requirements necessary to ensure that adequate levels of service are provided. The Master Plan applicants will provide the full cost of all infrastructure necessary to serve the Master Plan uses. Refer to Section 3.11, Public Services and Utilities for further discussion.	**Consistent:** The East and South areas will be served with or be eligible to be served with municipal services provided by the City of Manteca for fire/ emergency medical services, police, water, sewer, and storm drainage. Fire/emergency medical services and police services will be automatically provided to these areas. Water, sewer, or storm drainage service may be extended to these areas, although the property owners would likely be responsible for the costs of such service extensions.
Timely availability of water supplies adequate for projected needs as specified in Section 65352.5. (Section 65352.5 is reproduced below.)		**Consistent:** The City of Manteca prepared a Water Supply Assessment (Appendix I) that indicates that adequate long-term water supplies are available to serve the Master Plan uses. Refer to Section 3.11, Public Services and Utilities for further discussion.	**Consistent:** Most, if not all of the properties in the East and South areas currently use groundwater wells for water supply. As a result of annexation, properties within the East and South areas would be eligible for municipal water service provided by the City of Manteca. The net increase in municipal water consumption attributable to the annexation is within the demand projections contained in the City Urban Water Management Plan. Therefore, adequate water supplies would exist to serve these areas. Refer to Section 3.11, Public Services and Utilities
65352.5.	(a) The Legislature finds and declares that it is vital that there be close coordination and consultation between California' s water supply agencies and California's land use approval agencies to ensure that proper water supply planning occurs in order to accommodate projects		

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor		Consistency Determination	
		Master Plan	Non-Master Plan Annexations
	that will result in increased demands on water supplies. (b) It is, therefore, the intent of the Legislature to provide a standardized process for determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies. (c) Upon receiving, pursuant to Section 65352, notification of a city's or a county's proposed action to adopt or substantially amend a general plan, a public water system, as defined in Section 116275 of the Health and Safety Code, with 3,000 or more service connections, shall provide the planning agency with the following information, as is appropriate and relevant: (1) The current version of its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code. (2) The current version of its capital improvement program or plan, as reported pursuant to Section 31144.73 of the Water Code. (3) A description of the source or sources		for further discussion.

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor		Consistency Determination	
		Master Plan	Non-Master Plan Annexations
	of the total water supply currently available to the water supplier by water right or contract, taking into account historical data concerning wet, normal, and dry runoff years. (4) A description of the quantity of surface water that was purveyed by the water supplier in each of the previous five years. (5) A description of the quantity of groundwater that was purveyed by the water supplier in each of the previous five years. (6) A description of all proposed additional sources of water supplies for the water supplier, including the estimated dates by which these additional sources should be available and the quantities of additional water supplies that are being proposed. (7) A description of the total number of customers currently served by the water supplier, as identified by the following categories and by the amount of water served to each category: (A) Agricultural users. (B) Commercial users. (C) Industrial users. (D) Residential users. (8) Quantification of the expected reduction in total water demand,		

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor		Consistency Determination	
		Master Plan	**Non-Master Plan Annexations**
	identified by each customer category set forth in paragraph (7), associated with future implementation of water use reduction measures identified in the water supplier's urban water management plan. (9) Any additional information that is relevant to determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies.		
The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs as determined by the appropriate council of governments consistent with Article 10.6 (commencing with Section 65580) of Chapter 3 of Division 1 of Title 7. (Section 65580 is reproduced below.)		**Consistent:** The City of Manteca General Plan contemplates light industrial uses within the Master Plan area. As such, the General Plan Housing Element does not identify this area as a potential housing site for affordable housing. Therefore, the Master Plan would not have any effect on the City's ability to meet its regional housing requirements.	**Consistent:** The East and South areas are discussed separately. <u>East:</u> The City of Manteca General Plan contemplates Low Density Residential, Medium Density Residential, and High Density Residential uses within portions of the East area. Therefore, annexation of the East area into the city limits would provide additional residential-designated land that would allow the City to demonstrate progress towards achieving its regional housing requirements. <u>South:</u> The City of Manteca General Plan contemplates light industrial uses within the South area. As such, the General Plan Housing Element does not identify this area as a potential housing site for affordable housing. Therefore, the annexation of the South area would not have any effect on the City's ability to meet its regional housing requirements.
65580.	The Legislature finds and declares as follows: (a) The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every Californian, including farmworkers, is a priority of the highest order. (b) The early attainment of this goal requires the		

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor		Consistency Determination	
		Master Plan	Non-Master Plan Annexations
	cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels. (c) The provision of housing affordable to low- and moderate-income households requires the cooperation of all levels of government. (d) Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community. (e) The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan and to cooperate with other local governments and the state in addressing regional housing needs.		
Any information or comments from the landowner or owners, voters, or residents of the affected territory.		**Consistent:** Most of the approximately 300-acre Master Plan area is controlled by four parties. Property owners, voters,	**Consistent:** A number of parties control parcels within the East and South areas. Property owners, voters, and residents of

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor	Consistency Determination	
	Master Plan	**Non-Master Plan Annexations**
	and residents of the Master Plan area will be noticed about the availability of the CEQA documents and public meetings. These individuals will have the opportunity to submit comments to both the City of Manteca and San Joaquin County LAFCo.	the East and South areas will be noticed about the availability of the CEQA documents and public meetings. These individuals will have the opportunity to submit comments to both the City of Manteca and San Joaquin County LAFCo.
Any information relating to existing land use designations.	**Consistent:** The San Joaquin County General Plan designates the Master Plan area General Agriculture. The San Joaquin County Zoning Ordinance designates the Master Plan area General Agriculture, 40-Acre Minimum Parcel Size (AG-40). The Manteca General Plan designates the Master Plan area as Light Industrial and Urban Reserve.	**Consistent:** The East and South areas are discussed separately. <u>East:</u> The San Joaquin County General Plan designates the East area Low Density Residential. The San Joaquin County Zoning Ordinance designates the East area Agriculture-Urban Reserve, 20-Acre Minimum (AU-20). The Manteca General Plan designates the East area as Neighborhood Commercial, Low Density Residential, Medium Density Residential, High Density Residential, and Park. <u>South:</u> The San Joaquin County General Plan designates the South area General Agriculture and Limited Industrial. The San Joaquin County Zoning Ordinance designates the South area General Agriculture, 40-Acre Minimum (AG-40); Limited Industrial (I-L/S-11A). The Manteca General Plan designates the South area as Light Industrial.
The extent to which the proposal will promote environmental justice. As used in this subdivision, "environmental justice" means the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services.	**Consistent:** Although the Master Plan is not specifically intended to alleviate any alleged environmental injustices, it would annex this area into the City of Manteca and extend urban services to the Master Plan area. This would allow for higher levels of urban services to be provided to the Master Plan area	**Consistent:** Although the non-master plan annexations are not specifically intended to alleviate any alleged environmental injustices, they would annex the East and South area into the City of Manteca. This would allow for higher levels of urban services to be provided to these areas and, therefore, would benefit the

Table 3.9-7 (cont.): California Government Code Section 56668 Consistency Analysis

Factor	Consistency Determination	
	Master Plan	Non-Master Plan Annexations
	and, therefore, would benefit the recipients in a manner consistent with the objective of fair treatment of people of all races, cultures, and incomes.	recipients in a manner consistent with the objective of fair treatment of people of all races, cultures, and incomes.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Conservation Plan Consistency

Impact LU-6: The proposed project may not be consistent with the applicable policies of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations' consistency with the applicable policies of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

Master Plan

The Master Plan area is within the boundaries of the SJMSCP and is subject to the plan requirements. As discussed in Impact BIO-6 in Section 3.4, Biological Resources, the project applicant is required to complete the Section 8.2.1 (10) Checklist for Unmapped SJMSCP Projects. As part of the checklist submittal process, the applicant is required to provide all relevant biological review documentation. (Note that the information contained in this EIR would be part of the documentation). Upon receipt of the checklist and supporting information, San Joaquin COG would peer-review the documentation for adequacy. San Joaquin COG's Technical Advisory Committee would ultimately consider approval of the checklist.

Impact BIO-6 provides an analysis of Master Plan consistency with the SJMSCP. With the implementation of Mitigation Measure BIO-6, the Master Plan would be consistent with all applicable policies of the SJMSCP. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, they would not conflict with any of the provisions of the SJMSCP. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure BIO-6.

Level of Significance Before Mitigation

Less than significant impact.

3.10 - Noise

3.10.1 - Introduction

This section describes the existing noise setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on noise modeling performed by Michael Brandman Associates. The noise modeling output is included in this EIR as Appendix H.

3.10.2 - Environmental Setting

Noise Fundamentals

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit that expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating between very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. The scale value of zero is the threshold of human hearing.

Noise Descriptors

Noise equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. The peak traffic hour L_{eq} is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (L_{dn}) is the weighted average of the intensity of a sound, with corrections for time of day and averaged over 24 hours. The time of day corrections require the addition of 10 decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the L_{dn}, it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these periods because, compared with daytime hours, there is a decrease in the ambient noise levels during the evening and nighttime hours, which creates an increased sensitivity to sounds. For this reason, the sound seems louder in the evening and nighttime hours and is weighted accordingly. Due to the additional evening penalty CNEL values are always higher than L_{dn} values, however the difference is usually within 1 dB. Since CNEL and L_{dn} values are approximately the same, the City of Manteca General Plan Noise Element uses CNEL and L_{dn} noise descriptors interchangeably. However, since stationary noise standards in the Noise Element are based on the same daytime and

nighttime split that is used for L_{dn}, the L_{dn} standard has been used in this analysis to assess transportation-related impacts on noise-sensitive land uses.

Another noise descriptor that is used primarily for the assessment of aircraft noise impacts is the Sound Exposure Level, which is also called the Single Event Level (SEL). The SEL descriptor represents the acoustic energy of a single event (e.g., an aircraft overflight) normalized to a 1-second event duration. This is useful for comparing the acoustical energy of different events involving different durations of the noise sources. The SEL is based on an integration of the noise during the period when the noise first rises within 10 dBA of its maximum value and last falls below 10 dBA of its maximum value. The SEL is often 10 or more dBA greater than the L_{max}, since the SEL logarithmically adds the L_{eq} for each second of the duration of the noise.

Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown the humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a "pure tone," there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to "stand out" against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source, ground absorption, atmospheric effects and refraction, and shielding by natural and man-made features. Sound from point sources such as air conditioning condensers radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models: soft-site and hard-site conditions. Soft-site conditions

account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, compared with a 6.0-dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone, and very hard, packed earth. For line sources, a 4.5-dBA/DD drop-off rate is typically observed for soft-site conditions compared with the 3.0-dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis. In addition, since the majority of the roadways in the Master Plan vicinity have landscaped buffer areas along the sides of the roads as well as landscaped medians, soft-site conditions were used in this analysis.

Traffic Noise Prediction

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of traffic noise levels, a doubling of the traffic volumes results in a noise level increase of 3 dBA. Based on the FHWA community noise assessment criteria, this change is "barely perceptible," for reference a doubling of perceived noise levels would require an increase of approximately 10 dBA. In other words, doubling the traffic volume (assuming that the speed and truck mix do not change) results in a noise increase of 3 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. For a noise barrier to work, it must be high enough and long enough to block the view of a road. A noise barrier is most effective when placed close to the noise source or receiver. A noise barrier can achieve a 5-dBA noise level reduction when it is tall enough to break the line of sight. When the noise barrier is a berm instead of a wall, the noise attenuation can be increased by another 3 dBA.

Construction Noise Assumptions

The Federal Highway Administration (FHWA) compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table 3.10-1 provides a list of the construction equipment measured along with the associated noise emissions and measured percentages of typical equipment use per day. From this acquired data, the FHWA developed the Roadway Construction Noise Model (RCNM), which may be used for the prediction of construction noise. For the purposes of this analysis, the RCNM will be used to calculate the construction equipment noise emissions.

Table 3.10-1: Construction Equipment Noise Emissions and Usage Factors

Equipment	Acoustical Use Factor[1] (percent)	Spec 721.560 L_{max} @ 50 feet[2] (dBA, slow[3])	Actual Measured L_{max} @ 50 feet[4] (dBA, slow)
Auger Drill Rig	20	85	84
Backhoe	40	80	78
Bar Bender	20	80	N/A
Compactor (ground)	20	80	83
Compressor (air)	40	80	78
Concrete Batch	15	83	N/A
Concrete Mixer Truck	40	85	79
Concrete Pump	20	82	81
Concrete Saw	20	90	90
Crane	16	85	81
Dozer	40	85	82
Dump Truck	40	84	76
Excavator	40	85	81
Flat Bed Truck	40	84	74
Front End Loader	40	80	79
Generator	50	82	81
Grader	40	85	N/A
Jackhammer	20	85	89
Paver	50	85	77
Pneumatic Tools	50	85	85
Pumps	50	77	81
Roller	20	85	80
Scraper	40	85	84
Tractor	40	84	N/A
Vibrating Hopper	50	85	87
Vibratory Concrete Mixer	20	80	80
Welder/Torch	40	73	74

Notes:
[1] Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.
[2] Spec 721.560 is the equipment noise level utilized by the RCNM program.
[3] The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.
[4] Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.
Source: Federal Highway Administration, 2006.

Groundborne Vibration Fundamentals

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may consist of the rattling of windows or dishes on shelves.

Vibration Descriptors

Several different methods are used to quantify vibration amplitude, such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Because of the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels; it is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is "VdB," which in this text, is when L_v is based on the reference quantity of 1 microinch per second.

Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans, whose threshold of perception is around 65 VdB. Offsite sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration.

Vibration Propagation

The propagation of groundborne vibration is not as simple to model as airborne noise. This is because noise in the air travels through a relatively uniform medium, while groundborne vibrations travel through the earth, which may contain significant geological differences. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a push-pull fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly, depending on the soil, but it has been

shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

Construction-Related Vibration Level Prediction

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table 3.10-2 gives approximate vibration levels for particular construction activities. The data in the table provides a reasonable estimate for a wide range of soil conditions.

Table 3.10-2: Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v) at 25 feet
Pile driver (impact)	1.518 (upper range) 0.644 (typical)	112 104
Pile driver (sonic)	0.734 (upper range) 0.170 (typical)	105 93
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall)	0.008 (in soil) 0.017 (in rock)	66 75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Source: Federal Transit Administration, 2006.		

Existing Noise Levels

Noise in the study area is primarily created from vehicles on the nearby roadways, trucks, and railroad noise from the intermodal facility and from stationary sources associated with the existing industrial uses located within the Master Plan area. The nearby sensitive receptors consist of single-family residential homes located south of Lathrop Road and east of Airport Way.

To determine the existing noise level environment, short-term, peak-hour noise measurements were taken at seven locations in the study area, and one long-term noise measurement was taken in the study area. Noise measurement locations were selected in the field based on the methodology

presented in Section 5.3.1.2 of the Caltrans Technical Noise Supplement with the intent of representatively sampling of the existing noise environment. Exhibit 3.10-1 depicts the noise measurement locations.

Noise Measurement Results

Short-Term Peak Noise Measurements

Short-term peak measurements were taken at seven locations on and near the Master Plan area. The noise measurements were taken on March 5, 2010. The results of the short-term, peak-hour noise level measurements are presented in Table 3.10-3, and the short-term noise monitoring data printouts are included in Appendix H. All traffic noise measurement durations were measured according to the standards stated in Section 2.2.3 of the Caltrans Technical Noise Supplement, which specifies that the measurements be a duration of at least 10 minutes and shall be continued past 10 minutes until the fluctuations in the displayed L_{eq} are less than 0.5 dBA.

Table 3.10-3: Existing (Ambient) Short-Term Noise Level Measurements

Site No.	Site Description	Primary Noise Source	Start Time and Measurement (minutes)	Noise Level (dBA L_{eq}/L_{max})
M1	Located approximately 50 feet south of the centerline of Lathrop Road and approximately 60 feet west of the centerline of 7th Street, southwest of the Master Plan area.	Traffic noise from Lathrop Road and 7th Street and train noise from the Union Pacific Railroad	7:14 a.m. (13:00)	68.7/81.1
			3:58 p.m. (11:00)	67.9/80.0
M2	Located south of the Master Plan area on the northeast corner of 2416 Lathrop Road, approximately 50 feet south of the centerline of Lathrop Road and 670 feet west of Airport Way.	Traffic noise from Lathrop Road	7:32 a.m. (11:00)	71.3/82.6
			4:15 p.m. (12:00)	72.2/91.4
M3	Located east of the Master Plan area approximately 70 feet east of the centerline of Airport Way, approximately 255 feet north of the centerline of Lathrop Road.	Traffic noise from Airport Way	7:46 a.m. (10:00)	65.0/78.3
			4:47 p.m. (11:00)	62.2/73.9
M4	Located east of the Master Plan area approximately 110 feet east of the centerline of Airport Way and 0.5 mile south of Lovelace Road in front of the residence at 13170 Airport Way.	Traffic noise from Airport Way	8:02 a.m. (12:00)	63.2/76.0
			5:02 p.m. (11:00)	63.0/73.7
M5	Located northeast of the Master Plan area approximately 100 feet east of the centerline of Airport Way and approximately 185 feet south of the centerline of Roth Road at 11630 Airport Way.	Traffic noise from Airport Way and Roth Road	8:19 a.m. (11:00)	62.6/76.4
			5:17 p.m. (11:00)	61.1/76.2

Table 3.10-3 (cont.): Existing (Ambient) Short-Term Noise Level Measurements

Site No.	Site Description	Primary Noise Source	Start Time and Measurement (minutes)	Noise Level (dBA L_{eq}/L_{max})
M6	Located southeast of the Master Plan area approximately 35 feet west of the centerline of Pasado Avenue and approximately 55 feet south of the centerline of Lathrop Road at 2085 Pasado Avenue.	Traffic noise from Lathrop Road and Pasado Avenue	8:46 a.m. (11:00)	67.7/77.3
			4:30 p.m. (12:00)	67.9/77.1
M7	Located on the Master Plan area approximately 80 feet east of the Union Pacific Lathrop Intermodal Terminal.	Lathrop Intermodal Terminal activities	2:21 p.m. (20:00)	56.5/70.0
Notes: Noise measurements taken on March 5, 2010. Source: Michael Brandman Associates, 2010.				

The peak hour noise measurements shown above in Table 3.10-3 ranged from 56.5 to 72.2 dBA L_{eq}, with the highest noise measurement at Site M2. According to Section 2.2.3 of the Caltrans Technical Noise Supplement, the L_{dn} values are generally within ± 2 dBA of the measured peak-hour L_{eq} dBA. Based on the worst-case L_{eq} to L_{dn} conversion, all sites except M7 would exceed the City's 60-dB L_{dn} residential noise standard.

Long-Term Noise Measurement Results

A long-term noise measurement was taken from 7:44 p.m. on March 4, 2010 and ran until 7:24 p.m. on March 5, 2010. The measured sound pressure levels in dBA have been used to calculate (1) the minimum and maximum L_{eq} averaged over 1-hour intervals, and (2) the 24-hour L_{dn} and CNEL, which are shown in Table 3.10-4 along with the measured L_{eq} averaged over the entire measurement time. In addition, a graph of the calculated L_{eq} averaged over 1-hour intervals for the 24-hour measurement is shown in Exhibit 3.10-2.

Table 3.10-4: Existing (Ambient) Long-Term Noise Level Measurement

Site	Site Description	24-Hour Average (dBA L_{eq})	Minimum 1-Hour Interval (dBA L_{eq}/Time)	Maximum 1-Hour Interval (dBA L_{eq}/Time)	24-Hour Average (dBA L_{dn})	24-Hour Average (dBA CNEL)
A	Located east of the Master Plan area on the fence for the residence at 2350 Airport Way, approximately 75 feet east of the centerline of Airport Way.	62.0	53.9/ 1:09 a.m.	66.2/ 6:15 a.m.	67.4	67.6
Notes: Noise measurements taken on March 4 and 5, 2010. Source: Michael Brandman Associates, 2010.						



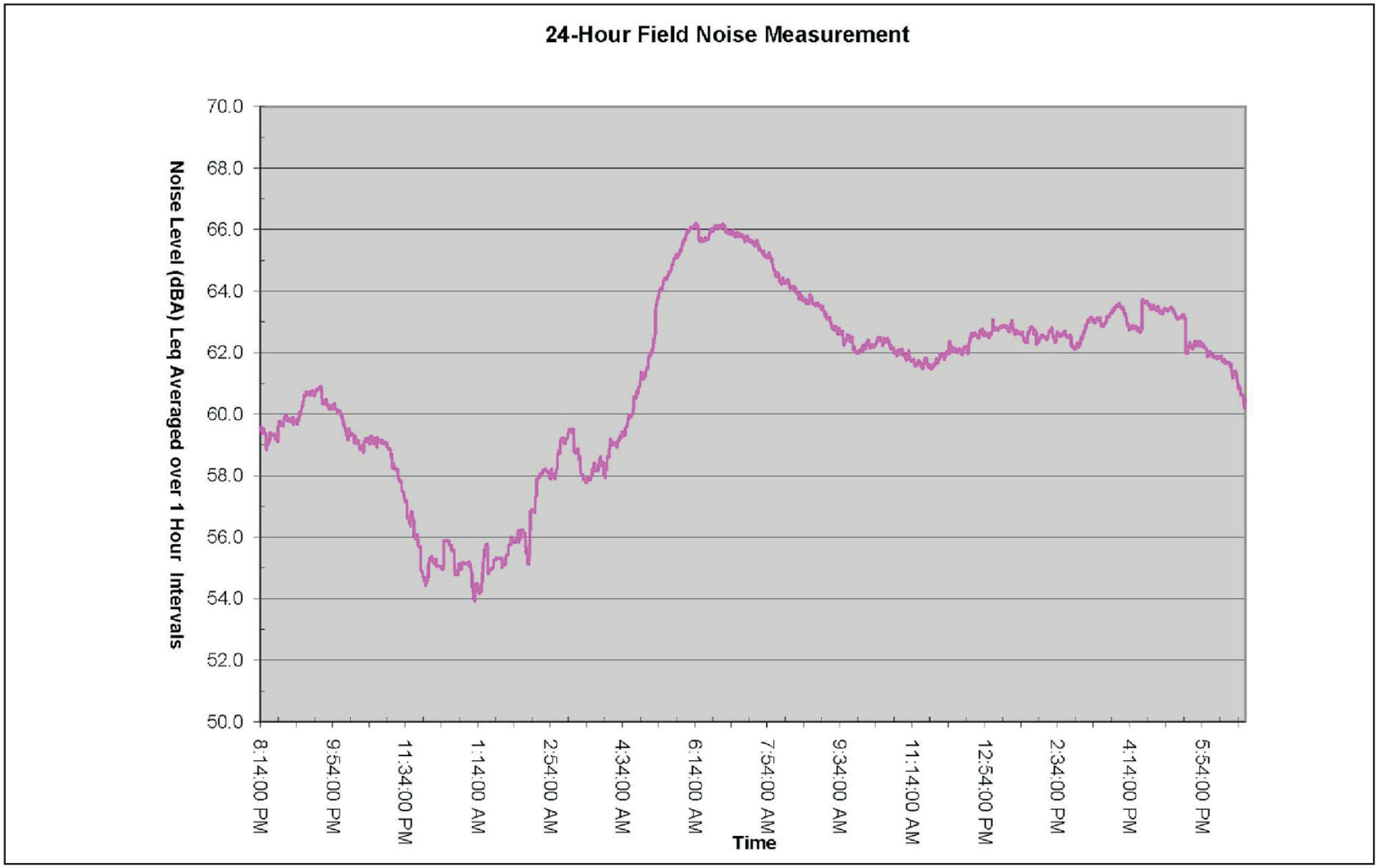
Source: DigitalGlobe, June 19, 2009.

NORTH

Michael Brandman Associates

24820003 • 07/2010 | 3.10-1_noise_measurement_loc.cdr

Exhibit 3.10-1
Noise Measurement Locations



Source: Extech Model 407780 Type 2 Integrating Sound Level Meters.

Michael Brandman Associates

24820003 • 07/2010 | 3.10-2_long_term_noise_meas.cdr

Exhibit 3.10-2
Long-Term Noise Measurement Graph

The noise measurement results show that Site A does not exceed the City's exterior noise standards of 60 dBA L_{dn} for noise sensitive areas. The 24-hour hour noise monitoring data printouts are included in Appendix H.

Modeled Existing Noise Levels at Nearby Sensitive Receptors

Sensitive receptors (e.g., residences) are located north and south of the Master Plan area. The closest residences are those on the south side of Lathrop Road, as near as 100 feet from the Master Plan area. The existing noise levels at the façades of nearby residences were calculated utilizing the SoundPlan model, which is described in Section 3.10.4 and a summary of the results is shown in Table 3.10-5. The SoundPlan model was also used to produce a noise contour map (Exhibit 3.10-3) showing the existing dBA L_{dn} in the Master Plan vicinity.

Table 3.10-5: Existing Noise Levels at Nearby Land Uses

Receiver[1]	Description	dBA L_{dn}[2]	dBA L_{eq} Day	dBA L_{eq} Night
1	Residential to the northeast	64.6	60.2	58.4
2	Residential to the east	59.2	54.8	53.0
3	Residential to the east	63.4	59.1	57.2
4	Residential to the east	63.2	58.8	56.9
5	Residential to the east	65.9	61.5	59.6
6	Residential to the east	58.3	52.7	52.3
7	Residential to the east	66.4	62.1	60.2
8	Residential to the southeast	62.0	56.7	56.0
9	Residential to the south	70.7	66.7	64.3
10	Residential to the south	69.6	65.7	63.2

Notes:
[1] Receiver noise level based on worst-case noise for either first or second floor.
[2] Noise level includes a 10-dBA penalty to account for the noise sensitive nighttime hours.
Source: Michael Brandman Associates, 2010.

Table 3.10-5 indicates that currently Receivers 1, 3, 4, 5, 7, 8, 9, and 10 currently exceeds the City's 60-dBA L_{dn} residential standard. The SoundPlan Model printouts for the existing conditions are provided in Appendix H.

Aviation Noise

The Stockton Metropolitan Airport is located approximately 2 miles northeast of the Master Plan area. Based on the year 2035 operations of the airport, the Master Plan area is located approximately 1.6 miles southwest of the nearest calculated noise contour of 60 dB CNEL. Because of the distance outside of the noise contours for the airport, the study area is not adversely impacted by aviation noise.

3.10.3 - Regulatory Framework

State

Noise Standards

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise, which is shown below in Exhibit 3.10-4.

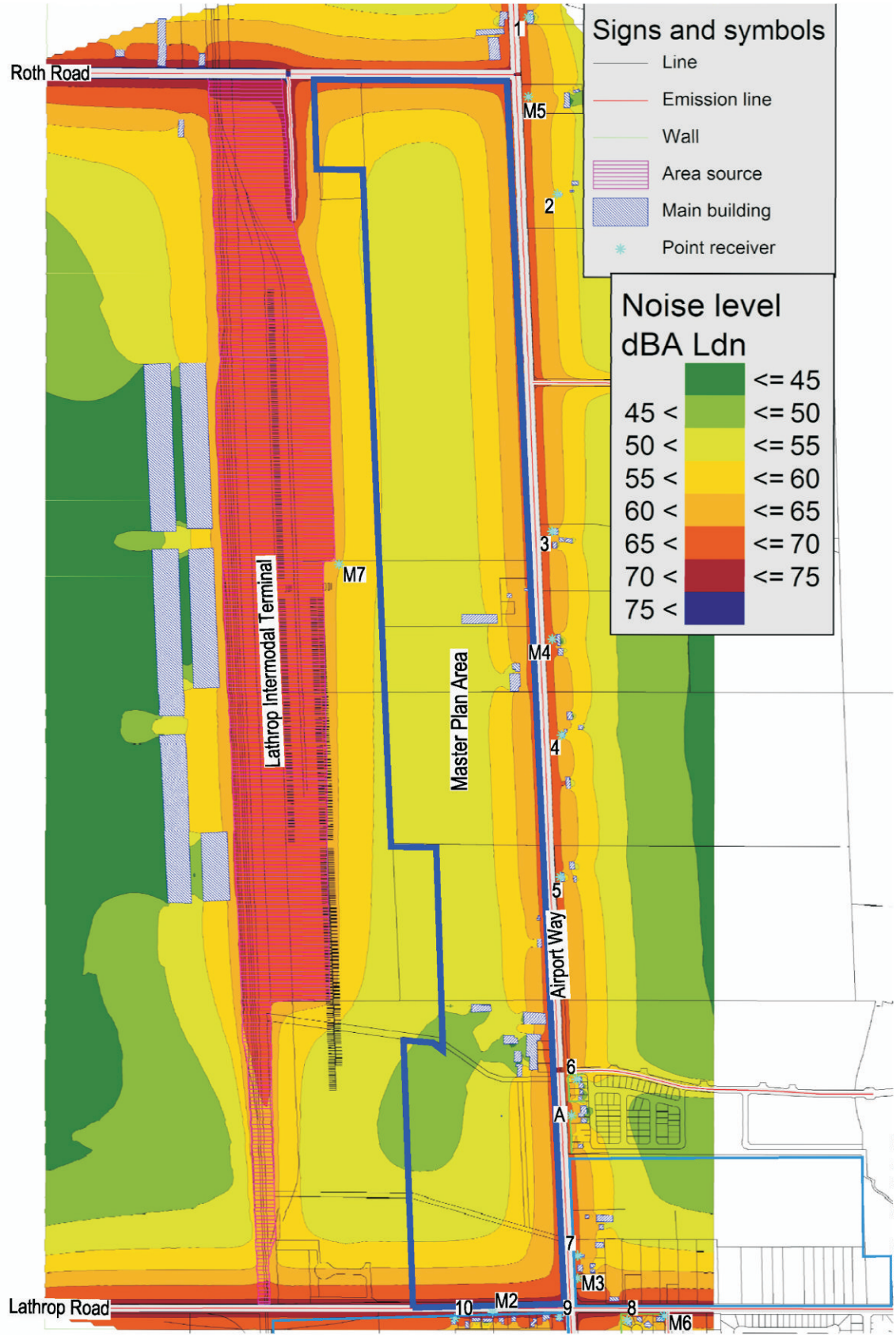
Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

Single-Event Noise Descriptors

Noise is rarely regulated by SEL descriptors. As previously discussed, the SEL descriptor represents the acoustic energy of a single event normalized to a 1-second event duration, while L_{dn} and CNEL represent the weighted average of the intensity of noise over a 24-hour period, with adjustments for nighttime noise sensitivity. The City of Manteca General Plan does not establish SEL standards.

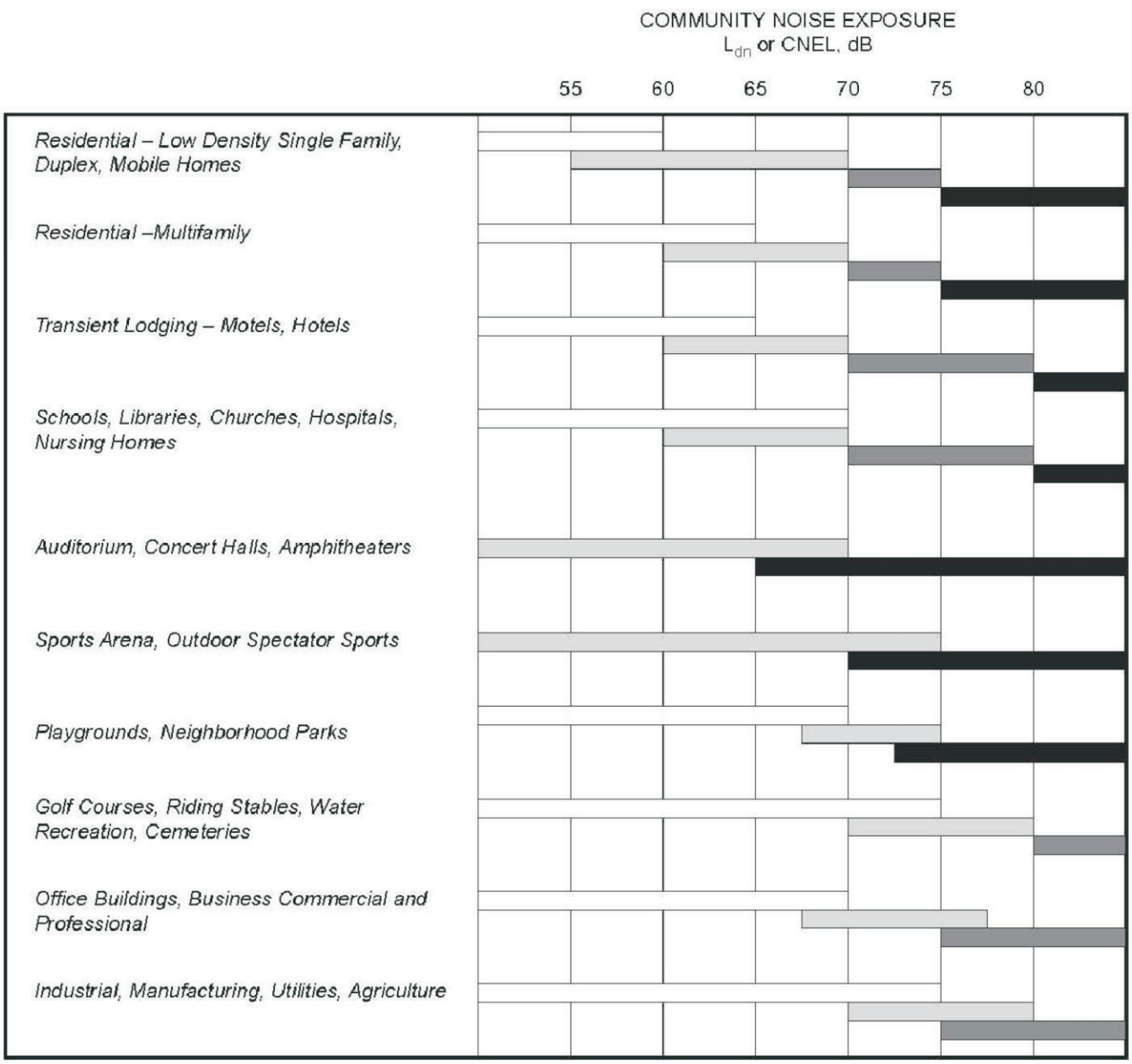
However, the courts have indirectly recognized SEL limits for unique circumstances such as sleep disturbance from aircraft overflights (e.g., *Berkeley Keep Jets Over the Bay Com. V. Bd of Port Comrs. of Oakland*, 91 Cal. App. 4th 1344 [2001]). In the Berkeley decision, the court held that impacts to sleep disturbance should be analyzed using the SEL descriptor, in addition to analyzing the L_{dn} or CNEL noise impacts. The ruling did not recommend a specific SEL noise threshold for sleep disturbance. A threshold for sleep disturbance is not absolute, since a high degree of variability exists from one person to another. As a result, no government agencies have suggested what frequencies of awakenings are acceptable. For these reasons, the Federal Interagency Committee on Noise and the California Airport and Land Use Planning Handbook continue to use L_{dn} or CNEL as the primary tool for land use compatibility planning and do not establish SEL standards. Since the L_{dn} and CNEL



Source: SoundPlan Version 7.0.

Michael Brandman Associates

Exhibit 3.10-3
Existing Noise Contour Map (dBA Ldn)



LEGEND:

NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

NORMALLY UNACCEPTABLE
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 neede noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

Source: California Department of Health. *Guidelines for the Preparation and Content of Noise Elements of the General Plan.* November, 1990.

Source: California Department of Health, 1990.

Michael Brandman Associates

Exhibit 3.10-4
Land Use Compatibility Matrix

represent the cumulative exposure to all single events—that is, the exposure of all SELs taken together, weighed to add penalties for nighttime occurrences and averaged over a 24-hour period—the L_{dn} and CNEL-based standards already account for the individual impacts associated with SELs.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

Caltrans issued the Transportation- and Construction-Induced Vibration Guidance Manual in 2004. The manual provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

Local

City of Manteca

General Plan

The General Plan establishes the following policies associated with noise that are relevant to the proposed project:

N-P-1: Areas within Manteca exposed to existing or projected exterior noise levels from mobile noise sources exceeding the performance standards in Table 9-1 [Table 3.10-6] shall be designated as noise-impacted areas.

N-P-4: The City shall require stationary noise sources proposed adjacent to noise sensitive uses to be mitigated so as to not exceed the noise level performance standards in Table 9-2 [Table 3.10-7].

N-P-5: In accord with the Table 9-2 [Table 3.10-7] standards, the City shall regulate construction-related noise impacts on adjacent uses.

N-P-7: Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with noise performance levels of Tables 9-1 [Table 3.10-6] and 9-2 [Table 3.10-7].

N-P-12: The City shall require new roadways to be mitigated so as to not exceed the noise levels specified in Table 9-1 [Table 3.10-6]. Widening or other improvement projects of existing roadways shall be mitigated to the most practical extent.

Table 3.10-6: City of Manteca Maximum Allowable Noise Exposure Mobile Noise Sources

Land Use[4]	Outdoor Activity Area[1]	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[3]
Residential	60[2]	45	—
Transient Lodging	60[2]	45	—
Hospitals, Nursing Homes	60[2]	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Music Halls	60[2]	—	40
Office Buildings	65	—	45
Schools, Libraries, Museums	—	—	45
Playgrounds, Neighborhood Parks	70	—	—

Notes:
1 Outdoor activity areas for residential development are considered backyard patios or decks of single-family dwellings, and the common areas where people generally congregate for multi-family developments. Outdoor activity areas for non-residential developments are considered those common areas where people generally congregate, including pedestrian plazas, seating areas, and outside lunch facilities. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.
2 In areas where it is not possible to reduce exterior noise levels to 60 dB L_{dn} or below using a practical application of best noise-reduction technology, an exterior noise level of up to 65 dB L_{dn} will be allowed.
3 Determined for a typical worst-case hour during periods of use.
4 Where a proposed use is not specifically listed on the table, the use shall comply with the noise exposure standards for the nearest similar use as determined by the City.
Source: City of Manteca, 2003.

Table 3.10-7: City of Manteca Performance Standards for Stationary Noise Sources

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB	50	45
Maximum Level, dB	70	65

Notes:
1 Each of the noise levels specified above should be lowered by five (5) dB for simple noise tones, noises consisting primarily of speech or music, or recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints.
2 No standards have been included for interior noise levels. Standard construction practices should with the exterior noise levels identified, result in acceptable interior noise levels.
Source: City of Manteca, 2003.

The General Plan establishes the following implementation measures associated with noise that are relevant to the proposed project:

N-I-3: In making a determination of impact under the California Environmental Quality Act (CEQA), a substantial increase will occur if ambient noise levels are increased by 10 dB or more. An increase from 5-10 dB may be substantial. Factors to be considered in determining the significance of increases from 5-10 dB include:

- The resulting noise levels
- The duration and frequency of the noise
- The number of people affected
- The land use designation of the affected receptor sites
- Public reactions or controversy as demonstrated at workshops or hearings, or by correspondence
- Prior CEQA determinations by other agencies specific to the project.

N-I-4: Control noise at the source through the use of insulation, berms, building design and orientation, buffer space, staggered operating hours and other techniques. Use noise barriers to attenuate noise to acceptable levels.

Municipal Code

The Municipal Code defines the following noise regulations that are relevant to the proposed project:

- **Section 9.52.040 Specific Prohibited Uses**

  Notwithstanding any other provisions of this chapter, the following acts and the causing or permitting thereof, are declared and deemed to be in violation of this chapter:

  D. Engines, Motors and Mechanical Devices Near Residential District. The sustained, continuous or repeated operation or use between the hours of ten p.m. and eight a.m. of any motor or engine or the repair, modification, reconstruction, testing or operation of any automobile, motorcycle, machine, contrivance, or mechanical device or other contrivance or facility unless such motor, engine, automobile, motorcycle, machine or mechanical device is enclosed within a sound insulated structure so as to prevent noise and sound from being plainly audible at the property line of the property from which the sound is emanating.

  F. Loading and Unloading. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building material, garbage cans or similar objects between the hours of 10 p.m. and eight a.m. in such a manner to cause noise disturbance, except for solid waste collection.

  G. Nonemergency Signaling Devices. Sounding or permitting the sounding of any electronically amplified signal from any bell, chime, siren, whistle or similar device, intended primarily for nonemergency purposes, from any place between the hours of ten p.m. and eight a.m. and in no event for more than ten consecutive seconds in any hourly period outside those hours.

  J. Commercial Establishments Adjacent to Residential Property. Notwithstanding any provision of this code to the contrary, continuous, repeated or sustained noise from the premises of any commercial establishment which is adjacent to one or more residential dwelling units, including any outdoor area part of or under the control of the establishment,

between the hours of ten p.m. and eight a.m. that is plainly audible from the residential dwelling unit's property line.

K. Construction Equipment. The use or operation of any construction equipment between the hours of eight p.m. and seven a.m. and is sufficiently loud as to be plainly audible at the property line of the property from which the sound is emanating (Ord. 1374 § 1(part), 2007).

3.10.4 - Methodology

Michael Brandman Associates evaluated the proposed project's noise impacts through noise measurements and modeling of project noise impacts. The analysis is described below.

Measurement Procedure and Criteria

To ascertain the existing noise at and adjacent to the Master Plan area, field monitoring was conducted on Thursday, March 4, 2010 and Friday, March 5, 2010. The field survey noted that noise within the Master Plan vicinity is generally characterized by vehicle traffic on Airport Way, Roth Road, and Lathrop Road, from the Union Pacific Railroad Lathrop Intermodal Terminal west of the Master Plan area and from the existing industrial uses on the Master Plan area. In addition, no aircraft overflights were observed during the noise measurements.

Noise monitoring was performed using two different styles of noise meters for the short-term measurements and the 24-hour measurement, which are described below.

Short-Term Noise Measurements

The short-term noise measurements were taken using a Larson-Davis Model 824 Type 1 precision sound level meter programmed in "slow" mode to record noise levels in "A" weighted form as well as the frequency spectrum of the noise broken down into 1/3 octaves. The sound level meter and microphone were mounted on a tripod 5 feet above the ground and were equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. The unit meets the requirements of the ANSI Standard S1.4-1984 and the IEC Standard 942: 1988 for Class 1 equipment. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

All traffic noise measurement durations were measured according to the standards stated in Section N-3320 of the Caltrans Technical Noise Supplement, which specifies that the measurements be a duration of at least 10 minutes and shall be continued past 10 minutes until the fluctuations in the displayed L_{eq} are less than 0.5 dBA.

Long-Term Noise Measurement

The long-term noise measurement was taken using an Extech Model 407780 Type 2 integrating sound level meter programmed in "slow" mode to record the sound pressure level at 3-second intervals for approximately 24 hours in "A" weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded. The sound level meters and microphones were mounted on tripods 5 feet above the ground and were equipped with windscreens during all measurements. The sound level meter was calibrated before and after the monitoring using an Extech calibrator, Model 407766. All noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise measurements of the current noise sources located within the Master Plan area, to provide a baseline for any potential noise impacts that may be created by development of the proposed Master Plan uses, and to provide a representative sampling of the existing noise environment. The sites are described in Table 3.10-3 and Table 3.10-4, and are shown in Exhibit 3.10-1. Appendix H includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 7:44 p.m. on March 4, 2010 and ran until 7:24 p.m. on March 5, 2010. When the long-term noise measurement was started the sky was clear, temperature was 51 degrees Fahrenheit (°F), barometric pressure was 30.07 inches of mercury, 53 percent humidity, and there was no wind. When the short-term noise measurements were started in the morning, the sky was clear, temperature was 42°F, barometric pressure was 30.06 inches of mercury, 69 percent humidity, and the wind averaged 2 miles per hour. When the afternoon noise measurements were started, the sky was hazy, temperature was 59°F, barometric pressure was 29.92 inches of mercury, and the wind averaged 2 miles per hour. Overnight, the temperature dropped to 36°F and there were low clouds.

SoundPlan Noise Modeling Software

Because noise in the Master Plan vicinity is created by multiple roadways, parking lots, and stationary sources, the SoundPlan Version 7.0 noise modeling software was used. SoundPlan's road noise, parking lot noise, and stationary noise source algorithms are based on the FHWA Traffic Noise Model (FHWA TNM Model). The FHWA TNM Model is a more sophisticated model than the FHWA-ROAD-77-108 Model and unlike the FHWA-ROAD-77-108 Model is capable of providing a relatively accurate prediction of noise from trucks traveling less than 25 miles per hour. The SoundPlan Model requires the input of roadways and the locations of the noise measurement receivers. Stationary noise sources with associated frequency spectrums, sound barriers, terrain contour lines, building placement, and specific ground coverage zones may be incorporated as well.

The site plan and aerial photos were used to determine the placement of the roadways, parking lots, and stationary sources as well as to establish the terrain in the Master Plan vicinity. The ground coverage of loose soil was used for all areas in the SoundPlan Model that were not defined by buildings, parking lots, or roadways. In addition, the default temperature (68°F) and default humidity (50 percent) were used in the SoundPlan Model.

Roadway Assumptions

The model analyzed the noise impacts from the nearby roadways onto the Master Plan vicinity. All roadways were based on a single-lane-equivalent noise source combining both directions of travel. A single-lane-equivalent noise source is where the vehicular traffic from all lanes is combined into a theoretical single lane that has a width equal to the distance between the two outside lanes of a roadway, which provides almost identical results to analyzing each lane separately where elevation changes are minimal. In order to convert the peak hour traffic volumes provided in the Traffic Impact Analysis prepared by Fehr & Peers Transportation Consultants into average daily traffic (ADT) volumes a multiplier was determined by comparing the provided existing ADT volumes to the peak hour volumes, which found the multiplier of 12 provides the best match between the two traffic volumes.

The roadway parameters used for the SoundPlan modeling are presented in Table 3.10-8. The roadway classifications are based on the City of Manteca and County of San Joaquin General Plan Circulation Elements. The roadway speed is based on posted speed limits.

Table 3.10-8: SoundPlan Model Existing Roadway Parameters

Roadway	Segment	Vehicle Speed (miles per hour)	Existing Average Daily Trip Volumes
Lathrop Intermodal Terminal Driveway	South of Roth Road	25	2,400
Airport Way	North of Roth Road	45	6,500
Airport Way	South of Roth Road	45	6,600
Airport Way	South of Daisywood Drive	45	6,400
Airport Way	South of Lathrop Road	45	7,600
Roth Road	West of Lathrop Intermodal Terminal Driveway	45	6,100
Roth Road	West of Airport Way	45	3,600
Daisywood Drive	East of Airport Way	25	700
Lathrop Road	West of Airport Way	45	12,800
Lathrop Road	East of Airport Way	45	10,500
Lovelace Road	East of Airport Way	45	700
Source: Fehr & Peers Transportation Consultants, 2010; Michael Brandman Associates, 2010.			

Table 3.10-9 presents the hourly traffic flow distributions (vehicle mixes) used in this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA and SoundPlan Models. The vehicle mixes were calculated based on the truck percentage calculations provided in the Traffic Impact Analysis.

Table 3.10-9: Roadway Vehicle Mixes

Roadway Classification	Vehicle Type	Hourly Traffic Flow Distributions (percent)			
		Day (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	Overall
Collectors	Automobiles	73.6	13.6	10.2	97.4
	Medium Trucks	0.9	0.9	0.0	1.8
	Heavy Trucks	0.4	0.0	0.4	0.7
Arterials	Automobiles	69.5	12.9	9.6	92.0
	Medium Trucks	1.4	0.1	1.5	3.0
	Heavy Trucks	2.4	0.1	2.5	5.0
Roth Road	Automobiles	49.8	10.2	11.9	72.0
	Medium Trucks	2.0	0.5	0.8	3.4
	Heavy Trucks	16.5	2.0	6.2	24.6
Lathrop Intermodal Terminal Driveway	Automobiles	15.2	3.1	3.7	22.0
	Medium Trucks	6.0	1.5	2.5	10.0
	Heavy Trucks	45.6	5.4	17.0	68.0
Arterials With Project	Automobiles	59.8	11.1	8.3	86.4
	Medium Trucks	1.8	1.5	0.1	3.4
	Heavy Trucks	6.1	1.5	2.5	10.2
Onsite Roads	Automobiles	22.2	4.5	5.3	32.0
	Medium Trucks	6.6	1.7	2.8	11.0
	Heavy Trucks	38.2	4.6	14.3	57.0

Source: Fehr & Peers Transportation Consultants, 2010; Michael Brandman Associates, 2010.

In order to determine the height above the road grade from where the noise is being emitted, each type of vehicle has been analyzed independently, with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the exhaust pipe, tires, and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

Lathrop Intermodal Facility

The Union Pacific Railroad Lathrop Intermodal Terminal is located on the west side of the Master Plan area. Currently the terminal has capacity to perform 270,000 lifts per year. A lift consists of a transfer of cargo from a truck to a train or vice versa. The Union Pacific Railroad 10-K Annual Report indicates that 250,000 lifts occurred at this facility in 2009. Noise Measurement M7 was taken in order to capture the noise created by the facility, which measured noise levels of 56.5 dB L_{eq} and 70.0 dB L_{max} at 80 feet from the facility. The facility was modeled as an area source 8 feet above ground level and calibrated to the 56.5 dB L_{eq} at 80 feet. The 1/3 octave center frequency sound pressure levels from the reference noise measurement was inputted into the SoundPlan Model, in order for the Model to calculate the appropriate sound attenuation rates. The reference noise measurement was also cross-checked for pure tones, which found no pure tones were created during the noise measurement. The facility was modeled as being 100 percent operational between 7 a.m. and 10 p.m. and 50 percent operational between 10 p.m. and 7 a.m.

Existing Sound Walls

In order to provide an accurate representation of the existing noise environment, the nearby existing walls were incorporated into the SoundPlan model. All the walls that were modeled are 6 feet in height and are located on the east side of Airport Way, south of Daisywood Drive and on the south side of Lathrop Road and west of Pasado Avenue. Because of their nominal heights, all walls were modeled based on the same sound attenuation qualities with no reflection.

Modeling Calibration

Receivers were placed at the location of the noise measurement sites in order to assist in the calibration of the model as well as to verify the accuracy of the SoundPlan Model. Table 3.10-10 and Table 3.10-11 provide a summary of the calculated results and a comparison with the measured results shown above in Table 3.10-3 and Table 3.10-4.

Table 3.10-10: Model Calibration of Existing Short-Term Noise Levels

Site No.	Primary Noise Source	Calculated Daytime Noise Level[1] (dBA L_{eq})	Measured Noise Level[2] (a.m./p.m.) (dBA L_{eq})	Difference (a.m./p.m.)
M2	Traffic noise from Lathrop Road	70.2	71.3/72.2	-1.1/-2.0
M3	Traffic noise from Airport Way	64.0	65.0/62.2	-1.0/1.8
M4	Traffic noise from Airport Way	61.7	63.2/63.0	-1.5/-1.3
M5	Traffic noise from Airport Way and Roth Road	61.5	62.6/61.1	-1.1/0.4
M6	Traffic noise from Lathrop Road and Pasado Avenue	66.2	67.7/67.9	-1.5/-1.7
M7	Lathrop Intermodal Terminal	56.5	56.5	0.0

Table 3.10-10 (cont.): Model Calibration of Existing Short-Term Noise Levels

Site No.	Primary Noise Source	Calculated Daytime Noise Level[1] (dBA L_{eq})	Measured Noise Level[2] (a.m./p.m.) (dBA L_{eq})	Difference (a.m./p.m.)
Notes: [1] Noise level calculated from SoundPlan Version 7.0. [2] Noise measurements taken on March 5, 2010. Source: Michael Brandman Associates, 2010.				

Table 3.10-11: Model Calibration of Existing Long-Term Noise Level

Site No.	Primary Noise Source	Calculated Noise Level[1] (dBA L_{dn})	Measured Noise Level[2] (dBA L_{dn})	Difference
A	Traffic noise from Airport Way and noise from industrial sources.	65.7	67.4	-1.7
Notes: [1] Noise level calculated from SoundPlan Version 7.0. [2] Noise measurements taken on March 4 and 5, 2010. Source: Michael Brandman Associates, 2010.				

Table 3.10-10 shows that the SoundPlan Model is within 2.0 dB of all the other noise measurements and below the 3.0-dBA threshold of perception. Table 3.10-11 above shows the model calibration accuracy to the long-term noise measurement and found that the model is within 1.7 dB of the measured noise level. Therefore, based on the field noise measurements, the SoundPlan Model provides an accurate representation of the Master Plan area noise levels.

FHWA-ROAD-77-108 Traffic Noise Prediction Model

The projected offsite roadway noise impacts from vehicular traffic were projected using a computer program that replicates the FHWA Traffic Noise Prediction Model FHWA-ROAD-77-108. Although the FHWA-ROAD-77-108 model is less sophisticated than the FHWA TNM model, the FHWA-ROAD-77-108 model still provides accurate noise prediction of roads where the speed is greater than 25 miles per hour and is a useful tool in screening offsite roads for potential noise impacts. The FHWA-ROAD-77-108 Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level. Adjustments are then made to the reference energy mean emission level to account for the roadway active width (the distance between the center of the outermost travel lanes on each side of the roadway); the total ADT and the percentage of ADT that flows during the day, evening, and night; the travel speed; the vehicle mix on the roadway, which is a percentage of the volume of automobiles, medium trucks, and heavy trucks; the roadway grade; the angle of view of the observer exposed to the roadway; and the site conditions (hard or soft) as they relate to the absorption of the ground, pavement, or landscaping.

Traffic Noise Prediction Model Inputs

The roadway parameters used for this study are presented below in Table 3.10-12. The roadway classifications are based on the City of Manteca and County of San Joaquin General Plan Circulation Elements. The roadway speed is based on the posted speed limits. Since the analyzed roadways have either landscaped areas or soft dirt adjacent to the roadways, soft-site conditions were used to develop noise contours and analyze noise impacts to the Master Plan area. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees.

Table 3.10-12: FHWA Model Roadway Parameters

Roadway	Segment	General Plan Classification	Vehicle Speed (miles per hour)
5th Street	North of Lathrop Road	Collector	25
McKinley Avenue	South of Lathrop Road	4-Lane Arterial	45
Airport Way	North of French Camp Road	6-Lane Arterial	45
Airport Way	North of Roth Road	6-Lane Arterial	45
Airport Way	South of Roth Road	6-Lane Arterial	45
Airport Way	South of Daisywood Drive	6-Lane Arterial	45
Airport Way	South of Lathrop Road	6-Lane Arterial	45
Airport Way	South of Hastings Drive	6-Lane Arterial	45
Airport Way	South of Louise Way	6-Lane Arterial	45
Union Road	North of Lathrop Road	4-Lane Arterial	45
Union Road	South of Lathrop Road	4-Lane Arterial	45
French Camp Road	West of Airport Way	4-Lane Arterial	55
French Camp Road	East of Airport Way	4-Lane Arterial	55
Roth Road	West of Lathrop Intermodal Terminal Driveway	6-Lane Arterial	45
Roth Road	West of Airport Way	6-Lane Arterial	45
Daisywood Drive	East of Airport Way	Collector	25
Lathrop Road	West of 5th Street	4-Lane Arterial	45
Lathrop Road	West of McKinley Avenue	4-Lane Arterial	50
Lathrop Road	West of Airport Way	4-Lane Arterial	45
Lathrop Road	East of Airport Way	4-Lane Arterial	45
Lathrop Road	East of Union Road	4-Lane Arterial	45
Hastings Drive	East of Airport Way	Collector	25
Louise Avenue	West of Airport Way	4-Lane Arterial	45
Louise Avenue	East of Airport Way	4-Lane Arterial	45
Source: Fehr & Peers Transportation Consultants, 2010; City of Manteca, 2003; County of San Joaquin, 2009.			

In order to determine the offsite project generated traffic noise impacts, the ADT volumes on the study area roadways were obtained from the Traffic Impact Analysis. The ADT volumes were provided for the existing year, existing plus project, cumulative baseline, and cumulative plus project scenarios. The ADT volumes were either directly provided by the Traffic Impact Analysis or calculated by multiplying the p.m. peak-hour intersection volumes by 12. The calculated ADT volumes are shown in Table 3.10-13.

Table 3.10-13: Offsite Roadways Average Daily Traffic Volumes

Roadway	Segment	Average Daily Traffic			
		Existing	Existing With Project	Cumulative Base	Cumulative With Project
5th Street	North of Lathrop Road	4,300	4,300	4,800	5,000
McKinley Avenue	South of Lathrop Road	1,700	1,800	2,900	3,200
Airport Way	North of French Camp Road	8,400	8,700	15,800	16,900
Airport Way	North of Roth Road	6,500	6,800	17,000	18,500
Airport Way	South of Roth Road	6,600	7,000	14,700	17,300
Airport Way	South of Daisywood Drive	6,400	8,500	26,900	31,800
Airport Way	South of Lathrop Road	7,600	8,200	20,400	23,300
Airport Way	South of Hastings Drive	7,500	8,300	20,300	23,400
Airport Way	South of Louise Way	11,100	11,700	24,000	26,000
Union Road	North of Lathrop Road	6,000	6,000	21,400	21,900
Union Road	South of Lathrop Road	9,600	9,800	18,000	18,700
French Camp Road	West of Airport Way	8,700	8,700	12,500	12,700
French Camp Road	East of Airport Way	9,300	9,300	15,600	15,800
Roth Road	West of Lathrop Intermodal Terminal Driveway	6,100	7,500	14,800	19,200
Roth Road	West of Airport Way	3,600	5,000	9,200	11,300
Daisywood Drive	East of Airport Way	700	800	7,000	7,300
Lathrop Road	West of 5th Street	14,600	15,400	28,800	31,400
Lathrop Road	West of McKinley Avenue	14,900	15,700	29,200	31,900
Lathrop Road	West of Airport Way	12,800	13,500	25,800	28,600
Lathrop Road	East of Airport Way	10,500	11,300	21,100	24,500
Lathrop Road	East of Union Road	13,400	14,300	26,500	28,900
Hastings Drive	East of Airport Way	1,200	1,300	1,800	2,000
Louise Avenue	West of Airport Way	11,200	11,300	22,600	22,900
Louise Avenue	East of Airport Way	11,500	11,700	23,000	23,600
Source: Fehr & Peers Transportation Consultants, 2010; Michael Brandman Associates, 2010.					

The vehicle mixes used in the FHWA-ROAD-77-108 Model have been provided previously in Table 3.10-9. The FHWA-ROAD-77-108 Model utilized the Collectors, Arterial and Arterials With Project mixes, which are based on the vehicles mixes provided in the Traffic Impact Analysis.

Source Assumptions

To assess the roadway noise generation in a uniform manner, all vehicles were analyzed at the single-lane-equivalent acoustic center of the roadway being analyzed. The width of each single-lane equivalent was based on the right-of-way and near-far lane length as determined by the General Plan Roadway Classifications. In order to determine the height above the road grade from where the noise is being emitted, each type of vehicle has been analyzed independently with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the exhaust pipe, tires, and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

Stationary Noise Impacts

The Master Plan allows the development of a maximum of 4,453,141 square feet of light industrial uses and 205,820 square feet of community commercial uses within the Master Plan area. At the time of this writing, most of the Master Plan uses are conceptual in nature. In the absence of specific details for each Master Plan use, the following assumptions have been made for the purposes of modeling potential noise impacts.

Onsite noise impacts have been analyzed separately from the offsite vehicular noise impacts, since onsite noise sources may be directly regulated by local jurisdictions and are typically defined as stationary source noise regulations. Since Table 3.10-5 above shows that all nearby sensitive receptors currently exceed the City's daytime and nighttime hourly L_{eq} standards, it is not possible for the proposed Master Plan uses to create a stationary noise impact that would exceed these standards. Therefore, this analysis has focused on potential stationary noise impacts from maximum noise levels.

Proposed Parking Lot Assumptions

In order to determine the potential maximum noise level created from the proposed parking lots for both the light industrial and community commercial uses, a 24-hour noise measurement was taken 10 feet from the parking lot for the Laguna Niguel Walmart, which measured noise levels of 59.5 dBA L_{eq}, 64.4 dBA L_{dn}, and 87.4 dBA L_{max} at approximately 5 feet. Since the maximum noise level occurred at 5:41 a.m., it was most likely created by a street sweeper cleaning the parking lot.

Proposed Truck Loading Areas

In order to determine the potential maximum noise level created from the proposed truck loading areas for both the light industrial and community commercial uses, a reference noise measurement was taken of an existing truck loading area during an entire truck unloading operation. During the noise measurement, a truck refrigeration unit was operational as well as the operation of a hand pallet.

The entire truck visit lasted approximately 30 minutes and recorded noise levels of 63.3 dBA L_{eq} and 76.4 dBA L_{max} at 10 feet from the edge of the loading area.

Since the proposed truck loading areas could also have trucks and forklifts that are equipped with backup beepers, the noise from backup beepers were also analyzed. According to the specifications of several forklifts, their backup beepers would range between 82 and 102 dBA. Most forklift and truck backup beepers are self-adjusting to produce a noise level 10 to 15 dB above the ambient noise level. Since the truck loading areas will have average noise levels up to 75 dB L_{eq}, the maximum backup beeper noise is anticipated to be 90 dB L_{max}.

Proposed Rooftop Mechanical Equipment Assumptions

In order to determine the potential maximum noise level created from the proposed rooftop mechanical equipment that would be installed on the rooftops of both the community commercial and light industrial uses, a reference noise measurement was taken 10 feet from an operational rooftop unit, which measured a noise level of 59.5 dBA L_{eq} and 60.3 dBA L_{max}.

Proposed Drive-Thru Speaker Noise Assumptions

The Master Plan designates 18.1 acres near the Airport Way/Lathrop Road intersection for Community Commercial uses. Since the exact layout is not yet known of the proposed community commercial center, a worst-case scenario was assumed where two drive-thru speakers for fast-food restaurant were located in the southeast corner of the site, which is the location that is the closest proximity to the nearby residences. In order to determine the noise created from a drive-thru speaker, a noise measurement was taken 10 feet from the drive-thru speaker for a McDonald's restaurant in Santa Rosa, which measured a noise level of 61.2 dBA L_{eq} and 73.6 dBA L_{max}.

Combined Stationary and Transportation Noise Impacts

In order to determine the combined stationary and transportation noise impacts created by the proposed Master Plan uses, the SoundPlan Model modeling software was utilized. The following describes the input parameters of the SoundPlan model that were modified from the existing scenario for the cumulative noise scenarios. According to the Traffic Impact Analysis, the proposed Master Plan uses would generate a net 16,326 trips that would enter or leave the Master Plan area and a gross of 19,165 trips, when the internal trips that never leave the Master Plan area are considered. In order to provide a worst-case analysis, the combined noise impacts were based on the 19,165 trips occurring onsite.

The following section provides a discussion of the modeling input parameters used in this analysis and a discussion of the resultant combined stationary and transportation noise impacts.

Approach

In order to determine the proposed Master Plan uses combined stationary and transportation impacts onto the nearby receptors, a cumulative without project scenario and a cumulative with project

scenario were analyzed using the SoundPlan model. Both scenarios were based on the SoundPlan modeling methodology presented above for the existing scenario. The following describes the input parameters of the SoundPlan model for the transportation noise sources that were modified from the existing scenario.

Proposed Onsite Roadway Assumptions

All of the proposed onsite roads have been analyzed in the SoundPlan model. The onsite roads traffic volumes have been either obtained from the Traffic Impact Analysis or estimated based on the buildings that each roadway would serve. The calculated onsite average daily traffic volumes and modeled vehicle speed, is provided in Table 3.10-14.

Table 3.10-14: SoundPlan Model Onsite Roadway Parameters

Roadway	Segment	Vehicle Speed (mph)	Average Daily Traffic
Private Roadway "F"	South of Roth Road	35	4,000
Private Roadway "A" West	North of Lathrop Road	35	3,700
Private Roadway "A" East	North of Lathrop Road	35	3,700
Private Roadway "J"	North of Private Roadway "I"	25	2,900
Private Roadway "G" North	West of Airport Way	25	1,500
Private Roadway "G" South	West of Airport Way	25	1,500
Private Roadway "E"	West of Airport Way	25	5,400
Private Roadway "I" North	West of Airport Way	25	3,700
Private Roadway "I" South	West of Airport Way	25	3,700
Source: Peters Engineering Group, 2010; Michael Brandman Associates, 2010.			

The hourly traffic flow distributions (vehicle mixes) used for the onsite roadways have been provided above in Table 3.10-9. The onsite roadways were based on the onsite roads vehicle mix, which was calculated based on 16 percent of the ADT consisting of trucks.

In order to determine the height above the road grade from where the noise is being emitted, each type of vehicle has been analyzed independently with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the exhaust pipe, tires, and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

Offsite Roadway Assumptions

The roadways that were included in the existing analysis have been re-analyzed with the parameters shown in Table 3.10-15 for both the cumulative without project and cumulative with project scenarios.

Table 3.10-15: SoundPlan Model Offsite Cumulative Roadway Parameters

Roadway	Segment	Vehicle Speed (miles per hour)	Average Daily Traffic	
			Cumulative Without Project	Cumulative With Project
Lathrop Intermodal Terminal Driveway	South of Roth Road	25	7,200	6,400
Airport Way	North of Roth Road	45	17,000	18,500
Airport Way	South of Roth Road	45	14,700	17,300
Airport Way	South of Daisywood Drive	45	26,900	31,800
Airport Way	South of Lathrop Road	45	20,400	23,300
Roth Road	West of Lathrop Intermodal Terminal Driveway	45	14,800	19,200
Roth Road	West of Airport Way	45	9,200	11,300
Daisywood Drive	East of Airport Way	25	7,000	7,300
Lathrop Road	West of Airport Way	45	25,800	28,600
Lathrop Road	East of Airport Way	45	21,100	24,500
Lovelace Road	East of Airport Way	45	2,500	2,500

Notes:
[1] Lovelace Road was not analyzed in the Traffic Impact Analysis and ADT has been estimated based on field observations.
Source: Fehr & Peers Transportation Consultants, 2010; Michael Brandman Associates, 2010.

The hourly traffic flow distributions (vehicle mixes) used in this analysis have been provided above in Table 3.10-9, and the roadways for the without project condition were assigned the same vehicle mixes used for the existing scenario. For the with project conditions, the arterial roadways were assigned the arterial with project vehicle mix, which account for the additional truck traffic generated by the proposed project.

Proposed Parking Lot Assumptions

The proposed parking lots for both the community commercial and light industrial uses were analyzed in the SoundPlan model, which provides a sound emission source specific to parking lots. The parking lot emission source is based on the different tonal contents typically created from parking lots and is primarily from engine and tire noise, slamming of car doors, pedestrians, and street sweepers. The proposed parking lots have been analyzed in the SoundPlan model, which requires input on the placement of the parking lots, the number of parking spaces in each lot, and the average number of car movements per hour that occur per space for both the daytime and nighttime.

The proposed parking lots were modeled based on the Traffic Impact Analysis gross trip generation rate of 19,165 vehicles per day and approximately 3,500 parking spaces, which produced an average

0.37 vehicle movement per space per hour during the daytime and 0.04 vehicle movement per space per hour during the nighttime.

Proposed Truck Loading Areas

The SoundPlan model also analyzed the noise impacts from the proposed truck loading docks for both the community commercial and light industrial uses throughout the proposed Master Plan. In order to determine the noise impacts from a loading dock, a reference noise measurement was taken of an existing truck loading area during an entire truck unloading operation. During the noise measurement, the truck refrigeration unit and a hand pallet were operational. The entire truck visit lasted approximately 30 minutes and recorded noise levels of 63.3 dBA L_{eq} at 10 feet from the edge of the loading area.

At buildout of the Master Plan, the uses would create approximately 2,612 truck trips per day. Since each visit to a loading dock consists of an arrival and a departure trip, this equates to approximately 1,306 loading dock visits per day. It has been estimated that the proposed Master Plan uses would contain approximately 600 loading docks[1] and based on an average visit lasting 30 minutes, each dock would be active 5 percent of each day. However, in order to account for greater activity during the daytime, this has been adjusted to 6 percent between 7 a.m. and 10 p.m. and 3 percent between 10 p.m. and 7 a.m.

Each loading area was modeled in the SoundPlan model as an area source located 8 feet above ground level and was calibrated to the measured 63.3 dBA L_{eq} at 10 feet. The 1/3 octave center frequency sound pressure levels from the reference noise measurement was also inputted into the SoundPlan Model, in order for the Model to calculate the appropriate sound attenuation rates. The reference noise measurement was also cross-checked for pure tones, which found no pure tones were created during the noise measurement. Each loading area was modeled as being active 6 percent of the time between 7 a.m. and 10 p.m. and 3 percent of the time between 10 p.m. and 7 a.m.

Proposed Rooftop Mechanical Equipment Assumptions

The SoundPlan model also analyzed the noise impacts from the rooftop mechanical equipment on the proposed community commercial and light industrial structures. The rooftop mechanical noise levels were calibrated to noise measurements of similar unit used on an existing building. The noise measurement was taken 10 feet from an operational rooftop unit, which measured a noise level of 59.5 dBA L_{eq}. The 1/3 octave center frequency sound pressure levels from the reference noise measurement were inputted into the SoundPlan Model, in order for the Model to calculate the appropriate sound attenuation rates. The reference noise measurement was also cross-checked for pure tones, which found no pure tones were created during the noise measurement of the rooftop mechanical equipment. Each rooftop mechanical equipment unit was modeled for running 50 percent

[1] Because of the conceptual nature of the various uses, a ratio of 1 loading dock/7,500 square feet of building square footage was used and then rounded to the nearest hundred to arrive at 600 loading docks.

of each hour between the hours of 7 a.m. and 7 p.m. and 20 percent of each hour between 7 p.m. and 7 a.m., which was based on the number of operational units during the noise measurement of the rooftop mechanical equipment. Each proposed structure was analyzed with an area source placed 3 feet above the center of the roof and equal to 20 percent of the size of the roof, which represents the approximate area the rooftop mechanical units occupy. Each area source was modeled based on a noise level calibrated to 59.5 dB L_{eq} at 10 feet.

Proposed Drive-Thru Speaker Noise Assumptions

The SoundPlan model also analyzed possible noise impacts from the proposed community commercial area on the southern portion of the proposed Master Plan. Since the exact layout is not yet known of the proposed retail area, a worst-case scenario was assumed where two drive-thru speakers for fast-food restaurants were located in the southeastern corner of the Master Plan area, which is the location that is the closest proximity to the nearby residences.

In order to determine the noise created from a drive-thru speaker, a noise measurement was taken 10 feet from the drive-thru speaker for a McDonald's restaurant in Santa Rosa, which measured a noise level of 61.2 dBA L_{eq}. The noise measurement captured the sound pressure level in 1/3 octaves and the frequency spectrum was entered into the SoundPlan model. The drive-thru speaker was modeled based on a noise level calibrated to 61.2 dB L_{eq} at 10 feet and operational 50 percent of the time during the daytime (7 a.m. to 10 p.m.) and operational 20 percent of the time during the nighttime, based on field observations.

Lathrop Intermodal Facility

Union Pacific Railroad is pursuing expansion of its Lathrop Intermodal Terminal from its current capacity of 270,000 lifts per year to 730,000 lifts per year. This expansion would increase the size of the facility by 145 acres. In order to account for the expansion, the proposed larger area encompassed by the facility was modeled as an area source in the SoundPlan model for both the cumulative without project and cumulative with project scenarios. Besides the larger size of the area source, all other parameters were the same as for the existing conditions.

3.10.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, noise impacts resulting from the implementation of the proposed project would be considered significant if the project would cause:

a.) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b.) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c.) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d.) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e.) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f.) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Implementation Measure N-I-3 of the City's General Plan defines what constitutes a substantial noise increase; however, this measure is dependent on the receiving land use and neighborhood response. In order to provide a consistent threshold in determining the potential impacts from transportation and combined transportation and stationary noise, Implementation Measure N-I-3 has been utilized and based on noise impacts to residential uses, which is the predominate type of sensitive receptors in the Master Plan vicinity. Project-generated increases in noise levels that exceed those outlined in the thresholds below, and that affect existing noise-sensitive land uses (receptors), are considered substantial and, therefore, would constitute a significant noise impact. The Master Plan will create a significant transportation or combined transportation and stationary noise-related impact if it would:

- Increase noise levels by 10 dB or more where the without project noise level is less than the 60-dB L_{dn} residential standard.
- Increase noise levels by 5 dB or more where the without project noise level is greater than the 60-dB L_{dn} residential standard.

Table 9-2 from the General Plan limits stationary noise levels to 50 dBA hourly L_{eq} and 70 dB L_{max} during the daytime (7 a.m. to 10 p.m.) and 45 dBA hourly L_{eq} and 65 dB L_{max} during the nighttime (10 p.m. to 7 a.m.) at any nearby residential uses. However, since the existing noise levels shown in Table 3.10-5 exceed both the daytime and nighttime hourly L_{eq} at all of the nearby residences, it is not possible for the proposed Master Plan uses to create a stationary noise impact that would exceed these standards. Therefore, this analysis has been limited to assessing potential impacts from the stationary source maximum levels.

For construction and operation related vibration levels, Caltrans thresholds presented in its Transportation- and Construction-Induced Vibration Guidance Manual, June 2004, were utilized. The report recommends a threshold of 0.04 inch per second PPV as the significance level for continuous events .

Pursuant to Section 9.52.040 of the City of Manteca Municipal Code, construction noise is considered a nuisance, and the Municipal Code places restrictions on the time when construction noise may occur. Although the Municipal Code provides an exemption to construction noise, construction noise levels may still create adverse impacts on the nearby sensitive receptors. Since neither the General Plan nor the Municipal Code provides quantitative construction noise thresholds, construction noise impacts have been analyzed based on the same thresholds described for transportation noise above.

3.10.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Construction Noise

Impact NOI-1:	**Construction activities associated with the proposed project may expose nearby land uses to excessive noise levels.**

Impact Analysis

This impact addresses checklist items a) and d).

Construction noise and vibration represent a short-term increase in ambient noise and vibration levels. Noise impacts from construction activities associated with the proposed Master Plan uses would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities.

In order for noise impacts created by construction of the proposed Master Plan uses to be considered potentially significant, the existing with construction noise level would need to either increase noise levels by 10 dB or more where the without project noise level is less than the 60-dB L_{dn} residential standard, or increase noise levels by 5 dB or more where the without project noise level is greater than the 60-dB L_{dn} residential standard.

Master Plan

Because of the size of the Master Plan, it is anticipated that its various uses will be constructed in phases over a 15-year period. Based on available information, the Master Plan uses are assumed to be constructed in three phases, described in the next passage.

Phase 1 – North Phase

The construction of this phase is anticipated to disturb approximately 124 acres. According to Section 3.3, Air Quality/Greenhouse Gas Emissions, the fine grading activities would be the phase where the most construction equipment would be simultaneously operating and would consist of one excavator, two graders, one rubber tired dozer, four scrapers, one water truck, and one of either a tractor, loader, or backhoe.

The SoundPlan model was used in order to determine the noise impacts created by this phase of construction onto the nearby residences. Since construction equipment typically operates in clusters, all of the above equipment was placed starting at the nearest point on the Master Plan area to Receiver 3 and spread out approximately 100 feet apart. Receiver 3 was chosen since it is the nearest receiver to this phase and is described above in Table 3.10-5. Each piece of equipment was analyzed as a point source and placed 8 feet above ground level and operational from 7 a.m. to 5 p.m., which are typical hours when construction occurs. The noise level of each type of equipment was calibrated to the applicable noise levels shown above in Table 3.10-1.

The existing plus construction noise at Receiver 3 was calculated at 70.0 dBA L_{dn}, while the existing noise level for Receiver 3 was calculated at 63.4 dBA L_{dn}, which shows that construction activities would increase the noise level by 6.6 dB at this location. The SoundPlan printouts of Phase 1 construction are provided in Appendix H. Since the existing noise level already exceeds the 60-dB L_{dn} residential standard, a 5-dB or greater increase would be required to create a significant impact. Therefore, a significant noise impact would occur during construction of Phase 1.

Mitigation Measure NOI-1 is proposed that would require the contractor implement various sound control measures, including limitation of construction hours, using noise attenuation devices on heavy equipment, and the use of a minimum 10-foot-high construction noise barrier along the edge of the Master Plan area within 300 feet of any offsite residence. The construction noise levels have been recalculated based on the use of a 10-foot-high noise barrier, which resulted in a noise level of 67.3 dBA L_{dn} at Receiver 3. This would result in a noise increase of 3.9 dB over the existing noise levels, which is less than the 5-dB or greater increase significance threshold.

Phase 2 – Central Phase

The construction of this phase is anticipated to disturb approximately 114 acres. According to Section 3.3, Air Quality/Greenhouse Gas Emissions, the fine grading activities would be the phase where the most construction equipment would be simultaneously operating and would consist of one grader, one rubber tired dozer, two scrapers, one water truck, and two of either a tractor, loader, or backhoe.

The SoundPlan model was used in order to determine the noise impacts created by this phase of construction onto the nearby residences. Since construction equipment typically operates in clusters, all of the above equipment was placed starting at the nearest point on the Master Plan area to Receiver 5 and spread out approximately 100 feet apart. Receiver 5 was chosen since it is the nearest receiver to this phase and is described above in Table 3.10-5. Each piece of equipment was analyzed as a point source and placed 8 feet above ground level and operational from 7 a.m. to 5 p.m., which are typical hours when construction occurs. The noise level of each type of equipment was calibrated to the applicable noise levels shown above in Table 3.10-1.

The existing plus construction noise at Receiver 5 was calculated at 71.8 dBA L_{dn}, while the existing noise level for Receiver 5 was calculated at 65.9 dBA L_{dn}, which shows that construction activities would increase the noise level by 5.9 dB at this location. The SoundPlan printouts of Phase 2 construction are provided in Appendix H. Since the existing noise level already exceeds the 60-dB L_{dn} residential standard, a 5-dB or greater increase would be required to create a significant impact. Therefore, a significant noise impact would occur during construction of Phase 2.

Mitigation Measure NOI-1 is proposed that would require the contractor implement various sound control measures, including limitation of construction hours, using noise attenuation devices on heavy equipment, and the use of a minimum 10-foot-high construction noise barrier along the edge of the Master Plan area within 300 feet of any offsite residence. The construction noise levels have been recalculated based on the use of a 10-foot-high noise barrier, which resulted in a noise level of 67.7 dBA L_{dn} at Receiver 5. This would result in a noise increase of 1.8 dB over the existing noise levels, which is less than the 5 dB or greater increase significance threshold.

Phase 3

The construction of this phase is anticipated to disturb approximately 63 acres. According to Section 3.3, Air Quality/Greenhouse Gas Emissions, the fine grading activities would be the phase where the most construction equipment would be simultaneously operating and would consist of one grader, one rubber tired dozer, one water truck, and two of either a tractor, loader, or backhoe.

The SoundPlan model was used in order to determine the noise impacts created by this phase of construction onto the nearby residences. Since construction equipment typically operates in clusters, all of the above equipment was placed starting at the nearest point on the Master Plan area to Receiver 10 and spread out approximately 100 feet apart. Receiver 10 was chosen since it is the nearest receiver to this phase and is described above in Table 3.10-5. Each piece of equipment was analyzed as a point source and placed 8 feet above ground level and operational from 7 a.m. to 5 p.m., which are typical hours when construction occurs. The noise level of each type of equipment was calibrated to the applicable noise levels shown above in Table 3.10-1.

The existing plus construction noise at Receiver 10 was calculated at 72.9 dBA L_{dn}, while the existing noise level for Receiver 10 was calculated at 69.6 dBA L_{dn}, which shows that construction activities would increase the noise level by 3.3 dB at this location. The SoundPlan printouts of Phase 3 construction are provided in Appendix H. Since the existing noise level already exceeds the 60-dB L_{dn} residential standard, a 5-dB or greater increase would be required to create a significant impact. Therefore, a less than significant noise impact would occur during construction of Phase 3.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new

construction to occur. Therefore, the proposed annexations would not have the potential to create construction noise impacts. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-1 During construction activities for all Master Plan uses, the applicant shall require its construction contractors to adhere to the following noise attenuation requirements:

- Construction activities shall be limited to the hours between 7 a.m. to 8 p.m. daily. The City of Manteca Director of Public Works shall have the discretion to permit construction activities to occur outside of allowable hours if compelling circumstances warrant such an exception (e.g., weather conditions necessary to pour concrete).
- All construction equipment shall use noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. If no noise-reduction features were installed by the manufacturer, then the contractor shall require that at least a muffler be installed on the equipment.
- Construction staging and heavy equipment maintenance activities shall be performed a minimum distance of 300 feet from the nearest residence, unless safety or technical factors take precedence (e.g., an equipment breakdown).
- A 10-foot-high construction noise barrier shall be installed along the edge of the Master Plan area within 300 feet of any offsite residence prior to start of grading activities. The noise barrier shall either be constructed of a minimum 0.5-inch plywood or utilize acoustical blankets with a minimum Sound Transmission Class of 12. The barrier shall remain in place until noise intensive aspects of construction are completed.

Level of Significance After Mitigation

Less than significant impact.

Construction and Operational Vibration

Impact NOI-2: Construction and operational activities associated with the proposed project would not generate substantial groundborne vibration.

Impact Analysis

This impact addresses checklist item b), which includes construction and operational vibration impacts associated the proposed project. Each issue is addressed separately.

Master Plan

Construction Vibration

Construction activities can produce vibration that may be felt by adjacent uses. The construction of the proposed Master Plan uses would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary sources of vibration during construction would be from bulldozers and excavators. From Table 3.10-2, a large bulldozer would be the piece of equipment that would produce the largest amount of vibration on the Master Plan area: 0.089 PPV at 25 feet. Because vibration propagates in waves through the soil, multiple pieces of equipment operating simultaneously would each produce vibration waves in different phases that typically would not increase the magnitude of the vibration; instead, multiple pieces of equipment would just lengthen the duration of the vibration impact.

The closest vibration sensitive land uses are the single-family homes to the south, with the nearest structure located approximately 100 feet from the proposed area to be disturbed during construction. It is anticipated that the vibration levels caused by a large bulldozer operating on the southern edge of the Master Plan would create a vibration level at the nearest structure of around 0.02 inch per second. This vibration level would not exceed the 0.04-inch-per-second threshold for continuous events. Therefore, construction-related vibration impacts would be less than significant.

Operational Vibration

The proposed Master Plan uses would create approximately 2,612 truck trips per day that would operate on public roads as close as 25 feet from the nearest residences. From Table 3.10-2, a loaded truck would typically produce a vibration level of 0.076 inch per second PPV at 25 feet. This vibration level would not exceed the 0.25-inch-per-second PPV transient source threshold. Therefore, vibration impacts from the ongoing operations of the proposed Master Plan uses would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to create new construction or operations-related vibration impacts. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Roadway Noise

Impact NOI-3:	The proposed project's vehicular trips would not cause a substantial permanent increase in ambient noise levels.

Impact Analysis

This impact addresses checklist items a) and c).

Master Plan

The proposed Master Plan uses would generate additional vehicular trips on roadways in the Master Plan vicinity. Noise from motor vehicles is generated by engine vibrations, the interaction between tires and the road, and the exhaust system. The potential offsite noise impacts caused by the increase in vehicular traffic from the ongoing operations from the proposed Master Plan uses onto the study area roadways have been analyzed for the following four traffic scenarios:

- **Existing Condition:** This scenario refers to the existing traffic noise conditions, without construction of the proposed project.
- **Existing With Project Condition:** This scenario refers to the existing traffic noise conditions, with construction of the CenterPoint Intermodal Center portion of the proposed project.
- **Cumulative Without Project Conditions:** This scenario refers to the future year traffic noise conditions based on the cumulative conditions that include the proposed expansion of the Lathrop Intermodal Terminal, without construction of the proposed project.
- **Cumulative With Project Conditions:** This scenario refers to the future year traffic noise conditions based on the cumulative conditions that include the proposed expansion of the Lathrop Intermodal Terminal, with construction of the entire Master Plan.

In order to quantify the traffic noise impacts along the analyzed roadways, the roadway noise contours were calculated. Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway. For analysis comparison purposes, the L_{dn} and CNEL noise levels are calculated at 60 feet from the centerline, which through field observations is representative of the nearest homes along the study area roadways. In addition, the distance from the centerline to the 55-, 60-, 65-, and 70-dBA noise levels are calculated for both L_{dn} and CNEL standards, and the noise calculation spreadsheets are provided in Appendix H.

Existing Conditions

The calculated existing condition noise contours are shown in Table 3.10-16.

Table 3.10-16: Existing Offsite Traffic Noise Contours

Roadway	Segment	L_{dn} at 60 feet (dBA)	Distance to Contour (feet)			
			70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}	55 dBA L_{dn}
5th Street	North of Lathrop Road	53.0	RW	RW	RW	44
McKinley Avenue	South of Lathrop Road	56.5	RW	RW	RW	75
Airport Way	North of French Camp Road	64.2	RW	RW	115	248
Airport Way	North of Roth Road	63.1	RW	RW	97	209
Airport Way	South of Roth Road	63.2	RW	RW	98	211
Airport Way	South of Daisywood Drive	63.1	RW	RW	96	207
Airport Way	South of Lathrop Road	63.8	RW	RW	108	232
Airport Way	South of Hastings Drive	63.7	RW	RW	107	230
Airport Way	South of Louise Way	65.4	RW	64	138	298
Union Road	North of Lathrop Road	61.9	RW	RW	81	174
Union Road	South of Lathrop Road	64.0	RW	51	111	238
French Camp Road	West of Airport Way	66.0	RW	70	150	324
French Camp Road	East of Airport Way	66.3	RW	73	157	338
Roth Road	West of Lathrop Intermodal Terminal Driveway	63.4	RW	RW	101	218
Roth Road	West of Airport Way	61.1	RW	RW	71	153
Daisywood Drive	East of Airport Way	45.1	RW	RW	RW	RW
Lathrop Road	West of 5th Street	65.8	RW	68	146	315
Lathrop Road	West of McKinley Avenue	67.2	RW	84	180	388
Lathrop Road	West of Airport Way	65.2	RW	62	134	289
Lathrop Road	East of Airport Way	64.4	RW	54	117	253
Lathrop Road	East of Union Road	65.4	RW	64	138	297
Hastings Drive	East of Airport Way	47.5	RW	RW	RW	RW
Louise Avenue	West of Airport Way	64.7	RW	57	123	264
Louise Avenue	East of Airport Way	64.8	RW	58	125	269

Notes:
RW = Noise contour is located within right-of-way of roadway.
Source: Michael Brandman Associates, 2010.

The calculated existing noise contours in Table 3.10-16 shows that currently the analyzed roadway segments of Airport Way, Union Road, Lathrop Road, and Louise Avenue exceed the City's 60-dBA L_{dn} residential standard. The noise levels from all analyzed roadway segments range from 45.1 to 67.2 dBA L_{dn}.

Existing With Project Conditions

The calculated existing with project condition noise contours are shown in Table 3.10-17.

Table 3.10-17: Existing With Project Offsite Traffic Noise Contours

Roadway	Segment	L_{dn} at 60 feet (dBA)	Distance to Contour (feet)			
			70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}	55 dBA L_{dn}
5th Street	North of Lathrop Road	53.0	RW	RW	RW	44
McKinley Avenue	South of Lathrop Road	57.3	RW	RW	RW	85
Airport Way	North of French Camp Road	64.9	RW	59	128	276
Airport Way	North of Roth Road	63.9	RW	RW	109	234
Airport Way	South of Roth Road	64.0	RW	RW	111	238
Airport Way	South of Daisywood Drive	64.8	RW	58	126	271
Airport Way	South of Lathrop Road	64.7	RW	57	123	265
Airport Way	South of Hastings Drive	64.7	RW	58	124	267
Airport Way	South of Louise Way	66.2	RW	72	156	336
Union Road	North of Lathrop Road	62.5	RW	RW	88	189
Union Road	South of Lathrop Road	64.6	RW	57	122	262
French Camp Road	West of Airport Way	66.1	RW	71	153	331
French Camp Road	East of Airport Way	66.4	RW	74	160	346
Roth Road	West of Lathrop Intermodal Terminal Driveway	64.3	RW	RW	116	250
Roth Road	West of Airport Way	62.5	RW	RW	88	191
Daisywood Drive	East of Airport Way	45.7	RW	RW	RW	RW
Lathrop Road	West of 5th Street	66.6	RW	76	165	355
Lathrop Road	West of McKinley Avenue	67.7	RW	91	196	422
Lathrop Road	West of Airport Way	66.0	RW	70	151	325
Lathrop Road	East of Airport Way	65.2	RW	62	134	289
Lathrop Road	East of Union Road	66.3	RW	73	157	338
Hastings Drive	East of Airport Way	47.8	RW	RW	RW	RW
Louise Avenue	West of Airport Way	65.2	RW	62	134	289
Louise Avenue	East of Airport Way	65.4	RW	64	137	295

Notes:
RW = Noise contour is located within right-of-way of roadway.
Source: Michael Brandman Associates, 2010.

The calculated existing with project noise contour in Table 3.10-17 shows that compared with the existing conditions, no additional roadway segments would exceed the City's 60-dBA L_{dn} residential standard. The noise levels from all analyzed roadway segments range from 45.7 to 67.7 dBA L_{dn}.

Cumulative Without Project Conditions

The calculated cumulative without project condition noise contours are shown in Table 3.10-18.

Table 3.10-18: Cumulative Without Project Offsite Traffic Noise Contours

Roadway	Segment	L_{dn} at 60 feet (dBA)	Distance to Contour (feet)			
			70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}	55 dBA L_{dn}
5th Street	North of Lathrop Road	53.5	RW	RW	RW	48
McKinley Avenue	South of Lathrop Road	58.8	RW	RW	50	107
Airport Way	North of French Camp Road	67.0	RW	81	175	378
Airport Way	North of Roth Road	67.3	RW	85	184	396
Airport Way	South of Roth Road	66.7	RW	78	167	360
Airport Way	South of Daisywood Drive	69.3	RW	116	250	538
Airport Way	South of Lathrop Road	68.1	RW	96	208	448
Airport Way	South of Hastings Drive	68.1	RW	96	207	446
Airport Way	South of Louise Way	68.8	RW	107	232	499
Union Road	North of Lathrop Road	67.5	RW	88	189	406
Union Road	South of Lathrop Road	66.7	RW	78	168	362
French Camp Road	West of Airport Way	67.6	RW	89	191	412
French Camp Road	East of Airport Way	68.5	48	103	222	478
Roth Road	West of Lathrop Intermodal Terminal Driveway	67.2	RW	85	182	393
Roth Road	West of Airport Way	65.2	RW	62	133	286
Daisywood Drive	East of Airport Way	55.1	RW	RW	RW	61
Lathrop Road	West of 5th Street	68.8	50	107	230	495
Lathrop Road	West of McKinley Avenue	70.1	61	131	282	608
Lathrop Road	West of Airport Way	68.3	46	99	214	460
Lathrop Road	East of Airport Way	67.4	RW	87	187	403
Lathrop Road	East of Union Road	68.4	47	101	218	469
Hastings Drive	East of Airport Way	49.2	RW	RW	RW	RW
Louise Avenue	West of Airport Way	67.7	RW	91	196	422
Louise Avenue	East of Airport Way	67.8	RW	92	198	426

Notes:
RW = Noise contour is located within right-of-way of roadway.
Source: Michael Brandman Associates, 2010.

The calculated cumulative without project noise contours in Table 3.10-18 shows that only the analyzed roadway segments of Airport Way, Union Road, Lathrop Road, and Louise Avenue would exceed the City's 60-dBA L_{dn} residential standard. The noise levels from all analyzed roadway segments would range from 49.2 to 70.1 dBA L_{dn}.

Cumulative With Project Conditions

The calculated cumulative with project condition noise contours are shown in Table 3.10-19.

Table 3.10-19: Cumulative With Project Offsite Traffic Noise Contours

Roadway	Segment	L_{dn} at 60 feet (dBA)	Distance to Contour (feet)			
			70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}	55 dBA L_{dn}
5th Street	North of Lathrop Road	53.7	RW	RW	RW	49
McKinley Avenue	South of Lathrop Road	59.8	RW	RW	58	124
Airport Way	North of French Camp Road	67.8	RW	92	199	429
Airport Way	North of Roth Road	68.2	RW	98	212	456
Airport Way	South of Roth Road	67.9	RW	94	202	436
Airport Way	South of Daisywood Drive	70.6	65	141	304	654
Airport Way	South of Lathrop Road	69.2	RW	115	247	532
Airport Way	South of Hastings Drive	69.2	RW	115	247	533
Airport Way	South of Louise Way	69.7	57	123	265	572
Union Road	North of Lathrop Road	68.1	45	97	208	449
Union Road	South of Lathrop Road	67.4	RW	87	187	404
French Camp Road	West of Airport Way	67.8	RW	92	197	425
French Camp Road	East of Airport Way	68.7	49	106	228	492
Roth Road	West of Lathrop Intermodal Terminal Driveway	68.4	RW	101	217	467
Roth Road	West of Airport Way	66.1	RW	71	152	328
Daisywood Drive	East of Airport Way	55.3	RW	RW	RW	63
Lathrop Road	West of 5th Street	69.7	57	123	265	570
Lathrop Road	West of McKinley Avenue	70.8	68	146	314	677
Lathrop Road	West of Airport Way	69.3	54	115	249	536
Lathrop Road	East of Airport Way	68.6	48	104	224	483
Lathrop Road	East of Union Road	69.3	54	116	250	540
Hastings Drive	East of Airport Way	49.7	RW	RW	RW	RW
Louise Avenue	West of Airport Way	68.3	46	100	214	462
Louise Avenue	East of Airport Way	68.4	47	102	219	471

Notes:
RW = Noise contour is located within right-of-way of roadway.
Source: Michael Brandman Associates, 2010.

The calculated cumulative with project noise contours in Table 3.10-19 shows that when compared with the cumulative without project condition, no additional roadway segments would exceed the City's 60-dBA L_{dn} residential standard. The noise levels from all analyzed roadway segments would range from 49.7 to 70.8 dBA L_{dn}.

Project Impacts

In order for noise impacts created by roadway noise to be considered potentially significant, the with project noise level would need to either increase noise levels by 10 dB or more where the without project noise level is less than the 60-dB L_{dn} residential standard, or increase noise levels by 5 dB or more where the without project noise level is greater than the 60-dB L_{dn} residential standard. The proposed project's offsite traffic noise impacts have been analyzed for the existing and cumulative conditions and are discussed below.

Existing Conditions

The proposed project's potential offsite noise impacts have been calculated through a comparison between the existing without project scenario and the existing with construction of the CenterPoint Intermodal Center portion of the proposed project scenario. The results of this comparison are shown below in Table 3.10-20.

Table 3.10-20: Existing Offsite Traffic Noise Contributions

Roadway	Segment	L_{dn} at 60 feet			
		No Project	With Project	Project Contribution	Potential Significant Impact?
5th Street	North of Lathrop Road	53.0	53.0	0.0	No
McKinley Avenue	South of Lathrop Road	56.5	57.3	0.8	No
Airport Way	North of French Camp Road	64.2	64.9	0.7	No
Airport Way	North of Roth Road	63.1	63.9	0.8	No
Airport Way	South of Roth Road	63.2	64.0	0.8	No
Airport Way	South of Daisywood Drive	63.1	64.8	1.7	No
Airport Way	South of Lathrop Road	63.8	64.7	0.9	No
Airport Way	South of Hastings Drive	63.7	64.7	1.0	No
Airport Way	South of Louise Way	65.4	66.2	0.8	No
Union Road	North of Lathrop Road	61.9	62.5	0.6	No
Union Road	South of Lathrop Road	64.0	64.6	0.6	No
French Camp Road	West of Airport Way	66.0	66.1	0.1	No
French Camp Road	East of Airport Way	66.3	66.4	0.1	No

Table 3.10-20 (cont.): Existing Offsite Traffic Noise Contributions

Roadway	Segment	L_{dn} at 60 feet			
		No Project	With Project	Project Contribution	Potential Significant Impact?
Roth Road	West of Lathrop Intermodal Terminal Driveway	63.4	64.3	0.9	No
Roth Road	West of Airport Way	61.1	62.5	1.4	No
Daisywood Drive	East of Airport Way	45.1	45.7	0.6	No
Lathrop Road	West of 5th Street	65.8	66.6	0.8	No
Lathrop Road	West of McKinley Avenue	67.2	67.7	0.5	No
Lathrop Road	West of Airport Way	65.2	66.0	0.8	No
Lathrop Road	East of Airport Way	64.4	65.2	0.8	No
Lathrop Road	East of Union Road	65.4	66.3	0.9	No
Hastings Drive	East of Airport Way	47.5	47.8	0.3	No
Louise Avenue	West of Airport Way	64.7	65.2	0.5	No
Louise Avenue	East of Airport Way	64.8	65.4	0.6	No
Source: Michael Brandman Associates, 2010.					

Table 3.10-20 above shows that for the existing conditions, noise level contributions from the proposed project to the study area roadways would range from 0.0 to 1.7 dBA. A 1.7-dBA noise increase would be below the 5-dB increase significance threshold for areas where the without project level already exceeds the 60-dB L_{dn} residential standard. Therefore, for the existing conditions a less than significant offsite noise impact from project-related vehicle traffic noise would occur along the study area roadways.

Cumulative Conditions

The proposed project's potential offsite noise impacts have been calculated through a comparison between the cumulative without-project scenario and the cumulative with construction of the entire Master Plan portion of the proposed project scenario. The results of this comparison are shown below in Table 3.10-21.

Table 3.10-21: Cumulative Offsite Traffic Noise Contributions

Roadway	Segment	L_{dn} at 60 feet			
		No Project	With Project	Project Contribution	Potential Significant Impact?
5th Street	North of Lathrop Road	53.5	53.7	0.2	No
McKinley Avenue	South of Lathrop Road	58.8	59.8	1.0	No
Airport Way	North of French Camp Road	67.0	67.8	0.8	No
Airport Way	North of Roth Road	67.3	68.2	0.9	No
Airport Way	South of Roth Road	66.7	67.9	1.2	No
Airport Way	South of Daisywood Drive	69.3	70.6	1.3	No
Airport Way	South of Lathrop Road	68.1	69.2	1.1	No
Airport Way	South of Hastings Drive	68.1	69.2	1.1	No
Airport Way	South of Louise Way	68.8	69.7	0.9	No
Union Road	North of Lathrop Road	67.5	68.1	0.6	No
Union Road	South of Lathrop Road	66.7	67.4	0.7	No
French Camp Road	West of Airport Way	67.6	67.8	0.2	No
French Camp Road	East of Airport Way	68.5	68.7	0.2	No
Roth Road	West of Lathrop Intermodal Terminal Driveway	67.2	68.4	1.2	No
Roth Road	West of Airport Way	65.2	66.1	0.9	No
Daisywood Drive	East of Airport Way	55.1	55.3	0.2	No
Lathrop Road	West of 5th Street	68.8	69.7	0.9	No
Lathrop Road	West of McKinley Avenue	70.1	70.8	0.7	No
Lathrop Road	West of Airport Way	68.3	69.3	1.0	No
Lathrop Road	East of Airport Way	67.4	68.6	1.2	No
Lathrop Road	East of Union Road	68.4	69.3	0.9	No
Hastings Drive	East of Airport Way	49.2	49.7	0.5	No
Louise Avenue	West of Airport Way	67.7	68.3	0.6	No
Louise Avenue	East of Airport Way	67.8	68.4	0.6	No
Source: Michael Brandman Associates, 2010.					

Table 3.10-21 shows that for the cumulative conditions, noise level contributions from the proposed project to the study area roadways would range from 0.2 to 1.3 dBA. A 1.3-dBA noise increase would be below the 5-dB increase significance threshold for areas where the without project level already exceeds the 60-dB L_{dn} residential standard. Therefore, for the cumulative conditions a less

than significant offsite noise impact from project-related vehicle traffic noise would occur along the study area roadways.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to create new vehicular trips and associated roadway noise impacts. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Stationary Noise

Impact NOI-4:	**The proposed project would not generate stationary noise levels that cause significant impacts at nearby receptors.**

Impact Analysis

This impact addresses checklist items a) and c).

Master Plan

The proposed Master Plan uses would have potential stationary noise impacts on the nearby residences from the proposed onsite roads, rooftop mechanical equipment, truck loading areas, parking lot areas, and other sources associated with retail uses including drive-thru speakers. Note that "stationary noise" includes onsite vehicle movements, which are transport-related in nature but are occurring within the site boundaries, and therefore have been accounted for in this analysis.

An impact would occur if the stationary noise sources would exceed 50 dB L_{eq} or 70 dB L_{max} between 7 a.m. and 10 p.m. or 45 dB L_{eq} or 65 dB L_{max} between 10 p.m. and 7 a.m. However, since the existing noise levels shown above in Table 3.10-5 exceed both the daytime and nighttime hourly L_{eq} at all of the nearby residences, it is not possible for the proposed Master Plan uses to create a stationary noise impact that would exceed the L_{eq} standards. Therefore, this analysis has been limited to assessing potential impacts from the stationary source maximum levels.

A maximum noise level consists of the highest instantaneous noise level during a specified time period. Maximum noise levels from the proposed project would typically occur from slamming of truck doors or start up and shutdown of mechanical equipment. The maximum noise levels typically

would last around a second and would occur only a few times a day. Therefore, it is very unlikely to have maximum noise levels from multiple sources occurring simultaneously. Because of this, the maximum noise level from each source has been analyzed separately through the use of the FHWA-RD-77-108 model. Each source was analyzed as a point source, since the L_{max} would occur from one action such as the slamming of a truck door. The propagation of each point source was analyzed, based on a soft-site drop-off rate of 7.5 dB per doubling of distance. A soft-site drop-off was chosen, since the perimeter of the Master Plan area will be required to be landscaped and all the nearby homes have landscaped front yards. A summary of the maximum noise level impacts are shown below in Table 3.10-22.

Table 3.10-22: Maximum Noise Levels at Nearby Sensitive Receptors

Stationary Noise Source	Reference Noise Measurement		Nearest Sensitive Receptor	
	Distance of Receptor to Source (feet)	Noise Level (dB L_{max})	Distance of Receptor to Source (feet)	Noise Level[1] (dB L_{max})
Parking Lots	5	87.4	120	66.7
Rooftop Mechanical Equipment	10	60.3	190	41.1
Truck Loading Areas	10	76.4	230	56.0
Forklift Backup Warning Device	4	90.0	230	63.6
Drive-Thru Speaker	10	73.6	185	54.6
City of Manteca Maximum Stationary Daytime (7 a.m. to 10 p.m.) Noise Threshold				**70**
City of Manteca Maximum Stationary Nighttime (10 p.m. to 7 a.m.) Noise Threshold				**65**

Notes:
[1] Noise level calculations are based on a soft-site drop-off rate of 7.5 dB per doubling of distance.
Source: Michael Brandman Associates, 2010.

Table 3.10-22 shows that none of the analyzed sources would exceed the City's daytime threshold of 70 dB L_{max}. However, the parking lot noise would exceed the City's nighttime threshold of 65 dB L_{max}. This would be considered a significant impact.

The reference noise measurement for the parking lot was based on a 24-hour noise measurement of an existing parking lot and the 87.4 dB L_{max} occurred at 5:41 a.m., which corresponds to when a street sweeper was likely cleaning the parking lot. Mitigation Measure NOI-4 would prohibit the operation of street cleaners and mechanical landscape maintenance equipment during the noise sensitive hours of 10 p.m. to 7 a.m. With implementation of this mitigation measure, the impact would be reduced to less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to create new stationary noise sources. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-4 During Master Plan operations, the use of street sweepers and mechanical landscape maintenance equipment (lawnmowers, leaf blowers, etc.) shall be prohibited between the hours of 10 p.m. and 7 a.m.

Level of Significance After Mitigation

Less than significant impact.

Combined Stationary and Transportation Noise

Impact NOI-5: The proposed project would not generate combined stationary and transportation noise levels that cause significant impacts at nearby receptors.

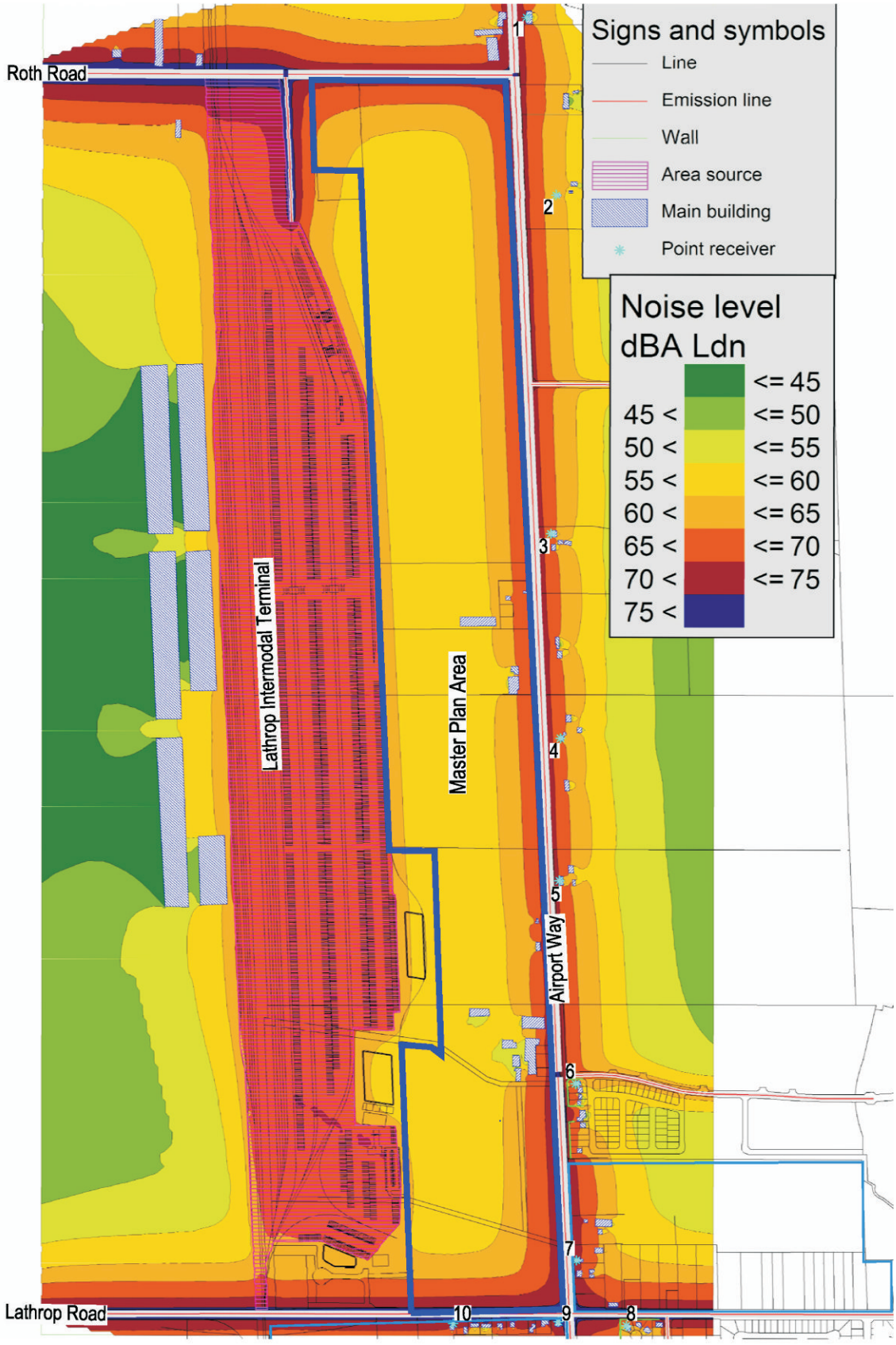
Impact Analysis

This impact addresses checklist items a) and c). This impact evaluates the proposed project's potential to cause a substantial permanent increase in ambient noise levels because of combined stationary and transportation noise.

Master Plan

In order for noise impacts created by the combined stationary and transportation noise to be considered potentially significant, the with project noise level would need to either increase noise levels by 10 dB or more where the without project noise level is less than the 60-dB L_{dn} residential standard, or increase noise levels by 5 dB or more where the without project noise level is greater than the 60-dB L_{dn} residential standard. The proposed Master Plan uses' combined stationary and transportation noise has been analyzed for the cumulative conditions, since this is the only scenario in the Traffic Impact Analysis that analyzes the impacts from buildout of the entire Master Plan.

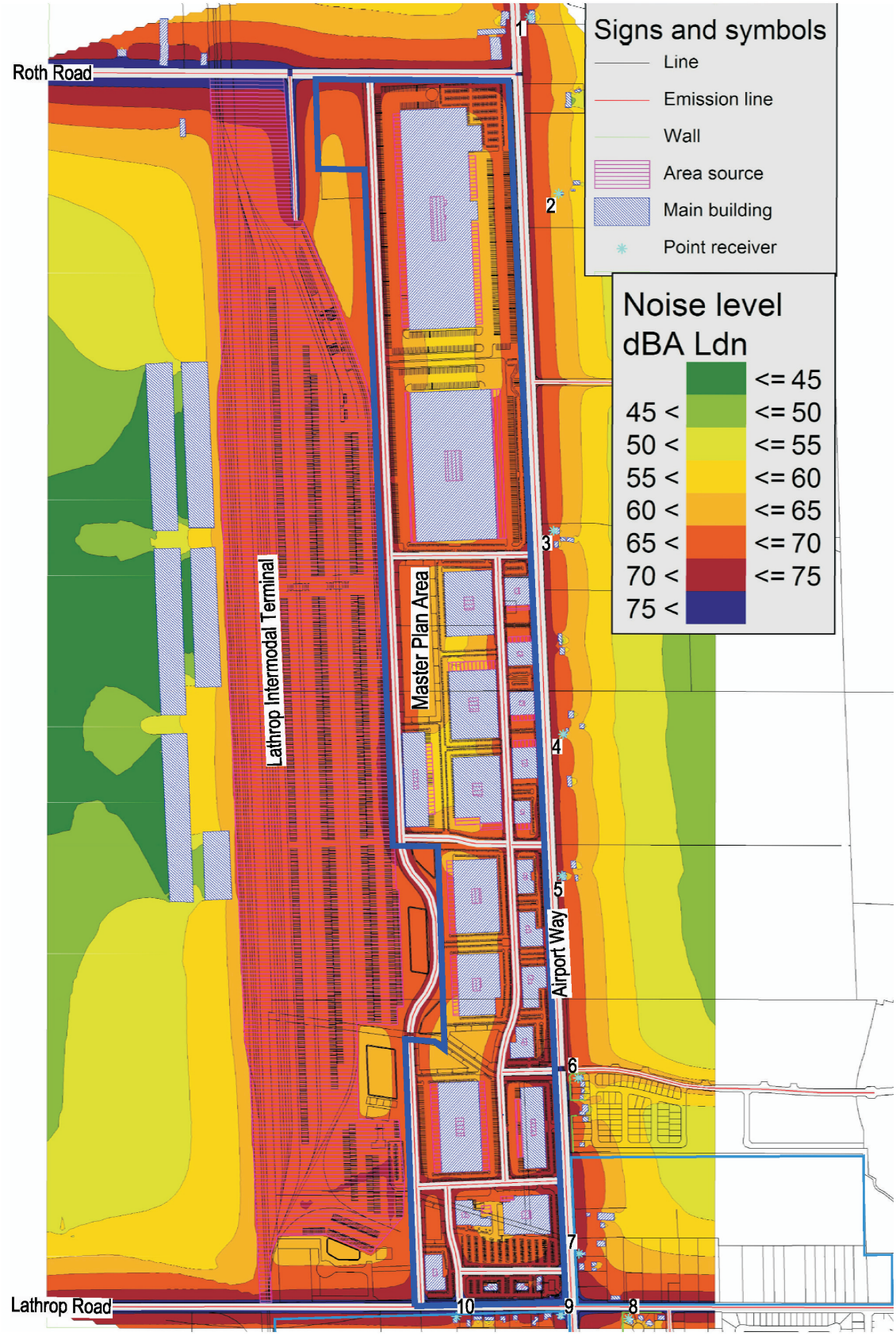
The combined stationary and transportation noise levels created by the cumulative without project and cumulative with project scenarios were calculated for the façades of the same nearby receptors that were analyzed for the existing conditions. The results are summarized in Table 3.10-23, and the SoundPlan Model printouts for the combined stationary and transportation noise levels are provided in Appendix H. Exhibit 3.10-5 shows the cumulative without project combined noise contours. Exhibit 3.10-6 shows the cumulative with project combined noise contours.



Source: SoundPlan Version 7.0.

Michael Brandman Associates

Exhibit 3.10-5
Cumulative Without Project Noise Contour Map (dBA Ldn)



Source: SoundPlan Version 7.0.

Michael Brandman Associates

Exhibit 3.10-6
Cumulative With Project Noise Contour Map (dBA Ldn)

Table 3.10-23: Combined Stationary and Transportation Noise Impacts at Nearby Receptors

Receiver	Description	dBA L_{dn}[1]		
		Cumulative Without Project	Cumulative With Project	Change
1	Residential to the northeast	68.7	69.1	0.4
2	Residential to the east	62.7	63.3	0.6
3	Residential to the east	66.9	67.9	1.0
4	Residential to the east	66.6	67.9	1.3
5	Residential to the east	69.4	70.3	0.9
6	Residential to the east	63.8	65.3	1.5
7	Residential to the east	72.5	73.4	0.9
8	Residential to the southeast	65.2	65.9	0.7
9	Residential to the south	74.1	74.7	0.6
10	Residential to the south	72.7	73.5	0.8

Notes:
[1] Noise level includes a 10-dBA penalty to account for the noise sensitive nighttime hours (10 p.m. to 7 a.m.).
Source: SoundPlan Version 7.0; Michael Brandman Associates, 2010.

Table 3.10-23 shows that the proposed Master Plan uses' combined transportation and stationary noise impacts would increase the noise levels at the nearby receptor by up to 1.5 dB. A 1.5-dBA noise increase would be below the 5-dB increase significance threshold for areas where the without project level already exceeds the 60-dB L_{dn} residential standard. Therefore, a less than significant combined stationary and transportation-related offsite noise impact would occur.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to create new combined stationary and transportation noise sources. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Aviation Noise

Impact NOI-6:	The proposed project would not expose persons residing or working in the project vicinity to excessive aviation noise levels.

Impact Analysis

This impact addresses checklist items e) and f). This impact evaluates the proposed project's potential to expose persons residing or working near an airport or private airstrip to excessive aviation noise levels.

Master Plan

The Stockton Metropolitan Airport is located approximately 2 miles northeast of the Master Plan area. Based on the year 2035 operations of the airport, the Master Plan area is located approximately 1.6 miles southwest of the nearest calculated noise contour of 60 dB CNEL. Because of distance, the Master Plan area is not adversely impacted by aviation noise. Additionally, there are no private airstrips in the Master Plan vicinity. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not have the potential to increase exposure to aviation noise levels beyond existing levels. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.11 - Public Services and Utilities

3.11.1 - Introduction

This section describes the existing public services and utilities and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by the Manteca Fire Department, the Manteca Police Department, the Manteca Public Works Department, South San Joaquin Irrigation District, Cal Recycle, and Pacific Gas and Electric Company. Written responses from service providers are provided in Appendix I. In addition, the potable water analysis is based on a Water Supply Assessment prepared by the City of Manteca, which is provided in Appendix I.

3.11.2 - Environmental Setting

Fire Protection and Emergency Medical Services

The Manteca Fire Department provides fire protection and emergency medical services to the City of Manteca. The Fire Department is headquartered at 1154 S. Union Road.

Stations

The Fire Department staffs three stations, summarized in Table 3.11-1.

Table 3.11-1: Fire Station Summary

No.	Location	Apparatus	Distance to Lathrop Road/Airport Way
1	290 S. Powers Avenue	Engine 241 and Rescue 24	4.9 miles
2	1154 S. Union Road (Headquarters)	Engine 242 and Truck 24	3.8 miles
3	399 W. Louise Avenue	Engine 243	2.8 miles

Notes:
Lathrop Road/Airport Way is representative of both the Master Plan area and the non-master plan annexation areas.
Source: Manteca Fire Department, 2010.

Organization

The Fire Department is organized into three divisions: Administration, Operations, and the Fire Prevention Bureau.

Administration Division

The Administration Division provides for and manages several important functions of the Department including Personnel, Communications/Dispatch, Policies and Procedures, Recruitment and Emergency Planning.

Operations Division

The Operations Division is responsible for responding to emergencies including fires, hazardous materials releases and treating the sick and injured. Through an agreement with the City of Stockton

Fire Dispatch Center, the Manteca Fire Department receives 911 requests for service from Stockton Fire.

Comprehensive mutual and automatic aid agreements with the Lathrop-Manteca Fire District and other surrounding fire agencies, as well as the State of California, allows the Manteca Fire Department to receive and provide emergency response resources to surrounding jurisdictions and throughout the state.

All Operations Division Personnel, including the Shift Commanders work a 56-hour work week and 48-hour shifts. The Shift Commander is assigned to supervise each of the three shifts and responds to emergencies while on-duty 24 hours a day. Three engine companies, a truck company, and one rescue unit respond from three stations strategically located throughout the City of Manteca.

Prevention Bureau

The Fire Prevention Bureau administers and enforces local, state, and national fire and life safety codes. The bureau's responsibilities encompass a wide range or activities and programs including fire inspections, re-inspections, land development project reviews, fire code developments, fire sprinkler and alarm system plan reviews, new business license inspections, fire code permit inspections, vegetation management and weed abatement programs, public education, hazardous materials inspections, and providing awareness and identification for businesses.

Staffing

The Fire Department is made up of career and reserve fire personnel. The Fire Department is staffed by 42 career personnel and 20 reserve personnel. Each engine and truck company is staffed with a minimum of three firefighters, which helps provide for an effective workforce of 15 firefighters responding for all structure fires.

Apparatus

The Fire Department operates the following fire and emergency medical response apparatus:

- Three engines
- One ladder truck
- Three reserve engines
- One medium rescue unit
- One USAR rescue trailer

Calls for Service

The Fire Department responded to 4,823 calls for service in 2009. Table 3.11-2 summarizes the calls for service.

Table 3.11-2: Calls For Service Summary (2009)

Category	Calls	Percent of Total
Emergency medical services	3,065	64
Other emergencies	857	18
Service	589	12
Fires	274	6
Total	**4,785**	**100**

Notes:
Other emergencies include vehicle accidents, hazmat releases, and electrical emergencies.
Service calls include smoke/odor investigations, public/police assists, and false alarms.
Source: Manteca Fire Department, 2010.

Response Times

Table 3.11-3 summarizes response times by station for 2009. The Fire Department's response time objective is being on-scene within 5 minutes of dispatch.

Table 3.11-3: Response Times By Fire Station (2009)

No.	Location	Average Response Time (Minutes)
1	290 S. Powers Avenue	3.5
2	1154 S. Union Road (Headquarters)	4.2
3	399 W. Louise Avenue	4.5

Source: Manteca Fire Department, 2010.

ISO Rating

The Insurance Services Office (ISO) Public Protection Classification Program currently rates the Fire Department as a 3 on a scale of 1 to 10, with 1 being the highest possible protection rating and 10 being the lowest. The ISO rating measures individual fire protection agencies against a Fire Suppression Rating Schedule, which includes such criteria as facilities and support for handling and dispatching fire alarms, first-alarm response and initial attack, and adequacy of local water supply for fire-suppression purposes. The ISO ratings are used to establish fire insurance premiums.

Manteca District Ambulance Service

The Manteca District Ambulance Service also provides emergency medical services to the City of Manteca.

The Manteca District Ambulance Service covers a 100-square-mile area and has two stations: one in Manteca and the other in Lathrop. The ambulance service has 36 employees and has eight ambulances. Two 24-hour ambulances and one 12-hour ambulance respond out of the Manteca station seven days per week. One 24-hour ambulance responds out of the Lathrop station seven days

per week. The ambulance service has mutual aid agreements with the cities of Ripon, Tracy, and Escalon. The Manteca District Ambulance Service has 20 paramedics and 16 emergency medical technicians.

Police Protection

The Manteca Police Department provides police protection to the City of Manteca. The Police Department is headquartered at 1001 W. Center Street.

Organization and Staffing

The Police Department is organized into two divisions: Operations and Services.

Operations Division

The Operations Division is the larger of the two divisions and includes all of the Police Department's uniformed police officers. The division is responsible for providing direct police response to requests for assistance. The patrol, traffic, and community service officers respond to and investigate criminal acts and public safety concerns. Operations includes teams that have been specially trained and equipped to meet some of the community and the Police Department's special needs, including canine, mounted patrol, bomb disposal, Special Weapons and Tactics (SWAT), and crisis negotiations. Sixty employees are assigned to the Operations Division.

Services Division

The Services Division is made up of several units, including Investigations, Detectives, School Resource Officer, Gang Unit, Records, Evidence and Property, Dispatch, and Animal Services. The Services Division consists of approximately 95 full-time, part-time, and volunteer employees managed by six Supervisors, and the Division Commander who oversees the management and operations of the units.

Calls for Service

The Police Department responded to 35,334 calls for service in 2009.

Response Times

The Police Department's response time standards are 3 minutes or less for Priority 1 (emergency) calls and 30 minutes or less for Priority 2 (non-emergency) calls. In 2009, the Police Department responded to 97.8 percent of Priority 1 calls within 3 minutes or less and 98.7 percent of the Priority 2 calls within 30 minutes or less.

Potable Water

The City of Manteca Public Works Department, Water Division distributes potable water within the city limits. The City obtains water from municipal groundwater wells and surface water provided by the South San Joaquin Irrigation District (SSJID).

The description of potable water supply infrastructure and sources is derived from the Water Supply Assessment prepared by the City of Manteca Public Works Department, Engineering Division. The complete the Water Supply Assessment is provided in Appendix I. Below are summaries of the relevant findings.

Water Supply Planning

The City of Manteca 2005 Water Master Plan and the 2005 Urban Water Management Plan document the City's water supply planning. The City limits the number of new residential sewer connections to 3.9 percent per year. The limitation in new sewer connections will also limit the growth in water demand. A lower growth rate for water demand of 3.4 percent is used in both the 2005 Water Master Plan and the 2005 Urban Water Management Plan to project future water demand. Both the 2005 Water Master Plan and 2005 Urban Water Management Plan include local groundwater and the South County Surface Water Supply Project as sources of water for the City of Manteca.

The 2005 Urban Water Management Plan was adopted in December of 2005. The 2005 Urban Water Management Plan includes water supply and demand comparisons through 2030 assuming the 3.4 percent growth in water demand. During the planning period, water is supplied by groundwater from City wells and surface water from the South County Water Supply Project. The 2005 Urban Water Management Plan also contains the single and multiple dry year water demand-supply comparisons and the water supply shortage contingency planning. The water supply and demand comparisons from the 2005 Urban Water Management Plan are included in Appendix I. The water supply-demand comparison in Table 9 of the Urban Water Management plan shows that the water demand will exceed projected supply by 1,145 acre-feet in the year 2030 or 3.3 percent without conservation. The increase in future water supply is provided by the planned increase in surface water deliveries and drilling of new wells to meet water demands. Conservation and the implementation of reclaimed water use during the planning period will reduce potable water demand such that the water supply will exceed demand by 2030. A 20-percent, state-mandated water reduction by conservation would reduce demand by 6,328 acre-feet in 2030. Reclaimed water use above the currently planned 2,300 acre-feet in 2030 can provide an additional reduction in potable water demand in Manteca.

Table 3.11-4, Table 3.11-5, and Table 3.11-6 summarize various supply and demand projections through the Year 2035 contained in the 2005 Urban Water Master Plan. This planning horizon satisfies the 20-year planning period required in water supply assessments. A 20-percent potable demand reduction and increased reclaimed water use are factored into the water supply and demand projection in the tables. The water supply and demand comparison shown in Table 3.11-6 indicates there will be sufficient water through 2035 with the currently planned water supply.

Table 3.11-4: Current and Projected Water Supplies

Water Supply Sources	Acre Feet						
	2005	2010	2015	2020	2025	2030	2035
SSJID South County Surface Water Project	4,100	9,704	11,470	13,557	16,444	18,500	18,500
Groundwater Production	11,491	8,606	10,171	12,022	13,790	13,790	13,790
Recycled Water	—	161	645	1,700	2,100	2,300	2,500
Total	**15,591**	**18,471**	**22,286**	**27,279**	**32,334**	**34,590**	**34,790**

Notes:
The information contained in this table reflects revisions to Table 4 from the City of Manteca 2005 Urban Water Management Plan.
Source: City of Manteca, 2010.

Table 3.11-5: Past, Current, and Projected Water Use

Water Use Sectors	Acre Feet									
	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035
Single-family residential	6,235	5,789	8,035	10,467	12,372	12,721	13,826	16,342	19,316	22,830
Multi-family residential	1,267	1,068	1,260	1,314	1,553	1,597	1,736	2,052	2,425	2,866
Commercial	828	815	1,103	1,211	1,431	1,472	1,600	1,891	2,235	2,642
Industrial	173	213	145	107	126	130	142	167	198	234
Institutional and governmental	220	251	363	329	390	400	434	574	759	897
Landscape	548	598	658	617	729	750	815	963	1,136	1,345
Unaccounted for system losses	602	1,988	1,044	1,446	1,709	2,020	2,388	2,822	3,336	3,944
Total	**9,873**	**10,631**	**12,608**	**15,491**	**18,310**	**19,090**	**20,941**	**24,752**	**29,407**	**34,759**

Notes:
Year 2015 demand figures assume 13-percent reduction achieved through conservation.
Year 2020 through 2035 figures assume 20-percent reduction achieved through conservation.
The information contained in this table reflects revisions to Table 4 from the City of Manteca 2005 Urban Water Management Plan.
Source: City of Manteca, 2010.

Table 3.11-6: Projected Supply and Demand Comparison

Category	Acre-Feet						
	2005	2010	2015	2020	2025	2030	2035
Supply	15,591	18,471	22,286	27,279	32,334	34,590	34,790
Demand	15,491	18,310	19,090	20,941	24,752	29,407	34,759
Difference	**100**	**161**	**3,196**	**6,338**	**7,582**	**5,183**	**31**

Notes:
The information contained in this table reflects revisions to Table 9 from the City of Manteca 2005 Urban Water Management Plan.
Source: City of Manteca, 2010.

The water supply planning in the 2005 Urban Water Management Plan and Water Master Plan consider increased water demand for future developments such as the Northwest Airport Way Master Plan.

Water Sources

Groundwater Supply

The City of Manteca draws groundwater from the Eastern San Joaquin County Groundwater Basin, which is a sub basin of the San Joaquin Valley Groundwater Basin. The California Department of Water Resources (DWR) identified the basin as being in a state of overdraft in DWR Bulletin 160-98. The basin is described in the 2005 Urban Water Management Plan and is included in Appendix I.

The agricultural, municipal, and industrial groundwater extraction in Eastern San Joaquin Groundwater Basin is estimated at 867,600 acre-feet per year in the Eastern San Joaquin Groundwater Basin Groundwater Management Plan. The estimate is based on land use and reported groundwater pumping. Land use information is used to estimate groundwater extraction where groundwater pumping is not reported. The estimated basin overdraft is 150,700 acre-feet per year.

Modeling conducted for the Eastern San Joaquin Groundwater Basins Groundwater Management Plan showed a continued decline in groundwater levels and loss of aquifer storage at the estimated basin overdraft. The Integrated Regional Management Plan for the groundwater basin that was developed and adopted in 2007 presented a water management strategy and course of action to implement an integrated conjunctive use program to manage and restore the groundwater resource in the basin.

The City of Manteca will limit groundwater extraction to the safe aquifer yield of 1 acre-foot per acre per year by the use of surface water from the South County Water Supply Project. The 2005 Urban Water Management Plan projected a maximum groundwater extraction of 13,790 acre-feet per year to be reached by 2027, based on projected city growth and the City's Primary Urban Service Area (PUSA) of 13,790 acres as defined in the City's General Plan. City growth beyond the PUSA will allow greater groundwater extraction. The 2005 Water Master Plan includes the construction of 11

new wells in its capital improvement plan in order to increase groundwater extraction capability for future water demands.

Agricultural and some industrial water users located in the Manteca planning area also use locally produced groundwater. Agricultural water use is expected to decline, since Manteca's residential development is displacing the local agriculture. The net impact on agricultural water supply is neutral, as agricultural and residential water use on an annual basis is similar. Industrial users should benefit from Manteca's conjunctive water use as the City's groundwater extraction is reduced to the safe aquifer yield.

Surface Water

The City of Manteca, along with the cities of Escalon, Lathrop, and Tracy, contracted with the SSJID in 1995 for treated surface water. The contract entitles the City to 11,500 acre-feet of surface water per year in Phase 1 and 18,500 acre-feet of surface water in Phase 2. The water treatment plant and water transmission line were completed in 2005, and surface water deliveries to the cities began in July of 2005.

The surface water deliveries are scheduled to increase until full capacity of 18,500 acre-feet per year is reached. The project is planned in two phases. Phase 1 planned to provide up to 11,500 acre-feet through 2010. Phase 2 would be constructed after 2010 and would provide up to 18,500 acre-feet by 2027. Timing of Phase 2 will depend on the water demand in each of the participating cities. At present, Phase 2 has not been designed or funded and is not required for the Northwest Airport Way Master Plan.

Reclaimed Water

The Urban Water Management Plan and the 2005 Water Master Plan include reclaimed water in future water planning projections. Reclaimed water requires construction of tertiary filters and disinfection facilities to meet Title 22 Reclamation Criteria. A reclaimed water distribution system is also required. Recent NPDES disposal and treatment requirements required the construction of tertiary filters and disinfection facilities. The treatment requirements make the use of reclaimed water for landscape irrigation feasible in some areas of the City, but use is limited by the lack of a reclaimed water distribution system. At present, reclaimed water is available for construction sites and is planned for irrigation of the Big League Dream sports complex. Additional landscape irrigation with reclaimed water is anticipated in the future and is projected reach 2,300 acre-feet per year by 2030. The use of reclaimed water for landscape irrigation will reduce the City's water demand and help extend the available water supply.

The use of reclaimed water in the Northwest Airport Way Development is not currently planned but may be available in the future. Development planning should include the installation of separate non-potable water line (purple pipe) for landscape and open space irrigation using non-potable water. The landscape and open space irrigation requirements should be provided by non-potable irrigation well

or wells. The non-potable irrigation wells will be funded by the developer. The landscape and open space irrigation systems can be converted to reclaimed water if it becomes available in the area.

Groundwater Management

The San Joaquin County Flood Control and Water Conservation District adopted a groundwater management plan for San Joaquin County in 2004, which includes much of the Eastern San Joaquin County Groundwater Basin. The City of Manteca participated in the development of the groundwater management plan. A major objective of the groundwater management plan is to stabilize the groundwater level in the central and eastern portions of the basin.

The City of Manteca plans to manage its groundwater use to meet the safe aquifer yield for the area, which has been estimated at 1 acre-foot per acre per year. Historically, Manteca extracted groundwater at a rate of 2.4 acre-feet per acre per year. Both the Water Master Plan and the Urban Water Management Plan recognize the overdraft in the basin. The City began reducing its groundwater extraction to the safe aquifer yield when the surface water became available in 2005.

Water Supply Reliability

Water supply reliability is addressed in the Urban Water Management Plan. In past droughts, the groundwater supply has been very reliable. Groundwater levels dropped during severe droughts but recovered in subsequent years. However, there has been a long-term drop in groundwater levels (approximately 4 feet since 1964) in the Manteca area. The drop in groundwater is due to both the local groundwater pumping and the severe overdraft in the central and eastern portions of the groundwater basin. The combined effort of Manteca and the San Joaquin County Groundwater Management Plan to reduce groundwater overdraft should help maintain the historical reliability of Manteca's groundwater. The City's water supply history for selected years between 1970 and 2010 is included in Table 3.11-7.

Table 3.11-7: City of Manteca Water Production History

Year	Population	Acres		Annual Groundwater Use		Annual Surface Water Use		Annual Average Day Use (million gallons per day)
		Developed Area	Total City Area	Acre-Feet	Million Gallons	Acre-Feet	Million Gallons	
1970	13,824	1,831	1,927	3,115	1,015	—	—	2.78
1975	17,750	2,466	2,835	3,901	1,271	—	—	3.48
1980	23,150	3,169	4,063	5,785	1,885	—	—	5.16
1985	32,545	3,353	4,299	8,621	2,809	—	—	7.70
1990	40,733	4,300	6,320	9,873	3,217	—	—	8.81
1995	44,111	4,600	7,372	10,631	3,464	—	—	9.49
2000	51,655	5,837	10,126	12,608	4,108	—	—	11.25

Table 3.11-7 (cont.): City of Manteca Water Production History

Year	Population	Acres		Annual Groundwater Use		Annual Surface Water Use		Annual Average Day Use (million gallons per day)
		Developed Area	Total City Area	Acre-Feet	Million Gallons	Acre-Feet	Million Gallons	
2005	63,389	7,281	10,975	11,275	3,674	3,667	1,194.8	13.34
2006	64,488	8,393	10,975	8,062	2,627	6,739	2,195.8	13.21
2007	66,123	8,393	11,211	9,119	2,971	6,364	2,073.5	13.82
2008	67,754	8,426	11,318	8,557	2,788	6,884	2,243.1	13.78
2009	68,847	8,438	11,426	7,157	2,332	7,050	2,297.0	12.68

Notes:
Surface water delivery began in 2005.
Appendix I provides a complete list of water production for all years between 1960 and 2010.
Source: City of Manteca, 2010.

SSJID supplies surface water to the South County Water Supply Project from Stanislaus River and has pre-1914 water rights to this water source. With the construction of New Melones Reservoir, the SSJID entitlement was negotiated with the DWR to 300,000 acre-feet per year. The entitlement is subject to reductions when the New Melones inflow is less than 600,000 acre-feet. An examination of the inflows between 1922 and 2000 indicated that SSJID would have received its full allocation of 300,000 acre-feet in all but 16 years during this period. The severity of possible reductions was estimated by examining the three lowest inflow years of 1977, 1924, and 1988, which would have reduced SSJID's allocation by 37, 24, and 23 percent, respectively. Conservation and increased groundwater development can sustain reductions of this order. Based on SSJID water rights and minimal reductions in past low flow years, the surface water supply is considered a reliable source. To assure water supply reliability, Manteca plans to construct additional groundwater wells to maintain full water supply with a 50-percent reduction in surface water supply.

The long-term overdraft of the basin groundwater poses a water supply reliability threat from the intrusion of saline water. Surface water supplies will enable groundwater pumping to be reduced in the Manteca area and reduce the intrusion of saline water into the area.

Water Quality

Changes in water quality standards have the potential to reduce available groundwater available to the City. Water quality standards are reviewed regularly by the EPA and may result in revising existing allowable contaminant levels or establishing limits for new contaminants. The City monitors regulatory actions that can affect City water supplies. The most recent standard revision was for arsenic. The revised limit and the City's response to maintain water the water supply is discussed below. The federal Maximum Contaminant Level (MCL) for arsenic was lowered from 50 micrograms per liter (µg/l) to 10 µg/l in 2001. The State of California also adopted the 10 µg/l

arsenic MCL. The revised federal arsenic MCL became effective in 2006. Twelve of the 16 city wells exceed the 10 µg/l MCL, with concentrations ranging from 12 to 19 µg/l. To maintain the City water supply, Manteca installed arsenic treatment at six wells and will install arsenic treatment at the remaining six wells in 2010.

Changes in groundwater water quality also have the potential to reduce the amount of groundwater available to the City. For example, three city wells exceeded the nitrate MCL in 2006. The affected wells were shut down until the elevated nitrate problem was resolved. Well modifications were completed at two wells in 2008 and restored 3,500 gallons per minute (gpm) of the lost production capacity. A water blending project will be completed in 2010 that will restore an additional 1,100 gpm of lost production capacity. There was a loss of 500 gpm in well capacity that was due to the sealing of strata with the high nitrate concentrations in Well 24.

Transmission and Distribution System

The City's existing water distribution system consists of a buried network of pipelines ranging from 1- to 6-inch pipelines in the older parts of the City to 8- to 16-inch diameter pipes in the newer areas. The distribution system conveys water from the sources to customers and must provide capacity to meet all domestic, industrial, irrigation, and fire suppression demands. Because of the distributed nature of the groundwater wells, large transmission lines are not needed to move large volumes of water around the City.

Project Vicinity Infrastructure

An existing 12-inch city water main is located in Airport Way and extends from Lathrop Road to the northern boundary of the Union Ranch subdivision approximately 600 feet north of Daisywood Drive.

Wastewater

The City of Manteca Public Works Department, Sewer Division provides wastewater collection and treatment within the city limits.

Wastewater Collection

The existing sewer collection system consists of 6-inch to 60-inch-diameter gravity flow pipes, 6-inch to 24-inch-diameter force mains, and 14 wastewater pump stations. The majority of the collections serve the core of the City (Central Shed), which is approximately bound by State Route 120 on the south, Austin Road on the east, Lathrop Road on the north, and Airport Way on the west. Several subdivisions located on the perimeter or beyond the Central Shed have installed temporary wastewater pump stations. In the future, these pump stations will be decommissioned and these service areas will connect to the gravity trunk sewers.

Within the Central Shed, the majority of the collection system flows by gravity to the Union Road Pump Station. The pump station is located at the site of the former city wastewater treatment facility

near the intersection of Union Road and Center Street. Downstream of the pump station, wastewater flows to the Wastewater Quality Control Facility by gravity via a 36-inch-diameter sewer.

Project Vicinity Infrastructure

An existing sewer main is located within Airport Way and terminates 600 feet north of Daisywood Drive. North of Daisywood Drive, the sewer line is 30 inches in diameter; south of Daisywood Drive, the line is 48 inches in diameter. Sewage from this trunk line is conveyed to the Woodbridge sewer pump station located approximately 600 feet south of Daisywood Drive in the Union Ranch subdivision that fronts Airport Way. It is then pumped through a 24-inch force main in Airport Way that connects with the Center Street sewer approximately 2 miles south of the project site. The Center Street trunk sewer flows into the Wastewater Quality Control Facility.

Wastewater Quality Control Facility

Wastewater is treated at the Manteca Wastewater Quality Control Facility, located at Airport Way and W. Yosemite Avenue. The facility provides wastewater treatment to the City of Manteca as well as a portion of the City of Lathrop and the unincorporated community of Raymus Village. The facility currently treats approximately 6.5 million gallons of wastewater per day (gpd), and has been rated with a capacity of approximately 9.87 million gpd. The facility treats sewage via combined biofilter-activated sludge plant. Secondary effluent is land-applied during the spring and summer period and discharged to the San Joaquin River during the winter (October through March). Dried sludge is sent to a landfill.

Wastewater Quality

The City's wastewater treatment plant is governed by a federal NPDES permit. The City is required by law to have its permit reviewed every 5 years by the Regional Water Quality Control Board (the State's regulating agency for the NPDES permit program). On October 9, 2009, the Central Valley Regional Water Quality Control Board adopted a revised wastewater discharge permit that governs the City of Manteca's operation of its wastewater treatment facility. The wastewater treatment plant is operating in compliance with the permit. The permit is still in effect at the time of this writing.

Storm Drainage

Storm drainage in Manteca is provided by the City of Manteca and South San Joaquin Irrigation District (SSJID). Each agency is discussed below.

City of Manteca

The City of Manteca Public Works Department, Sewer Division oversees storm drainage within the city limits. The City's Storm Drainage System consists of approximately 170 miles of pipeline, 36 pump stations, and 35 detention basins. Runoff flows through this system and into SSJID facilities.

South San Joaquin Irrigation District

SSJID provides regional storm drainage to southern San Joaquin County. The agency operates a network of canals, drains, and pipelines that convey runoff to the San Joaquin River and its tributaries. The French Camp Outlet Canal is the principle SSJID drainage facility for Manteca and discharges runoff into French Camp Slough.

Project Vicinity Infrastructure

Currently, the Master Plan area has several existing SSJID facilities running through the site: Lateral RJ, Lateral RG, Lateral RGC, Drain 3, and Lateral T. They run east to west and discharge flows into the French Camp Outlet Canal, which parallels the east side of the Union Pacific Railroad Oakland Subdivision.

Solid Waste

The City of Manteca Public Works Department, Solid Waste Division provides solid waste garbage service for the Manteca area.

Landfills

Solid waste from Manteca is primarily landfilled at the Forward Sanitary Landfill, located northeast of Manteca. Other landfills used include Foothill Sanitary and North County. All three landfills are summarized in Table 3.11-8.

Table 3.11-8: Landfill Summary

Landfill	Location	Maximum Daily Throughput (tons/day)	Remaining Capacity (cubic yards)	Anticipated Closure Date
Forward Sanitary	Manteca	8,668	23.7 million	2020
Foothill Sanitary	Linden	1,500	97.9 million	2054
North County	Victor	825	15.3 million	2035
Source: Cal Recycle, 2010.				

Waste Diversion Targets

Table 3.11-9 summarizes the City of Manteca's disposal rate targets, as identified by Cal Recycle.

Table 3.11-9: City of Manteca Disposal Rate Targets

Pounds per Day			
Population		Employment	
Target	Annual	Target	Annual
5.1	5.6	21.1	21.6
Source: Cal Recycle, 2010.			

Energy

Pacific Gas and Electric Company (PG&E) provides electricity and natural gas service to the City of Manteca. Below is a discussion of each energy source.

Electricity

PG&E provides electricity to all or part of 47 counties in California, including San Joaquin County, constituting most of the northern and central portions of the State. In 2009, PG&E obtained 36 percent of electricity from its own generation sources and the remaining 62 percent from outside sources. PG&E-owned generating facilities include nuclear, natural gas, and hydroelectric, with a net generating capacity of more than 6,800 megawatts. Outside suppliers to PG&E include the California Department of Water Resources, irrigation districts, renewable energy suppliers, and other fossil fuel-fired suppliers. PG&E operates approximately 141,000 circuit miles of transmission and distribution lines. PG&E is interconnected with electric power systems in the western Electricity Coordinating Council, which includes 14 western states; Alberta and British Columbia, Canada; and parts of Mexico. In 2009, PG&E delivered 85,625 gigawatt-hours (GWh) of electricity to its customers.

SSJID is currently attempting to purchase PG&E's distribution system in southern San Joaquin County and enter the retail power business, servicing Manteca, Ripon, Escalon, and adjoining rural areas. Should this transaction be completed, SSJID would become the electrical provider to the City of Manteca.

Natural Gas

PG&E provides natural gas to all or part of 39 counties in California, including San Joaquin County, comprising most of the northern and central portions of the State. PG&E obtains more than 70 percent of its natural gas supplies from western Canada and the balance from U.S. sources. PG&E operates approximately 48,000 miles of transmission and distribution pipelines. In 2009, PG&E delivered 845 billion cubic feet (Bcf) of natural gas to its customers.

3.11.3 - Regulatory Framework

State

California Building Standards Code

Title 24 of the California Code of Regulations, also known as the California Building Standards Code, is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national and international model codes.
- Building standards that have been adopted and adapted from the national and international model code standards to meet California conditions.

- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

The California Fire Code is a component of the California Building Standards Code and contains fire-safety-related building standards.

California Green Building Standards Code

The California Green Building Standard Code was adopted January 12, 2009. The purpose of this code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental air quality

The Code addresses exterior envelope, water efficiency, and material conservation components. The aim is to reduce energy usage in non-residential buildings by 20 percent by 2015 and help meet reductions contemplated in AB 32. With the 2008 Building Code, a 15-percent energy reduction over 2007 edition is expected. Compliance will be mandatory as of January 1, 2011.

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610–10656) requires that all urban water suppliers with at least 3,000 customers prepare urban water management plans and update them every 5 years. The act requires that urban water management plans include a description of water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. Specifically, urban water management plans must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;
- Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier;
- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;
- Describe plans to supplement or replace that source with alternative sources or water demand management measures;

- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures;
- Assessment of the water supply reliability.

Pursuant to the Urban Water Management Planning Act, the City of Manteca prepared and maintains an Urban Water Management Plan.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009 and requires local agencies to implement water efficiency measures as part of its review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into code requirements for landscaping. For new landscaping projects of 2,500 square feet or more that require a discretionary or ministerial approval, the applicant is required to submit a detailed Landscape Documentation Package that discusses water efficiency, soil management, and landscape design elements.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill (AB) 939, the California Integrated Waste Management Act of 1989, effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent by 1995 and 50 percent by 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, Senate Bill (SB) 1016, Wiggins, Chapter 343, Statutes of 2008, introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The standards were updated in 2005 and amended in 2008. The 2008 standards set a goal of reducing growth in electricity use by 561.2 gigawatt-hours per year (GWh/y) and growth in natural gas use by 19 million therms per year

(therms/y). The savings attributable to new nonresidential buildings are 151.2 GWh/y of electricity savings and 3.3 million therms. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC]; and water heating systems), indoor and outdoor lighting, and illuminated signs.

Local

City of Manteca

General Plan

The General Plan establishes the following goals and policies associated with public services and utilities that are relevant to the proposed project:

- **Goal PF-3:** Facilities improvements and services required to serve development will not place an economic burden on existing residents of the City. Development will pay a fair share of all costs of required public infrastructure and services.
- **Goal PF-4:** Public improvements and facilities will be designed to enhance, rather than degrade, the natural environment in the City and surrounding area.
- **Policy PF-P-2:** Encourage comprehensive development rather than incremental, single project development.
- **Policy PF-P-12:** The City shall continue to assess a water development fee on all new commercial, industrial, and residential development sufficient to fund system-wide capacity improvements. The water development fee schedule shall be periodically reviewed and revised as necessary.
- **Policy PF-P-13:** Ensure that all new development provides for and funds a fair share of the costs for adequate water distribution, including line extensions, easements, and plant expansions.
- **Policy PF-P-17:** The City of Manteca shall consider incremental increases in the demands on groundwater supply and water quality when reviewing development applications.
- **Policy PF-P-20:** The City shall develop new sewage treatment and trunk line capacity as necessary to serve new development.
- **Policy PF-P-21:** City sewer services will not be extended to unincorporated areas, except in extraordinary circumstances. Existing commitments for sewer service outside the city limits shall continue to be honored.
- **Policy PF-P-24:** Ensure that all new development provides for and funds a fair share of the costs for adequate sewer distribution, including line extensions, easements, and plant expansions.
- **Goal PF-9:** Maintain an adequate level of service in the City's drainage system to accommodate runoff from existing and projected development and to prevent property damage due to flooding.

- **Policy PF-P-27:** The City shall require the dedication and improvement of drainage detention basins as a condition of development approval according to the standards of the Drainage Master Plan. The responsibility for the dedication and improvement of detention basins shall be based on the prorated share of stormwater runoff resulting from each development.
- **Policy PF-P-28:** Storm drainage systems within new development areas shall include open drainage corridors where feasible to supplement or replace an underground piped drainage system. The drainage systems would provide for short-term storm water detention, storm water conveyance for storm waters exceeding a 10-year event, storm water quality treatment, bike and pedestrian paths, and visual open space within neighborhoods. The width and length of the corridors would be determined by the stormwater management requirements. The drainage systems would provide a pedestrian connection between parks and access to open space from residential neighborhoods. The neighborhoods would be designed with homes oriented to, rather than backing on the open space corridor.
- **Policy PF-P-39:** The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response times for police calls.
- **Policy PF-P-40:** The City shall provide police services to serve the existing and projected population.
- **Policy PF-P-43:** The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls.
- **Policy PF-P-44:** The City shall provide fire services to serve the existing and projected population.

3.11.4 - Methodology

This section is based on the information provided by a number of sources, which are described below.

Michael Brandman Associates (MBA) consulted with the Manteca Fire Department and the Manteca Police Department about their ability to serve the Master Plan uses and non-master plan annexation areas. The agency responses are provided in Appendix I.

The Manteca Public Works Department, Engineering Division prepared a Water Supply Assessment to evaluate the ability of the City of Manteca to meet the water supply demand associated with the proposed land uses of the Northwest Airport Way Master Plan. A water supply assessment is required to comply with water supply planning requirements of the California Water Code and Government Code. Water supply assessments are required for industrial developments that exceed 40 acres or have more than 650,000 square feet of floor space. Much of the information required in the Water Supply Assessment is included in the City of Manteca 2005 Urban Water Management Plan. Additional information is contained in the City of Manteca Water Master Plan. The complete Water Supply Assessment is provided in Appendix I.

MBA obtained information regarding wastewater and storm drainage from the Manteca Municipal Services Review, prepared by the San Joaquin County Local Agency Formation Commission in June 2008. Additionally, MBA reviewed relevant city documents, including the General Plan, the Municipal Code, and the Urban Water Management Plan. Finally, MBA also reviewed documents and websites produced by Cal Recycle and PG&E.

3.11.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, public services and utilities impacts resulting from the implementation of the proposed project would be considered significant if the project would:

> Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
>
> a) Fire Protection?
> b) Police Protection?
> c) Schools? (Refer to Section 7, Effects Found Not To Be Significant.)
> d) Parks? (Refer to Section 7, Effects Found Not To Be Significant.)
> e) Other public facilities? (Refer to Section 7, Effects Found Not To Be Significant.)

To determine whether impacts to utilities and services are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- 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?
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- 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?

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- Comply with federal, state, and local statutes and regulations related to solid waste?
- Result in inefficient, wasteful, or unnecessary consumption of energy?

3.11.6 - Project Impacts and Mitigation Measures

Fire Protection and Emergency Medical Services

Impact PSU-1: The proposed project may contribute to a need for new or expanded fire protection facilities.

Impact Analysis

This impact assesses whether the Master Plan and non-master plan annexations would result in a new for new or expanded fire protection and emergency medical service facilities.

The Fire Department provided written responses to a questionnaire regarding impacts to fire protection and emergency medical services. The responses are summarized below and a copy of the document is provided in Appendix I.

Master Plan

The Master Plan area is currently within the boundaries of the Lathrop-Manteca Fire District. As part of the Master Plan approvals, the area would be annexed into the City of Manteca. After annexation, the Master Plan area would be served by the Manteca Fire Department and would be removed from the Lathrop-Manteca Fire District.

The Fire Department indicated in a written response dated March 1, 2010 (Appendix I) that Fire Station No. 3 is the closest existing fire station and can service the Master Plan area with a response time of 5 to 7 minutes depending on the location of the emergency. The Fire Department has a response time objective of arriving on-scene within 5 minutes of dispatch for all emergencies. The department staffing level from existing fire stations and infrastructure within the City provides for the highest level of service in the vicinity for the project area.

The Fire Department indicated that there is a planned fire station (Station No. 5) for the 1400 block of Lathrop Road that will serve the Master Plan vicinity. The City has secured the land for the station on Lathrop Road and has an architectural design in progress that is nearing completion. The Fire Department indicated that this fire station will need to be built and staffed to allow for adequate fire service delivery to the Master Plan uses. To ensure that the Master Plan uses contribute to the implementation of this fire station, mitigation is proposed requiring payment of all applicable fire prevention development fees at the time building permits are sought. With the implementation of mitigation, impacts would be less than significant.

Note that the construction of Station No. 5 is independent of the proposed Master Plan, and the City of Manteca would undertake separate environmental review for that project.

Non-Master Plan Annexations

The East and South areas are currently within the boundaries of the Lathrop-Manteca Fire District. As part of the Non-Master Plan Annexations, both areas would be annexed into the City of Manteca. After annexation, the East and South areas would be served by the Manteca Fire Department and would be removed from the Lathrop-Manteca Fire District.

The East and South areas contain approximately 75 dwelling units. Using unincorporated San Joaquin County's 2010 average household size of 3.023 persons per dwelling unit, the estimated population of both areas is 227 persons. The City of Manteca's 2010 estimated population is 68,847; therefore, the addition of 227 persons would represent a population growth increase of 0.3 percent. This figure represents a negligible amount of population growth, such that the additional calls for service generated by these uses would not cause the need for new or expanded fire facilities. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM PSU-1 Prior to issuance of building permits for any Master Plan uses, the project applicant shall provide the City of Manteca will all applicable fire protection development fees in accordance with the latest adopted fee schedule.

Level of Significance After Mitigation

Less than significant impact.

Police Protection

Impact PSU-2:	**The proposed project would not contribute to a need for new or expanded police protection facilities.**

Impact Analysis

This impact assesses whether the Master Plan and non-master plan annexations would result in a new for new or expanded police protection facilities.

The Police Department provided written responses to a questionnaire regarding impacts to police protection. The responses are summarized below and a copy of the document is provided in Appendix I.

Master Plan

The San Joaquin County Sheriff's Department currently provides law enforcement services to the Master Plan area. As part of the Master Plan approvals, the area would be annexed into the City of Manteca. After annexation, the Manteca Police Department would provide law enforcement services to the Master Plan area.

The Police Department indicated in a written response dated March 5, 2010 (Appendix I) that current staffing levels are adequate to serve the Master Plan uses, largely because no residential uses are proposed. As such, no new or expanded police facilities would be necessary to serve the Master Plan uses.

The Police Department requested that the Master Plan uses implement Crime Prevention Through Environmental Design practices, as well as other techniques intended to deter and prevent criminal activity. This request will be incorporated into the Conditions of Approval for the Master Plan uses. Furthermore, as part of the City of Manteca's standard design review process, the Police Department will have the opportunity to review and comment on the site plans of the Master Plan uses, including the application of criminal activity deterrence and prevention practices and techniques.

For these reasons, impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas are currently within unincorporated San Joaquin County and are served by the San Joaquin County Sheriff's Department. The non-master plan annexations would result in these areas being served by the Manteca Police Department.

The East and South areas contain approximately 75 dwelling units. Using unincorporated San Joaquin County's 2010 average household size of 3.023 persons per dwelling unit, the estimated population of both areas is 227 persons. The City of Manteca's 2010 estimated population is 68,847; therefore, the addition of 227 persons would represent a population growth increase of 0.3 percent. This figure represents a negligible amount of population growth, such that the additional calls for service generated by these uses would not cause the need for new or expanded police facilities. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Water

Impact PSU-3: **The proposed project may not be served with sufficient water supplies from existing entitlements and resources and may require the construction of new water treatment facilities.**

Impact Analysis

This impact assesses whether the Master Plan and non-master plan annexations would be served with sufficient water supplies or result in the construction of new water treatment facilities.

Master Plan

The Public Works Department, Engineering Division prepared a Water Supply Assessment that addressed the availability of potable water to serve the proposed Master Plan. The Water Supply Assessment is provided in Appendix I.

The Master Plan uses would be served by a network of 12-inch water mains that will be placed in a grid throughout the Master Plan area. The existing 12-inch water main in Airport Way will be extended north from its current terminus point 600 feet north of Daisywood Drive to Roth Road. The 12-inch main will continue west on Roth Road to a north-south internal roadway within the Master Plan area. A 12-inch water main will be located within the north-south internal roadway that connects from Roth Road in the north to Lathrop Road on the south. A 12-inch water main will be extended west of Airport Way along Lathrop Road to connect to the 12-inch water main in the internal roadway. A minimum of two 12-inch water mains will interconnect the Airport Way water main with the north-south internal roadway.

The Water Supply Assessment's water demand projections for the Master Plan uses are summarized in Table 3.11-10. As shown in the table, the Master Plan uses would demand 249,910 gallons per day or 174 gallons per minute. Water demand for the Master Plan uses is based on the identified land use categories and the City of Manteca water duty. The City allocates water for commercial, institutional, and industrial uses through its gross residential water demand. The gross residential demand is based on the City of Manteca's historical per capita water demand of 214 gallons per day, which includes commercial and industrial water demand.

Table 3.11-10: Master Plan Water Demand

Land Use	Land Use Area (acres)	Water Demand Rate (gallons per day per acre)	Water Demand (gallons per day)
Commercial	18.1	2,200	39,820
Light Industrial	248.3	300	74,490
Open Space	33.9	4,000	135,600
Total	**300.3**	**—**	**249,910**
Source: City of Manteca, 2010.			

The Water Supply Assessment concluded that the City of Manteca has a sufficient supply of groundwater and surface water to serve the proposed Master Plan uses. The existing and planned sources of water include groundwater supplies from the City and surface water from SSJID. These water sources, in combination with water conservation and development of reclaimed water use, will result in a sufficient water supply for the Master Plan uses and with current and future developments in the City. The Water Supply Assessment also indicated that City of Manteca is actively addressing the water quality issues associated with arsenic, which does not pose a significant constraint to the availability of long-term water supplies.

Because the Water Supply Assessment's conclusions partially rely on the assumption of water conservation and reclaimed water use, Mitigation Measures PSU-3a and PSU-3b are proposed requiring that the Master Plan uses implement appropriate and feasible measures to reduce potable water consumption. With the implementation of mitigation, water supply impacts would be less than significant.

The Water Supply Assessment indicated that the City of Manteca Fire Department determined a fire flow of 3,500 gallons per minute for four hours will be required for the planned development. This requirement will be incorporated into the Conditions of Approval for the Master Plan uses.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Currently, many if not all of these properties use groundwater wells for water supply. Because these properties would be annexed into the city limits, they would be eligible for service from the City's municipal water system.

The City of Manteca Urban Water Management Plan indicates that historical per capita water demand averages 214 gallons per day. Therefore, assuming all dwelling units within the East and South areas connect to the City's municipal water system, the estimated 227 persons residing within these areas would increase municipal water demand by 48,578 gallons per day. As shown in Table 3.11-5, the Urban Water Management Plan anticipates increases in water demand from future residential growth, including growth that occurs via annexation of existing residential uses. As such, the associated increase in demand would be consistent with the Urban Water Management Plan's projections. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM PSU-3a Prior to issuance of building permits for each Master Plan use, the applicant shall prepare and submit documentation to the City of Manteca for review and approval identifying a non-potable irrigation system that is separate from the potable water

systems. The non-potable irrigation system shall use non-potable well water until recycled water is available, at which point it shall be converted to use recycled water.

MM PSU-3b Prior to issuance of building permits for each Master Plan use, the applicant shall prepare and submit documentation to the City of Manteca for review and approval identifying that all appropriate and feasible water conservation measures are incorporated into the proposed use(s). The approved measures shall be incorporated into the final development plans. Examples of water conservation measures include but are not limited to:

- Drought-tolerant landscaping or xeriscaping
- Water efficient irrigation systems (drip irrigation, bubbler/soaker systems, hydrozones, evapotranspiration controllers, etc.)
- Sensor-activated low-flow fixtures (e.g., faucets, urinals, and toilets)

Level of Significance After Mitigation

Less than significant impact.

Wastewater

Impact PSU-4:	**The proposed project's effluent would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board and would not require the construction of new wastewater treatment facilities.**

Impact Analysis

This impact assesses whether the Master Plan and non-master plan annexations would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or result in the construction of new wastewater treatment facilities.

Master Plan

The Master Plan contemplates constructing a sewer main within Airport Way from 600 feet north of Daisywood Drive to Roth Road. The extended line would be 18 inches in diameter and would connect with a proposed 8-inch sewer within Roth Road that would extend to the north-south internal roadway. The northern Master Plan uses would be served by a series of 12- to 15-inch sewer stub-outs to the Airport Way sewer, as well as the 8-inch line in Roth Road. The southern Master Plan area uses would install a 10- to 18-inch gravity sewer line that would connect to the existing pump station on Airport Way.

Using the Master Plan water demand projections shown in Table 3.11-10, estimated wastewater generation is shown in Table 3.11-11. As shown in the table, the Master Plan uses are anticipated to generate 102,879 gallons of wastewater on a daily basis.

Table 3.11-11: Master Plan Wastewater Generation

Land Use	Gallons per Day	
	Water Consumption	Wastewater Generation
Commercial	39,820	35,838
Light Industrial	74,490	67,041
Total	**114,310**	**102,879**

Notes:
Wastewater generation is estimated to represent 90 percent of water consumption, a standard industry assumption.
Open spaces uses excluded from wastewater calculations, as irrigation water does not enter the City of Manteca's municipal sewer system.
Source: Michael Brandman Associates, 2010.

The City of Manteca Water Quality Control Facility currently treats approximately 6.5 million gpd, and has been rated with a capacity of approximately 9.87 million gpd. As such, the addition of 102,879 gpd (0.103 million gpd) of wastewater would represent 3 percent of the 3.37 million gpd of available capacity. Furthermore, the Water Quality Control Facility is in compliance with all federal and state water quality standards. For these reasons, the Master Plan uses would not result in a need for additional wastewater treatment capacity. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Currently, most if not all of these properties use septic systems for wastewater disposal. Because these properties would be annexed into the City limits, they would be eligible for service from the City's municipal sewer system.

The City of Manteca uses a wastewater generation estimate of 265 gpd for each single-family equivalent unit. As such, if all of the approximately 75 dwelling units within the East and South areas sought connection to the City's municipal sewer system, they would generate 19,875 gpd of wastewater. The addition of 19,875 gpd (or 0.020 million gpd) of wastewater would represent 0.5 percent of the 3.37 million gpd of available capacity. Furthermore, the Water Quality Control Facility is in compliance with all federal and state water quality standards. For these reasons, the non-master plan annexations would not result in a need for additional wastewater treatment capacity. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Storm Drainage

Impact PSU-5:	**The proposed project would not result require the construction of new downstream drainage facilities.**

Impact Analysis

This impact assesses whether the Master Plan and non-master plan annexations would result in the construction of new drainage facilities.

Master Plan

The Master Plan contemplates the following improvements to SSJID drainage facilities:

- Lateral T Will be replaced and rerouted. The existing pipe will be removed and replaced with rubber–gasketed, reinforced concrete pipe according to SSJID standard drawings and specifications. A 30-foot-wide SSJID easement for access and maintenance will be recorded and centered on the pipe alignment.
- Drain 3 will remain in its existing condition, partially piped and the rest an open drain ditch. Where the private roadways cross Drain 3, a box culvert or approved equal construction will be installed to prevent restriction of the flow of drain water to the French Camp Outlet Canal. Any public or private utilities that cross the Drain 3 channel must cross with a minimum 2-foot clearance below the bottom of the channel, assuring no flow is restricted in Drain 3. All improvements within the Drain 3 right-of-way must be approved by SSJID.
- Lateral RCG will be replaced in place with rubber-gasketed, reinforced concrete pipe, and a new 30-foot easement will be recorded and centered on the new pipe. Lateral RG will be replaced and rerouted. The existing pipe will be removed and replaced with rubber-gasketed, reinforced concrete pipe according to SSJID standard drawings and specifications. A 30-foot-wide SSJID easement for access and maintenance will be recorded and centered on the pipe alignment. Lateral RJ will be plugged on the east side of Airport Way with the existing structure converted into a backup structure. The existing pipe from the backup structure to the westernmost boundary of the Plan area will be removed.

The Master Plan uses will discharge treated runoff into the SSJID drainage facilities. In addition, the Master Plan uses will generate additional stormwater runoff as previously pervious land is converted to impervious surfaces. As such, the proposed project will be required to implement BMPs (Best Management Practices) to reduce runoff created as a result of development. In addition to BMPs, Low Impact Development (LID) will be encouraged for the Master Plan uses. The Master Plan area storm drain conveyance system will consist of both open channels where feasible and an underground pipe network. This network of piping and channels will flow into a series of regional storm drain

detention basins strategically placed to allow development flexibility and to adequately store storm drainage runoff from the Plan area. Detention basins are sized to attenuate peak stormwater flows (a 10-year, 48-hour storm event) and reduce the potential for downstream flooding. Each individual building site will be required to treat its stormwater runoff prior to entering the storm drain conveyance system and regional storm drainage detention basins in compliance with local codes and NPDES (National Pollutant Discharge Elimination System) permit requirements.

The open channels will be designed to control up to a 10-year peak storm and will also be able to control the 100-year storm without stormwater topping the banks of the channels. During a 100-year event, the channels will convey the 10-year storm runoff to the detention basins and will store the excess between the 10-year and 100-year storms—all of which is consistent with the City's Storm Drain Master Plan.

The purpose of the storm drain detention basins is to reduce the peak flows coming from the Master Plan area. The basins hold the peak flows and release them over a 96-hour period, thus reducing the peak flow to the French Camp Outlet Canal. The basins will be designed in accordance with city standards, having a 5-foot maximum water depth and 8:1 side slopes. All basins will be landscaped to augment the open space network. Each basin will have a pump station that is designed to drain the basin within a 96-hour period and will be controlled by the City's Supervisory Control and Data Acquisition system.

All City storm drain discharge is coordinated with SSJID. SSJID pipes become joint-use pipes with the City of Manteca. The City and SSJID share in the maintenance costs of these pipes.

In summary, the Master Plan contemplates the installation of new storm drainage infrastructure and improvements to existing SSJID drainage facilities. As such, offsite, downstream drainage improvements would not be necessary. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. Currently, many if not all of these properties are not drained by any formal storm drainage systems; instead, runoff either ponds onsite or sheet flows offsite. The non-master plan annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, there would be no net increase in runoff above existing levels and, therefore, no need for downstream drainage improvements. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Solid Waste

Impact PSU-6: **The proposed project may not be served by a landfill with adequate capacity or comply with federal, state, and local statutes and regulations related to solid waste.**

Impact Analysis

This impact assesses whether the Master Plan and non-master plan annexations would be served by a landfill with adequate capacity or comply with federal, state, and local statutes and regulations related to solid waste.

Master Plan

Construction and operational solid waste generation characteristics of the Master Plan uses are discussed separately below.

Construction Waste Generation

Short-term construction waste generation is summarized in Table 3.11-12. The estimate of 17,975 tons was calculated using demolition and non-residential construction waste generation rates provided by the U.S. Environmental Protection Agency.

Table 3.11-12: Demolition and Construction Solid Waste Generation

Activity	Waste Generation Rate	Square Feet	Waste Generation (Tons)
Demolition	155 pounds/square foot	115,000*	8,913
Construction	3.89 pounds/square foot	4,658,961	9,062
Total	—	—	**17,975**

Notes:
* This figure represents the known square footage of buildings on the parcels controlled by CenterPoint (15,000) plus the estimated square footage of the RCCI PTP Cheese Factory buildings (100,000).
1 ton = 2,000 pounds
Source: U.S. Environmental Protection Agency, 1998; Michael Brandman Associates, 2010.

Given the amount of construction waste tonnage that would be generated, there is the potential that this could impair the City's ability to meet its state-mandated solid waste targets. As such, mitigation is proposed that would require construction and demolition debris recycling to be implemented. The implementation of this mitigation measure would reduce potential impacts to a level of less than significant.

Operational Waste Generation

Operational solid waste generation estimates were calculated using a standard commercial waste generation rate provided by Cal Recycle. As shown in Table 3.11-13, the Master Plan uses are estimated to generate 11,181 tons of solid waste annually.

Table 3.11-13: Operational Solid Waste Generation

Waste Generation Rate	Square Feet	Annual Waste Generation (tons)
4.8 pounds per square foot per year	4,658,961	11,181
Source: Cal Recycle, 2010; Michael Brandman Associates, 2010.		

Table 3.11-11 likely overstates the amount of annual solid waste generation, as the waste generation rate is for commercial uses, not light industrial uses, which would be lower. Regardless, because there is the potential that the operational waste generation could impair the City's ability to meet its state-mandated solid waste targets, mitigation is proposed that would require the installation recycling facilities prior to issuance of occupancy permits. The implementation of this mitigation measure would reduce solid waste generation and reduce demand for landfill capacity. Therefore, solid waste impacts would be reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. All of these properties are served with solid waste collection and disposal service. The proposed annexations would maintain existing land use activities and would not confer any development rights that would allow new construction to occur. As such, no increase in solid waste generation would occur; therefore, there would be no need for additional landfill capacity. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM PSU-6a Prior to issuance of building permits for any building developed pursuant to the Master Plan, the project applicant shall retain a qualified contractor to perform construction and demolition debris recycling. Following the completion of construction activities, the project applicant shall provide documentation to the satisfaction of the City of Manteca demonstrating that construction and demolition debris was recycled.

MM PSU-6b Prior to issuance of building permits for each building developed pursuant to the Master Plan, the project applicant shall provide information to the City of Manteca describing the methods by which recycling and waste diversion activities shall be achieved. This information shall include but is not limited to the type and location of facilities necessary to collect and store recyclable materials, contractors who would pick-up recyclable and reusable materials, and how recycling and waste diversion activities would be integrated into operational practices. To the extent feasible, centralized recycling facilities are encouraged to enhance the ease and efficiency of

such practices. The approved facilities and practices shall be incorporated into the uses envisioned by the Master Plan.

Level of Significance After Mitigation

Less than significant impact.

Energy

Impact PSU-7: The proposed project would not result in the inefficient, wasteful, or unnecessary use of energy.

Impact Analysis

This impact assesses whether the Master Plan and non-master plan annexations would result in the inefficient, wasteful, or unnecessary use of energy.

Master Plan

Electricity will be provided to the Master Plan uses from the 47-kilovolt (kv) overhead power lines located on the east side of Airport Way. The power will be dropped from the overhead lines and distributed throughout the Master Plan area via underground electrical lines and a series of transformers. Natural gas will be provided to the Master Plan uses from existing gas pipelines located within Lathrop Road, Airport Way, and Roth Road. All energy connections would be located underground in public rights-of-way or public-utility easements.

Table 3.11-14 summarizes the estimated annual electricity and natural gas consumption estimates for the Master Plan uses. The demand figures shown in the table are delivered from information provided by the United States Energy Information Administration for commercial buildings that operate continuously. As such, these figures likely overstate actual energy consumption since they include data from states with different climactic characteristics and less stringent energy efficiency requirements than California.

Table 3.11-14: Master Plan Energy Demand Estimate

Energy Source	Consumption Rate	Square Feet	Estimated Annual Demand
Electricity	15.7 kWH/square foot	4,658,961	73.1 million kWH
Natural Gas	58.3 cubic feet/square foot		271.6 million cubic feet

Notes:
kWH = kilowatt hours
Consumption rates provided by United States Energy Information Agency for buildings that operate continuously.
Source: Michael Brandman Associates, 2010.

The Master Plan establishes several design guidelines that relate to energy conservation:

- Provide high efficiency HVAC systems, when required, with non-HCFC refrigerants.
- Provide motion detectors in accessory function areas.

- Design buildings which use natural ventilation with the goal of minimizing air-conditioned areas.
- Design building orientation and shading to minimize solar gain and maximize daylight within the building work areas.
- Include photo-sensors and localized lighting controls to reduce the amount of artificial light used within indoor spaces.

In addition, the Master Plan uses will be subject to the most recently adopted edition of the Title 24 energy efficiency standards at the time building permits are sought. The Title 24 standards include a number of requirements associated with energy conservation and, therefore, ensure that the Master Plan uses would not result in the inefficient, wasteful, or unnecessary use of energy. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. All of these properties are currently served by PG&E and annexation would not change this existing condition. Furthermore, because no changes in land use would occur, no net change in energy consumption would occur. As such, no new or expanded facilities or supplies would be necessary. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

3.12 - Transportation

3.12.1 - Introduction

This section describes the existing transportation setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Transportation Impact Study, prepared in July 2010 by Fehr & Peers Transportation Consultants and included in this EIR as Appendix J.

3.12.2 - Environmental Setting

Roadway System

Below is a summary of relevant roadway facilities.

Interstate 5

Interstate 5 (I-5) is a major, north-south interstate freeway that extends from Mexico to Canada. Within the study area, it has three lanes in each direction with a posted speed limit of 65 miles per hour (mph). Located approximately 1 mile west of the Master Plan area, I-5 will serve as an important travel route for trucks.

Roth Road

Roth Road is a two-lane road that extends easterly from its interchange at I-5 to Airport Way. Roth Road west of the project site has a posted speed limit of 45 mph and is within the jurisdiction of the City of Lathrop. Passing is currently permitted along a portion of the easterly segment of Roth Road (along the north project frontage), which is located in unincorporated San Joaquin County.

Airport Way

Airport Way is a north-south road that extends from downtown Stockton into Manteca, and continues southerly from State Route 120 (SR-120) into unincorporated San Joaquin County. Airport Way between Roth Road and Lathrop Road is a two-lane undivided roadway that permits passing in certain areas. Airport Way does not have a posted speed limit along the project frontage, but generally accommodates free-flow speeds of 45 to 50 mph.

Lathrop Road

Lathrop Road extends from its interchange at I-5 easterly through the cities of Lathrop and Manteca, and continues easterly beyond its interchange with SR-99. Much of Lathrop Road consists of a two-lane roadway with a center left-turn lane. However, portions of the road have been widened along the frontage of recently developed properties and at an overcrossing of the Union Pacific Railroad Oakland Subdivision tracks. Along the project frontage, Lathrop Road is a two-lane roadway divided by a center median lane with a posted speed limit of 45 mph.

Traffic Volumes

Table 3.12-1 displays existing average daily traffic volumes on segments of Roth Road, Airport Way, and Lathrop Road.

Table 3.12-1: Existing Average Daily Traffic Volumes

Segment	Average Daily Traffic	Heavy Vehicle Percentage[3]
Roth Road west of Lathrop Intermodal Terminal[1]	6,100	38%
Roth Road west of Airport Way[2]	3,600	28%
Airport Way north of Roth Road[2]	6,500	10%
Airport Way south of Roth Road[1]	6,600	8%
Airport Way north of Lathrop Road[2]	6,400	4%
Airport Way south of Lathrop Road[1]	7,600	4%
Lathrop Road west of Airport Way[1]	12,800	4%
Lathrop Road east of Airport Way[1]	10,500	6%
Lathrop Intermodal Terminal Driveway[1]	2,400	88%

Notes:
[1] Based on counts collected on May 27-28, 2009.
[2] Estimated from May 2009 roadway and intersection counts.
[3] Heavy vehicles are defined as having three or more axles. Two-axle concrete and garbage trucks not considered in these percentages.
Source: Fehr & Peers Transportation Consultants, 2010.

Table 3.12-2 displays existing hourly traffic volumes during the morning and evening peak periods on segments of Roth Road, Airport Way, and Lathrop Road. This table indicates that the morning peak hour of traffic on Roth Road occurs from 6:00 to 7:00 a.m., primarily due to the effects of early morning trucking operations. Airport Way and Lathrop Road each exhibit peak hours of 7:00 to 8:00 a.m., which are typical for streets that serve as both trucking and commute routes. The evening peak hour on all three road segments occurs from 3:00 to 4:00 p.m.

Table 3.12-2: Existing Hourly Traffic Volumes

Hour	Roth Road East of Vallejo Court[1]	Airport Way South of Roth Road[1]	Lathrop Road West of Airport Way[1]
6:00 – 7:00 a.m.	**396**[2]	293	676
7:00 – 8:00 a.m.	358	**427**[2]	**805**[2]
8:00 – 9:00 a.m.	315	392	739
9:00 – 10:00 a.m.	289	325	581
2:00 – 3:00 p.m.	453	477	853
3:00 – 4:00 p.m.	**565**[2]	**556**[2]	**1,047**[2]

Table 3.12-2 (cont.): Existing Hourly Traffic Volumes

Hour	Roth Road East of Vallejo Court[1]	Airport Way South of Roth Road[1]	Lathrop Road West of Airport Way[1]
4:00 – 5:00 p.m.	409	538	948
5:00 – 6:00 p.m.	406	508	910

Notes:
[1] Based on counts collected on May 27-28, 2009.
[2] Peak hour volumes shown in bold and underline.
Source: Fehr & Peers Transportation Consultants, 2010.

Intersection Operations

Level of Service

The operations of roadway facilities are described using the level of service (LOS) concept. LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, with the least congested operating conditions, to LOS F, with the most congested operating conditions. LOS E represents "at-capacity" operations. Operations are designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions.

Signalized Intersections

The level of service method for signalized intersections analyzes operations based on average control vehicular delay, as described in Chapter 16 of the 2000 Highway Capacity Manual (HCM) by the Transportation Research Board. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections was calculated using the Synchro analysis software and is correlated to an LOS designation, as shown in Table 3.12-3.

Table 3.12-3: Intersection Levels of Service Thresholds

Level of Service	Signalized Intersection Control Delay (sec/veh)[1]	Unsignalized Intersection Control Delay (sec/veh)[1]	General Description
A	0 – 10.0	0 – 10.0	Little to no congestion or delays. Free flow
B	10.1 – 20.0	10.1 – 15.0	Limited congestion, short delays
C	20.1 – 35.0	15.1 – 25.0	Modest delays and stable flow.
D	35.1 – 55.0	25.1 – 35.0	High density, heavy delays, but stable flow.
E	55.1 – 80.0	35.1 – 50.0	Operations at or near capacity
F	>80.0	>50.0	Over-capacity, breakdown flow.

Notes:
[1] Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay.
Source: Fehr & Peers Transportation Consultants, 2010.

Unsignalized Intersections

Operations of unsignalized study intersections are evaluated using the method contained in Chapter 17 of the 2000 HCM. At two-way or side-street stop-controlled intersections, control delay is reported for the minor movement with the worst control delay, not for the intersection as a whole. For approaches composed of a single lane, control delay is computed as the average of all movements in that lane. For all-way stop-controlled intersections, the LOS is based on the weighted average control delay of all movements. The LOS designations for unsignalized intersections are also presented in Table 3.12-3.

Peak Hour Signal Warrants

A peak-hour signal warrant analysis was conducted for all unsignalized study intersections with an LOS of E or F. The analysis applied the peak-hour traffic signal warrant recommended in the California Manual on Uniform Traffic Control Devices. It should be noted that the peak-hour signal warrant is only one of several warrants that are evaluated to determine the need for a traffic signal.

Even when peak-hour signal warrant is satisfied, the decision to install a signal should not be based solely upon this factor. The City of Manteca, City of Lathrop, San Joaquin County, and the California Department of Transportation (Caltrans) should regularly monitor traffic conditions and accident data, and evaluate the full set of warrants in order to prioritize and program intersections for signalization.

Study Intersections

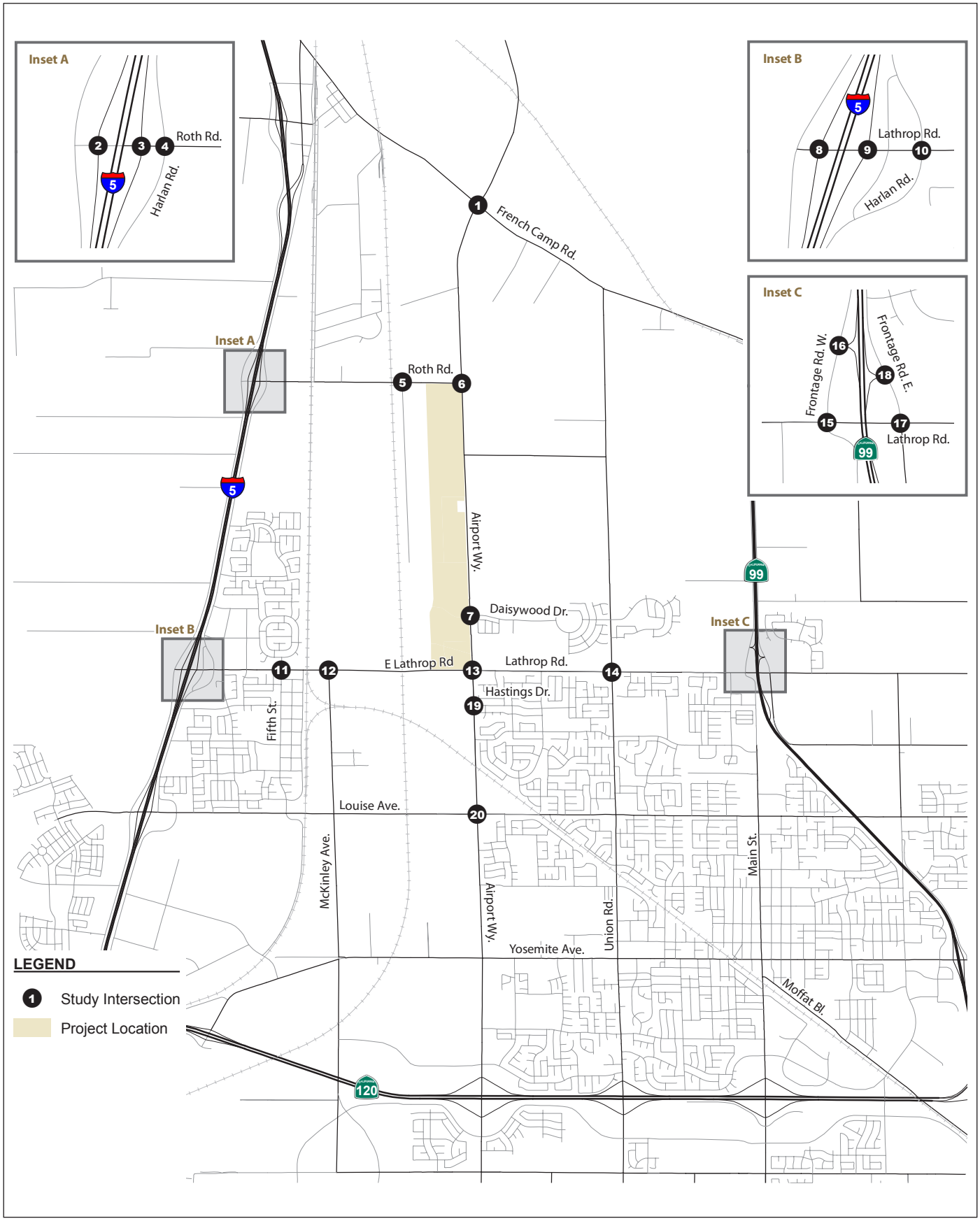
The study area shown on Exhibit 3.12-1 was selected from the project's expected travel characteristics (i.e., location and amount of project trips), as well as facilities susceptible to being impacted by the project. The study area is generally bounded by SR-99 on the east, I-5 on the west, French Camp Road on the north, and Louise Avenue on the south.

Exhibit 3.12-1 shows the 20 intersections that were selected for analysis under weekday AM and PM peak-hour conditions. In addition to these offsite intersections, several project access intersections were also analyzed. Various segments and ramps on I-5 and SR-99 were also analyzed.

Existing Intersection Operations

Exhibit 3.12-2 displays the existing AM and PM peak-hour turning movement volumes at the 20 study intersections. New counts were collected at four study intersections along Airport Way between French Camp Road and Hastings Drive on May 27, 2009. Counts in late 2008 or early 2009 from other studies were available for the other study intersections. As shown on Exhibit 3.12-2, eight intersections are signalized, with the remaining intersections controlled by stop signs.

The study intersections were analyzed in accordance with procedures described previously. Table 3.12-4 displays the average delay and LOS at each intersection during the AM and PM peak hours.



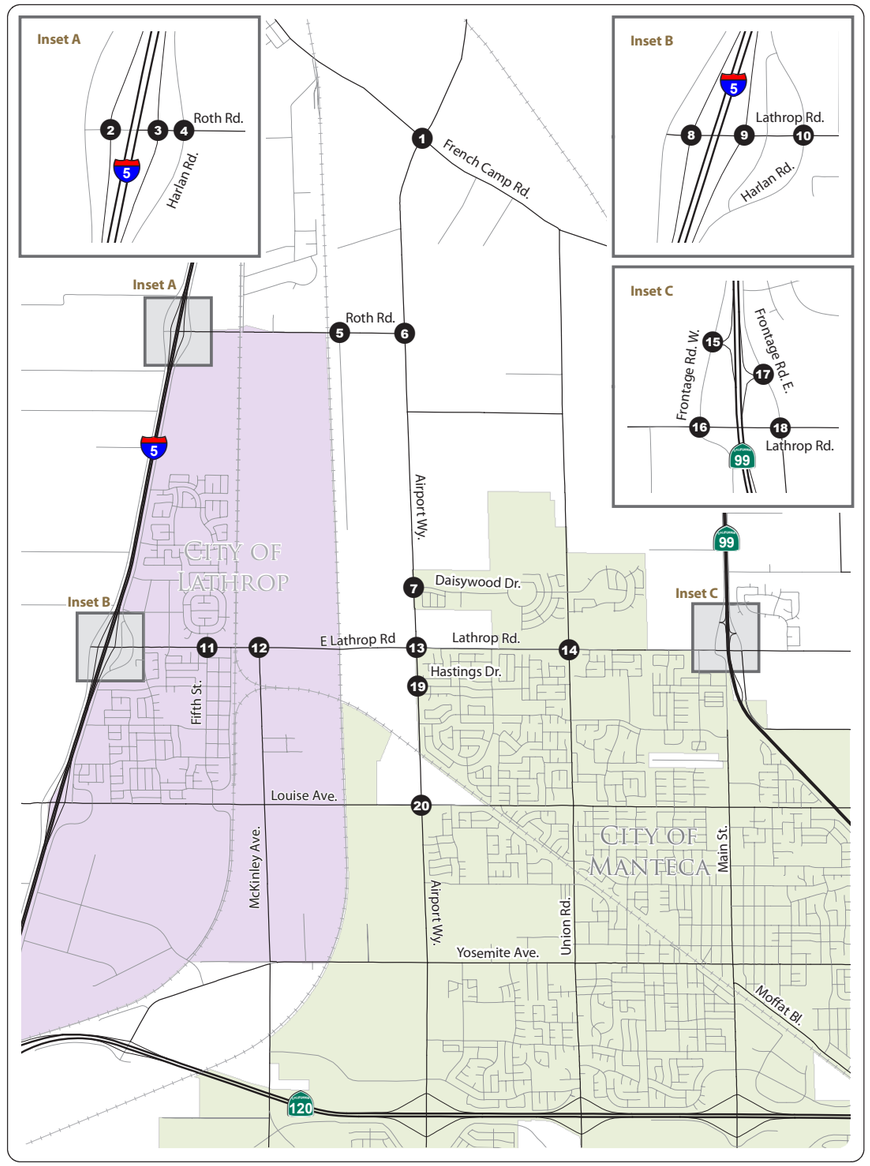
Source: Fehr & Peers Transportation Consultants (2010).

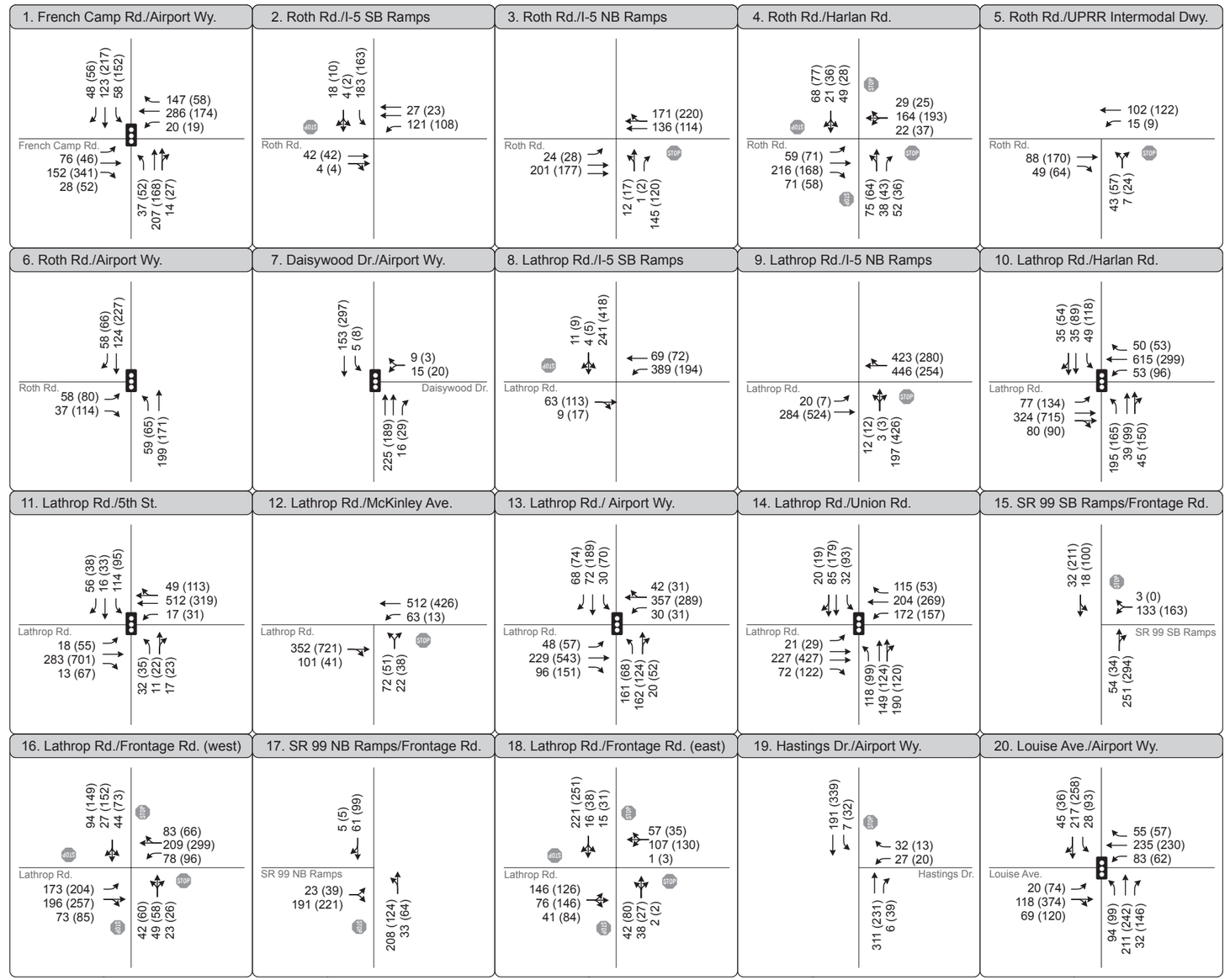
Michael Brandman Associates

NORTH

Not to Scale

Exhibit 3.12-1
Study Intersections and Project Location





LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- 1 Study Intersection
- Traffic Signal
- STOP Stop Sign

Source: Fehr & Peers Transportation Consultants (2010).

NORTH

Not to Scale

Michael Brandman Associates

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Exhibit 3.12-2
Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

This table also displays the form of traffic control (signal, stop signs) and jurisdiction associated with each intersection.

Table 3.12-4: Existing Intersection Operations

No.	Intersection	Jurisdiction	Control	AM Peak Hour		PM Peak Hour	
				Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	French Camp Road/ Airport Way	San Joaquin County	Signal	17	B	22	C
2	Roth Road/ I-5 Southbound Ramps	Caltrans	Side-Street Stop	14	B	14	B
3	Roth Road/ I-5 Northbound Ramps	Caltrans	Side-Street Stop	11	B	10	B
4	Roth Road/ Harlan Road	City of Lathrop	All-way Stop	14	B	13	B
5	Roth Road/ Lathrop Intermodal Terminal Driveway	San Joaquin County	Side-Street Stop	12	B	14	B
6	Roth Road/Airport Way	San Joaquin County	Signal	11	B	14	B
7	Daisywood Drive/ Airport Way	City of Manteca	Signal	4	A	4	A
8	Lathrop Road/ I-5 Southbound Ramps[1]	Caltrans	Side-Street Stop	>150	F	>150	F
9	Lathrop Road/ I-5 Northbound Ramps	Caltrans	Side-Street Stop	24	C	69	F
10	Lathrop Road/Harlan Road	City of Lathrop	Signal	28	C	28	C
11	Lathrop Road/Fifth Street	City of Lathrop	Signal	27	C	32	C
12	Lathrop Road/ McKinley Avenue	City of Lathrop	Side-Street Stop	39	E	33	D
13	Lathrop Road/Airport Way	City of Manteca	Signal	31	C	31	C
14	Lathrop Road/Union Road	City of Manteca	Signal	37	D	29	C
15	SR-99 Southbound Ramps/Frontage Road (West)	Caltrans	Side-Street Stop	12	B	22	C
16	Lathrop Road/SR-99 Frontage Road (West)	City of Manteca	All-way Stop	13	B	39	E
17	SR-99 Northbound Ramps/Frontage Road (East)	Caltrans	Side-Street Stop	11	B	12	B

Table 3.12-4 (cont.): Existing Intersection Operations

No.	Intersection	Jurisdiction	Control	AM Peak Hour		PM Peak Hour	
				Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
18	Lathrop Road/ SR-99 Frontage Road (East)	City of Manteca	All-way Stop	11	B	15	B
19	Hastings Drive/ Airport Way	City of Manteca	Side-Street Stop	13	B	15	B
20	Louise Avenue/ Airport Way	City of Manteca	Signal	22	C	31	C

Notes:
[1] >150 sec/veh of delay shown because inputs exceed analysis software's ability to produce reasonable delay estimates.
Source: Fehr & Peers Transportation Consultants, 2010.

As shown in Table 3.12-4, the following intersections currently operate at LOS E or F during one or both peak hours:

- 8) Lathrop Road/I-5 Southbound Ramps (off-ramp operates at LOS F during both peak hours)
- 9) Lathrop Road/I-5 Northbound Ramps (off-ramp operates at LOS F during PM peak hour)
- 12) Lathrop Road/McKinley Avenue (side-street operates at LOS E during AM peak hour)
- 16) Lathrop Road/SR-99 Frontage Road West (LOS E during PM peak hour)

The following intersections currently satisfy the peak-hour traffic volume warrant in the AM or PM peak hour for consideration of a traffic signal:

- 9) Lathrop Road/I-5 Northbound Ramps
- 12) Lathrop Road/McKinley Avenue
- 16) Lathrop Road/SR-99 Frontage Road West

Freeway Operations

Level of Service

Freeway mainline segments were evaluated using two-way average daily traffic volumes, which were collected from the Caltrans Traffic Data Branch 2008 Annual Average Daily Traffic report. The level of service was determined using the thresholds in Table 3.12-5. These thresholds were taken from the City of Stockton General Plan Draft Environmental Impact Report and were derived from density ranges specified in the HCM 2000.

As is described later in this section, a significant proportion of project trips (particularly trucks) are expected to access I-5 via the Roth Road interchange. Therefore, the analysis of this interchange

includes both ramp terminal intersection operations and ramp merge/diverge operations. The merge/diverge analysis is conducted in accordance with HCM 2000 procedures.

Table 3.12-5: Freeway Segment Level of Service Thresholds

Number of Lanes	Maximum Daily Traffic Volume at . . .				
	LOS A	LOS B	LOS C	LOS D	LOS E
4	27,600	45,200	63,600	77,400	86,400
6	41,400	67,800	95,400	116,100	129,600
8	55,200	90,400	127,200	154,800	172,800
10	69,000	113,000	159,000	193,500	216,000
Source: City of Stockton, 2006; Transportation Research Board, 2000.					

Heavy Vehicles

Many of the study roadways are traversed by significant numbers of heavy vehicles (generally defined as trucks with three or more axles). Because trucks have much greater acceleration and deceleration requirements than passenger cars, a passenger car equivalent of 2.0 is used in all analyses to account for the effects of trucks at intersections and freeway ramps.

Existing Freeway Operations

Freeway Segments

Table 3.12-6 displays the average daily traffic volume and LOS for the study segments of I-5 and SR-99. As shown, each segment currently operates in the LOS D range. According to the 2008 Highway Congestion Monitoring Program, northbound SR-99 from SR-120 to north of French Camp Road experiences recurrent congestion (i.e., speeds of 35 mph or less for 15 consecutive minutes) during the AM peak hour. No recurring congestion was identified on the segments of I-5 within the study area. These findings generally match results in Table 3.12-6.

Table 3.12-6: Existing Freeway Segment Operations

Freeway	Segment	Lanes	Average Daily Traffic	LOS[1]
I-5	North of Roth Road	6	96,000	D
	Roth Road to Lathrop Road	6	96,000	D
	Lathrop Road to Louise Avenue	6	100,000	D
	South of Louise Avenue	6	100,000	D
SR-99	North of French Camp Road	4	68,000	D
	Lathrop Road to French Camp Road	4	68,000	D
	South of Lathrop Road	4	67,000	D
Notes: [1] LOS based on daily volume per lane thresholds in Table 3.12-5 Source: Fehr & Peers Transportation Consultants, 2010.				

Interchange Ramps

Table 3.12-7 displays the ramp junction analysis results at the I-5/Roth Road interchange. As shown, all of the ramp merge/diverge movements operate at LOS C during both the AM and PM peak hours.

Table 3.12-7: Existing Interchange Ramp Operations (I-5/Roth Road)

Ramp	AM Peak Hour		PM Peak Hour	
	Density	LOS[1]	Density	LOS[1]
I-5 Southbound Off-Ramp Diverge	27	C	28	C
I-5 Southbound On-Ramp Merge	21	C	22	C
I-5 Northbound Off-Ramp Diverge	27	C	28	C
I-5 Northbound On-Ramp Merge	23	C	24	C

Notes:
[1] LOS is based on density, which is measured in passenger car equivalents per lane per mile.
Source: Fehr & Peers Transportation Consultants, 2010.

Public Transit

Transit service in the City of Manteca is provided by Manteca Transit. The San Joaquin Regional Transit District (SJRTD) provides fixed-route and flexible-response bus service in San Joaquin County. The nearest transit route to the project site is currently located on Lathrop Road.

The Manteca Transit Short Range Transit Plan (2009) does not envision expanding the City's transit service to the immediate project vicinity within the next 5 years. This is to be expected because the area currently has limited numbers of residents and workers who would benefit from transit service.

Bicycles

There are no marked on-street or off-street bicycle facilities near the project site. However, certain roads have shoulders of sufficient width to allow bicycling.

Pedestrians

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. Some of the major roads through the built-out portions near the project site include scattered pedestrian facilities. Examples include crosswalks at the signalized Lathrop Road/Airport Way intersection and sidewalks on the east side of Airport Way adjacent to Daisywood Drive.

Rail

The Union Pacific Railroad operates two rail lines in the projects vicinity: the Fresno Subdivision and the Oakland Subdivision. Each is discussed separately.

Fresno Subdivision

The Fresno Subdivision is a north-south, single-track rail line linking the southern portion of the San Joaquin Valley with the Sacramento Area. The Fresno Subdivision, also known as the I-5 Corridor,

hosts most of Union Pacific's north-south movements within California. The line also hosts Altamont Commuter Express (ACE) passenger service between Stockton and the junction with the Oakland Subdivision.

Within the project vicinity, the Fresno Subdivision is located to the west and south of both the Master Plan area and non-master plan annexation areas. The rail line parallels I-5 and then turns southeast towards Fresno at the Lathrop Wye. The line forms the southern boundary of the South non-master plan annexation area.

Oakland Subdivision

The Oakland Subdivision is an east-west, single-track rail line linking the San Francisco Bay Area with the Sacramento Area via Altamont Pass. The Oakland Subdivision hosts both freight trains and passenger trains operated by ACE. ACE trains use the Oakland Subdivision between the Fresno Subdivision Junction and Nile Junction (Fremont).

Within the project vicinity, the Oakland Subdivision is located to the west of both the Master Plan area and non-master plan annexation areas. The rail line forms the western boundary of the Master Plan area and South non-master plan annexation area.

Lathrop Intermodal Terminal

The Lathrop Intermodal Terminal is located on the Oakland Subdivision, west of the Master Plan area. The terminal transfers highway semi-trailers and shipping containers (intermodal units) between trains that move the trailers and containers long distances overland to another terminal, and trucks that move the trailers and containers locally between the terminal and shippers' and receivers' docks. The terminal currently has a capacity of 270,000 lifts per year. Union Pacific's 2010 10-K Annual Report indicates that the terminal performed 250,000 lifts in 2009.

At the time of Draft EIR release, Union Pacific has an application pending before the County of San Joaquin to expand the facility's capacity to 730,000 lifts per year by 2020. The application is currently under review.

Grade Crossings

Roth Road has at-grade crossings with both the Fresno and Oakland subdivisions.

The Lathrop Road crossing of the Oakland Subdivision is grade-separated via an overcrossing. The Lathrop Road crossing of the Fresno Subdivision is at-grade.

Grade Crossing Safety

Fehr & Peers reviewed grade crossing safety information for the two Roth Road grade crossings in the Master Plan vicinity.

Roth Road/Fresno Subdivision

According to US Department of Transportation Rail Crossing Inventory, an average of 18 trains per day travel through the Roth Road/Fresno Subdivision grade crossing. The crossing has advanced warning signs, railroad crossing pavement markings, stop lines, crossing gates, flashing lights, and warning bells.

Data from the Federal Railroad Administration was obtained to review the accident history at this crossing. In July 2009, a pick-up truck was stopped on Roth Road on the crossing and was struck by an ACE train. The driver of the pick-up truck was killed; no other injuries were reported. According to the accident record, all crossing equipment was functioning correctly and driver error (stopping on the tracks) caused the accident. A second fatality occurred at this crossing in June 2006. In this instance, the driver maneuvered around the crossing gates and was struck by an ACE train. These were the only two reported collisions between 2002 and 2009.

Roth Road/Oakland Subdivision

According to U.S. Department of Transportation Crossing Inventory, an average of 20 trains per day travel through the Roth Road/Oakland Subdivision grade crossing. The crossing has advanced warning signs, railroad crossing pavement markings, stop lines, crossing gates, flashing lights, and warning bells. In June 2009, a collision on Roth Road caused a vehicle to become disabled on the grade crossing. The vehicle was vacated by its driver and then hit by a train. This was the only reported collision between 2002 and 2009.

Comparison With National Railroad Safety Statistics

Table 8-2 of the Railroad Safety Statistics 2007 Final Annual Report reports motor vehicle accident rates throughout the United States at public at-grade rail crossings. The data show that the rate of accidents per 100,000-vehicle crossings (i.e., per 100,000 average daily trips) are lower when the crossing has gates, flashing lights, or warning bells versus stop signs or cross bucks (i.e., railroad crossing signs). The reported accident rate for crossings with gates or flashing lights was approximately 0.5 accident per 100,000 average daily trips, whereas the rate was about 1.4 accidents per 100,000 average daily trips for crossings with cross bucks and 4.3 accidents per 100,000 average daily trips for crossings with stop signs.

This data provides substantial evidence that the warning devices presently in place at the two Roth Road at-grade railroad crossings are associated with lower levels of accident rates when considering the entire range of potential warning devices. This conclusion is confirmed by the accident records at each location since 2002. The Fresno Subdivision grade crossing had two accidents and the Oakland Subdivision grade crossing had one accident, all of which were associated with driver error and not railroad equipment malfunctions.

3.12.3 - Regulatory Framework

State

California Department of Transportation

California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways in San Joaquin County. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the state highway system within the City of Manteca need to be approved by Caltrans, and the City of Manteca has no ability to unilaterally make improvements to the state highway system.

The Interstate 5 Transportation Concept Report identifies a concept LOS of "D" for the segment from SR-120 to north of Roth Road. The report identifies the need for widening to eight lanes in the near future to relieve congestion, and ultimate widening to a 10-lane freeway.

The State Route 99 Transportation Concept Report identifies a concept LOS of "D" for the segment from SR-120 to north of French Camp Road. The report identifies the need for the ultimate need for eight lanes to meet projected travel demands.

Local

City of Manteca

General Plan

The City of Manteca General Plan established the following goals and policies related to geology and soils that are applicable to the proposed project:

- **Goal C-1:** Provide for a circulation system that allows for the efficient movement of people, goods, and services within and through Manteca, based on land use and current improvement standards in conformance with the Public Facilities Implementation Plan.
- **Goal C-2:** Maintain a safe vehicular circulation system.
- **Goal C-5:** Ensure the adequate provision of both on-street and off-street parking.
- **Goal C-6:** Provide a safe secure bicycle route system.
- **Goal C-8:** Provide for safe and convenient pedestrian circulation.
- **Policy C-P-1:** The City shall strive to attain the highest possible traffic levels of service (LOS) consistent with the financial resources available and the limits of technical feasibility. The impact of new development and land use proposals on LOS should be considered in the review process.
- **Policy C-P-2:** Manteca's target for transportation LOS is to provide City-wide average LOS of C or better, and a minimum of LOS D at any individual location. LOS C, LOS D, and the other Level of Service ratings as defined in current traffic engineering standards. This "C average, D minimum" shall be accomplished by attempting to provide LOS C at all locations, but accepting LOS D under the following circumstances:

a. Where constructing facilities with enough capacity to provide LOS C is found to be unreasonably expensive.
b. Where it is difficult or impossible to maintain LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse.
c. Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes.
d. Where maintaining LOS C will be a disincentive to use of existing alternative modes or to the implementation of new transportation modes that would reduce vehicle travel.

- **Policy C-P-3:** Streets shall be dedicated, widened, extended, and constructed according to the Street cross-section diagrams established in the City Improvement Standards. Dedication and improvement of full rights-of-way as shown in the Street Standards shall not be required in existing developed areas where the City determines that such improvements are either infeasible or undesirable.
- **Policy C-P-5:** Development which would necessitate roadway improvements prior to the development of lands abutting those roadway improvements shall be required to make such improvements, or participate in such improvements, as a condition of approval.
- **Policy C-P-6:** New development will pay a fair share of the costs of street and other traffic and transportation improvements based on traffic generation and impacts on levels of service in conformance with the standards and policies established in the Public Facilities Implementation Plan.
- **Policy C-P-8:** Street improvements will be designed to provide multiple, direct, and convenient traffic routes.
- **Policy C-P-12:** The City shall promote development of a perimeter road system along Lathrop Road, Austin Road, Woodward Avenue, and Airport Way.
- **Policy C-P-18:** In accord with the PFIP the City shall assess development fees for traffic signals and highway interchanges sufficient to fund system wide improvements. The development fee schedule for these traffic improvements shall be periodically reviewed, and revised as necessary.
- **Policy C-P-26:** The city shall require all new development to provide an adequate number of off-street parking spaces to accommodate the typical parking demands of the type of development on the site. In the downtown area, the City is responsible for development of parking facilities and new development is not required to provide parking.
- **Policy C-P-29:** Ensure that there is adequate parking for normal commercial activities.
- **Policy C-P-36:** Provide adequate bicycle parking facilities at commercial, business/ professional and light industrial uses.
- **Policy C-P-37:** Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians. Provide shade and/or protection from wind and other weather conditions when possible.

- **Policy C-P-48:** The City shall encourage the provision of rail service into industrial development.
- **Policy C-P-54:** Establish and maintain a working relationship between the City administration and the local management of the Union Pacific Railroad regarding expansion of freight and passenger rail service and economic development of the region.

Bicycle Master Plan

The City of Manteca Bicycle Master Plan (2003) includes the following policies related to bicycle circulation in new development areas that are relevant to this analysis:

- Require new development to construct bikeways included in the proposed system along all roadways included within or adjacent to that development.
- Require new development to provide support facilities such as bicycle racks, personal lockers, and showers at appropriate locations such as parks, major recreational destinations, park-and-ride facilities, employment centers, schools, and commercial centers.
- Provide bike crossings at appropriate intervals along new roadways that will adequately serve new large-scale commercial, office, industrial, and residential development.
- Require new development to incorporate parks and schools as important destinations for bicyclists when designing circulation plans for subdivisions and other developments.

Public Facilities Implementation Plan

The City of Manteca's Public Facilities Implementation Plan (PFIP) is the implementing document for the City's General Plan policies on public infrastructure facilities. The purpose of the PFIP is to ensure adequate provision of public facilities as the City grows, and that they are developed in accordance with the City's General Plan. The PFIP is based on the City's individual water, sewer, drainage, and transportation facilities master plans. Under the PFIP, development impact fees are collected at or near the time of development and are used to finance the capacity expansion of public facilities (such as water, sewer collection, drainage, and transportation) necessary to accommodate the new demands.

Since the 1993 PFIP was not indexed to inflation, the current fees do not cover the costs of building the required transportation infrastructure. The City is currently updating the PFIP to develop a new list of infrastructure projects and a revised fee. It is expected that the PFIP fee will fully cover the cost of improvements to the City's street system. The revised fee is expected to be adopted by the City Council by the end of 2010.

San Joaquin County Regional Transportation Plan

San Joaquin County, through the San Joaquin Council of Governments (SJCOG), periodically updates the Regional Transportation Plan (RTP), which outlines countywide transportation

expenditures based on funding from such sources as the federal government, the State of California, and locally collected funds. The current SJCOG RTP (2007) contains several proposed improvements that would benefit the regional roadway network within the study area.

San Joaquin County Congestion Management Program

SJCOG operates a Regional Congestion Management Program, which monitors cumulative transportation impacts of growth on the regional roadway system, identifies deficient roadways, and develops plans to mitigate the deficiencies. The Regional Congestion Management Program considers LOS E or F operations to be deficient and includes segments of I-5, SR-99, Airport Way, and Lathrop Road as Congestion Management Program facilities.

San Joaquin County Regional Traffic Impact Fee

SJCOG has implemented a regional traffic impact fee that is assessed on new developments throughout San Joaquin County. As of 2009, the fee schedule is as follows: $3,102 per single-family dwelling unit, $1,801 per multi-family dwelling unit, $1.20 per square foot for retail development, $1.51 per square foot for office development, and $0.90 for industrial development. These fees are adjusted annually to account for inflation, and the funds go toward adding capacity on regional roadways and state highways.

Measure K

Measure K is a San Joaquin County measure that funds transportation projects through a half-cent sales tax. Measure K includes funds for widening SR-99 to six lanes between Manteca and Stockton, interchange improvements at Lathrop Road/I-5, as well as other improvements.

San Joaquin County General Plan

The LOS threshold from the San Joaquin County General Plan is relevant to this analysis since some study facilities are within unincorporated portions of the County. The San Joaquin General Plan circulation element specifies LOS D as the minimum acceptable LOS for county-owned transportation facilities.

City of Lathrop General Plan

The City of Lathrop General Plan (amended 2004) includes the following relevant goals and policies relating to its transportation system:

- Freeway interchanges should be improved to carry the demands of traffic generated by development in Lathrop, with new freeway interchanges and additional interchange ramps being added where necessary and practical in consideration of the need for fair apportionment of traffic to existing and future regional demands.
- Arterial streets serving Service Commercial and Industrial uses are to be designed and constructed to standards that reflect heavy truck traffic and the need for longer turning radii for trucks at intersections.

The General Plan identifies the following planned improvements in the study area:

- Improve Roth Road to six lanes from I-5 to Airport Way, along with railroad grade separation structures.
- Improve Airport Way to six lanes from Roth Road to SR-120.
- Improve Lathrop Road to four lanes from I-5 to the Manteca City limits, and provide railroad grade separation structures.

The City's General Plan identifies expected LOS C operations on city streets and LOS D operations at interchange ramps. However, in previous environmental documents, the City has used an LOS D standard for signalized and all-way stop intersections, and an LOS E standard for side-street stop-controlled intersections for the purposes of identifying impacts.

According to the City of Lathrop Adopted Budget (Fiscal Year 2009-2010), funds are being collected for the following Capital Improvement Program (CIP) projects:

- Lathrop Road/Fresno Subdivision grade-separation. Other sources of funding include Section 190 funds from the PUC, and State Transportation Improvement Program (STIP) funds. Completion is expected in 2012.
- I-5/Lathrop Road improvements. The City is pursuing interim improvements, as the ultimate improvements are several years away. Funding for ultimate improvements through developer fees, Measure K Renewal, and other sources.

3.12.4 - Methodology

Fehr & Peers Transportation Consultants prepared a Transportation Impact Study, dated July 2010, that analyzed the transportation impacts associated with development of the Northwest Airport Way Master Plan. The complete report is provided in Appendix J. Below are descriptions of key aspects of the study.

Scope of Analysis

A number of different public agencies provided comment letters in response to the Notice of Preparation of an EIR. Below are some of the salient comments pertaining to the transportation impact analysis:

- The transportation study should analyze the effects of the project on the Regional Congestion Management Plan, and identify mitigations for impacts.
- The Master Plan should include design standards that decrease Vehicle Miles of Travel (VMT) to reduce air quality impacts.

- The analysis needs to specifically consider safety issues at the at-grade railroad crossings in the area, and if necessary implement measures that will improve safety.
- The analysis should include a comprehensive analysis to address project impacts on Roth Road, Lathrop Road, and other roadways in Lathrop. In addition, improvements to the I-5/ Roth Road and I-5/Lathrop Road interchanges should be evaluated.

The technical analysis contained in this section addresses the majority of the items listed above. In some instances, the requested type, method, or extent of analysis is not provided, because it is either not required by CEQA guidelines, not necessary according to professional engineering judgment, or may be too speculative to analyze.

Study Scenarios

Twenty study intersections and various freeway segments and ramps were selected for analysis under the following scenarios:

- Existing Conditions
- Existing Plus CenterPoint Conditions
- Cumulative No Development Conditions
- Cumulative Plus CenterPoint Conditions
- Cumulative Plus Northwest Airport Way Master Plan Conditions

Project Travel Characteristics

Land Use Assumptions

The following land uses are proposed as part of the Northwest Airport Way Master Plan:

- **CenterPoint Intermodal Facility:**
  - 3,177,521 square feet of distribution, high-cube warehouse, and light industrial uses
- **Remaining Properties:**
  - 1,275,620 square feet of light industrial
  - 205,821 square feet of retail

The City's zoning ordinance permits both retail and business professional land uses within the community commercial zoning category. To provide for a conservative analysis approach in this study, the entire community commercial parcel (located adjacent to the Airport Way/Lathrop Road intersection) was assumed to develop with retail space (versus office), given its higher daily and PM peak-hour trip generation.

Trip Generation

This section describes the expected trip generation associated with the CenterPoint Intermodal Facility and the remainder of the Master Plan.

CenterPoint Intermodal Facility

The CenterPoint Intermodal Facility project is a unique type of land use whose trip generation cannot be readily established from references such as Trip Generation. The following project description is contained in the Master Plan:

> The CenterPoint Intermodal Facility project would be a separate, stand alone logistics facility that supports intermodal transportation by providing warehouse, distribution, and light industrial uses. It would capitalize on its location adjacent the Lathrop Intermodal Terminal to provide a transload center that would allow the contents of containers to be stored in on-site warehouses, assembled in on-site facilities, and distributed off-site by truck or rail.

To estimate the trip generation of CenterPoint Intermodal Facility, Fehr & Peers obtained traffic counts collected in 2007 at a similar CenterPoint facility located in Elwood, Illinois. At the time of the counts, the Elwood facility consisted of 6.9 million square feet of distribution, warehouse, and container/equipment management space. The traffic counts also included trips to/from an intermodal facility (similar to the Lathrop Intermodal Terminal on Roth Road), which operated approximately 750,000 annual lifts.

The Elwood Facility exhibited the following trip generation characteristics:

- Daily: 13,875 trips, 68 percent trucks
- AM peak hour: 890 trips, 58 percent trucks, 62 percent inbound
- PM peak hour: 1,310 trips, 48 percent trucks, 56 percent outbound

The Elwood data is valuable but cannot be applied directly to the proposed CenterPoint Intermodal Facility project for several reasons. First, the CenterPoint Elwood data includes trips generated by the intermodal facility, whereas the intermodal facility already exists adjacent to CenterPoint Manteca. Second, the CenterPoint Elwood intermodal facility operates 750,000 annual lifts, whereas the Lathrop Intermodal Terminal currently operates 250,000 annual lifts. The Lathrop Intermodal Terminal is planned to expand to operate 400,000 annual lifts by 2013 and 730,000 annual lifts by 2020. Lastly, CenterPoint Elwood has approximately 6.9 million square feet of supporting warehouse/distribution uses, whereas Manteca would have about 3.2 million square feet. Therefore, scaling of trips and adjustments to trip rates is necessary to take into consideration the differences in annual lifts and square footage.

The following describes a procedure for estimating the cumulative daily trip generation of the industrial component of the proposed CenterPoint Manteca project. Because the CenterPoint Elwood traffic data includes trips associated with the CenterPoint square footage and intermodal facility, it is necessary for this exercise to consider the combined trips of the CenterPoint Manteca and the Lathrop Intermodal Terminal, with appropriate adjustments for internal trips between the two adjacent uses.

- Step 1 – Estimate the gross daily trip generation of CenterPoint Manteca.

Step 1 Analysis

The 2007 CenterPoint Elwood counts are based on operations that represent an equivalent amount of annual lifts, but more than twice as much logistics/industrial space than CenterPoint Manteca/Lathrop Intermodal Terminal would have under cumulative conditions. Based on the Elwood land uses, annual lifts, and traffic data, the logistics/industrial space at CenterPoint Elwood is estimated to generate about 9,600 gross daily trips. Since CenterPoint Manteca would be 54 percent smaller than CenterPoint Elwood, a commensurate decrease in trips is expected, with the resulting trip generation being 4,420 daily trips (9,600 x 46 percent). Adjustments for internal truck trips between the Lathrop Intermodal Terminal and CenterPoint Manteca are described in Step 2.

- Step 2 – Determine external trips that are associated with CenterPoint Manteca

Step 2 Analysis

The Lathrop Intermodal Terminal was observed in May 2009 to generate 2,400 external daily trips, 88 percent of which were trucks. Under cumulative conditions, the planned expansion of the facility would generate 7,200 external daily trips, based on the three-fold increase in annual lifts. However, by placing CenterPoint Manteca adjacent to the Lathrop Intermodal Terminal, some Lathrop Intermodal Terminal truck trips will travel to/from CenterPoint Manteca versus traveling externally. Based on observations from other facilities and assumptions in the Joliet CenterPoint Traffic Study, this study assumes that 20 percent of Lathrop Intermodal Terminal truck trips would travel to/from CenterPoint Manteca. This represents 425 internal trips (i.e., 850 trip ends) under Existing Plus Project conditions. Given the planned extension of the Lathrop Intermodal Terminal, internalization is assumed to approximately double under cumulative conditions. These internal trip adjustments then yield the external trips associated with CenterPoint Manteca.

- Step 3 – Determine percentage of external CenterPoint Manteca trips that are trucks

Step 3 Analysis

Trucks were observed to represent 68 percent of total external trips at CenterPoint Elwood and 88 percent of the trips at the Lathrop Intermodal Terminal. Based on these truck percentages and trip generation calculations from above, trucks would represent 53 percent of daily CenterPoint Manteca trips.

Steps 1 through 3 were repeated to develop the cumulative external trip generation of CenterPoint Manteca for weekday AM and PM peak-hour conditions.

A similar approach was followed for the "Existing Plus CenterPoint" analysis scenario. However, since this scenario does not assume any expansion of the Lathrop Intermodal Terminal, fewer total truck trips are assumed to be internalized between the two sites. Table 3.12-8 displays the expected

trip generation of CenterPoint under existing and cumulative conditions. The internalized Lathrop Intermodal Terminal truck trips will be reflected by reduced numbers of trips entering/exiting that project's access on Roth Road.

Table 3.12-8: CenterPoint Intermodal Facility Trip Generation

Land Use	Quantity (1,000 square feet)	Trip Rate[1]			Trips		
		Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
CenterPoint Intermodal Facility (Distribution, High-Cube Warehouse, Light Industrial)	3,177	Not Applicable			4,420	327	495
Trip Generation – Existing Plus Project Conditions							
CenterPoint-to-Lathrop Intermodal Terminal Internalization[2]					(425)	(21)	(28)
New Trips					3,995	306	467
Trip Generation – Cumulative Plus Project Conditions							
CenterPoint-to-Lathrop Intermodal Terminal Internalization[2]					(850)	(42)	(57)
New Trips					**3,570**	**285**	**438**

Notes:
[1] Refer to previous pages for methodology for calculating CenterPoint Intermodal Facility trips.
[2] Twenty percent of external truck trips generated by Lathrop Intermodal Terminal assumed to be internalized with the CenterPoint Intermodal Facility under Existing Plus Project conditions. Greater internalization expected under Cumulative conditions based on planned Lathrop Intermodal Terminal expansion.
Source: Fehr & Peers Transportation Consultants, 2010.

Under Existing Plus Project conditions, CenterPoint Manteca would generate approximately 4,000 external daily trips, with 305 trips during the AM peak hour and 470 trips during the PM peak hour. The trip generation would be reduced by 5 to 10 percent under cumulative conditions from increased internalization with the Lathrop Intermodal Terminal due to its assumed expansion.

Table 3.12-8 shows that the gross PM peak-hour trip generation of the CenterPoint industrial uses would be 495 trips based on the application of trip rates derived from the Elwood CenterPoint facility. An alternative approach for calculating the trip generation would have been to assume a mixture of high-cube warehouse and light industrial uses. The vast majority of CenterPoint space will be dedicated to warehouse and distribution. If a mix of 93 percent high-cube warehouse and 7 percent light industrial was assumed, the resulting gross PM peak-hour trip generation would be 487 trips based on the trip rates shown in Table 3.12-9. This information leads to the following conclusion:

- The use of traffic data from the existing CenterPoint Elwood facility is an appropriate means for estimating the trip generation of the proposed CenterPoint project. The resulting PM peak-hour trip generation estimate was checked against data from Trip Generation and found to

correspond closely to trips associated with a reasonable and likely mix of high-cube warehouse and light industrial space to be constructed onsite.

Trip Generation of Remaining Master Plan Properties

The remaining properties in the Master Plan would permit a mix of light industrial and community commercial uses. In accordance with direction from City staff, the light industrial properties were assumed to be developed with the following mix of uses:

- 80 percent high-cube warehouse
- 15 percent light industrial
- 5 percent retail (based on low intensity auto parts/service uses)

This mix of uses is similar to what has been constructed elsewhere in the City (e.g., Spreckels Business Park) on light industrial-zoned land. To provide for a conservative analysis approach, the community commercial was assumed to develop with retail space. Table 3.12-9 displays the trip generation of the remaining Master Plan properties.

The remaining properties would generate approximately 12,750 external daily trips, with 490 trips during the AM peak hour and 1,090 trips during the PM peak hour.

Modest levels of internalization were assumed between the CenterPoint industrial uses and the retail space. The number of external retail trips has been adjusted to reflect pass-by traffic from adjacent streets based on data in Trip Generation Handbook.

Table 3.12-9: Remaining Master Plan Land Uses Trip Generation

Land Use	Quantity (1,000 square feet)	Trip Rate[1]			Trips		
		Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak	PM Peak
High-Cube Warehouse	1,020.50	1.44	0.09	0.10	1,470	92	102
Light Industrial	191.30	6.94	0.71	0.61	1,327	136	116
Auto/Truck Parts/Service	63.80	17.10	1.35	1.93	1,091	86	123
Retail	205.82	52.75	1.15	5.01	10,857	236	1,032
				Gross Trips	14,745	550	1,373
				Industrial-to-Retail Internalization[2]	(389)	(31)	(34)
				Retail Pass-by Trips[3]	(1,600)	(33)	(254)
				New Trips	**12,756**	**486**	**1,085**

Table 3.12-9 (cont.): Remaining Master Plan Land Uses Trip Generation

Land Use	Quantity (1,000 square feet)	Trip Rate[1]			Trips		
		Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak	PM Peak

Notes:
[1] Trip rates for retail use from ITE Trip Generation (2008) best fit curve. Trip rates for light industrial and high-cube warehouse based on average rates published in Trip Generation. Trip rates for auto/truck parts/service land use category based on data in San Diego Traffic Generators, SANDAG, 1998.
[2] Five percent of industrial trips assumed to be internalized with retail uses.
[3] Retail pass-by rate assumed to be 15 percent for daily and AM peak-hour conditions and 25 percent for PM peak-hour conditions.
Source: Fehr & Peers Transportation Consultants, 2010.

Summary

Table 3.12-10 summarizes the trip generation for the various scenarios analyzed.

Table 3.12-10: Trip Generation Summary

Scenario	New Trips (Percent Trucks)		
	Daily	AM Peak Hour	PM Peak Hour
Existing Plus CenterPoint Intermodal Facility	3,995 (53%)	306 (42%)	467 (29%)
Cumulative Plus CenterPoint Intermodal Facility	3,570 (48%)	285 (38%)	438 (24%)
Cumulative Plus Master Plan Buildout	16,326 (16%)	771 (22%)	1,523 (11%)

Notes:
Refer to prior tables for detailed trip generation calculations.
Overall heavy vehicle percentages based on following heavy vehicle percentages for specific land uses:

Land Use	Daily	AM Peak	PM Peak
CenterPoint (Industrial)	53%	42%	29%
Retail	2%	2%	2%
Warehouse/Light Industrial/Auto Service	20%	20%	15%

Source: Fehr & Peers Transportation Consultants, 2010.

Trip Distribution

The spatial distribution of project trips will depend on several factors, including type of land use, relative location of uses within the Master Plan area, and primary access driveways to be used by trucks. Turning movements at the Lathrop Intermodal Terminal driveway on Roth Road provides a sense for the directionality of movements by trucks. Approximately 80 percent of vehicles using this driveway traveled to/from the west on Roth Road (i.e., toward I-5). Based in part on output from the

City of Manteca Travel Demand Forecasting Model, trips from Manteca CenterPoint will not be so heavily weighted to/from the west, because trucks will not constitute such a large percentage of the total trip generation.

Exhibit 3.12-3 displays the expected distribution of project trips under Existing Plus CenterPoint conditions. Exhibit 3.12-4 shows the expected distribution of project trips under cumulative conditions.

Access Assumptions

The Draft Master Plan displays the interim and ultimate internal circulation and access plans for the Master Plan area. Refer Exhibit 2-8 and Exhibit 2-9 in Section 2, Project Description for illustrations of each of the two plans described below.

Interim Access Plan (CenterPoint Only)

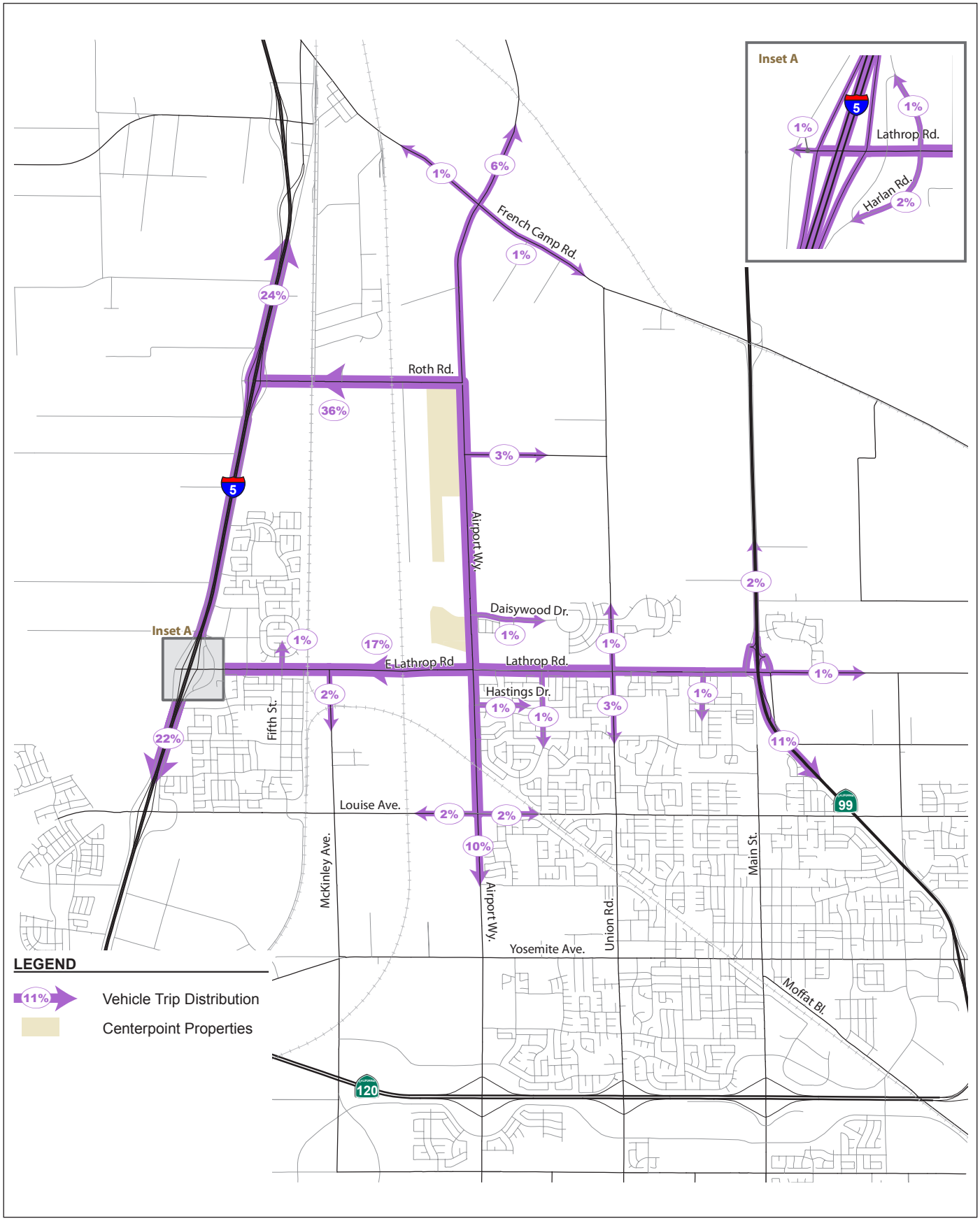
This access plan consists of driveways serving the CenterPoint Intermodal Facility from Roth Road and Airport Way. Two full-access driveways would be provided on Roth Road and as many 12 driveways would be situated on Airport Way. The Airport Way driveways would include a new signalized driveway opposite Lovelace Road and a driveway opposite the existing signalized intersection at Daisywood Drive. The interim access plan would not provide direct access to Lathrop Road.

A main north-south collector road would extend along the western portion of the property from Roth Road toward the south. However, this internal road would not connect the southern and northern portions of the CenterPoint property because it would need to pass through the RCCI PTP property, which is not assumed to be developed in this phase. As such, all access to the southern CenterPoint property would be provided from Airport Way under this phase.

Ultimate Access Plan (Master Plan Buildout)

The ultimate access plan for the Master Plan consists of vehicular access from Roth Road, Airport Way, and Lathrop Road. Much of the ultimate access would be constructed with the interim plan. However, the ultimate access plan provides two new access points on Lathrop Road, including a new signalized driveway. It also completes internal street connections through the remaining Master Plan properties. This will enable travel from one end of the Master Plan to the other without using public streets.

The applicant is currently in negotiations with the City with respect to frontage improvements. For the purposes of this analysis, no capacity improvements have been assumed on any of the frontage streets. The timing/need for such improvements will be identified through the impact analysis. The City will require that travel lanes along the project frontage be constructed in their planned ultimate locations to support future widening.



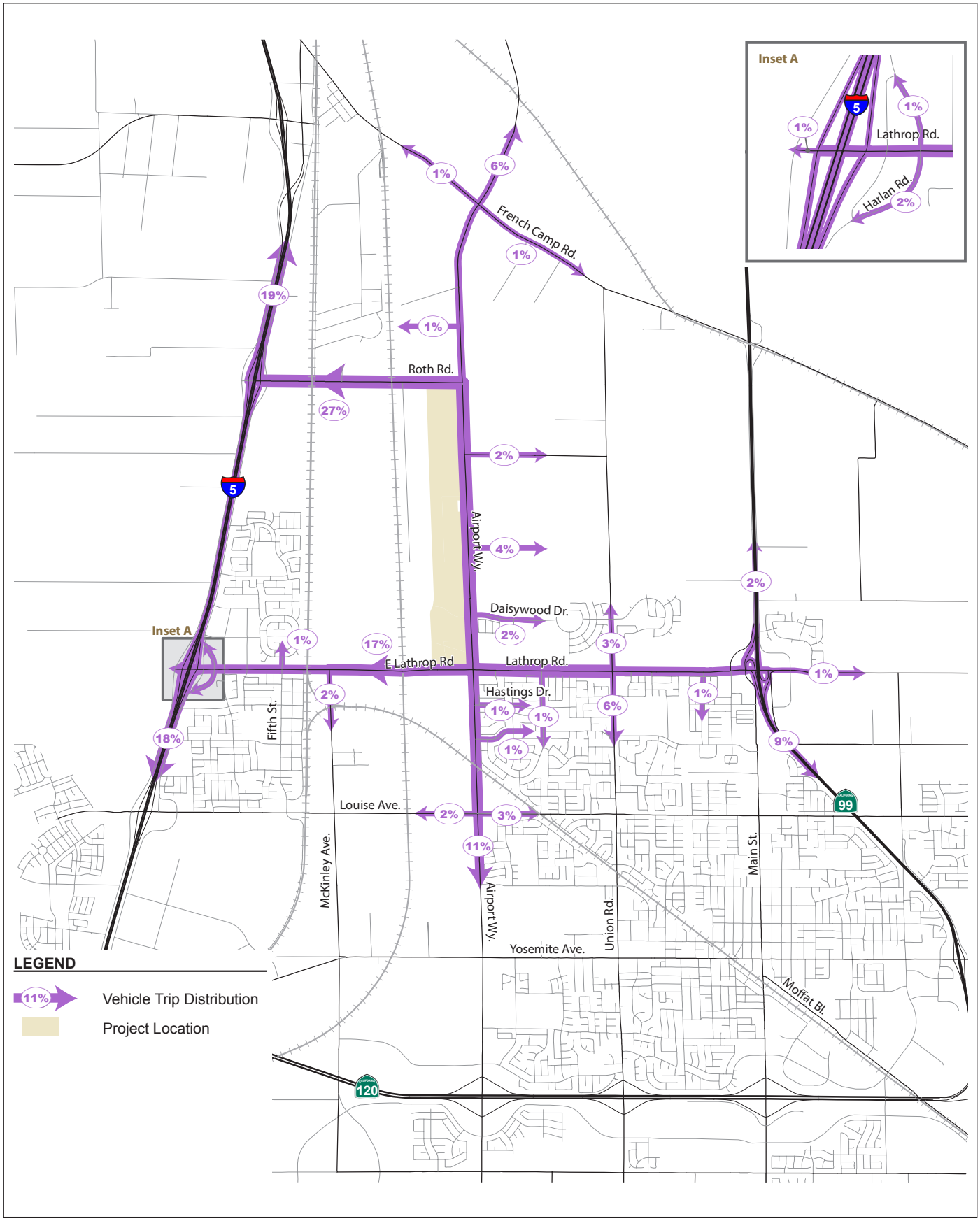
Source: Fehr & Peers Transportation Consultants (2010).

NORTH

Not to Scale

Michael Brandman Associates

Exhibit 3.12-3
Trip Distribution - CenterPoint Project Only Conditions



Source: Fehr & Peers Transportation Consultants (2010).

NORTH

Not to Scale

Michael Brandman Associates

Exhibit 3.12-4
Trip Distribution - Master Plan Buildout Conditions

3.12.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, transportation impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a.) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b.) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c.) 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?

d.) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e.) Result in inadequate emergency access?

f.) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?

Related to checklist items a) and b), the project would cause a significant impact to the roadway system if it would:

Signalized Intersections

- Worsen operations from LOS D or better to LOS E or F.
- Increase the average delay at an intersection currently operating (or projected to operate) unacceptably by three (3) seconds or more.

All-Way Stop Intersections

- Worsen operations from LOS D or better to LOS E or F.
- Increase the average delay at an intersection currently operating (or projected to operate) unacceptably by 3 seconds or more and cause one of the peak-hour signal warrants to be met.

Side-Street Stop Intersections

- Worsen operations at a facility controlled by Manteca, San Joaquin County, or Caltrans from LOS D or better to LOS E or F.
- Worsen operations at a facility controlled by Lathrop from LOS E or better to LOS F.

- Increase the average delay for the highest delayed side-street movement at an intersection currently operating (or projected to operate) unacceptably by 3 seconds or more and cause one of the peak-hour signal warrants to be met.

Freeways

- Worsen operations from LOS D or better to LOS E or F.
- Add 100 vehicles per day or more to a freeway segment that is currently operating (or projected to operate) unacceptably.
- Increase traffic by one percent or more at a freeway ramp that is currently operating (or projected to operate) unacceptably.

The above thresholds were developed based on the relevant policies of each agency as well as information in the City's Transportation Impact Analysis Guidelines. Although still in draft form, these guidelines have been used for several other EIRs in the area. They are also being considered for formal adoption along with updates to the City of Manteca General Plan Circulation Element.

3.12.6 - Project Impacts and Mitigation Measures

Existing Plus CenterPoint Traffic

Impact TRANS-1: The CenterPoint Intermodal Facility would generate new trips that contribute to unacceptable intersection operations under Existing Plus Project Conditions.

Impact Analysis

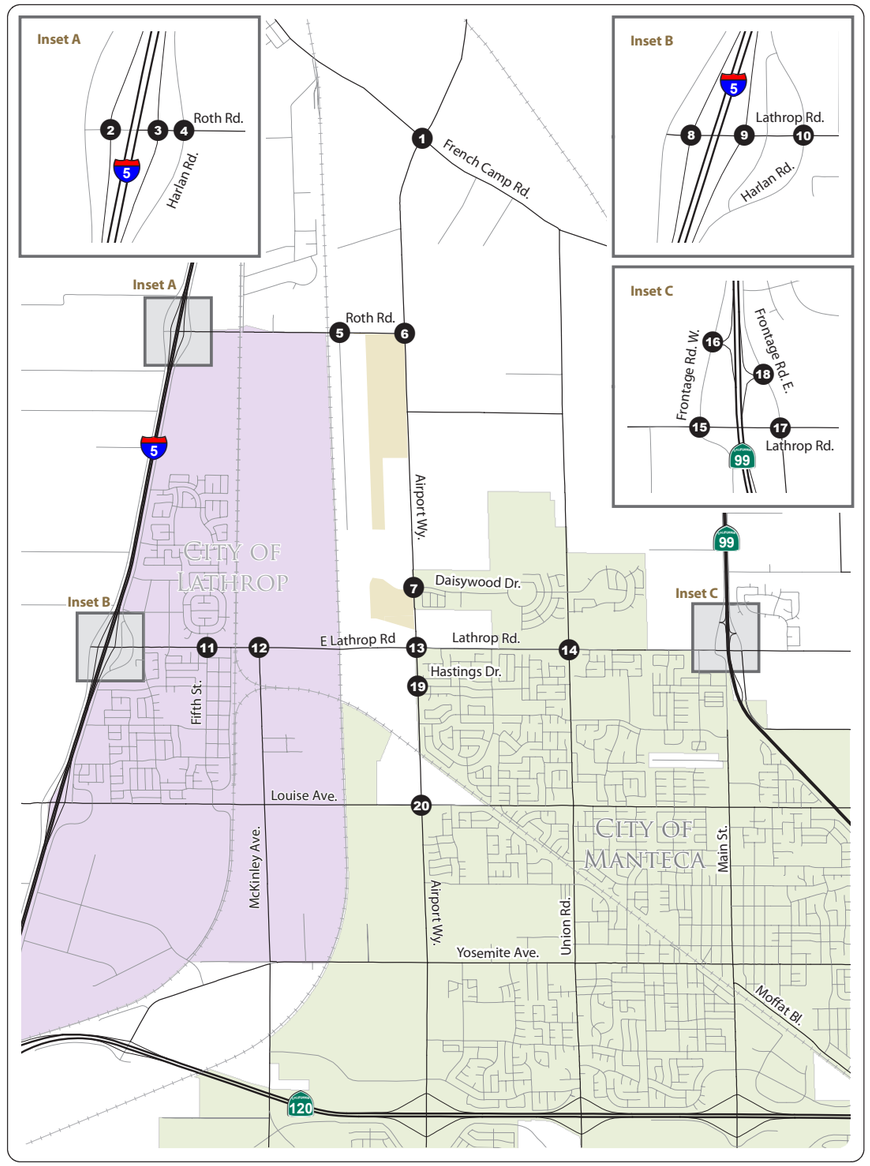
This impact assess impacts on the circulation system under Existing Plus CenterPoint conditions, which represent the hypothetical "opening year" of the first phase of the Master Plan (i.e., the CenterPoint Intermodal Facility). The balance of the Master Plan uses are not anticipated to be developed until after the CenterPoint Intermodal Facility is completed; therefore, they have been excluded from this scenario.

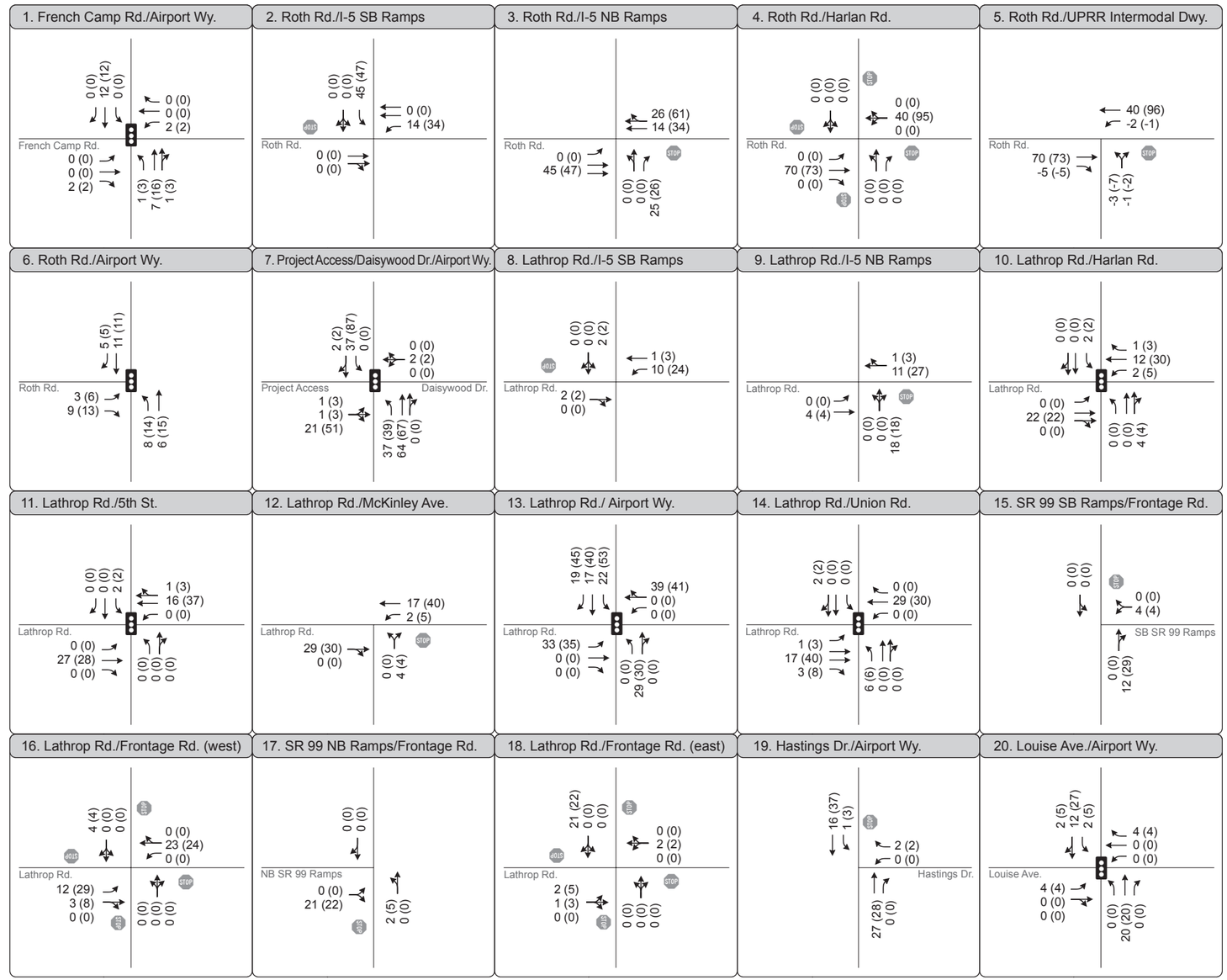
Master Plan

Traffic Forecasts

Trips associated with the CenterPoint component were assigned to the study facilities in accordance with the trip generation and distribution assumptions described previously. Exhibit 3.12-5 displays project-only trips during the AM and PM peak hours at the study intersections. Project-only trips were then added to the existing volumes to yield Existing Plus CenterPoint conditions. Exhibit 3.12-6 displays these forecasts at the study intersections.

Table 3.12-11 displays the average daily traffic on roadways surrounding the Master Plan area under Existing Plus CenterPoint conditions. As shown, the greatest increases in traffic are expected to occur on Airport Way between Lathrop Road and Daisywood Drive.





Source: Fehr & Peers Transportation Consultants (2010).

NORTH

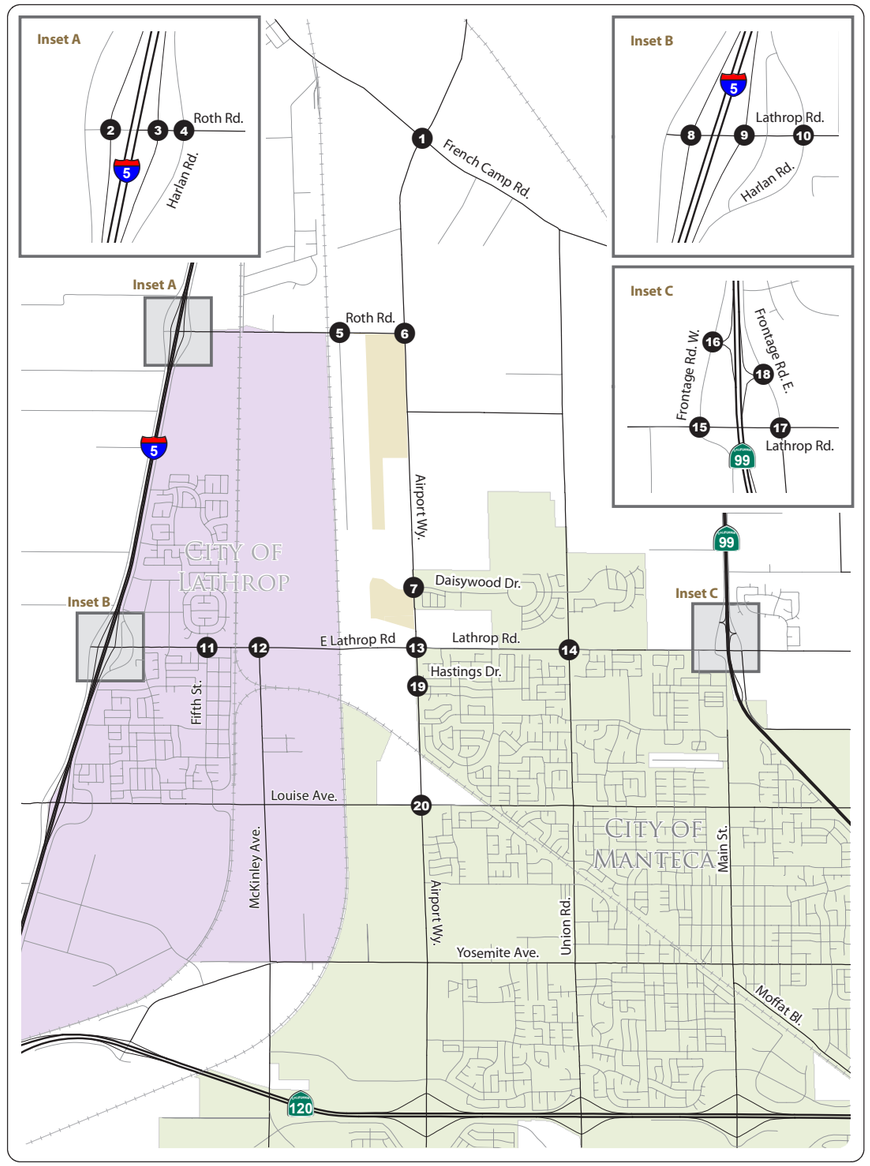
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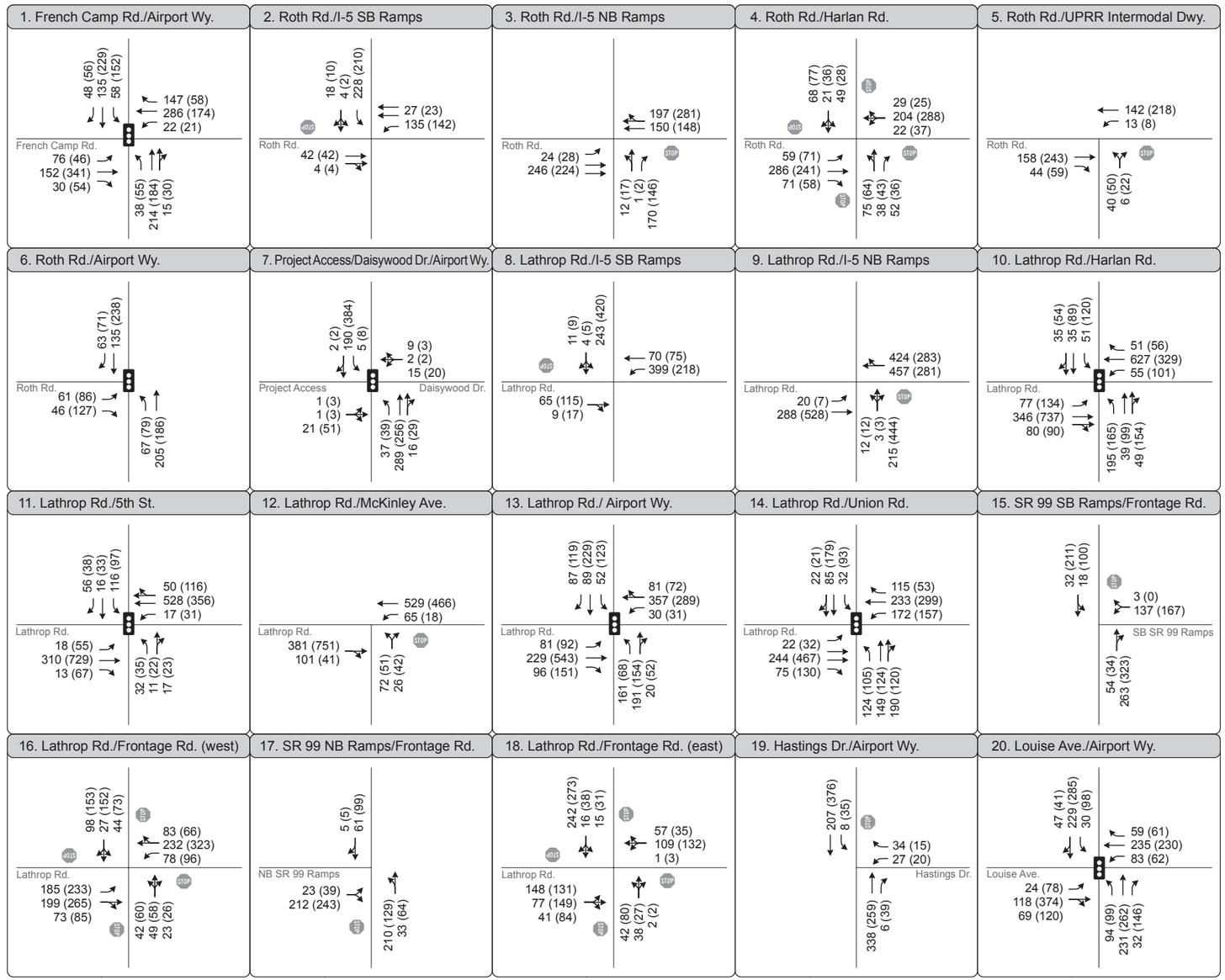
Michael Brandman Associates

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Exhibit 3.12-5
CenterPoint-Only Peak Hour Trips

CITY OF MANTECA • NORTHWEST AIRPORT WAY MASTER PLAN
ENVIRONMENTAL IMPACT REPORT





LEGEND

	Turn Lane		Traffic Signal
AM (PM)	Peak Hour Traffic Volume	STOP	Stop Sign
1	Study Intersection		Centerpoint Properties

Source: Fehr & Peers Transportation Consultants (2010).

NORTH

Not to Scale

Michael Brandman Associates

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Exhibit 3.12-6
Peak Hour Traffic Volumes and Lane Configurations - Existing Plus CenterPoint Project Conditions

Table 3.12-11: Existing Plus CenterPoint Average Daily Traffic Volumes

Segment	Average Daily Traffic		
	Existing Conditions	Center-Point Trips	Existing Plus CenterPoint Conditions
Roth Road west of Lathrop Intermodal Terminal	6,100	1,400	7,500
Roth Road from Lathrop Intermodal Terminal to Project Driveway	3,600	1,400	5,000
Roth Road from Main Project Driveway to Airport Way	3,600	300	3,900
Airport Way north of Roth Road	6,500	300	6,800
Airport Way from Roth Road to Lovelace Road	6,600	400	7,000
Airport Way from Lovelace to Daisywood Drive	6,200	1,400	7,600
Airport Way to Daisywood Drive to Lathrop Road	6,400	2,100	8,500
Airport Way south of Lathrop Road	7,600	600	8,200
Lathrop Road west of Airport Way	12,800	700	13,500
Lathrop Road east of Airport Way	10,500	800	11,300
Lathrop Intermodal Terminal Driveway	2,400	-400	2,000

Notes:
CenterPoint trips included industrial and retail uses (see Table 3.12-8).
Source: Fehr & Peers Transportation Consultants, 2010.

Intersection Operations

The study intersections were re-analyzed under Existing Plus CenterPoint conditions. Table 3.12-12 summarizes the results.

Table 3.12-12: Existing Plus CenterPoint Intersection Operations

No.	Intersection	Jurisdiction	Control	AM (PM) Peak Hour			
				Existing Conditions		Existing Plus CenterPoint Conditions	
				Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	French Camp Road/Airport Way	San Joaquin County	Signal	17	B	17	B
				(22)	(C)	(23)	(C)
2	Roth Road/I-5 Southbound Ramps	Caltrans	Side-Street Stop	14	B	18	C
				(14)	(B)	(17)	(C)
3	Roth Road/I-5 Northbound Ramps	Caltrans	Side-Street Stop	11	B	11	B
				(10)	(B)	(11)	(B)

Table 3.12-12 (cont.): Existing Plus CenterPoint Intersection Operations

No.	Intersection	Jurisdiction	Control	AM (PM) Peak Hour			
				Existing Conditions		Existing Plus CenterPoint Conditions	
				Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
4	Roth Road/Harlan Road	City of Lathrop	All-way Stop	14	B	17	C
				(13)	(B)	(17)	(C)
5	Roth Road/ Lathrop Intermodal Terminal Driveway	San Joaquin County	Side-Street Stop	12	B	14	B
				(14)	(B)	(15)	(C)
6	Roth Road/Airport Way	San Joaquin County	Signal	11	B	11	B
				(14)	(B)	(15)	(B)
7	Daisywood Drive/Airport Way	City of Manteca	Signal	4	A	11	B
				(4)	(A)	(12)	(B)
8	Lathrop Road/I-5 Southbound Ramps[1]	Caltrans	Side-Street Stop	>150	F	>150	F
				(>150)	(F)	(>150)	(F)
9	Lathrop Road/I-5 Northbound Ramps	Caltrans	Side-Street Stop	24	C	25	D
				(69)	(F)	(84)	(F)
10	Lathrop Road/ Harlan Road	City of Lathrop	Signal	28	C	28	C
				(28)	(C)	(29)	(C)
11	Lathrop Road/ Fifth Street	City of Lathrop	Signal	27	C	28	C
				(32)	(C)	(32)	(C)
12	Lathrop Road/ McKinley Avenue	City of Lathrop	Side-Street Stop	39	E	41	E
				(33)	(D)	(39)	(E)
13	Lathrop Road/ Airport Way	City of Manteca	Signal	31	C	35	C
				(31)	(C)	(32)	(C)
14	Lathrop Road/ Union Road	City of Manteca	Signal	37	D	39	D
				(29)	(C)	(29)	(C)
15	SR-99 Southbound Ramps/Frontage Road (West)	Caltrans	Side-Street Stop	12	B	12	B
				(22)	(C)	(23)	(C)
16	Lathrop Road/ SR-99 Frontage Road (West)	City of Manteca	All-way Stop	13	B	14	B
				(39)	(E)	(46)	(E)
17	SR-99 Northbound Ramps/Frontage Road (East)	Caltrans	Side-Street Stop	11	B	11	B
				(12)	(B)	(12)	(B)

Table 3.12-12 (cont.): Existing Plus CenterPoint Intersection Operations

No.	Intersection	Jurisdiction	Control	AM (PM) Peak Hour			
				Existing Conditions		Existing Plus CenterPoint Conditions	
				Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
18	Lathrop Road/ SR-99 Frontage Road (East)	City of Manteca	All-way Stop	11	B	11	B
				(15)	(B)	(16)	(C)
19	Hastings Drive/ Airport Way	City of Manteca	Side-Street Stop	13	B	14	B
				(15)	(B)	(16)	(C)
20	Louise Avenue/ Airport Way	City of Manteca	Signal	22	C	23	C
				(31)	(C)	(34)	(C)

Notes:
[1] >150 sec/veh of delay shown because inputs exceed analysis software's ability to produce reasonable delay estimates.
Source: Fehr & Peers Transportation Consultants, 2010.

According to this table, the following intersections would operate at LOS E or F under this scenario:

- 8) Lathrop Road/I-5 99 Southbound Ramps (LOS F in the AM and PM peak hours)
- 9) Lathrop Road/I-5 99 Northbound Ramps (LOS F in the PM peak hour)
- 12) Lathrop Road/McKinley Avenue (LOS E in AM and PM peak hours)
- 16) Lathrop Road/SR-99 Frontage Road West (LOS F in PM peak hour)

A peak-hour signal warrant analysis at the above unsignalized intersections indicates that the warrant would be satisfied at the following three locations:

- 9) Lathrop Road/I-5 Northbound Ramps (meets signal warrant in AM and PM peak hours)
- 12) Lathrop Road/McKinley Avenue (meets signal warrant in AM and PM peak hours)
- 16) Lathrop Road/SR-99 Frontage Road West (meets signal warrant in the PM peak hour)

Freeway Operations

Table 3.12-13 displays the average daily traffic volume and LOS under Existing Plus CenterPoint conditions for the study segments of I-5 and SR-99. As shown, each segment would continue to operate at LOS D under this scenario. Table 3.12-14 displays the ramp junction analysis results at the I- 5/Roth Road interchange. As shown, each ramp junction will continue to operate at an acceptable LOS with the addition of project traffic.

Table 3.12-13: Existing Plus CenterPoint Freeway Segment Operations

Freeway	Segment	Lanes	Average Daily Traffic – LOS[1]	
			Existing Conditions	Existing Plus CenterPoint Conditions
I-5	North of Roth Road	6	96,000 – D	97,000 – D
	Roth Road to Lathrop Road	6	96,000 – D	96,600 – D
	Lathrop Road to Louise Avenue	6	100,000 – D	100,900 – D
	South of Louise Avenue	6	100,000 – D	100,900 – D
SR-99	North of French Camp Road	4	68,000 – D	68,200 – D
	Lathrop Road to French Camp Road	4	68,000 – D	68,100 – D
	South of Lathrop Road	4	67,000 – D	67,400 – D

Notes:
[1] LOS based on daily volume per lane thresholds in Table 3.12-5.
Source: Fehr & Peers Transportation Consultants, 2010.

Table 3.12-14: Existing Plus CenterPoint Interchange Ramp Operations

Ramp	AM (PM) Peak Hour			
	Existing Conditions		Existing Plus CenterPoint Conditions	
	Density	LOS[1]	Density	LOS[1]
I-5 Southbound Off-Ramp Diverge	27 (28)	C (C)	27 (28)	C (D)
I-5 Southbound On-Ramp Merge	21 (22)	C (C)	21 (23)	C (C)
I-5 Northbound Off-Ramp Diverge	27 (28)	C (C)	27 (28)	C (D)
I-5 Northbound On-Ramp Merge	23 (24)	C (C)	23 (25)	C (C)

Notes:
[1] LOS is based on density, which is measured in passenger car equivalents per lane per mile.
Source: Fehr & Peers Transportation Consultants, 2010.

Potential Impacts and Mitigation

This section describes potentially significant impacts and necessary mitigation measures.

I-5 Northbound Ramps/Lathrop Road

The CenterPoint component would exacerbate to a significant degree LOS F conditions during the AM and PM peak hours at the I-5 Northbound Ramps/Lathrop Road intersection. CenterPoint-related trips would increase the average delay at this stop-controlled intersection by more than 3 seconds during each peak hour. Because the intersection already operates at LOS F and a traffic signal warrant is currently met, this impact is considered a significant impact.

The City of Lathrop is pursuing a set of interim improvements to this interchange with funding provided through developer fees, the Measure K half-cent sales tax, the San Joaquin County Regional Transportation Impact Fee, and other sources. The CenterPoint component would generate sales tax revenue and pay the County Regional Transportation Impact Fee, which would help fund improvements to this interchange. Payment of applicable local and regional transportation is reflected in Mitigation Measure TRANS-1.

The type of interim improvements, their timing, their effectiveness, and the remaining funding sources required for implementation are unknown. Since improvements to this interchange are within the right-of-way of Caltrans, no assurances can be made that Caltrans will permit construction of any improvements.

Lathrop Road/SR-99 Frontage Road West

The CenterPoint component would exacerbate to a significant degree LOS F conditions during the AM and PM peak hours at the Lathrop Road/SR-99 Frontage Road West intersection. CenterPoint-related trips would increase the average delay at this all-way stop-controlled intersection by more than 3 seconds during each peak hour. Because the intersection already operates at LOS F and a traffic signal is currently warranted, this impact is considered significant.

The SR-99 widening project includes improvements to the SR-99/Lathrop Road interchange. According to the geometric approval drawings, the interchange will be converted to a partial-cloverleaf (L-9) configuration. The frontage road west of SR-99 will be relocated to intersect Lathrop Road several hundred feet west of its current location. The Lathrop Road/(Relocated) Frontage Road and Lathrop Road/SR-99 Southbound Ramps intersections would each be signalized. These planned signalized intersections would operate at LOS C or better under Existing Plus CenterPoint conditions.

Because improvements to the Lathrop Road/Frontage Road West intersection will occur in the near future and would restore operations to an acceptable level, this impact is considered less than significant.

Lathrop Road/McKinley Road

Although the Lathrop Road/McKinley Road intersection satisfies the peak-hour signal warrant under Existing Plus CenterPoint conditions, it operates at an acceptable LOS with the project. Therefore, an impact was not identified at this location.

Lathrop Road/I-5 Southbound Ramps

Although the Lathrop Road/I-5 Southbound Ramps intersection operates at LOS F under Existing Plus CenterPoint conditions, it does not satisfy a peak-hour signal warrant. Therefore, an impact was not identified at this location.

Conclusion

CenterPoint-related trips would contribute to unacceptable intersection operations at four intersections under Existing Plus CenterPoint conditions. At two of the intersections, the CenterPoint contribution would not be considered significant; at the two other intersections, the contribution would be significant.

For the two intersections where CenterPoint-related trips would have a significant impact, planned improvements have been identified by regional transportation agencies. Given the regional nature of these improvements, the only feasible mitigation measure is to require the Master Plan applicants to pay all applicable regional transportation fees at the time building permits are sought.

In summary, although all feasible mitigation measures have been identified, there is uncertainty whether they would be implemented as envisioned or whether they would fully mitigate the impact to a level of less than significant. Because uncertainty exists, the residual significance of this impact is significant and unavoidable.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would not generate new vehicle trips and, therefore, would not have the potential to contribute to unacceptable operations. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-1 Prior to issuance of building permits for each Master Plan use, the applicant shall pay all transportation-related fees in accordance with the latest adopted fee schedule at the time permits are sought. Such fees shall include, but not be limited to, the City of Manteca Public Facilities Implementation Plan fee and the San Joaquin County Regional Transportation Impact Fee.

Level of Significance After Mitigation

Significant unavoidable impact.

Cumulative Traffic

Impact TRANS-2: Both the CenterPoint Intermodal Facility and the Master Plan uses would generate new trips that contribute to unacceptable intersection and freeway operations under Cumulative Conditions.

Impact Analysis

This impact assess impacts on the circulation system under both Cumulative Plus CenterPoint conditions and Cumulative Plus Master Plan conditions. The former scenario represents a future condition that considers trips generated only by CenterPoint Intermodal Facility component of the Master Plan in conjunction with other cumulative projects. The latter scenario represents a future condition that considers trips generated by the entire Master Plan, including the CenterPoint Intermodal Facility, in conjunction with other cumulative projects.

Cumulative Scenario

No Project Conditions

This chapter describes cumulative transportation conditions in the study area assuming the Master Plan area remains undeveloped. It begins with a discussion of roadway and land use assumptions, followed by the "cumulative no project" traffic forecasts. Operations are then analyzed at the study facilities.

Roadway Network and Land Use Assumptions

A number of planned roadway improvements within the study area are cited in the San Joaquin Council of Governments RTP, Measure K Renewal, Manteca PFIP, and City of Lathrop CIP. However, the availability of funding to construct these improvements is uncertain. Therefore, the following set of "financially constrained" or otherwise reasonable set of roadway improvements were assumed in place for the purposes of the cumulative analysis:

- Lathrop Road – new grade separation over the Fresno Subdivision and widening of Lathrop Road to be four continuous lanes between the two grade separations.
- SR-99 Widening – freeway widened from four to six lanes from SR-120 to Arch Road. This includes reconstruction of the SR-99/Lathrop Road interchange.
- I-5 Widening – freeway widened from six to eight lanes from SR-120 to French Camp Road.

The Measure K Renewal would provide partial funding for several other roadway improvement projects in the study area. However, since City/County impact fee programs do not currently collect enough in fees to fund the remainder of the cost, these improvements are not assumed in place.

The version of the SJCOG travel demand model used for various other environmental studies in Manteca was also used for this study. This model predicts traffic volumes for year 2025 conditions based on a set of assumed roadway network improvements. The traffic model includes the three roadway improvements listed above. Because several other roadways in the study area are also

planned to be widened, the model assumes the following additional capacity improvements to provide "unconstrained" travel demand forecasts (that is, the model assumes these widenings, but the impact analysis does not):

- Lathrop Road is four continuous lanes from I-5 to SR-99.
- Airport Way is four continuous lanes from SR-120 to French Camp Road.

The SJCOG travel demand model was modified to include a set of realistic future development forecasts or the City of Manteca. Some of the significant projects assumed in the model include Austin Road Business Park and Residential Community, Evans Estates, Pillsbury Estates, Villa Ticino West, Yosemite Park, The Promenade Shops, and Union Crossing. The model also assumes buildout of Union Ranch (located east of Airport Way) and the Central Lathrop Specific Plan (located west of the Lathrop Road/I-5 interchange). In addition, expanded operations are assumed at the Lathrop Intermodal Terminal, which translates into twice as many trips entering/exiting the facility from Roth Road as what occurs presently.

Traffic Forecasts

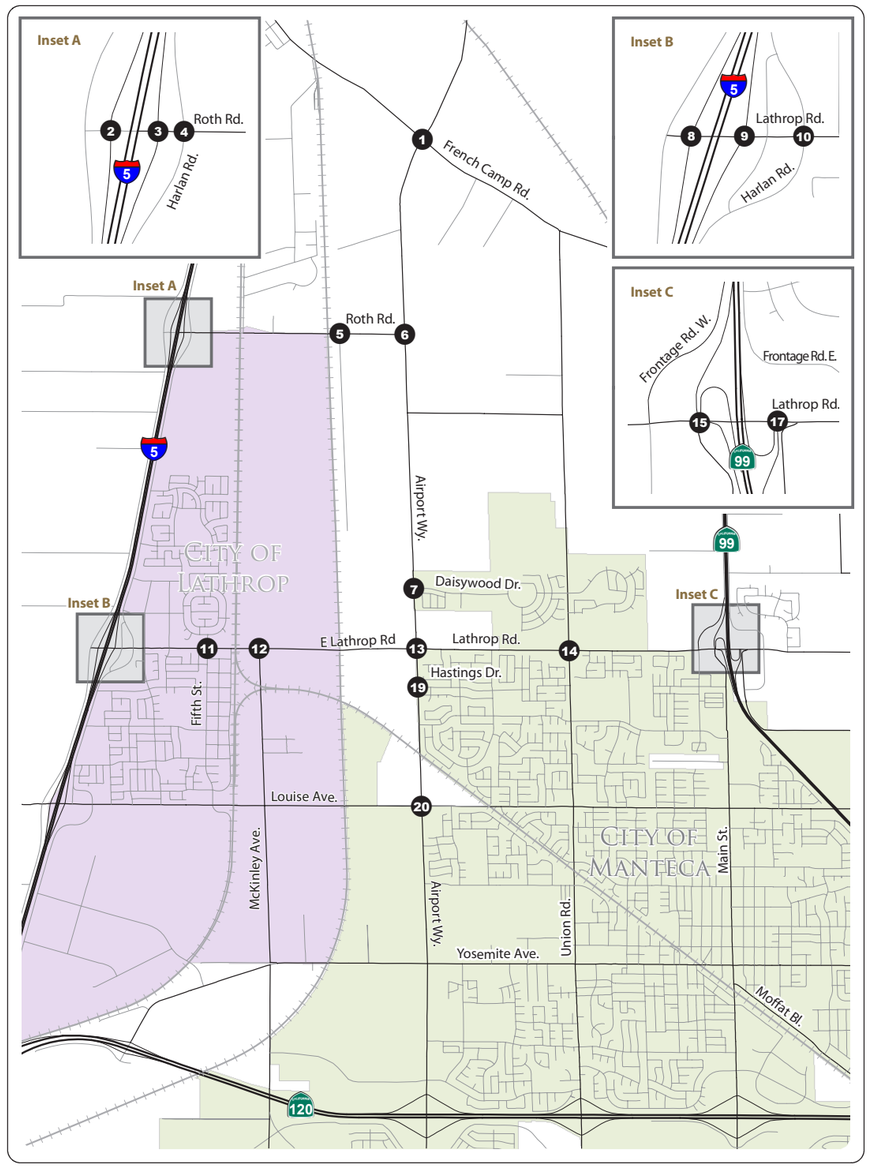
To account for potential inaccuracies/errors in the base year SJCOG model that could otherwise transfer to the cumulative forecasts, the difference forecasting method was applied using the formula below:

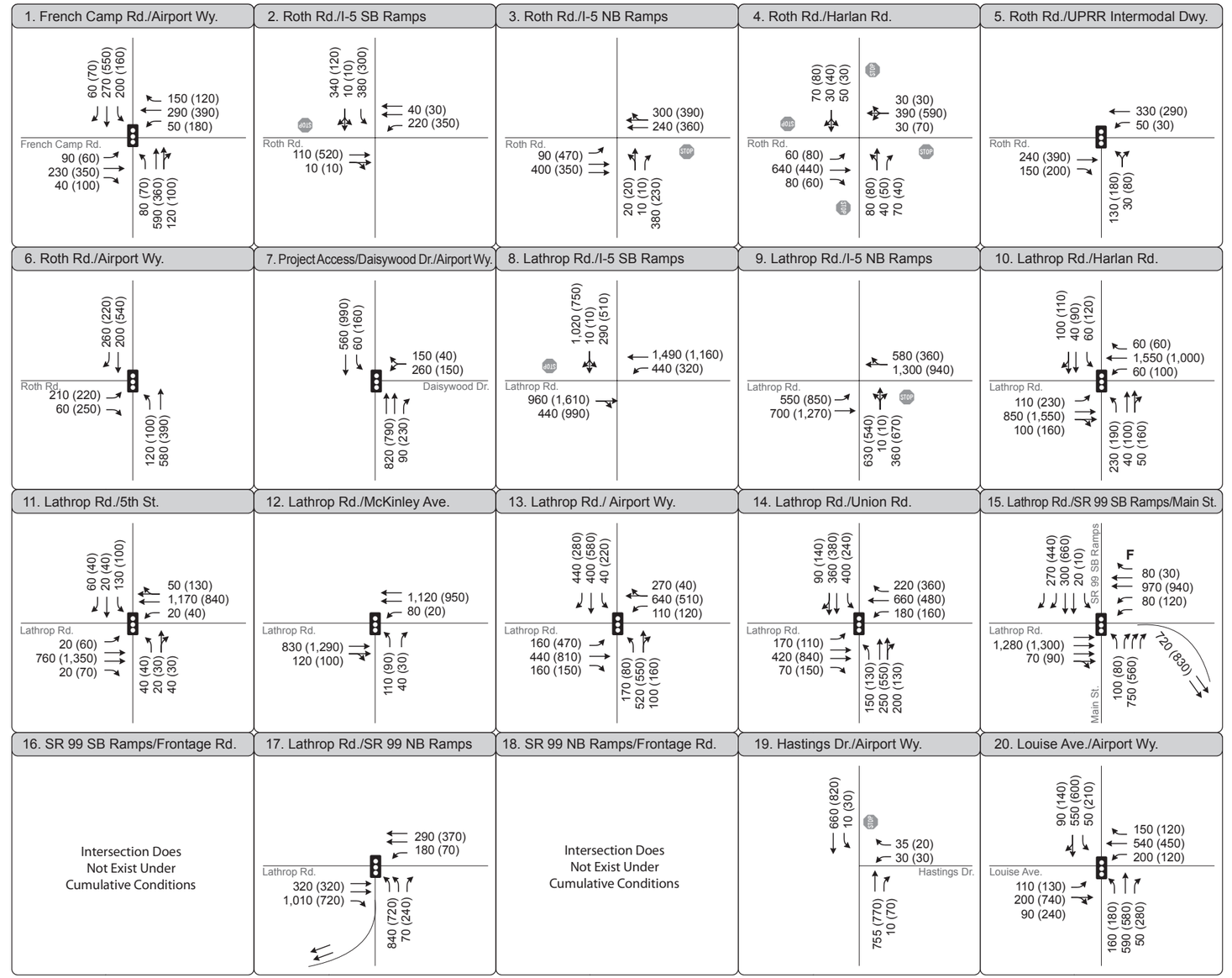
> Cumulative No Project Turning Movement Volumes = Existing Turning Movement Volumes + (2025 SJCOG Turning Movement Volumes - 2008 SJCOG Turning Movement Volumes)

Exhibit 3.12-7 displays the cumulative no project peak-hour traffic forecasts at the study intersections. Table 3.12-15 displays the cumulative no project average daily traffic volumes along the project frontage. These forecasts assume no development within the Master Plan boundaries.

Intersection Operations

The study intersections were analyzed under cumulative no project conditions. The planned improvements at the SR-99/Lathrop Road interchange were assumed in place. Improvements were also assumed on Lathrop Road at the McKinley Avenue and Fifth Street intersections (to be made in accordance with the Lathrop Road Union Pacific Railroad grade-separation). Given its planned expansion, a traffic signal was assumed to be in place at the Roth Road driveway to the Lathrop Intermodal Terminal. No other intersection improvements were assumed. Table 3.12-16 summarizes the results. This table indicates that the following 11 study intersections would operate at an unacceptable LOS during one or both peak hours.





LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- 1 Study Intersection
- Traffic Signal
- STOP Stop Sign
- F Free Right Turr

Source: Fehr & Peers Transportation Consultants (2010).

NORTH

Not to Scale

Michael Brandman Associates

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Exhibit 3.12-7
Peak Hour Traffic Volumes and Lane Configurations - Cumulative No Project Conditions

2) Roth Road/I-5 SB Ramps
3) Roth Road/I-5 NB Ramps
4) Roth Road/Harlan Road
8) Lathrop Road/I-5 SB Ramps
9) Lathrop Road/I-5 NB Ramps
10) Lathrop Road/Harlan Road
13) Lathrop Road/Airport Way
14) Lathrop Road/Union Road
19) Hastings Drive/Airport Way
20) Louise Avenue/Airport Way

A peak-hour signal warrant analysis indicates that the warrant would be satisfied at all of the above unsignalized intersections except Hastings Drive/Airport Way.

Freeway Operations

Table 3.12-17 displays the average daily traffic volume and LOS for the study segments of I-5 and SR-99 under cumulative no project conditions. As shown, the segment of I-5 between Lathrop Road and Louise Avenue, and the segment south of Louise Avenue are anticipated to operate at an unacceptable LOS prior to the addition of project traffic.

Table 3.12-18 displays the ramp junction analysis results at the I-5/Roth Road interchange. As shown, all of the ramp merge/diverge movements would operate at an acceptable LOS, except for the I-5 Northbound on-ramp merge, which would operate at LOS E during the PM peak hour.

With Project

Traffic Forecasts

Trips generated by CenterPoint were assigned to the study facilities in accordance with the trip generation and distribution assumptions described previously. These trips were then added to the cumulative no project forecasts to yield the Cumulative Plus CenterPoint forecasts. Exhibit 3.12-8 displays the Cumulative Plus CenterPoint peak-hour traffic forecasts at the study intersections. Table 3.12-15 displays the Cumulative Plus CenterPoint average daily traffic volumes along the project frontage.

Table 3.12-15: Cumulative Average Daily Traffic

Segment	Average Daily Traffic		
	Cumulative No Project Conditions	Cumulative Plus CenterPoint Conditions	Cumulative Plus Master Plan Conditions
Roth Road west of Lathrop Intermodal Terminal	14,800	16,100	19,200
Roth Road from Lathrop Intermodal Terminal to Project Driveway	9,200	10,500	13,600
Roth Road from Main Project Driveway to Airport Way	9,200	9,500	11,300
Airport Way north of Roth Road	17,000	17,300	18,500
Airport Way south of Roth Road	14,700	15,100	17,300

Table 3.12-15 (cont.): Cumulative Average Daily Traffic

Segment	Average Daily Traffic		
	Cumulative No Project Conditions	Cumulative Plus CenterPoint Conditions	Cumulative Plus Master Plan Conditions
Airport Way north of Lathrop Road	26,900	28,800	31,800
Airport Way south of Lathrop Road	20,400	20,900	23,300
Lathrop Road west of Airport Way	25,800	26,400	28,600
Lathrop Road east of Airport Way	21,100	21,800	24,500
Lathrop Intermodal Terminal Driveway	7,200	6,400	6,400
Source: Fehr & Peers Transportation Consultants, 2010.			

Trips generated by buildout of the Master Plan were assigned to the roadway system and then added to the no project forecasts in a similar manner. Exhibit 3.12-9 displays the cumulative plus Master Plan peak-hour traffic forecasts at the study intersections. Table 3.12-15 displays the cumulative plus Master Plan average daily traffic volumes along the project frontage.

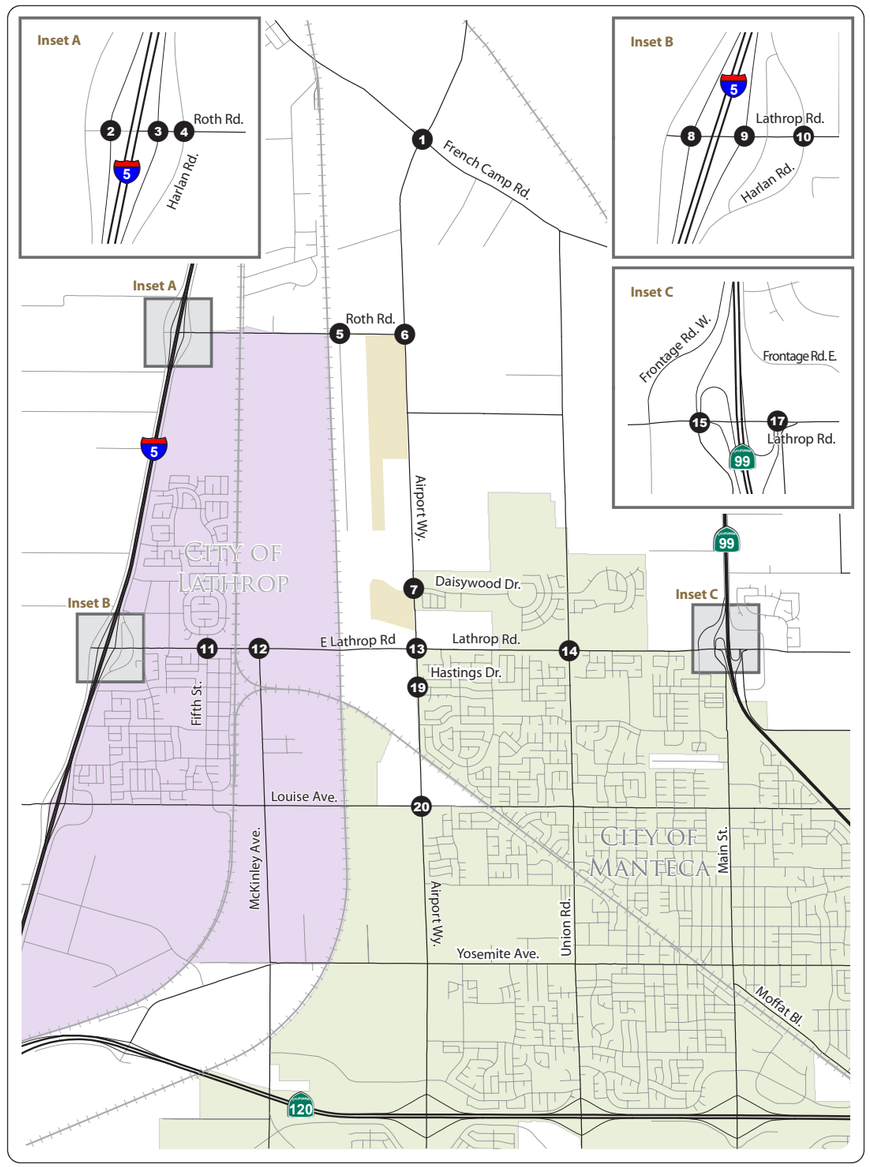
If the Master Plan is approved and annexed into the City of Manteca, the City would also annex the following two adjacent non-Master Plan properties:

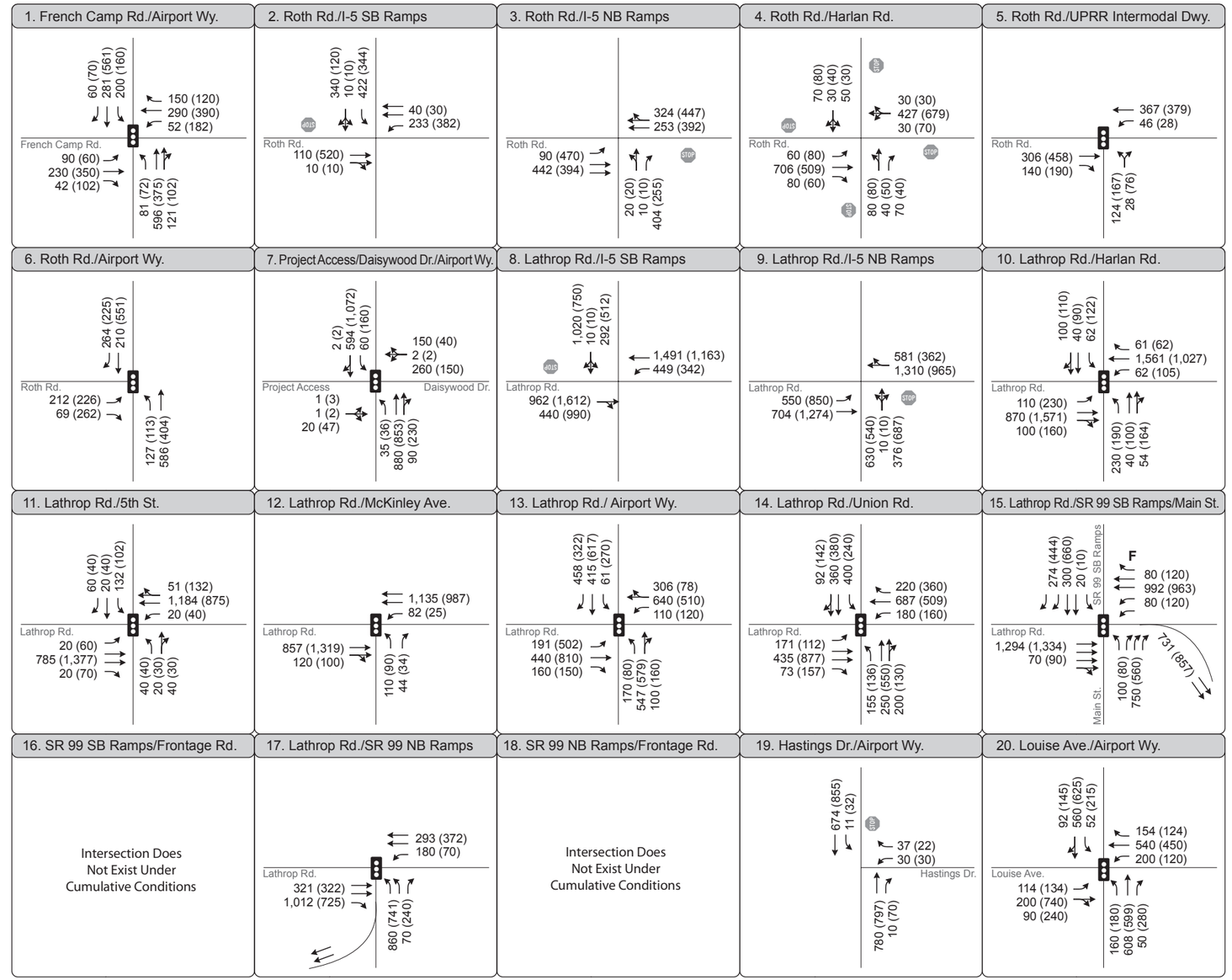
- East Area – occupies 67 acres of land in the northeast quadrant of the Airport Way/Lathrop Road intersection. Pursuant to the General Plan land use designations, this area was assumed to consist of 455 dwelling units and 10 acres of community commercial.
- South Area – occupies 247 acres, which includes the property in the southwestern quadrant of the Airport Way/Lathrop Road intersection and property in the northeast and northwest corners of the Airport Way/Louise Avenue intersection. Pursuant to the General Plan land use designations, this area was assumed to consist of 160 dwelling units, 143 acres of light industrial, 41 acres of public/quasi-public, and 1 acre of retail.

Land uses representing the East area and South area were entered into the SJCOG travel demand model. Thus, the forecasts shown in this chapter considered trips from these areas.

Intersection Operations

The study intersections were analyzed under Cumulative Plus CenterPoint and Cumulative Plus Master Plan conditions. Table 3.12-16 summarizes the results. This table indicates that the addition of CenterPoint traffic would exacerbate operations at the 10 intersections expected to operate unacceptably under Cumulative No Project conditions. However, no additional intersections would worsen from acceptable to unacceptable.





LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- 1 Study Intersection
- Traffic Signal
- STOP Stop Sign
- F Free Right Turn
- Centerpoint Properties

Source: Fehr & Peers Transportation Consultants (2010).

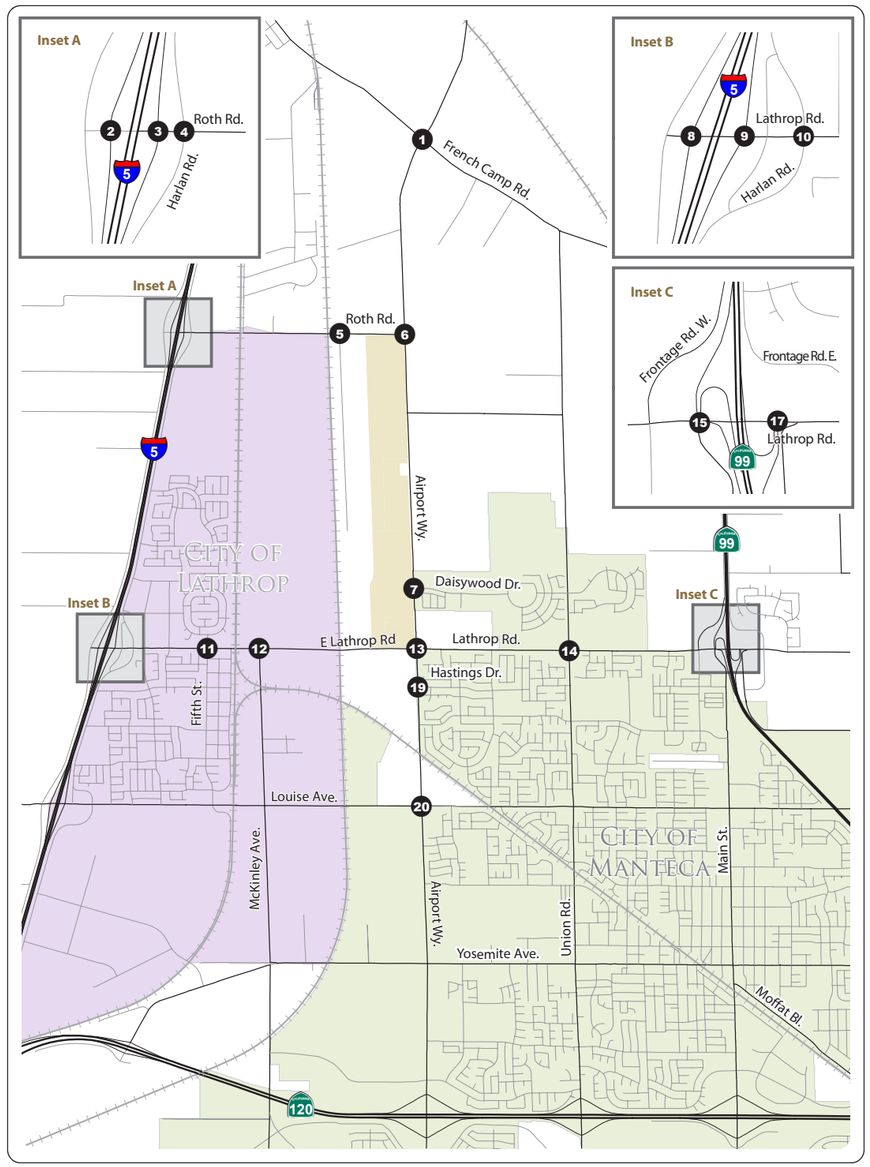
NORTH

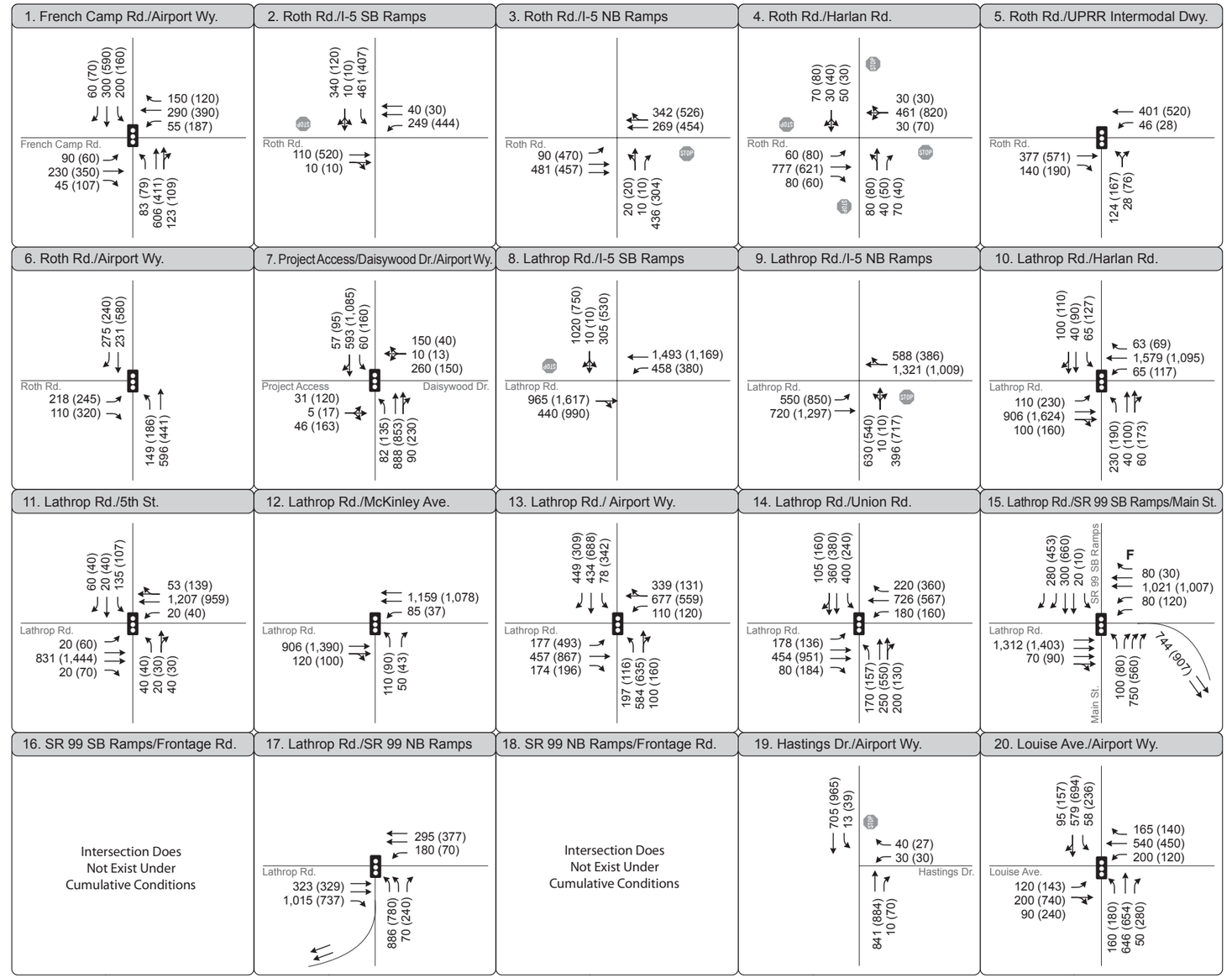
Not to Scale

Michael Brandman Associates

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Exhibit 3.12-8
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus CenterPoint Project Conditions





LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- 1 Study Intersection
- Traffic Signal
- STOP Stop Sign
- F Free Right Turn
- Project Location

Source: Fehr & Peers Transportation Consultants (2010).

NORTH

Not to Scale

Michael Brandman Associates

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Exhibit 3.12-9
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus Master Plan Buildout Conditions

Buildout of the remainder of the Master Plan would further exacerbate unacceptable operations. Additionally, buildout of the Master Plan would also cause the Airport Way/Daisywood Drive intersection to worsen to an unacceptable level during the PM peak hour.

Table 3.12-16: Cumulative Intersection Operations

No.	Intersection	Jurisdiction	Control	AM (PM) Peak Hour					
				Cumulative No Project		Cumulative Plus CenterPoint		Cumulative Plus Master Plan	
				Delay	LOS	Delay	LOS	Delay	LOS
1	French Camp Road/Airport Way	San Joaquin County	Signal	32	C	32	C	33	C
				(42)	(D)	(43)	(D)	(45)	(D)
2	Roth Road/I-5 Southbound Ramps	Caltrans	Side-Street Stop	76	F	120	F	187	F
				(869)	(F)	(>1000)	(F)	(>1000)	(F)
3	Roth Road/I-5 Northbound Ramps	Caltrans	Side-Street Stop	18	C	20	C	23	C
				(63)	(F)	(69)	(F)	(120)	(F)
4	Roth Road/Harlan Road	City of Lathrop	All-way Stop	112	F	153	F	185	F
				(133)	(F)	(183)	(F)	(272)	(F)
5	Roth Road/ Lathrop Intermodal Terminal Driveway	San Joaquin County	Signal	19	B	16	B	20	C
				(19)	(B)	(18)	(B)	(21)	(C)
6	Roth Road/ Airport Way	San Joaquin County	Signal	14	B	15	B	15	B
				(16)	(B)	(17)	(B)	(22)	(C)
7	Daisywood Drive/ Airport Way	City of Manteca	Signal	16	B	30	C	46	D
				(15)	(B)	(43)	(D)	(132)	(F)
8	Lathrop Road/ I-5 Southbound Ramps[1]	Caltrans	Side-Street Stop	>1000	F	>1000	F	>1000	F
				(>1000)	(F)	(>1000)	(F)	(>1000)	(F)
9	Lathrop Road/ I-5 Northbound Ramps	Caltrans	Side-Street Stop	>1000	F	>1000	F	>1000	F
				(>1000)	(F)	(>1000)	(F)	(>1000)	(F)
10	Lathrop Road/ Harlan Road	City of Lathrop	Signal	136	F	138	F	140	F
				(61)	(E)	(63)	(E)	(68)	(E)
11	Lathrop Road/ Fifth Street	City of Lathrop	Signal	40	D	42	D	43	D
				(40)	(D)	(42)	(D)	(47)	(D)
12	Lathrop Road/ McKinley Avenue	City of Lathrop	Side-Street Stop	9	A	9	A	9	A
				(8)	(A)	(8)	(A)	(8)	(A)
13	Lathrop Road/ Airport Way	City of Manteca	Signal	112	F	136	F	159	F
				(156)	(F)	(183)	(F)	(227)	(F)

Table 3.12-16 (cont.): Cumulative Intersection Operations

No.	Intersection	Jurisdiction	Control	AM (PM) Peak Hour					
				Cumulative No Project		Cumulative Plus CenterPoint		Cumulative Plus Master Plan	
				Delay	LOS	Delay	LOS	Delay	LOS
14	Lathrop Road/ Union Road	City of Manteca	Signal	64	E	69	E	74	E
				(43)	(D)	(44)	(D)	(48)	(D)
15	SR-99 Southbound Ramps/Frontage Road (West)	Caltrans	Side-Street Stop	23	C	23	C	23	C
				(24)	(C)	(24)	(C)	(25)	(C)
17	SR-99 Northbound Ramps/Frontage Road (East)	Caltrans	Side-Street Stop	16	B	16	B	16	B
				(15)	(B)	(15)	(B)	(15)	(B)
19	Hastings Drive/ Airport Way	City of Manteca	Side-Street Stop	79	F	88	F	119	F
				(75)	(F)	(80)	(F)	(131)	(F)
20	Louise Avenue/ Airport Way	City of Manteca	Signal	66	E	68	E	71	E
				(161)	(F)	(168)	(F)	(181)	(F)

Notes:
Intersections 16 and 18 do not exist under cumulative conditions.
Delay estimates are shown for over-saturated conditions for purposes of determining significance of impacts.
Source: Fehr & Peers Transportation Consultants, 2010.

Freeway Operations

Table 3.12-17 displays the average daily traffic volume and LOS for the study segments of I-5 and SR-99 under Cumulative Plus Project conditions. Although buildout of the Master Plan would increase traffic on the segments of I-5 that are projected to operate unacceptably, the resulting LOS would not change.

Table 3.12-18 displays the ramp junction analysis results at the I-5/Roth Road interchange. As shown, buildout of the Master Plan is expected to exacerbate unacceptable LOS on the northbound on-ramp during the PM peak hour.

Table 3.12-17: Cumulative Freeway Segment Operations

Freeway	Segment	Lanes	Average Daily Traffic – LOS[1]		
			Cumulative No Project	Cumulative Plus CenterPoint	Cumulative Plus Master Plan
I-5	North of Roth Road	8	135,200 – D	136,100 – D	138,300 – D
	Roth Road to Lathrop Road	8	135,200 – D	135,700 – D	137,500 – D
	Lathrop Road to Louise Avenue	8	154,400 – E	155,200 – E	157,300 – E
	South of Louise Avenue	8	167,400 – F	168,200 – F	170,300 – F

Table 3.12-17 (cont.): Cumulative Freeway Segment Operations

Freeway	Segment	Lanes	Average Daily Traffic – LOS[1]		
			Cumulative No Project	Cumulative Plus CenterPoint	Cumulative Plus Master Plan
SR-99	North of French Camp Road	6	100,000 – D	100,100 – D	100,500 – D
	Lathrop Road to French Camp Road	6	98,000 – D	98,100 – D	98,300 – D
	South of Lathrop Road	6	97,500 – D	97,900 – D	99,000 – D

Notes:
[1] LOS based on daily volume per lane thresholds in Table 3.12-5.
Source: Fehr & Peers Transportation Consultants, 2010.

Table 3.12-18: Cumulative Interchange Ramp Operations

Ramp	Density – LOS AM (PM)[1]		
	Cumulative No Project	Cumulative Plus CenterPoint	Cumulative Plus Master Plan
I-5 Southbound Off-Ramp Diverge	34 – D (32 – D)	34 – D (32 – D)	34 – D (33 – D)
I-5 Southbound On-Ramp Merge	27 – C (28 – C)	27 – C (28 – D)	27 – C (29 – D)
I-5 Northbound Off-Ramp Diverge	30 – D (33 – D)	30 – D (33 – D)	31 – D (34 – D)
I-5 Northbound On-Ramp Merge	27 – C (35 – E)	27 – C (36 – E)	27 – C (37 – E)

Notes:
[1] LOS is based on density, which is measured in passenger car equivalents per lane per mile.
Source: Fehr & Peers Transportation Consultants, 2010.

Congestion Management Program Roadway Segments

Regional roadways in San Joaquin County are monitored as part of the Regional Congestion Management Program implemented by SJCOG. Within the study area, Lathrop Road, Airport Way, SR-99, and I-5 are designated as Congestion Management Program facilities. The CMP requires that each designated facility be analyzed to identify any project-related impacts. SR-99 and I-5 are inter-regional facilities that are being analyzed in the forthcoming Manteca General Plan EIR.

Lathrop Road and Airport Way were evaluated using PM peak-hour volumes, in accordance with the guidelines from the Regional Congestion Management Program. The LOS was determined using the thresholds from the Florida Department of Transportation Quality/Level of Service Handbook (2002), as specified by the Regional Congestion Management Program.

The analysis of these facilities assumes that they are each widened to four lanes. The project will be paying the appropriate Manteca PFIP impact fee, which includes the widening of Airport Way to four lanes. The Lathrop General Plan and CIP include the widening of Lathrop Road to four lanes. Table 3.12-19 displays the PM peak-hour traffic volumes and LOS for the study segments of Lathrop Road

and Airport Way under cumulative plus Master Plan Buildout conditions. As shown, each segment is projected to operate at an acceptable LOS D or better.

Table 3.12-19: Congestion Management Plan Roadway Segment Operations – Cumulative Plus Master Plan Buildout

Segment	Number of Lanes	Two-Way PM Peak Hour Forecast	LOS
Lathrop Road – west of Airport Way	4	2,540	D
Lathrop Road – east of Airport Way	4	2,174	D
Airport Way – north of Lathrop Road	4	2,598	D
Airport Way – south of Lathrop Road	4	1,915	C
Source: Fehr & Peers Transportation Consultants, 2010.			

Potential Impacts and Mitigation

This section describes the cumulatively significant impacts of the CenterPoint component and Master Plan Buildout, and recommends mitigations to reduce the significance of each impact.

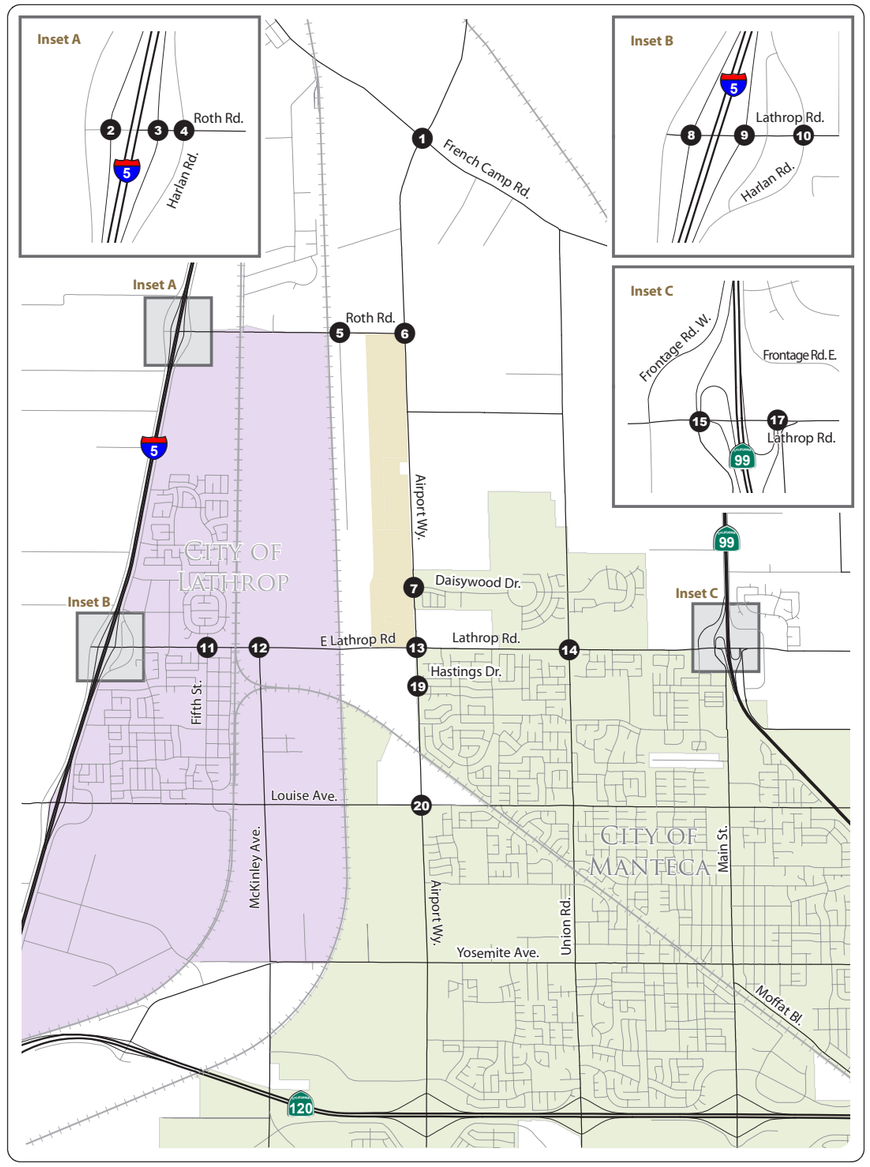
The City of Manteca is currently modifying its PFIP and associated traffic impact fee. Recent discussions with the City's Public Works Department suggest that the impact fee and associated number of dwelling unit equivalents will be sufficient to fully fund the required road improvements within the City, and to partially fund improvements to selected freeway interchanges. This section presumes that building permits will not be issued for the Northwest Airport Way Master Plan until after the new fee becomes effective, which is expected to occur in late 2010.

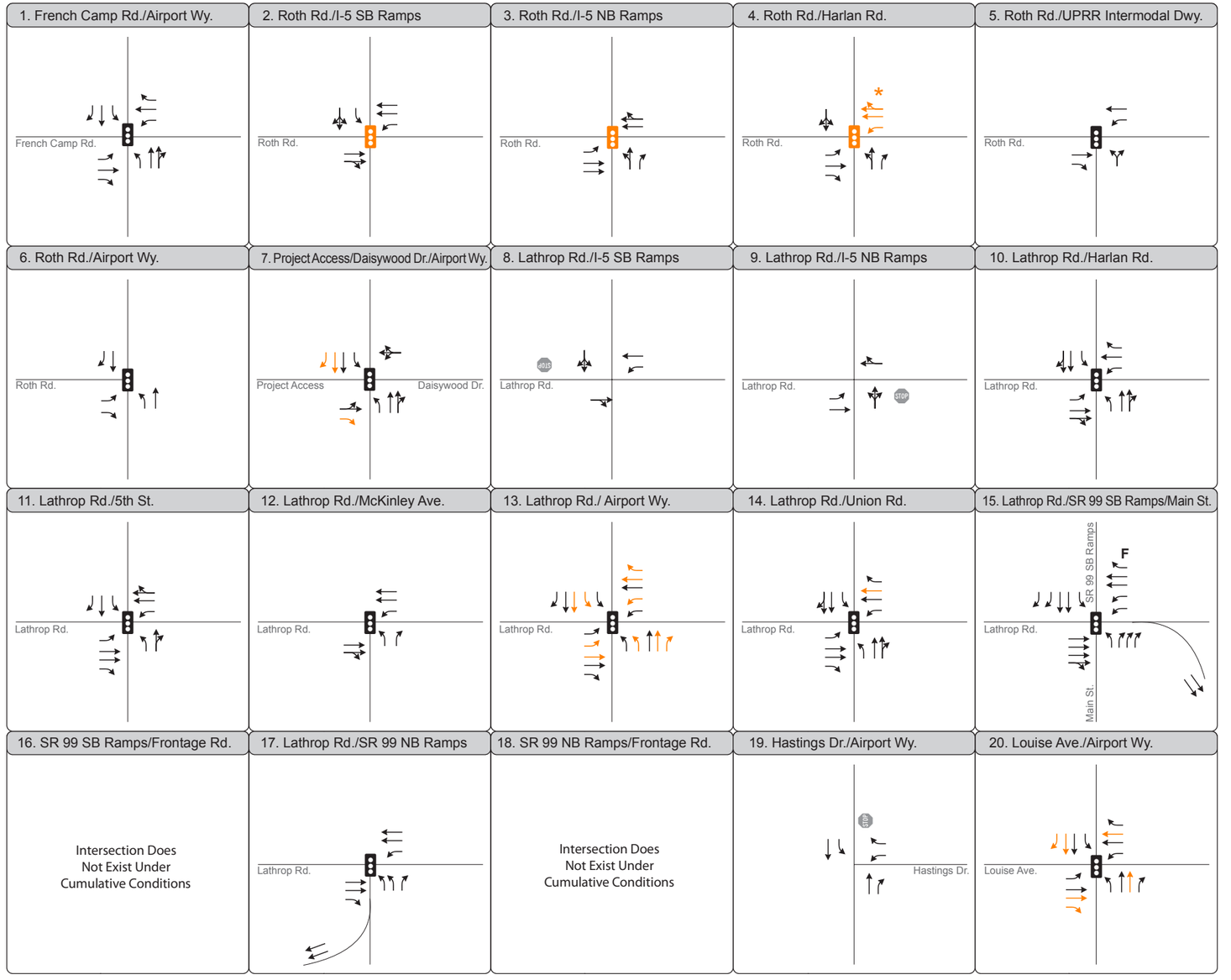
Exhibit 3.12-10 illustrates the recommended mitigation measures under Cumulative Plus CenterPoint and "Cumulative Plus Master Plan Buildout conditions, respectively. Table 3.12-20 and Table 3.12-21 illustrate their effectiveness.

I-5/Roth Road

Cumulatively unacceptable operations at the I-5/Roth Road interchange would be exacerbated to a significant degree by the CenterPoint Intermodal Facility and Master Plan buildout. LOS F conditions would be exacerbated at each ramp intersection by increasing delay by more than 3 seconds during the AM and/or PM peak hours. Because each intersection would also meet the peak-hour traffic signal warrant, this impact is considered significant.

To mitigate this impact, Master Plan use applicants should contribute fair-share funding toward the cost of installing traffic signals at the I-5 Northbound Ramps/Roth Road and I-5 Southbound Ramps/ Roth Road intersections. The installation of traffic signals would restore operations to LOS D or better conditions. This improvement is reflected in Mitigation Measure TRANS-2a.





Note: Mitigation measures are indentical for "Cumulative Plus CIC" conditions, with exception of Intersection 4 (see asterisk) and Intersection 7, which is not impacted.

LEGEND

- Mitigation Measure
- * "Cumulative Plus CIC" Requires a Left and Through/Right Lane
- 1 Study Intersection
- Traffic Signal
- STOP Stop Sign
- Turn Lane
- F Free Right Turn
- Project Location

Source: Fehr & Peers Transportation Consultants (2010).

NORTH

Not to Scale

Michael Brandman Associates

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Exhibit 3.12-10
Recommended Mitigation Measures - Cumulative Plus Master Plan Buildout Conditions

In recognition that this interchange are under this jurisdiction of Caltrans, the City of Manteca cannot make any assurances that the contemplated improvements will be implemented as envisioned. Furthermore, the remaining funding sources required for implementation are unknown, since no established funding program is currently collecting fees for this improvement. As such, it may not be feasible for the City of Manteca to collect fees for this improvement at the time building permits are sought. Accordingly, Mitigation Measure TRANS-2a contains provision stating that payment of all local and regional transportation fees as required by Mitigation Measure TRANS-1 would satisfy the applicants' obligation in this regard.

Roth Road/Harlan Road

Cumulatively unacceptable operations at the Roth Road/Harlan Road intersection in Lathrop would be exacerbated to a significant degree by CenterPoint Intermodal Facility and Master Plan buildout. LOS F conditions would be exacerbated by increasing delay by more than 3 seconds during the AM and PM peak hours. Because this intersection would also meet the peak-hour traffic signal warrant, this impact is considered significant.

To mitigate this impact, Master Plan use applicants should contribute fair share funding (calculated to be 15 percent) toward the following improvements to the Roth Road/Harlan Road intersection:

- Installation of traffic signal
- Widening of westbound approach to include left-turn lane, through lane, and shared through/right lane.

Field observations suggest this improvement could be constructed within the existing right-of-way. These improvements would restore operations to LOS D or better conditions. This improvement is reflected in Mitigation Measure TRANS-2b.

In recognition that this intersection is under the jurisdiction of the City of Lathrop, the City of Manteca cannot make any assurances that the contemplated improvements will be implemented as envisioned. Furthermore, the remaining funding sources required for implementation are unknown, since no established funding program is currently collecting fees for this improvement. As such, it may not be feasible for the City of Manteca to collect fees for this improvement at the time building permits are sought. Accordingly, Mitigation Measure TRANS-2b contains provision stating that payment of all local and regional transportation fees as required by Mitigation Measure TRANS-1 would satisfy the applicants' obligation in this regard.

It is noted that an alternative mitigation whereby the intersection is relocated to the east is also an option to provide increased spacing from the I-5/Roth Road interchange. However, the location, traffic control, and number of lanes have not been identified in any planning or engineering document to date. Thus, analysis of such an improvement would be speculative.

Airport Way/Daisywood Drive

Cumulative operations at the Airport Way/Daisywood Drive intersection in Manteca worsened to an unacceptable level with the addition of the Master Plan Buildout. Operations during the PM peak hour would worsen from LOS B to F with implementation of the Master Plan Buildout. This impact is considered significant.

To mitigate this impact, Master Plan use applicants should pay the appropriate PFIP impact fee, which will include the widening of Airport Way from two to four lanes along the Master Plan frontage. This would provide a second southbound lane through the Airport Way/Daisywood Drive intersection. In addition, exclusive right-turn lanes should be provided on the southbound and eastbound approaches. These additional lanes would improve operations to LOS D or better under cumulative plus Master Plan Buildout conditions. Payment of the PFIP impact fee is reflected in Mitigation Measure TRANS-1.

Lathrop Road/Airport Way

Cumulatively unacceptable operations at the Lathrop Road/Airport Way intersection in Manteca would be exacerbated to a significant degree by the CenterPoint Intermodal Facility and Master Plan buildout. LOS F operations during the AM and PM peak hours would be exacerbated by increasing delay by more than 3 seconds with implementation of CenterPoint and Master Plan buildout. This impact is considered significant.

To mitigate this impact, Master Plan use applicants should pay the appropriate PFIP impact fee, which will include the widening of Airport Way and Lathrop Road from two to four lanes along the Master Plan frontage. This would provide additional through lanes on all approaches to the Lathrop Road/Airport Way intersection. The intersection is recommended to consist of two left-turn lanes, two through lanes, and one right-turn lane on each approach. These lane configurations would improve operations to LOS D or better under cumulative plus Master Plan Buildout conditions. Payment of the PFIP impact fee is reflected in Mitigation Measure TRANS-1.

Lathrop Road/Union Road

Cumulatively unacceptable operations at the Lathrop Road/Union Road intersection in Manteca would be exacerbated to a significant degree by the CenterPoint Intermodal Facility and Master Plan buildout. Unacceptable (LOS E) operations during the AM peak hour would be exacerbated by increasing delay by more than 3 seconds with implementation of CenterPoint and Master Plan buildout. This impact is considered significant.

To mitigate this impact, Master Plan use applicants should pay the appropriate PFIP impact fee, which will include the widening of Lathrop Road to four lanes through the Union Road intersection. This widening would add a second through lane on the westbound approach to the intersection. This would restore AM peak-hour operations to LOS D under cumulative with Master Plan Buildout conditions. Payment of the PFIP impact fee is reflected in Mitigation Measure TRANS-1.

Louise Avenue/Airport Way

Cumulatively unacceptable operations at the Louise Avenue/Airport Way intersection in Manteca would be exacerbated to a significant degree by the CenterPoint Intermodal Facility and Master Plan buildout. Unacceptable (LOS E or F) operations during the AM and PM peak hours would be exacerbated to a significant degree with implementation of CenterPoint and Master Plan buildout. This impact is considered significant.

To mitigate this impact, Master Plan use applicants should pay the appropriate PFIP impact fee, which will include the widening of Airport Way and Louise Avenue to four lanes. This would provide additional lanes on all approaches to the Louise Avenue/Airport Way intersection. The intersection is recommended to consist of one left-turn lane, two through lanes, and one right-turn lane on each approach. These lane configurations would improve operations to LOS D under cumulative plus Master Plan Buildout conditions. Payment of the PFIP impact fee is reflected in Mitigation Measure TRANS-1.

I-5 between Lathrop Road and SR-120

Cumulatively unacceptable operations on I-5 between Lathrop Road and SR-120 would be exacerbated to a significant degree by the CenterPoint Intermodal Facility and Master Plan buildout. LOS E or F conditions on this segment would be exacerbated by CenterPoint and the Master Plan buildout because more than 100 daily trips would be added. This impact is considered significant.

To mitigate this impact, Master Plan use applicants should pay the applicable Regional Traffic Impact Fee, which would help to fund improvements to this segment of I-5. In addition, the project will generate additional revenue for infrastructure improvements (including widening of I-5) through the Measure K sales tax. The widening of I-5 is a Tier I RTP improvement, meaning that funding has been identified through various sources to enable its construction. However, the identified improvements do not restore operations to an acceptable level. No further mitigation is available to mitigate this impact, because I-5 is under the jurisdiction of Caltrans and the City of Manteca does not have the ability to implement improvements. Payment of the Regional Traffic Impact Fee impact fee is reflected in Mitigation Measure TRANS-1.

I-5 Northbound On-Ramp at Roth Road

Cumulatively unacceptable operations on the I-5 northbound on-ramp at Roth Road would be exacerbated to a significant degree by the CenterPoint Intermodal Facility and Master Plan buildout. LOS E conditions would be exacerbated by increasing traffic on the ramp by more than 1 percent in the PM peak hour by CenterPoint and the Master Plan Buildout. This impact is considered significant.

To mitigate this impact, Master Plan use applicants should pay the applicable Regional Traffic Impact Fee, which would help to fund improvements to this segment of I-5. In addition, the project will generate additional revenue for infrastructure improvements (including widening of I-5) through the

Measure K sales tax. However, the identified improvements do not restore operations to an acceptable level. No further mitigation is available to mitigate this impact, because I-5 is under the jurisdiction of Caltrans and the City of Manteca does not have the ability to implement improvements. Payment of the Regional Traffic Impact Fee impact fee is reflected in Mitigation Measure TRANS-1.

Table 3.12-20: Mitigated Intersection Operations – Cumulative Plus CenterPoint

No.	Intersection	Jurisdiction	AM (PM) Peak Hour			
			Cumulative Plus CenterPoint		Cumulative Plus CenterPoint with Mitigation	
			Delay	LOS	Delay	LOS
2	Roth Road/I-5 Southbound Ramps[1]	Caltrans	120	F	39	D
			(>1000)	(F)	(34)	(C)
3	Roth Road/I-5 Northbound Ramps	Caltrans	20	C	21	C
			(69)	(F)	(17)	(B)
4	Roth Road/ Harlan Road	City of Lathrop	153	F	39	D
			(183)	(F)	(31)	(C)
13	Lathrop Road/ Airport Way	City of Manteca	136	F	31	C
			(183)	(F)	(38)	(D)
14	Lathrop Road/ Union Road	City of Manteca	69	E	40	D
			(44)	(D)	(38)	(D)
20	Louise Avenue/ Airport Way	City of Manteca	68	E	26	C
			(168)	(F)	(31)	(C)

Notes:
Refer to Exhibit 3.12-10 for illustration of recommended mitigation.
Source: Source: Fehr & Peers Transportation Consultants, 2010

Table 3.12-21: Mitigated Intersection Operations – Cumulative Plus Master Plan

No.	Intersection	Jurisdiction Control	AM (PM) Peak Hour			
			Cumulative Plus Master Plan		Cumulative Plus Master Plan with Mitigation	
			Delay	LOS	Delay	LOS
2	Roth Road/ I-5 Southbound Ramps[1]	Caltrans	187	F	45	D
			(>1000)	(F)	(41)	(D)
3	Roth Road/ I-5 Northbound Ramps[1]	Caltrans	23	C	31	C
			(120)	(F)	(18)	(B)

Table 3.12-21 (cont.): Mitigated Intersection Operations – Cumulative Plus Master Plan

No.	Intersection	Jurisdiction Control	AM (PM) Peak Hour			
			Cumulative Plus Master Plan		Cumulative Plus Master Plan with Mitigation	
			Delay	LOS	Delay	LOS
4	Roth Road/Harlan Road	City of Lathrop	185	F	43	D
			(272)	(F)	(32)	(C)
7	Daisywood Drive/ Airport Way	City of Manteca	46	D	33	C
			(132)	(F)	(36)	(D)
13	Lathrop Road/ Airport Way	City of Manteca	159	F	32	C
			(227)	(F)	(42)	(D)
14	Lathrop Road/ Union Road	City of Manteca	74	E	41	D
			(48)	(D)	(41)	(D)
20	Louise Avenue/ Airport Way	City of Manteca	71	E	27	C
			(181)	(F)	(33)	(C)

Notes:
[1] Refer to Exhibit 3.12-10 for illustration of recommended mitigation
Source: Source: Fehr & Peers Transportation Consultants, 2010

Conclusion

Master Plan-related trips (including CenterPoint trips) would contribute to unacceptable intersection operations at six intersections, one freeway segment, and one freeway ramp terminal under cumulative conditions. In all cases, the Master Pan contribution would be considered significant.

Of the six intersections where Master Plan-related trips would have a significant contribution to unacceptable operations, two of them are under the control of agencies other than the City of Manteca—Caltrans and the City of Lathrop. As previously explained in Impact TRANS-1, there is uncertainty whether the necessary improvements would be fully funded or implemented as envisioned. The other four intersections are under the jurisdiction of the City of Manteca and the necessary improvements are identified in the City's PFIP, which is considered an "actual plan for mitigation" because it has an established fee collection mechanism and schedule for implementing improvements.

Regarding the Master Plan's impacts to the freeway segment and ramp terminal, as previously explained in Impact TRANS-1, these facilities are under the jurisdiction of Caltrans. Furthermore, improvements to these facilities are considered regional in nature; therefore, the only feasible mitigation measure is to require the Master Plan applicants to pay all applicable regional transportation fees at the time building permits are sought. Regardless, the planned improvements to

these facilities that would be funded by regional transportation fees would not be sufficient to improve operations to acceptable levels.

In summary, although all feasible mitigation measures have been identified, there is uncertainty whether they would be implemented as envisioned or whether they would fully mitigate the impact to a level of less than significant. Because uncertainty exists, the residual significance of this impact is significant and unavoidable.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the proposed annexations would not generate new vehicle trips and, therefore, would not have the potential to contribute to unacceptable operations. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-2a Prior to issuance of building permits for each Master Plan use, the applicant shall provide fees to the City of Manteca for the installation of signals at the I-5 Northbound Ramps/Roth Road and I-5 Southbound Ramps/Roth Road intersections, provided that fee collection mechanism exists. Fee amounts shall be calculated in accordance with equitable share methodology. This mitigation measure shall be superseded by Mitigation Measure TRANS-1 if no fee collection mechanism exists for this improvement at the time building permits are sought.

MM TRANS-2b Prior to issuance of building permits for each Master Plan use, the applicant shall provide fees to the City of Manteca for improvements to the Roth Road/Harland Road intersection, provided that fee collection mechanism exists. The improvements shall consist of the installation of a signal and widening the westbound approach to include left-turn lane, through lane, and shared through/right lane. Fee amounts shall be calculated in accordance with equitable share methodology. This mitigation measure shall be superseded by Mitigation Measure TRANS-1 if no fee collection mechanism exists for this improvement at the time building permits are sought.

Level of Significance After Mitigation

Significant unavoidable impact.

Air Traffic Patterns

Impact TRANS-3: The proposed project would not cause a change in air traffic patterns that results in substantial safety risks.

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations potential to alter air traffic patterns in a manner that results in substantial safety risks.

Master Plan

The Master Plan area is located within the Stockton Metropolitan Airport Influence Area, but is not located within any designated airport land use zones set forth in the Airport Land Use Plan. The zones established in the Airport Land Use Plan reflect potential exposure to overflight safety risks. As such, because the Master Plan area is not within any of the zones set forth in the Airport Land Use Plan, it can be concluded that the development of the Master Plan would not alter air traffic patterns for the Stockton Metropolitan Airport. Impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The East area is located within the Airport Influence, while the South area is not. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Therefore, the proposed annexations would have no potential to alter air traffic patterns associated with Stockton Metropolitan Airport. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Roadway Safety

Impact TRANS-4: The proposed project may substantially increase hazards that are due to a design feature or incompatible uses.

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations potential to substantially increase hazards that are due to a design feature or incompatible uses.

Master Plan

Fehr & Peers assessed various roadway safety-related aspects of the Master Plan uses. The findings of the analysis are provided below.

Frontage Improvements

The City's PFIP list identifies improvements required to accommodate development and traffic in the Year 2025. An analysis of post-2025 conditions was also conducted to determine if development beyond the City's current General Plan (i.e., within its sphere of influence) could require further widening of streets within the City. This exercise revealed the following ultimate roadway right-of-way needs along the project frontage:

- **Airport Way** – Right-of-way should be dedicated to provide an ultimate six-lane arterial plus a median or center turn pocket.
- **Lathrop Road** – The ultimate roadway cross-section consists of four lanes plus a landscaped or paved median.
- **Roth Road** – Right-of-way should be dedicated to provide an ultimate four-lane arterial plus a median or center turn pocket.

The City and the project applicant should review site plans to ensure that these ultimate right-of-way requirements are met.

According to Table 3.12-11, the sections of Airport Way and Roth Road that front portions of the CenterPoint Intermodal Facility would carry 8,500 vehicles per day or fewer under Existing Plus CenterPoint conditions. This volume suggests that widening for capacity-enhancing purposes is not necessary in the near term. However, some widening will be necessary to develop left-turn pockets into the project driveways and provide raised medians in locations with restricted driveway turning movements. The City will require that travel lanes along the frontage be constructed in their planned ultimate locations to support future widening.

This recommendation is reflected in Mitigation Measure TRANS-4a.

Project Access Intersections

Under the interim access plan (Exhibit 2-8), the CenterPoint Intermodal Facility would be served by 12 access openings along Airport Way and two access openings along Roth Road. This number of access points, combined with a lack of specifics regarding onsite circulation (parking lots, truck docks, internal drive aisles, etc.), makes a focused and accurate analysis of project access intersections infeasible at this time.

Fehr & Peers recommends that the City conduct focused reviews of project access as individual projects are submitted for site plan and subsequent environmental review. The access evaluations should be performed in accordance with the City's Transportation Impact Study Guidelines.

Below are some specific issues that should be addressed during the plan reviews:

- Need for traffic signals at driveways

- Traffic signal coordination and installation of associated signal conduits
- Truck traffic volumes at driveways and associated lane storage requirements, right-turn deceleration needs, and curb return radii
- Coordination and accommodation of driveways for future projects on the opposite side of the street
- Pavement thickness

These recommendations have been incorporated into Mitigation Measure TRANS-4b.

Railroad Grade Crossings

The Master Plan uses would add vehicle trips to the two at-grade railroad crossings on Roth Road, which are located between I-5 and the Master Plan boundaries. The review of accident data at each crossing shows that the warning devices presently in place are associated with lower levels of accident rates when considering the entire range of potential warning devices. Therefore, the project would not add traffic to an at-grade railroad crossing that has a demonstrated record of having an above-average accident rate.

According to the existing traffic counts, 490 vehicles pass over the Fresno Subdivision crossing and 410 vehicles pass over the Oakland Subdivision at-grade crossing during the PM peak hour. On average, one train travels through each at-grade crossing during each peak hour. Assuming an average pre-emption of 5 minutes, this implies that 88 percent of motorists are not delayed by trains and 12 percent are delayed by trains. This equates to an average delay of 13 seconds per vehicle, which corresponds to LOS B operations. The Master Plan uses would add approximately 170 PM peak-hour trips to each crossing. The average delay for all vehicles approaching each at-grade crossing would increase only slightly by the additional, post-crossing, vehicle platoon dispersion, but it would remain at an acceptable level.

Furthermore, the Fresno Subdivision grade crossing is within the City of Lathrop and the Oakland Subdivision grade crossing is within unincorporated San Joaquin County. The City of Lathrop General Plan identifies a future grade separation at the Fresno Subdivision grade crossing; however, the City's CIP is not currently collecting fees from new development to help fund this improvement.

At the time of Draft EIR release, Caltrans, on behalf of the Union Pacific Railroad, has an application pending before the United States Department of Transportation to obtain funding for various improvements associated with expansion of the Lathrop Intermodal Terminal. The application requests $49.5 million from the Transportation Investment Generating Economic Recovery program, with Union Pacific providing the balance ($49.5 million) of the project costs. The application includes a funding request for grade separating Roth Road from the Oakland Subdivision via a two-lane overcrossing.

Based on the above analysis and significance criteria established for this study, Master Plan impacts to the at-grade rail crossings are considered less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the proposed annexations would not generate new vehicle trips and, therefore, would not have the potential to contribute to roadway safety problems. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-4a Prior to site plan review for each Master Plan use, the applicant shall consult with the City of Manteca Community Development Department about appropriate frontage improvements. All necessary frontage improvements shall be depicted on the final site plan and implemented as part of site development.

MM TRANS-4b Prior to site plan review for each Master Plan use, the applicant shall consult with the City of Manteca Community Development Department about the following roadway access issues listed below. The access evaluations shall be performed in accordance with the City's Transportation Impact Study Guidelines. All necessary improvements shall be depicted on the final site plan and implemented as part of site development. Issues include but are not limited to:

- Need for traffic signals at driveways
- Traffic signal coordination and installation of associated signal conduits
- Truck traffic volumes at driveways and associated lane storage requirements, right-turn deceleration needs, and curb return radii
- Coordination and accommodation of driveways for future projects on the opposite side of the street
- Pavement thickness

Level of Significance After Mitigation

Less than significant impact.

Emergency Access

Impact TRANS-5: The proposed project would provide adequate emergency access.

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations potential to result in inadequate emergency access.

Master Plan

The proposed Master Plan would provide adequate emergency vehicular access throughout the Master Plan area via driveway connections with adjoining roadways and an internal circulation network. All driveways and internal roadways would be designed to accommodate large emergency vehicles such as fire engines. These improvements would contribute to effective emergency response and evacuation, and they would promote efficient circulation in the project vicinity. Furthermore, the proposed Master Plan does not propose any permanent road closures, lane reductions, or other adverse circulation conditions that may adversely affect emergency response or evacuation in the project vicinity. Therefore, impacts would be less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. Furthermore, the annexations would not result in any permanent road closures, lane reductions, or other adverse circulation conditions that may adversely affect emergency response or evacuation in the project vicinity. Therefore, the proposed annexations would have no potential to interfere with emergency evacuation or response in the project vicinity. No impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Public Transit, Bicycles, and Pedestrians

Impact TRANS-6: The proposed project may conflict with adopted policies, plans, or programs supporting alternative transportation.

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations potential to conflict with adopted policies, plans or programs supporting alternative transportation, including those associated with public transit, bicycles, and pedestrians.

Master Plan

Public Transit

Manteca Transit and San Joaquin Regional Transit District provide bus service to Manteca. Existing bus routes provide stops along Lathrop Road. In addition, the Lathrop ACE commuter rail station is located approximately 2.5 miles south of the Master Plan area.

The Master Plan uses may increase demand for public transit in several ways. Employees may choose to travel by bus or by train to work. (Use of the latter mode may increase in viability if ACE or Amtrak California service increases in frequency or expands within San Joaquin County.) Likewise, customers of the community commercial uses may also do the same. As such, providing onsite bus facilities or employee shuttles to rail stations would enable convenient access to public transit.

In recognition that the appropriateness of public transit facilities and services will vary by end use, Mitigation Measure TRANS-6a requires the evaluation of transit facilities and services prior to site plan review for each Master Plan light industrial use. The intent of the measure is to ensure that adequate transit facilities and services are provided on a use-by-use basis. For example, employee shuttles may be the most appropriate transit option for certain uses, while bus turnouts may be the most appropriate transit option for other uses. A provision in the mitigation measure encourages coordination of transit facilities and services among the Master Plan uses in order to enhance efficiency and effectiveness. In addition, Mitigation TRANS-6d requires the community commercial use to provide at least one bus turnout (including shelter, lighting, trash receptacle, and direct pedestrian connection). With the implementation of these mitigation measures, impacts would be reduced to a level of less than significant.

Bicycles

There are no marked on-street or off-street bicycle facilities near the Master Plan area. However, certain roads have shoulders of sufficient width to allow safe bicycling.

The Master Plan would provide improvements to adjoining roadways, including half-width improvements. Class II bicycle facilities would be provided along the Airport Way frontage. In addition, 14-foot curb lanes would be provided along Lathrop Road and Roth Road that would provide adequate space for safe bicycle travel. These characteristics would promote efficient and safe bicycle circulation around the perimeter of the Master Plan area.

Within the Master Plan area, an internal roadway network would link the various uses. All roadways would provide 46-foot sections, consisting of two 15-foot travel lanes (30 feet total) and a 16-foot, two-way left-turn lane. In addition, a 12-foot-wide, off-street bicycle/pedestrian path would be provided along Roadway A (the north-south roadway that would serve the community commercial and southern light industrial uses).

Finally, in recognition that storage facilities are necessary to facilitate bicycle travel, Mitigation Measure TRANS-6b requires the evaluation of bicycle storage facilities prior to site plan review for each Master Plan light industrial use. The mitigation measure requires that appropriate facilities (e.g., racks or lockers) be shown on the final site plan. In addition, Mitigation TRANS-6d requires the community commercial use to provide bicycle parking with storage equivalent to 2 percent of the minimum vehicular parking requirement. With the implementation of these mitigation measures, impacts would be reduced to a level of less than significant.

Pedestrians

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. Some of the major roads through the built-out portions near the project site include scattered pedestrian facilities. Examples include crosswalks at the signalized Lathrop Road/Airport Way intersection and sidewalks on the east side of Airport Way adjacent to Daisywood Drive.

The Master Plan would provide improvements to adjoining roadways, including half-width improvements. Such half-width improvements would include sidewalks along all roadway frontages. These characteristics would promote efficient and safe pedestrian circulation around the perimeter of the Master Plan area.

Within the Master Plan area, a 12-foot-wide, off-street bicycle/pedestrian path would be provided along Roadway A (the north-south roadway that would serve the community commercial and southern light industrial uses). This is the most appropriate shared facility, since pedestrian activity would likely be concentrated around the community commercial uses.

To facilitate pedestrian travel, Mitigation Measure TRANS-6c requires the evaluation of pedestrian facilities prior to site plan review for each Master Plan light industrial use. The mitigation measure requires that appropriate facilities (e.g., sidewalks or paths) be shown on the final site plan. In addition, Mitigation TRANS-6d requires the community commercial use to provide onsite pedestrian facilities, including sidewalks along street frontages and direct pedestrian connections between buildings. With the implementation of these mitigation measures, impacts would be reduced to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the annexations would not change accessibility to or increase demands for alternative modes of transportation. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-6a Prior to site plan review for each Master Plan light industrial use, the applicant shall consult with the City of Manteca Community Development Department, Manteca Transit, and the San Joaquin Regional Transit District about the inclusion of appropriate transit facilities (turnouts, shelters, etc.) or services (e.g., an employee shuttle). If transit facilities are deemed to be necessary, they shall be provided on the final site plan. If transit services are deemed to be necessary, the applicant shall prepare a service plan and submit it to the City of Manteca for review and approval. The approved plan shall be incorporated into the project. To the extent feasible, transit facilities and services shall be coordinated among Master Plan uses to maximize efficiency and effectiveness.

MM TRANS-6b Prior to site plan review for each Master Plan light industrial use, the applicant shall consult with the City of Manteca Community Development Department about the inclusion of appropriate bicycle facilities (racks, lockers, etc.). If bicycle facilities are deemed to be necessary, such facilities shall be provided on the final site plan.

MM TRANS-6c Prior to site plan review for each Master Plan light industrial use, the applicant shall consult with the City of Manteca Community Development Department about the inclusion of appropriate pedestrian facilities. If pedestrian facilities are deemed to be necessary, such facilities shall be provided on the final site plan.

MM TRANS-6d Prior to site plan review for the Master Plan community commercial use, the applicant shall prepare and submit plans to the City of Manteca demonstrating access and facilities for public transit, bicycles, and pedestrians. Public transit facilities shall consist of at least one bus turnout with shelter, lighting, trash receptacle, and direct pedestrian connection to the community commercial center. Bicycle facilities shall consist of racks near building entrances that provide storage equivalent to 2 percent of the minimum Municipal Code parking requirement. Pedestrian facilities shall consist of sidewalks along street frontages and direct connections between buildings. The approved facilities shall be incorporated in the community commercial center plans.

Level of Significance After Mitigation

Less than significant impact.

Construction Traffic and Parking

Impact TRANS-7: Construction traffic and parking may adversely impact local circulation.

Impact Analysis

This impact will evaluate the proposed Master Plan and non-master plan annexations potential to cause short-term impacts on circulation and parking from construction activities.

Master Plan

The Master Plan uses would be developed over a 15-year period, with the CenterPoint Intermodal Facility to be developed first and the remaining light industrial and commercial uses to be developed in subsequent phases.

Construction activities will generate traffic related to construction workers and equipment, and hauling fill and construction material to and from the site. The highest volumes of construction traffic will occur during grading and the hauling of import and export soil material.

During construction, the predominant vehicle routes (for haul trucks) would follow either Roth Road or Lathrop Road from I-5 and then, if necessary, turn onto Airport Way. The presence of large and slow-moving vehicles and construction equipment on streets in the Master Plan vicinity may result in potential hazards to motorists. Additionally, project construction activities may result in temporary lane closures along Roth Road, Airport Way, and Lathrop Road. Accordingly, mitigation is proposed requiring the project applicant to implement a Construction Traffic Control Plan during construction activities to minimize impacts on surrounding roadways and nearby parking areas. The implementation of this mitigation measure would reduce potential impacts to a level of less than significant.

Non-Master Plan Annexations

The East and South areas would be annexed into the City of Manteca. The annexations would not change any existing land use activities or confer any development rights that would allow for new construction to occur. As such, the annexations would not have any short-term impacts on circulation or parking associated with construction activities. No impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-7 Prior to issuance of grading permits for each Master Plan use, the applicant shall submit a Construction Traffic Control Plan to the City of Manteca for review and approval. The plan shall identify the timing and routing of all major construction equipment and trucking to avoid potential traffic congestion and delays on the local street network. The plan shall encourage the use of Interstate 5 (I-5), Roth Road,

Airport Way, and Lathrop Road wherever practical. Anticipated temporary road closures should be identified, along with safety measures and detours. If necessary, construction equipment and materials deliveries shall be limited to off-peak hours to avoid conflicts with local traffic circulation. The plan shall also identify suitable locations for construction worker parking.

Level of Significance After Mitigation

Less than significant impact.

SECTION 4: CUMULATIVE EFFECTS

4.1 - Introduction

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project's incremental effects are cumulatively considerable. Cumulatively considerable means that " . . . the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those which are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), " . . . the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone." The discussion should be guided by standards of practicality and reasonableness, and it should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact.

The proposed project's cumulative impacts were considered in conjunction with other proposed and approved projects in Manteca, Lathrop, and nearby portions of unincorporated San Joaquin County. Table 4-1 provides a list of the other projects considered in the cumulative analysis.

Table 4-1: Cumulative Projects

Jurisdiction	Project	Characteristics	Location	Status
City of Manteca	Yosemite Avenue Business Park	46,800 square feet warehouse/office	2320 W. Yosemite Avenue	Under construction
	Storage Warehouse	1,738,230 square feet warehouse building	2403 W. Louise Avenue	Under construction
	Water Quality Control Facility	3200 square feet construction (three structures)	2450 W. Yosemite Avenue	Under Construction
	Woodridge Center East	59,900 square feet commercial retail center	2134 N Union Road	Under construction
	Kaiser Permanente Modular Office	3,434 square feet modular office	1777 W. Yosemite Avenue	Completed
	Union Ranch	1425 units low density residential	14455 N. Union Road	Under Construction

Table 4-1 (cont.): Cumulative Projects

Jurisdiction	Project	Characteristics	Location	Status
City of Manteca (*cont.*)	Union Ranch East	294 units low density residential	2430 N. Union Road	Under construction
	Villa Ticino West	708 units low density residential	495 N. Airport Way	Approved Tentative Map
	Villa Ticino West Apartments	163 units high density residential	495 N. Airport Way	Approved Tentative map
	Fire Station No. 5	New Manteca Fire Department station	1400 block, Lathrop Road	Pending
County of San Joaquin	Union Pacific Railroad Lathrop Intermodal Terminal Expansion	**Phase I:** Increase capacity by 135,000 annual lifts by adding 1425.5 acres, constructing 34,092 feet of new track, constructing 24,042 square feet of new buildings, and constructing 222 new container bays. **Phase II:** Increase capacity by 330,000 annual lifts by constructing 29,036 feet of new track and constructing 1,948 new container bays.	1000 E. Roth Road	Pending
City of Lathrop	Lathrop Gateway Business Park	68 acres office/commercial; 190 acres limited industrial; 49 acres service commercial; 77 acres roads and public facilities	W. Yosemite Avenue/State Route 120	Pending
Multiple	Roth Road Grade Separation	Grade separate Roth Road from Oakland Subdivision	Roth Road/Oakland Subdivision	Proposed
Source: City of Manteca, 2010; City of Lathrop, 2010; County of San Joaquin, 2010.				

4.2 - Cumulative Impact Analysis

The cumulative impact analysis below is guided by the requirements of CEQA Guidelines Section 15130. Key principles established by this section include:

- A cumulative impact only occurs from impacts caused by the proposed project and other projects. An EIR should not discuss impacts that do not result from the proposed project.
- When the combined cumulative impact from the increment associated with the proposed project and other projects is not significant, an EIR need only briefly explain why the impact is not significant; detailed explanation is not required.

- An EIR may determine that a project's contribution to a cumulative effect impact would be rendered less than cumulatively considerable if a project is required to implement or fund its fair share of mitigation intended to alleviate the cumulative impact.

The cumulative impact analysis that follows relies on these principles as the basis for determining the significance of the proposed project's cumulative contribution to various impacts.

4.2.1 - Aesthetics, Light and Glare

The geographic scope of the cumulative aesthetics, light, and glare analysis is the area surrounding the Master Plan area and non-master plan annexation areas. This is the area within view of the project and, therefore, the area most likely to experience changes in visual character or experience light and glare impacts.

Several of the projects listed in Table 4-1 may have the potential to impact aesthetics, light, and glare. The proposed Master Plan would not have significant impacts on scenic vistas, visual character, or light and glare because the Master Plan establishes design standards and guidelines that provide certainty that the Master Plan uses do not degrade visual character and do not introduce substantial sources of light and glare that degrade daytime and nighttime views. Other projects that result in significant impacts on aesthetics, light, and glare would be required to mitigate for their impacts. Because the proposed Master Plan's impacts would be less than significant and would not require mitigation, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on aesthetics, light, and glare because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.2 - Agricultural Resources

The geographic scope of the cumulative agricultural resources analysis is San Joaquin County. Agricultural resources are most commonly evaluated in the context of countywide resources; therefore, it is most appropriate to use this as the basis for assessing cumulative impacts.

Several of the projects listed in Table 4-1 would occur on land mapped as Prime Farmland and, therefore, would have the potential to convert farmland to non-agricultural use. The proposed project would convert approximately 300 acres of Important Farmland to urban uses. The Master Plan exceeds the threshold of significance for conversion of Important Farmland to non-agricultural use according to the Land Evaluation and Site Assessment model. Therefore, mitigation is proposed requiring the project applicant to pay the City's agricultural mitigation fee. However, this would not fully mitigate the impact to a level of less than significant, and the residual significance of this impact would be significant and unavoidable. Other projects that convert significant amounts of Important

Farmland to non-agricultural use would also contribute to this cumulative impact. As such, the proposed Master Plan has a related cumulatively considerable impact.

The Master Plan area is not encumbered by any Williamson Act contract and would be re-zoned to non-agricultural use as part of the Master Plan use. In addition, the Master Plan uses would not create pressures to convert adjacent farmland to non-agricultural uses. Other projects listed in Table 4-1 may or may not have significant impacts in these areas. However, because the proposed Master Plan would not significantly impact these issues, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on agricultural resources because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.3 - Air Quality/Greenhouse Gas Emissions

The geographic scope of the cumulative air quality analysis is the San Joaquin Valley Air Basin. Air pollution is regarded as a regional issue; therefore, this area would be the area most likely to be impacted by project emissions.

All of the projects listed in Table 4-1 would result new air emissions, during construction or operations (or both). The Master Plan uses would emit construction and operational emissions at levels that would exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds. Mitigation is proposed requiring the implementation of feasible emissions reductions measures; however, these measures would not fully reduce emissions to below SJVAPCD thresholds. Therefore, a significant unavoidable impact associated with air quality violations (construction and operations) and air quality attainment plan consistency would occur. Other projects that exceed SJVAPCD thresholds would also contribute to this cumulative impact. As such, the proposed Master Plan has a related cumulatively considerable impact.

Other projects would also emit new greenhouse gas emissions. The Master Plan uses were found to be able to achieve a 39-percent reduction in greenhouse gas emissions relative to "business-as-usual" conditions and, therefore, to exceed the SJVAPCD's 29-percent reduction target for greenhouse gas emissions. Other projects would also be required to meet this target. Because the proposed Master Plan can achieve this objective, it would not have a related cumulative considerable impact

All other Master Plan air quality impacts were found to be less than significant after mitigation (e.g., objectionable odors) or less than significant and did not require mitigation (e.g., carbon monoxide hotspots). Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of these remaining air quality impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on air quality because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.4 - Biological Resources

The geographic scope of the cumulative biological resources analysis is the Master Plan area and non-master plan annexation areas. Biological impacts tend to be localized; therefore, the area near the project area would be the area most affected by project activities (generally within a 0.5-mile radius).

Several of the projects listed in Table 4-1 may have the potential to impact biological resources. The proposed Master Plan would have significant impacts on special-status species, riparian habitat, wetlands, conflicts with local biological policies, and conflicts with an adopted habitat conservation plan that could be mitigated to a level of less than significant. All other Master Plan biological impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of its biological impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on biological resources because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.5 - Cultural Resources

The geographic scope of the cumulative cultural resources analysis is the Master Plan area and non-master plan annexation areas. Cultural resource impacts tend to be localized; therefore, the area near the project area would be the area most affected by project activities (generally within a 500-foot radius).

Several of the projects listed in Table 4-1 may have the potential to impact cultural resources. The proposed Master Plan would have significant impacts on historical resources, archaeological resources, paleontological resources, and burial sites that could be mitigated to a level of less than significant. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of its cultural impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on cultural resources because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.6 - Geology, Soils, and Seismicity

The geographic scope of the cumulative geology, soils, and seismicity analysis is the Master Plan area and non-master plan annexation areas. Geologic, soil, and seismic impacts tend to be localized; therefore, the area near the project area would be the area most affected by project activities.

Several of the projects listed in Table 4-1 may have the potential to impact geology, soils, and seismicity. The proposed Master Plan would have significant impacts on seismic hazards, erosion, and unstable geologic units and soils that could be mitigated to a level of less than significant. All other Master Plan geologic impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of its geology impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on geology, soils, and seismicity because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.7 - Hazards and Hazardous Materials

The geographic scope of the cumulative hazards and hazardous materials analysis is the Master Plan area and non-master plan annexation areas. Adverse affects of hazards and hazardous materials tend to be localized; therefore, the area near the project area would be the area most affected by project activities.

Several of the projects listed in Table 4-1 may have the potential to impact hazards and hazardous materials. The proposed Master Plan would have significant impacts associated with hazardous materials from past or present site usage as well as the potential for risk of upset that could be mitigated to a level of less than significant. All other Master Plan hazards impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of its hazards impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on hazards and hazardous materials because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.8 - Hydrology and Water Quality

The geographic scope of the cumulative hydrology and water quality analysis is the Manteca area. Hydrologic and water quality impacts concern local waterways and groundwater sources, which affect the greater Manteca area.

Several of the projects listed in Table 4-1 may have the potential to impact hydrology and water quality. The proposed Master Plan would have significant impacts on short-term water quality, long-term water quality, and drainage, and 100-year flood hazards that could be mitigated to a level of less than significant. All other Master Plan hydrology impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of its hydrology impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on hydrology and water quality because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.9 - Land Use

The geographic scope of the cumulative land use analysis is the Manteca area. Land use decisions are made at the city level; therefore, the Manteca area is an appropriate geographic scope.

The Master Plan and its contemplated uses were found to be consistent with the City of Manteca General Plan, the Manteca Municipal Code, and the San Joaquin County Airport Land Use Plan. Mitigation was required for consistency with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) and was found to reduce impacts to a level of less than significant. The non-master plan annexations were found to be consistent with or not conflict with the City of Manteca General Plan, the Manteca Municipal Code, the San Joaquin County Airport Land Use Plan, LAFCo annexation criteria, and the SJMSCP. Other projects would be required to demonstrate consistency with applicable land use plans and mitigate where necessary. Because the residual significance of the proposed Master Plan and non-master plan's land use impacts would be less than significant, it would not have a related cumulative considerable impact.

4.2.10 - Noise

The geographic scope of the cumulative noise analysis is the Master Plan area and non-master plan annexation areas, including surrounding sensitive receptors. Noise impacts tend to be localized; therefore, the area near the project area would be the area most affected by project activities.

All of the projects listed in Table 4-1 have the potential to introduce new sources of noise that could expose nearby receptors to excessive noise levels. The proposed Master Plan would have significant impacts associated with construction noise and stationary noise that could be mitigated to a level of

less than significant. All other Master Plan noise impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of its noise impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on noise because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

4.2.11 - Public Services and Utilities

The geographic scope of the cumulative public services analysis is the Manteca area. The service area of the respective service providers primarily encompasses Manteca and surrounding communities and, therefore, would be most affected by project activities.

The Master Plan and its contemplated uses were found to have significant impacts on fire protection, water supply, and solid waste. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. All other Master Plan public services impacts were found to be less than significant and did not require mitigation. The annexation of the East and South areas would increase service demands on the City of Manteca for fire protection, police protection, water, and wastewater; however, these increases were found to be less than significant impacts and did not require mitigation. Other projects would be required to evaluate whether sufficient public services and utilities are available and mitigate where necessary. Because the residual significance of the proposed Master Plan and non-master plan's land use impacts would be less than significant, it would not have a related cumulative considerable impact.

4.2.12 - Transportation

The geographic scope of the cumulative transportation analysis is the Manteca/Lathrop area. Note that Section 3.12, Transportation provides a detailed evaluation of project-related transportation impacts.

All the new development projects listed in Table 4-1 would generate new vehicle trips that may trigger or contribute to unacceptable intersection operations, roadway operations, and freeway operations. All projects would be required to mitigate for their fair share of impacts. At buildout, the proposed Master Plan would result in a net increase of 16,326 daily trips, including 771 trips during the weekday morning peak hour and 1,523 trips during the weekday afternoon peak hour. The Master Plan uses would contribute trips to intersection and freeway facilities that would operate at unacceptable levels under Existing Plus CenterPoint and Cumulative conditions. All feasible mitigation measures are proposed that would improve operations to acceptable levels. However, there is uncertainty whether all necessary improvements would be fully funded and implemented as contemplated and, therefore, the residual significance is significant and unavoidable. Therefore, the

proposed project, in conjunction with other projects, would have a cumulatively considerable contribution to unacceptable intersection, roadway, and freeway operations.

For other transportation-related areas, the proposed Master Plan would have significant impacts on alternative transportation and construction traffic and parking. All other Master Plan transportation impacts were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts. Because the proposed Master Plan can mitigate all of its impacts to a level of less than significant, it would not have a related cumulative considerable impact.

Note that the non-master plan annexations were found to have no impact on transportation because they would not change any existing land use activities or confer development rights that would allow new construction to occur. Accordingly, this condition precludes the possibility of related cumulative impacts.

SECTION 5: ALTERNATIVES TO THE PROPOSED PROJECT

5.1 - Introduction

In accordance with CEQA Guidelines Section 15126.6, this Environmental Impact Report (EIR) contains a comparative impact assessment of alternatives to the proposed projects. The primary purpose of this section is to provide decision makers and the general public with a reasonable number of feasible project alternatives that could attain most of the basic objectives of each project, while avoiding or reducing any of the project's significant adverse environmental effects. Important considerations for these alternatives analyses are noted below (as stated in CEQA Guidelines Section 15126.6).

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

5.1.1 - Significant Unavoidable Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Conversion of Important Farmland:** Buildout of the Northwest Airport Way Master Plan would result in the conversion of Important Farmland to non-agricultural use. Mitigation is proposed requiring the payment of fees to the City of Manteca's agricultural farmland mitigation program for preservation of farmland elsewhere. However, the preservation of farmland elsewhere would not fully offset the loss of Important Farmland; therefore, the residual significance of this impact is significant and unavoidable.
- **Air Quality Violations – Construction and Operational Emissions:** Master Plan construction and operational emissions would exceed San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds. Mitigation is proposed requiring the implementation of feasible emissions reduction measures; however, these measures would not reduce emissions to below SJVAPCD thresholds. Therefore, the residual significance of this impact is significant and unavoidable.
- **Air Quality Attainment Plan Consistency:** Because Master Plan construction and operational emissions would exceed SJVAPCD thresholds, they would be inconsistent with the agency's regional quality planning assumptions. Mitigation is proposed requiring the

implementation of feasible emissions reduction measures; however, these measures would not reconcile this inconsistency. Therefore, the residual significance of this impact is significant and unavoidable.

- **Cumulative Air Quality:** Because Master Plan emissions result in a significant unavoidable air quality impact associated with air quality violations and air quality attainment plan consistency, a significant unavoidable cumulative air quality impact would occur.
- **Existing Plus CenterPoint Traffic:** The CenterPoint Intermodal Facility component of the Master Plan would generate vehicle trips that would contribute to unacceptable intersection under Existing Plus CenterPoint conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable
- **Cumulative Traffic:** The Master Plan uses would generate vehicle trips that would contribute to unacceptable intersection and freeway operations under Cumulative (Master Plan buildout) conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.

5.1.2 - Alternatives to the Proposed Projects

The four alternatives to the proposed projects analyzed in this section are as follows:

- **No Project Alternative:** Neither the Northwest Airport Way Master Plan nor the non-master plan annexations would be pursued. These properties would remain in unincorporated San Joaquin County, with no changes in land use or land use designations.
- **Master Plan Only Alternative:** The Northwest Airport Way Master Plan would be implemented as proposed. The non-master plan annexations would not be pursued.
- **Non-Master Plan Annexations Only Alternative:** The non-master plan annexations would be implemented as proposed. The Northwest Airport Way Master Plan would not be pursued.
- **CenterPoint Intermodal Facility Alternative:** The CenterPoint Intermodal Facility would be developed and annexed into the City of Manteca. No Master Plan would be employed under this alternative. The balance of the Master Plan area would remain unchanged and the non-master plan annexations would not be pursued.

Four alternatives to the proposed project are analyzed below. These analyses compare the proposed project and each individual project alternative. In several cases, the description of the impact may be

the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the proposed project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

5.2 - Project Objectives

5.2.1 - Northwest Airport Way Master Plan

The objectives of the Northwest Airport Way Master Plan are to:

- Create new jobs for local residents.
- Contribute to economic growth through capital investment, the creation of new jobs, the establishment of new businesses, and the expansion of the tax base.
- Facilitate the logical, orderly, and planned development of the Master Plan area through the use of a comprehensive planning document.
- Prevent land use conflicts and avoid the premature conversion of agricultural land through the use of phasing, buffering, and other appropriate land planning techniques.
- Provide new warehouse/distribution and industrial facilities with adjacent rail access that can be easily accessed from the existing roadway network.
- Enhance the efficiency of regional and local goods movement through the development of an integrated logistics center that will interface with the Lathrop Intermodal Terminal.
- Minimize and mitigate truck travel impacts by internalizing truck trips between the Lathrop Intermodal Terminal and the Master Plan uses and improving Roth Road and Airport Way.
- Develop a community commercial retail center at the Lathrop Road/Airport Way intersection to cater to both the Master Plan land uses and surrounding land uses.
- Provide open space areas within the Master Plan area that serve multiple purposes such as safety, recreation, and land use buffering.

5.2.2 - Non-Master Plan Annexations

The objectives of the non-master plan annexations are to:

- Facilitate the logical, orderly, and planned expansion of the Manteca city limits as envisioned by the General Plan.
- Annex areas that are anticipated to redevelop to higher and better uses in the near term, based on surrounding land use patterns and market forces.

- Avoid the creation of "unincorporated islands" and the associated shortcomings with service delivery to these areas.
- Acknowledge and respect existing property rights and entitlements.

5.3 - Alternative 1 – No Projects Alternative

Under the No Projects Alternative, neither the Northwest Airport Way Master Plan nor the non-master plan annexations would be pursued. All of the acreage encompassed by both projects would remain in unincorporated San Joaquin County, and no changes to existing land use or land use designations would occur.

5.3.1 - Impact Analysis

The Master Plan area and non-master plan annexation areas would remain in their existing conditions and no changes would occur. All of the proposed project's significant unavoidable impacts would be avoided, and its potentially significant impacts that can be mitigated to a level of less than significant would not occur.

5.3.2 - Conclusion

The No Project Alternative would avoid all of the proposed project's significant unavoidable impacts and have less impact on all environmental topical areas. However, this alternative would not advance any of the project objectives, and it is not a reasonable expectation for the Master Plan property owners to keep the site in its existing condition for the foreseeable future because of previous investments. Furthermore, this alternative would not realize the project benefits of new capital investment, additional employment opportunities, and new tax revenues.

5.4 - Alternative 2 – Master Plan Only Alternative

The Master Plan Only Alternative consists of implementation of the Northwest Airport Way Master Plan as proposed. All characteristics of the Master Plan would be identical to those described in Section 2, Project Description. The non-master plan annexations would not be pursued under this alternative.

To recap, the Master Plan consists of the following components:

- CenterPoint Intermodal Facility (Light Industrial and High Cube Warehouse): 3,177,521 square feet
- Non-CenterPoint Light Industrial Uses: 1,275,620 square feet
- Commercial Retail Uses: 205,820 square feet
- **Total: 4,658,961 square feet**

The Master Plan also contemplates detailed roadway and infrastructure improvements that would be implemented under this alternative. This alternative will assume a 15-year buildout for the Master Plan uses, with CenterPoint being developed first and the non-CenterPoint and commercial retail uses following in later phases.

The purpose of the Master Plan Only Alternative is to evaluate the environmental effects of the Master Plan in isolation from the environmental effects of the non-master plan annexations. In addition, this alternative provides insight into what would occur if the Master Plan were pursued in the absence of the non-master plan annexations. Table 5-1 summarizes the Master Plan Only Alternative.

Table 5-1: Master Plan Only Alternative Summary

Scenario	Characteristic	Value
Master Plan Only Alternative	Acreage	300
	Square Feet	4,658,961
Proposed Project (Master Plan and Non-Master Plan Annexations)	Acreage	521
	Square Feet	4,658,961
Difference	Acreage	(221)
	Square Feet	—
Source: Michael Brandman Associates, 2010.		

5.4.1 - Impact Analysis

Aesthetics, Light, and Glare

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan uses were found to have a less than significant impact on aesthetics, light, and glare, because the Master Plan sets forth design standards and guidelines that provide certainty that visual character will not be degraded and that new sources of light and glare would not adversely affect daytime or nighttime views. This alternative would draw similar conclusions. All other Master Plan aesthetic impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impact on all aesthetic and light and glare-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on aesthetics, light, and glare similar to the proposed project.

Agricultural Resources

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan uses were

found to have a significant impact on the conversion of Important Farmland to non-agricultural use. Mitigation was proposed requiring payment of fees in accordance with City's agricultural mitigation fee program; however, this would not fully mitigate the impact to a level of less than significant. Accordingly, the residual significance is significant and unavoidable. As such, this alternative would draw a similar conclusion. All other Master Plan agricultural impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impact on all agricultural resource-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on agricultural resources similar to the proposed project.

Air Quality/Greenhouse Gas Emissions

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan uses were found to have significant impacts associated with air quality violations (construction and operations), air quality attainment plan consistency, and cumulative air quality. Mitigation was proposed requiring the implementation of feasible emissions reduction features; however, this would not fully mitigate these impacts to a level of less than significant. Accordingly, the residual significance for all three issues is significant and unavoidable. As such, this alternative would draw a similar conclusion. All other Master Plan air quality impacts were found to be less than significant after mitigation or less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impact on all air quality-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on air quality similar to the proposed project.

Biological Resources

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan uses were found to have significant impacts on special-status species, riparian habitat, wetlands, conflicts with local biological policies, and conflicts with an adopted habitat conservation plan. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. As such, this would alternative draw a similar conclusion. All other Master Plan biological impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impact on all biological resource-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on biological resources similar to the proposed project.

Cultural Resources

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan uses were found to have significant impacts on historical resources, archaeological resources, paleontological resources, and burial sites. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. As such, this alternative would draw a similar conclusion.

Because the non-master plan annexations were found to have no impact on all cultural resource-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on cultural resources similar to the proposed project.

Geology, Soils, and Seismicity

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan uses were found to have a significant impact on seismic hazards, erosion, and unstable geologic units and soils. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. As such, this alternative would draw a similar conclusion. All other Master Plan geologic impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impact on all geologic-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on geology, soils, and seismicity similar to the proposed project.

Hazards and Hazardous Materials

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan uses were found to have a significant impact associated with hazardous materials from past or present site usage as well as the potential for risk of upset. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. As such, this alternative would draw a similar conclusion. All other Master Plan hazards impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impact on all hazards-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on hazards and hazardous materials similar to the proposed project.

Hydrology and Water Quality

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan and its contemplated uses were found to have significant impacts on short-term water quality, long-term water quality, and drainage, and on 100-year flood hazards. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. As such, this alternative would draw a similar conclusion. All other Master Plan hydrology impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impacts on all hydrology-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on hydrology and water quality similar to the proposed project.

Land Use

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan and its contemplated uses were found to be consistent with the City of Manteca General Plan, the Manteca Municipal Code, and the San Joaquin County Airport Land Use Plan. Mitigation was required for consistency with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), and was found to reduce impacts to a level of less than significant. As such, this alternative would draw a similar conclusion.

The Master Plan was found to be consistent with the San Joaquin County Local Agency Formation Commission (LAFCo) annexation criteria, in part, because of the proposed annexation of the East and South areas into the City of Manteca. The elimination of these annexations would create unusual jurisdictional boundaries or "unincorporated islands," which is a condition discouraged by LAFCo. This alternative may create unusual jurisdictional boundaries and "unincorporated islands," and, therefore, may not achieve the same degree of consistency with LAFCo annexation criteria as the proposed project. As such, the severity of this alternative land use impacts would be increased. Therefore, this alternative would have greater impacts on land use than the proposed project.

Noise

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan and its contemplated uses were found to have significant impacts associated with construction noise and stationary noise. Mitigation was proposed that would fully mitigate these impacts to a level of less than significant. As such, this alternative would draw a similar conclusion. All other Master Plan noise impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impacts on all noise-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have noise impacts similar to the proposed project.

Public Services and Utilities

This alternative would result in the development of the Master Plan uses as contemplated by the proposed project and the elimination of the non-master plan annexations. The Master Plan and its contemplated uses were found to have significant impacts on fire protection, water supply, and solid waste. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. As such, this alternative would draw a similar conclusion. All other Master Plan public services impacts were found to be less than significant and did not require mitigation.

The non-master plan annexations would bring approximately 221 acres of land containing 75 existing dwelling units into the City of Manteca. Although the addition of this acreage and population was found not to have a significant impact on public services and utilities, the elimination of these annexations would reduce service demands on the City of Manteca. As such, this would lessen the severity of this impact. Therefore, this alternative would have fewer impacts on public services and utilities than the proposed project.

Transportation

The Master Plan Only Alternative would generate the same number of trips as the Master Plan uses contemplated by the proposed project. To recap, at buildout, the Master Plan uses would generate 16,326 daily trips, 771 AM peak-hour trips, and 1,523 PM peak-hour trips. As such, Master Plan Only Alternative would have impacts on intersection and freeway operations identical to the proposed project. Accordingly, identical mitigation measures would be pursued to mitigate this alternative's impacts on intersections and freeways. However, as with the proposed project, the residual significance of this impact would be significant and unavoidable because there is uncertainty about whether the necessary improvements would be implemented.

The Master Plan and its contemplated uses were found to have a significant impact on alternative transportation and construction traffic and parking. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. As such, this alternative would draw a similar conclusion. All other Master Plan transportation impacts were found to be less than significant and did not require mitigation.

Because the non-master plan annexations were found to have no impact on all transportation-related issues, the elimination of this project component (as contemplated by the Master Plan Only Alternative) would not materially change any of its conclusions. Therefore, this alternative would have impacts on transportation similar to the proposed project.

5.4.2 - Conclusion

The Master Plan Only Alternative would result in the same significant unavoidable impacts as the proposed project. This alternative would not avoid or lessen the severity of any significant project impacts because the Master Plan uses, which are the catalysts for all of the significant impacts identified in this EIR, would remain unchanged. However, this alternative may increase the severity of land use impacts, as the elimination of the non-master plan annexations may create "unincorporated islands" within the Manteca city limits and, therefore, may not achieve consistency with LAFCo policies to the same degree as the proposed project.

This alternative would advance all of the Master Plan objectives and would not advance any of the non-master plan annexation objectives. For example, this alternative would realize the Master Plan objectives associated with job creation, capital investment, and increasing tax revenues, and it would not realize the non-master plan objective associated with the logical, orderly, and planned expansion of the Manteca city limits.

5.5 - Alternative 3 – Non-Master Plan Annexations Only Alternative

The Non-Master Plan Annexations Only Alternative consists of the annexations of the East and South areas as proposed. All characteristics of the annexations would be identical to those described in Section 2, Project Description. The Northwest Airport Way Master Plan would not be pursued under this alternative.

To recap, the 77-acre East area and 144-acre South area would be annexed into the City of Manteca. The annexations would involve associated, pre-zoning approvals. The annexations themselves do not confer any development rights that would allow new construction to occur on any of the affected properties. Instead, the annexations merely change jurisdictional and political boundaries; for example, the annexation areas would be patrolled by the Manteca Police Department instead of the San Joaquin County Sheriff's Department.

The purpose of the Non-Master Plan Annexations Only Alternative is to evaluate the environmental effects of the annexations in isolation from the environmental effects of the Master Plan. In addition, this alternative provides insight into what would occur if the annexations were pursued in the absence of the Master Plan. Table 5-2 summarizes the Non-Master Plan Annexations Only Alternative.

Table 5-2: Non-Master Plan Annexations Only Alternative Summary

Scenario	Characteristic	Value
Non-Master Plan Annexations Only Alternative	Acreage	221
	Square Feet	—
Proposed Project (Master Plan and Non-Master Plan Annexations)	Acreage	521
	Square Feet	4,658,961
Difference	Acreage	(300)
	Square Feet	(4,658,961)
Source: Michael Brandman Associates, 2010.		

5.5.1 - Impact Analysis

Aesthetics, Light, and Glare

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on aesthetics, light, and glare. Although the proposed project's aesthetic, light, and glare impacts were found to be less than significant, this alternative would avoid changes to these areas and, therefore, would lessen the severity of their impacts. Accordingly, this alternative would have fewer aesthetic, light, and glare impacts than the proposed project.

Agricultural Resources

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on agricultural resources. The proposed project would result in a significant unavoidable impact associated with conversion of Important Farmland, which would be avoided by this alternative. Therefore, this alternative would have fewer agricultural resource impacts than the proposed project.

Air Quality/Greenhouse Gas Emissions

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on air quality. The proposed project would result in three significant unavoidable impacts associated with air quality violations (construction and operations), air quality attainment plan consistency, and cumulative air quality, which would be avoided by this alternative. Therefore, this alternative would have fewer air quality impacts than the proposed project.

Biological Resources

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on biological resources. The proposed project would result in potentially significant impacts associated with special-status species, riparian habitat, wetlands, conflicts with local biological ordinances, and conflicts with habitat conservation plans, which can be mitigated to a level of less than significant. This alternative's avoidance of potential impacts would lessen the severity of biological resources impacts. Therefore, this alternative would have fewer biological resource impacts than the proposed project.

Cultural Resources

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on cultural resources. The proposed project would result in potentially significant impacts associated with historical resources, archaeological resources, paleontological resources, and burial sites, which can be mitigated to a level of less than significant. This alternative's avoidance of these potential impacts would lessen the severity of cultural resources impacts. Therefore, this alternative would have fewer cultural resource impacts than the proposed project.

Geology, Soils, and Seismicity

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on geology, soils, and seismicity. The proposed project would result in potentially significant impacts associated with seismic hazards, erosion, and unstable geologic units and soils, which can be mitigated to a level of less than significant. This alternative's avoidance of these potential impacts would lessen the severity of geology, soils, and seismicity impacts. Therefore, this alternative would have fewer geologic, soil, and seismic impacts than the proposed project.

Hazards and Hazardous Materials

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on hazards and hazardous materials. The proposed project would result in potentially significant impacts associated with hazardous materials from past and present usage as well as the potential for risk of upset, which can be mitigated to a level of less than

significant. This alternative's avoidance of these potential impacts would lessen the severity of hazards and hazardous materials impacts. Therefore, this alternative would have fewer hazards and hazardous materials impacts than the proposed project.

Hydrology and Water Quality

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on hydrology and water quality. The proposed project would result in potentially significant impacts associated with short-term water quality, long-term water quality, and drainage, and on 100-year flood hazards, which can be mitigated to a level of less than significant. This alternative's avoidance of these potential impacts would lessen the severity of hydrology and water quality impacts. Therefore, this alternative would have fewer hydrology and water quality impacts than the proposed project.

Land Use

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The non-master plan annexations were found to be consistent with or not conflict with the City of Manteca General Plan, the Manteca Municipal Code, the San Joaquin County Airport Land Use Plan, LAFCo annexation criteria, and the SJMSCP. As such, this alternative would draw a similar conclusion.

The elimination of the Master Plan and its uses would obviate the need for the discretionary approvals associated with this project component (that is, General Plan Amendment, pre-zoning, annexation, airport land use consistency, and SJMSCP coverage). The elimination of these items would lessen the severity of this impact. As such, this alternative would have fewer land use impacts than the proposed project.

Noise

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexations would not confer any development rights that would allow new construction to occur. As such, this alternative would not result in any significant impacts on noise. The proposed project would result in potentially significant impacts associated with construction noise and stationary noise, which can be mitigated to a level of less than significant. This alternative's avoidance of these potential impacts would lessen the severity of noise impacts. Therefore, this alternative would have fewer noise impacts than the proposed project.

Public Services and Utilities

This alternative would annex the East and South areas into the City of Manteca and would eliminate the Master Plan component and its associated uses. The annexation of the East and South areas

would increase service demands on the City of Manteca for fire protection, police protection, water, and wastewater; however, these increases were found to be less than significant and did not require mitigation.

The elimination of the Master Plan and its uses would avoid increasing service demands on the City of Manteca and other utility providers for fire protection, police protection, water, wastewater, storm drainage, solid waste, and energy. Although impacts on these areas were found to be less than significant after mitigation or less than significant with no mitigation necessary, the elimination of the Master Plan uses would lessen the severity of public services impacts. Therefore, this alternative would have fewer impacts on public services and utilities than the proposed project.

Transportation

The Non-Master Plan Annexations Only Alternative would not generate any new trips. As such, this alternative would not have any impacts on intersection and freeway operations and, therefore, avoid the proposed project's significant unavoidable impacts.

The non-master plan annexations were found to have no impact on all other transportation-related areas. As such, this alternative would draw a similar conclusion. Therefore, this alternative would have fewer impacts on transportation than the proposed project.

5.5.2 - Conclusion

The Non-Master Plan Annexations Only Alternative would avoid all of the significant unavoidable impacts of the proposed project. The Master Plan uses are the catalysts for all of the significant impacts identified in this EIR; therefore, the elimination of this component would avoid the creation of all significant environmental effects, including those than can be mitigated to a level of less than significant.

This alternative would advance all of the non-master plan annexation objectives and none of the Master Plan objectives. For example, this alternative would realize the non-master plan objective associated with the logical, orderly, and planned expansion of the Manteca city limits and would not realize the Master Plan objectives associated with capital investment, additional employment opportunities, and new tax revenues.

Finally, as a practical matter, the non-master plan annexation would accrue little to no net fiscal benefits to the City of Manteca once the cost of providing municipal services to these areas are accounted for. As such, annexation of the East and South areas would be unlikely in the absence of the Master Plan or a significant development proposal within these areas.

5.6 - Alternative 4 – CenterPoint Intermodal Facility Alternative

The CenterPoint Intermodal Facility Alternative consists of developing the CenterPoint Intermodal Facility portion of the Northwest Airport Way Master Plan. The other portions of the Master Plan

would not be developed, nor would they be annexed into the City of Manteca. In addition, the non-master plan annexations would not be pursued under this alternative.

As stated in Section 2, Project Description, the CenterPoint Intermodal Facility would be an integrated logistics center and would interface with the adjacent Union Pacific Railroad Lathrop Intermodal Terminal. The intermodal facility would sort, store, and distribute goods for shippers and receivers. The facility would have a maximum area of 3,177,521 square feet, and it is anticipated to employ as many as 900 workers.

The facility would occupy two, non-contiguous sites (North and South):

- **North Site:** The north site—the larger of the two—would feature three buildings totaling 2,693,483 square feet. All three of the north buildings would be rail-served with spur tracks connecting to the neighboring Lathrop Intermodal Terminal. This EIR will assume that each rail-served building receives two train movements a week (one inbound and one outbound). The buildings would also be accessible to trucks.
- **South Site:** The south site would feature two buildings totaling 484,038 square feet. These buildings would be served exclusively by trucks.

The North and South sites would be linked by an internal roadway along the adjacent property line with the Lathrop Intermodal Terminal. The roadway would provide a single, controlled access point to the Lathrop Intermodal Terminal.

The purpose of the CenterPoint Intermodal Facility Alternative is to evaluate the project component with the greatest likelihood of being developed in the absence of other aspects of the Master Plan and the non-master plan annexations. Furthermore, this alternative is anticipated to reduce trip generation, air emissions, noise, and demands on public services and utility providers as a result of the net decrease in development potential relative to the proposed project. Table 5-3 summarizes the CenterPoint Intermodal Facility Alternative.

Table 5-3: CenterPoint Intermodal Facility Alternative Summary

Scenario	Characteristic	Value
CenterPoint Intermodal Facility Alternative	Acreage	188
	Square Feet	3,177,521
Proposed Project (Master Plan and Non-Master Plan Annexations)	Acreage	521
	Square Feet	4,658,961
Difference	Acreage	(333)
	Square Feet	1,481,440
Source: Michael Brandman Associates, 2010.		

5.6.1 - Impact Analysis

Aesthetics, Light, and Glare

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. Although the proposed project's aesthetic, light, and glare impacts were found to be less than significant, this alternative would disturb less acreage and develop less square footage, which would reduce the severity of its impacts. Therefore, this alternative would have fewer impacts on aesthetics, light, and glare than the proposed project.

Agricultural Resources

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. The proposed project was found to have a significant unavoidable impact as a result of converting approximately 300 acres of Important Farmland to non-agricultural use. In contrast, this alternative would convert 188 acres of Important Farmland to non-agricultural use. Although this would not necessarily avoid a significant unavoidable impact, it would substantially lessen the severity of this impact. Therefore, this alternative would have fewer impacts on agricultural resources than the proposed project.

Air Quality/Greenhouse Gas Emissions

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. The proposed project was found to have three significant unavoidable impacts associated with air quality—air quality violations (construction and operations), air quality attainment plan consistency, and cumulative air quality. Although this alternative would not necessarily avoid these significant unavoidable impacts, it would substantially lessen the severity of all of them by reducing overall emissions. Therefore, this alternative would have fewer impacts on air quality than the proposed project.

Biological Resources

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. The proposed project was found to have significant impacts on special-status species, riparian habitat, wetlands, conflicts with local biological policies, and conflicts with an adopted habitat conservation plan. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would disturb less

acreage than the proposed project, it would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts on biological resources than the proposed project.

Cultural Resources

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. The proposed project was found to have significant impacts on historical resources, archaeological resources, paleontological resources, and burial sites. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would disturb less acreage than the proposed project, it would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts on cultural resources than the proposed project.

Geology, Soils, and Seismicity

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. The proposed project was found to have significant impacts on seismic hazards, erosion, and unstable geologic units and soils. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would disturb less acreage and develop less square footage than the proposed project, it would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts on geology, soils, and seismicity than the proposed project.

Hazards and Hazardous Materials

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. The proposed project was found to have significant impacts associated with hazardous materials from past or present site usage as well as the potential for risk of upset. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would disturb less acreage and develop less square footage than the proposed project, it would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts on hazards and hazardous materials than the proposed project.

Hydrology and Water Quality

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of

Manteca. The proposed project was found to have significant impacts on short-term water quality, long-term water quality, and drainage, and on100-year flood hazards. Mitigation was proposed to address all of these impacts and would fully mitigate these issues to a level of less than significant. Because this alternative would disturb less acreage and develop less square footage than the proposed project, it would lessen the severity of its impacts. Therefore, this alternative would have fewer impacts on hydrology and water quality than the proposed project.

Land Use

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The alternative would require a General Plan Amendment, pre-zone, annexation, airport land use consistency, and SJMSCP coverage approvals. As with the proposed project, this alternative would be consistent with City of Manteca General Plan, the Manteca Municipal Code, and the San Joaquin County Airport Land Use Plan, and mitigation would be required for consistency with the SJMSCP.

The proposed project (Master Plan and non-master plan annexations) was found to be consistent with LAFCo annexation criteria, in part, because the annexation of the entire Master Plan area and East and South areas would avoid the creation of unusual jurisdictional boundaries and "unincorporated islands," which are conditions discouraged by LAFCo. This alternative would only involve the annexation of the 188-acre CenterPoint Intermodal Facility site into the City of Manteca and would leave the remainder of the Master Plan area and East and South areas in the unincorporated County. In particular, the CenterPoint North Site is not currently contiguous to the Manteca city limits; therefore, it would not be consistent with City of Manteca General Plan and LAFCo annexation criteria. Furthermore, annexation of the CenterPoint South Site (which is contiguous to the Manteca city limits) would create unusual jurisdictional boundaries and "unincorporated islands," and may not achieve the same degree of consistency with LAFCo annexation criteria as the proposed project. As such, the severity of this alternative's land use impacts would be increased. Therefore, this alternative would have greater impacts on land use than the proposed project.

Noise

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. The approximately 112-acre remainder of the Master Plan area would remain unchanged, and the East and South areas would not be annexed into the City of Manteca. The proposed project was found to have a significant impact associated with construction noise and stationary noise. Mitigation was proposed that would fully mitigate these impacts to a level of less than significant. Because this alternative would disturb less acreage and develop less square footage than the proposed project, it would lessen the severity of its impacts. Therefore, this alternative would have fewer noise impacts than the proposed project.

Public Services and Utilities

This alternative would develop the approximately 3.2 million-square-foot CenterPoint Intermodal Facility component on 188 acres. This alternative would increase demands for public services and utilities and would implement mitigation similar to the proposed project for impacts on fire protection, water supply, and solid waste. Because this alternative would develop less square footage than the proposed project, it would reduce demands on public service and utility providers and would lessen the severity of its impacts.

Furthermore, the annexation of only 188 acres of land into the City of Manteca instead of 521 acres would reduce service demands on City agencies. Although the addition of this acreage and population was found not to have a significant impact on public services and utilities, the elimination of these annexations would lessen the severity of this impact. Therefore, this alternative would have fewer impacts on public services and utilities than the proposed project.

Transportation

Table 5-4 summarizes the trip generation for the CenterPoint Intermodal Facility Alternative. As shown in the table, this alternative would generate 12,331 fewer daily trips, 465 fewer AM peak-hour trips, and 1,056 fewer PM peak-hour trips. While this alternative would result in fewer trips, it would still contribute additional vehicle trips to the intersections and freeway facilities that are projected to operate at unacceptable levels. Similar improvements would be implemented to mitigate this alternative's impacts on intersections and freeway facilities; however, as with the proposed project, the residual significance would be significant and unavoidable, because there is uncertainty about whether the necessary improvements would be implemented. However, the severity of impacts resulting from this alternative would be less than that of the proposed project.

Table 5-4: CenterPoint Intermodal Facility Alternative Trip Generation Summary

Scenario	Category	Trips		
		Daily	AM Peak Hour	PM Peak Hour
CenterPoint Intermodal Facility Alternative	Net New Trips	3,995	306	467
Proposed Project	Net New Trips	16,326	771	1,523
Difference	**Net New Trips**	**(12,331)**	**(465)**	**(1,056)**

Notes:
Trip generation figures derived from values shown in Table 3.12-12 in Section 3.12, Transportation.
Source: Michael Brandman Associates, 2010.

Similar to the proposed project, this alternative would mitigate for impacts on alternative transportation and construction traffic and parking, which would reduce impacts to a level of less than significant. Additionally, as with the proposed project, this alternative would not result in significant impacts on other transportation-related areas.

In summary, the CenterPoint Intermodal Facility Alternative would substantially reduce trip generation relative to the proposed project, thereby lessening its contribution to significant unavoidable traffic impacts. Therefore, this alternative would have fewer impacts on transportation than the proposed project.

5.6.2 - Conclusion

The CenterPoint Intermodal Facility Alternative would result in the same significant unavoidable impacts as the proposed project, although the severity of these impacts would be substantially lessened. In addition, this alternative would lessen the severity of other impacts, including those associated with aesthetics, light, and glare; biological resources; cultural resources; geology, soils, and seismicity; hazards and hazardous materials; hydrology and water quality; public services; and transportation. However, this alternative would increase the severity of land use impacts because it would annex only the CenterPoint site into the city limits.

This alternative would advance most of the Master Plan annexation objectives—albeit to a lesser degree than the proposed project—and none of the non-master plan annexation objectives. For example, this alternative would realize the Master Plan objectives associated with job creation, capital investment, and increasing tax revenues, and it would not realize the non-master plan objective associated with the logical, orderly, and planned expansion of the Manteca city limits. In addition, this alternative would not achieve the Master Plan objective of developing a community commercial retail center at the Lathrop Road/Airport Way intersection.

Finally, the practical viability of this alternative is in question, since the creation of unusual jurisdictional boundaries and unincorporated islands is discouraged by both the City of Manteca General Plan and LAFCo annexation criteria.

5.7 - Environmentally Superior Alternative

The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 5-5.

Table 5-5: Summary of Alternatives

Environmental Topic Area	No Projects Alternative	Master Plan Only Alternative	Non-Master Plan Annexations Only Alternative	CenterPoint Intermodal Facility Alternative
Aesthetics, Light, and Glare	Less Impact	Similar Impact	Less Impact	Less Impact
Agricultural Resources	Less Impact	Similar Impact	Less Impact	Less Impact
Air Quality/Greenhouse Gas Emissions	Less Impact	Similar Impact	Less Impact	Less Impact

Table 5-5 (cont.): Summary of Alternatives

Environmental Topic Area	No Projects Alternative	Master Plan Only Alternative	Non-Master Plan Annexations Only Alternative	CenterPoint Intermodal Facility Alternative
Biological Resources	Less Impact	Similar Impact	Less Impact	Less Impact
Geology, Soils, and Seismicity	Less Impact	Similar Impact	Less Impact	Less Impact
Hazards and Hazardous Materials	Less Impact	Similar Impact	Less Impact	Less Impact
Hydrology and Water Quality	Less Impact	Similar Impact	Less Impact	Less Impact
Land Use	Less Impact	Greater Impact	Less Impact	Greater Impact
Noise	Less Impact	Similar Impact	Less Impact	Less Impact
Public Services and Utilities	Less Impact	Less Impact	Less Impact	Less Impact
Transportation	Less Impact	Similar Impact	Less Impact	Less Impact
Source: Michael Brandman Associates, 2010.				

CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. In this case, the No Project Alternative is the environmentally superior alternative, as it avoids all of the proposed project's significant unavoidable impacts.

To determine which of the remaining alternatives is the environmentally superior alternative, Table 5-6 compares how each alternative would avoid or substantially lessen the proposed project's significant unavoidable impacts associated with agricultural resources and transportation.

Table 5-6: Comparison of Significant Unavoidable Impacts

Significant Unavoidable Impact Area	Master Plan Only Alternative	Non-Master Plan Annexations Only Alternative	CenterPoint Intermodal Facility Alternative
Agricultural Resources	300 acres of Important Farmland converted to non-agricultural use	No Important Farmland converted to non-agricultural use	188 acres of Important Farmland converted to non-agricultural use
Air Quality/Greenhouse Gas Emissions	4.7 million square feet of new construction; 16,326 new daily trips	No new construction; No net increase in vehicle trips	3.2 million square feet of new construction; 3,995 new daily trips
Transportation	771 new AM peak-hour trips; 1,523 new PM peak-hour trips	No net increase in vehicle trips	306 new AM peak-hour trips; 467 new PM peak-hour trips
Source: Michael Brandman Associates, 2010.			

Overall, the Non-Master Plan Annexations Only Alternative avoids converting Important Farmland to non-agricultural use, generating new air emissions, and generating new peak-hour vehicle trips that contribute to unacceptable traffic operations; as such, it would not create any of the proposed project's significant unavoidable impacts. Therefore, the Non-Master Plan Annexations Only Alternative is the environmentally superior alternative.

5.8 - Alternatives Rejected From Further Consideration

The following alternative was initially considered but rejected from further consideration for the reasons described below.

5.8.1 - Alternative Location

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations in evaluating an alternative location as part of CEQA alternatives analysis. The section indicates that EIRs should only discuss alternative locations if they can avoid or substantially lessen significant project impacts. In addition, the section establishes that if a lead agency determines that no feasible alternative locations exist, it should explain its reasoning for this conclusion.

In this case, the City of Manteca has determined that no feasible locations exist for either the Master Plan or the non-master plan annexations for the following reasons:

Master Plan

- Location: The CenterPoint Intermodal Facility, the primary component of the Northwest Airport Way Master Plan, can only be developed adjacent to the Union Pacific Railroad Lathrop Intermodal Terminal. CenterPoint would interface with the terminal, in which containers and cargo are exchanged. The current proposed location is the only suitable site within the Manteca Planning Area that affords this opportunity, as it has sufficient acreage to accommodate this use and is not committed to a higher-and-better use. Thus, the CenterPoint facility cannot be developed at any other location but at the proposed site.
- Basis for Master Plan: The planning basis for the Master Plan is contingent on the CenterPoint facility. In the absence of the proposed CenterPoint facility, there would be no planning basis for pursuing a Master Plan to guide future development within the 300-acre plan area.

Non-Master Plan Annexations

- Basis for Non-Master Plan Annexations: The planning basis for the Non-Master Plan Annexations is contingent on the entire Master Plan Area being annexed into the City of Manteca. As a result of annexation of the Master Plan area into the City of Manteca, the East and South areas would be rendered unincorporated islands, a condition discouraged by

LAFCo. In the absence of the Master Plan (and associated annexation), there is no need to annex the non-Master Plan areas because no unincorporated islands would be created.

In summary, both the Master Plan and non-master plan annexations possess unique, site-specific attributes that no other sites offer. As such, it is not feasible to evaluate an alternative location for either project component.

SECTION 6: OTHER CEQA CONSIDERATIONS

6.1 - Significant Unavoidable Impacts

CEQA Guidelines Section 15126.2(a)(b) requires an EIR to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

This section describes significant impacts, including those that can be mitigated but not reduced to a level of less than significant. Where there are impacts that cannot be alleviated without imposing a project alternative, their implications, and the reason why the project is being proposed, notwithstanding their effect, are described. With implementation of the proposed project, six significant impacts that cannot be avoided would occur. Each significant unavoidable impact is discussed below.

The proposed project would result in the following significant unavoidable impacts:

- **Conversion of Important Farmland:** Buildout of the Northwest Airport Way Master Plan would result in the conversion of Important Farmland to non-agricultural use. Mitigation is proposed requiring the payment of fees to the City of Manteca's agricultural farmland mitigation program for preservation of farmland elsewhere. However, the preservation of farmland elsewhere would not fully offset the loss of Important Farmland; therefore, the residual significance of this impact is significant and unavoidable.
- **Air Quality Violations – Construction and Operational Emissions:** Master Plan construction and operational emissions would exceed San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds. Mitigation is proposed requiring the implementation of feasible emissions reduction measures; however, these measures would not reduce emissions to below SJVAPCD thresholds. Therefore, the residual significance of this impact is significant and unavoidable.
- **Air Quality Attainment Plan Consistency:** Because Master Plan construction and operational emissions would exceed SJVAPCD, they would be inconsistent with the agency's regional quality planning assumptions. Mitigation is proposed requiring the implementation of feasible emissions reduction measures; however, these measures would not reconcile this inconsistency. Therefore, the residual significance of this impact is significant and unavoidable.
- **Cumulative Air Quality:** Because Master Plan emissions result in a significant unavoidable air quality impact associated with air quality violations and air quality attainment plan consistency, a significant unavoidable cumulative air quality impact would occur.

- **Existing Plus CenterPoint Traffic:** The CenterPoint Intermodal Facility component of the Master Plan would generate vehicle trips that would contribute to unacceptable intersection under Existing Plus CenterPoint conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.
- **Cumulative Traffic:** The Master Plan uses would generate vehicle trips that would contribute to unacceptable intersection and freeway operations under Cumulative (Master Plan buildout) conditions. Mitigation is proposed that would require the applicant to contribute fees to fund necessary improvements; however, there is uncertainty regarding actual implementation of the improvements. As such, the residual significance of this impact is significant and unavoidable.

6.2 - Growth-Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines Section 15126.2(d)).

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future, unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

Buildout of the Master Plan would create as many as 2,588 employment opportunities over a 15-year period or approximately 173 jobs on an annual basis. Most employment opportunities would be expected to be jobs in the industrial sector (warehousing, logistics, trucking, etc.), with some commercial retail sector jobs. For comparison purposes, the California Employment Development Department indicates that as of June 2010, there were 4,100 unemployed persons in Manteca and 51,300 unemployed persons in San Joaquin County. Accordingly, it would be expected that the Master Plan's new jobs could readily be filled from the local workforce over the 15-year buildout horizon. Therefore, the proposed project would not have the potential to cause substantial direct or indirect population growth.

No land use changes are proposed for the non-master plan areas; therefore, the annexation of these areas would not have the potential to cause substantial direct or indirect population growth.

6.3 - Significant Irreversible Changes

The environmental effects of the proposed project are summarized in Section ES, Executive Summary, and are analyzed in detail in Section 3, Environmental Impact Analysis, of this EIR.

As mandated by the CEQA Guidelines, the EIR must address any significant irreversible environmental change that would result from implementation of the proposed project. Specifically, pursuant to the CEQA Guidelines (Section 15126.2(c)), such an impact would occur if:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and
- The proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).

6.3.1 - Master Plan

Approval and implementation of actions related to the Master Plan uses would result in an irretrievable commitment of non-renewable resources such as energy supplies and other construction-related materials. The energy resource demands would be used for construction, heating, and cooling of buildings, transportation of people and goods, heating and refrigeration, lighting, and other associated energy needs. However, the proposed Master Plan uses would implement a number of design features and mitigation measures that would reduce energy demand, water consumption, wastewater generation, and solid waste generation that would collectively reduce the demand for resources. This would result in the emission and generation of less pollution and effluent and lessen the severity of corresponding environmental effects. Although the Master Plan uses would result in an irretrievable commitment of non-renewable resources, the commitment of these resources would not be significantly inefficient, unnecessary, or wasteful.

The Master Plan would develop light industrial and community commercial uses within a 300-acre area. The light industrial uses contemplated by the Master Plan would consist of high-cube warehouse and other warehouse and distribution-type facilities. The community commercial uses contemplated by the Master Plan would consist of retail and restaurants. None of these uses would handle large quantities of hazardous materials or engage in activities that have the potential to result in serious environmental accidents (chemical manufacturing, mineral extraction, refining, etc.). As such, the Master Plan would not have the potential to cause serious environmental accidents.

The proposed Master Plan uses would result in greater demand for resources such as energy and water; however, such consumption would not be unusually high or disproportionate relative to similar land uses (refer to Section 3.11, Public Services and Utilities for further discussion). The Master Plan

uses would implement a number of design features and mitigation measures to reduce energy and water consumption. These design features and mitigation measures exceed state and local requirements for energy and water conservation and demonstrate that the Master Plan's consumption would not be unjustified.

6.3.2 - Non-Master Plan Annexations

The non-master plan annexations would not change any existing land use activities or confer any development rights that would allow new construction to occur. As such, they would not have the potential to involve a large commitment of nonrenewable resources, cause irreversible damage as a result of environmental accidents, or result in the unjustified consumption of resources.

6.4 - Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted AB 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines. Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the proposed project will not result in the wasteful, inefficient, and unnecessary consumption of energy; will not cause the need for additional natural gas or electrical energy-producing facilities; and, therefore, will not create a significant impact on energy resources.

6.4.1 - Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. At the state level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related

data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting state fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and state energy-related laws and plans are discussed below.

Federal Energy Policy and Conservation Act

The Federal Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the United States Department of Transportation, is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model; rather, compliance is determined on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. The Corporate Average Fuel Economy (CAFE) program, which is administered by United States Environmental Protection Agency, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The United States Environmental Protection Agency calculates a CAFE value for each manufacturer that is based on city and highway fuel economy test results and vehicle sales. On the basis of the information generated under the CAFE program, the United States Department of Transportation is authorized to assess penalties for noncompliance. In the course of its over 30-year history, this regulatory program has resulted in vastly improved fuel economy throughout the nation's vehicle fleet.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) such as the San Joaquin Council of Governments were required to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process for specific projects would then address these policies. Another requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

The Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators, encouraging urban designs that reduce vehicle miles traveled, and accommodating pedestrian and bicycle access.

Title 24, Energy Efficiency Standards

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. According to the CEC, since the energy efficiency standards went into effect in 1978, it is estimated that California residential and nonresidential consumers have reduced their utility bills by at least $15.8 billion. The CEC further estimates that by 2011, residential and nonresidential consumers will have saved an additional $43 billon in energy costs.

In 2008, the CEC adopted new energy efficiency standards. Effective January 1, 2010, all projects that apply for a building permit must adhere to the new 2008 standards. The 2008 standards reflect the greenhouse gas reduction requirements of the California Global Warming Solutions Act of 2006 (Assembly Bill 32).

Because the adoption of Title 24 post-dates the adoption of AB 1575, it has generally been the presumption throughout the State that compliance with Title 24 (as well as compliance with the federal and state regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy. As is the case with other uniform building codes, Title 24 is designed to provide certainty and uniformity throughout the State while ensuring that the efficient and non-wasteful consumption of energy is carried out through design features. For the vast

majority of residential and nonresidential projects, adherence to Title 24 is deemed necessary to ensure that no significant impacts occur from the inefficient, wasteful, and unnecessary consumption of energy. As a further example, the adoption of federal vehicle fuel standards, which have been continually improved since their original adoption in 1975, have also protected against the inefficient, wasteful, and unnecessary use of energy.

Pursuant to the California Building Standards Code and the Title 24 Energy Efficiency Standards, the City will review the design and construction components of the project's Title 24 compliance when specific building plans are submitted.

6.4.2 - Energy Requirements of the Proposed Project

Short-term construction and long-term operational energy consumption are discussed below.

The EPA regulates non-road diesel engines. The EPA has no formal fuel economy standards for non-road (e.g., construction) diesel engines but does regulate diesel emissions, which indirectly affects fuel economy. In 1994, the EPA adopted the first set of emissions standards (Tier 1) for all new non-road diesel engines greater than 37 kilowatts (kW) (50 horsepower [hp]). The Tier 1 standards were phased in for different engine sizes between 1996 and 2000, reducing nitrogen oxide (NO_x) emissions from these engines by 30 percent. The EPA has since adopted more stringent emission standards for NO_x, hydrocarbons, and particulate matter from new, non-road diesel engines. This program includes the first set of standards for non-road diesel engines less than 37 kW. It also phases in more stringent Tier 2 emission standards from 2001 to 2006 for all engine sizes and adds yet more stringent Tier 3 standards for engines between 37 and 560 kW (50 and 750 hp) from 2006 to 2008. These standards will further reduce non-road diesel engine emissions by 60 percent for NO_x and 40 percent for particulate matter (PM) from Tier 1 emission levels. In 2004, the EPA issued the Clean Air Non-road Diesel Rule. This rule, which took effect in 2008 and will be fully phased in by 2014, will cut emissions from non-road diesel engines by more than 90 percent. These emission standards are intended to promote advanced clean technologies for non-road diesel engines that improve fuel combustion, but they also result in slight decreases in fuel economy.

The proposed Master Plan uses would be developed over a 15-year period. Table 6-1 provides estimates of the Master Plan uses construction fuel consumption. The construction assumptions contained in the tables are the same assumptions used in the construction air quality analysis in Section 3.3, Air Quality.

Table 6-1: Construction Fuel Consumption

Phase	Fuel Consumption (Gallons)
1	5,148,674
2	1,488,240
3	478,781
Total	**7,115,695**

Notes:
Fuel consumption worksheet provided in Appendix B.
Source: Michael Brandman Associates, 2010.

As shown in Table 6-1, construction activities associated with the Master Plan uses would be estimated to consume 7,115,695 gallons of diesel or gasoline. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the State. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Long-Term Operations

Transportation Energy Demand

Vehicle fuel efficiency is regulated at the federal level. Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards.

The fuel economy standard for new passenger cars has been 27.5 miles per gallon since 1990. The fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon since 1996. Heavy-duty vehicles (vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model; rather, compliance is determined by each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Table 6-2 provides an estimate of the daily fuel consumed by vehicles traveling to and from the proposed project. These estimates were derived using the same assumptions used in the operational air quality analysis in Section 3.3, Air Quality. As shown in Table 6-2, daily vehicular fuel consumption is estimated to be 15,091 gallons of both gasoline and diesel.

Table 6-2: Daily Vehicle Fuel Consumption (Master Plan Buildout)

Master Plan Component	Vehicle Type	Percent of Vehicle Trips	Daily Vehicle Miles Traveled	Average Fuel Economy	Total Daily Fuel Consumption
Light Industrial	Passenger cars	30.0	34,993	21.6	1,620
	Light trucks	23.4	27,295	17.2	1,587
	Medium trucks/ Heavy trucks	46.6	54,356	6.1	8.911
	Sub-Total	**100.0**	**116,644**	**—**	**12,118**
Community Commercial	Passenger cars	47.5	20,569	21.6	952
	Light trucks	37.1	16,065	17.2	934
	Medium trucks/ Heavy trucks	15.3	6,626	6.1	1,086
	Motorcycles	0.1	43	50.0	1
	Sub-Total	**100.0**	**43,303**	**—**	**2,973**
Total		**—**	**159,947**	**—**	**15,091**

Notes:
Daily trips and vehicle miles traveled provided by URBEMIS air quality modeling output (Appendix C).
Average fuel economy is provided by United States Department of Transportation, Bureau of Transportation Statistics and reflects fuel economy of overall fleet, not just new vehicles.
Source: Michael Brandman Associates, 2010.

A key characteristic of the Master Plan uses that pertains to transportation energy consumption is the adjacency to the Union Pacific Railroad Lathrop Intermodal Terminal. This adjacency would eliminate truck trips through the use of rail-served buildings and the reduction in the length of truck trips because of a direct, internal connection between the Master Plan uses and the Lathrop Intermodal Terminal. Furthermore, the CenterPoint Intermodal Facility component is intended to interface with the Lathrop Intermodal Terminal. As such, it would facilitate the use of rail transportation, which is more energy efficient than truck transportation on a ton-mile basis.

In addition, this EIR identifies several mitigation measures that would reduce transportation energy consumption:

- **Mitigation Measure TRANS-6a** requires consultation with the City of Manteca Community Development Department, Manteca Transit, and the San Joaquin Regional Transit District about the inclusion of appropriate transit facilities (turnouts, shelters, etc.) or services (e.g., an employee shuttle) prior to site plan approval of each Master Plan light industrial use. If transit facilities are deemed to be necessary, then such facilities shall be provided on the final site plan. If transit services are deemed to be necessary, the applicant shall prepare a service plan and submit it to the City of Manteca for review and approval. The approved plan shall be incorporated into the project.

- **Mitigation Measure TRANS-6b** requires consultation with the City of Manteca Community Development Department about the inclusion of appropriate bicycle facilities (racks, lockers, etc.) prior to site plan approval of each Master Plan light industrial use. If bicycle facilities are deemed to be necessary, such facilities shall be provided on the final site plan.
- **Mitigation Measure TRANS-6c** requires consultation with the City of Manteca Community Development Department about the inclusion of appropriate pedestrian facilities prior to site plan approval of each Master Plan light industrial use. If pedestrian facilities are deemed to be necessary, such facilities shall be provided on the final site plan.
- **Mitigation Measure TRANS-6d** requires the inclusion of public transit, bicycle, and pedestrian facilities in the community commercial use.

As such, it would be expected that vehicular fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar land use in the region.

Building Energy Demand

The Master Plan uses are estimated to demand 73.1 million kilowatt-hours (kWh) of electricity and 271.6 million cubic feet of natural gas on an annual basis. These figures were derived from energy consumption rates provided by the United States Energy Information Administration. Refer to Impact PSU-7 in Section 3.11, Public Services and Utilities for further discussion about the calculations used to arrive at these consumption estimates, as well as a discussion on local and regional energy supplies and requirements for additional capacity, the effects of the project on energy resources, and the effects of the project on peak demand periods.

The Master Plan establishes several design guidelines that relate to energy conservation:

- Provide high efficiency HVAC systems, when required, with non-HCFC refrigerants.
- Provide motion detectors in accessory function areas.
- Design buildings which use natural ventilation with the goal of minimizing air-conditioned areas.
- Design building orientation and shading to minimize solar gain and maximize daylight within the building work areas.
- Include photo-sensors and localized lighting controls to reduce the amount of artificial light used within indoor spaces.

In addition, the Master Plan uses will be subject to the most recently adopted edition of the Title 24 energy efficiency standards at the time building permits are sought. The Title 24 standards include a number of requirements associated with energy conservation and, therefore, ensure that the Master Plan uses would not result in the inefficient, wasteful, or unnecessary use of energy.

SECTION 7: EFFECTS FOUND NOT TO BE SIGNIFICANT

7.1 - Introduction

This section is based on the Notice of Preparation (NOP), dated February 8, 2010, and contained in Appendix A of this Environmental Impact Report (EIR). The NOP was prepared to identify the potentially significant effects of the proposed projects and was circulated for public review between February 8, 2010 and March 9, 2010. In the course of this evaluation, certain impacts were found to be less than significant because the proposed project's characteristics would not create such impacts. This section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the EIR preparation process. Note that a number of impacts that are found to be less than significant are addressed in the various EIR topical sections (Sections 3.1 through 3.12) to provide more comprehensive discussion of why impacts are less than significant, in order to better inform decision makers and the general public.

7.2 - Effects Found Not To Be Significant

7.2.1 - Aesthetics, Light, and Glare

State Scenic Highways

Interstate 580 is the only officially designated State Scenic Highway in San Joaquin County. This highway is more than 15 miles from the Master Plan area and the non-master plan annexation areas. This condition precludes the possibility of any adverse impact on a State Scenic Highway as a result of project implementation. No impact would occur.

7.2.2 - Agriculture Resources

Forest Land Zoning

The Master Plan area and the non-master plan annexation areas are currently zoned for agricultural use by the San Joaquin County Zoning Ordinance. This condition precludes the possibility of conflicts with forest land zoning as a result of project implementation. No impacts would occur.

Forest Lands

The Master Plan area and the non-master plan annexation areas contain agricultural land and low-density residential development. There would be no loss or conversion of forest land. This condition precludes the possibility of conversion of forest land to non-forest use as a result of project implementation. No impacts would occur.

7.2.3 - Geology, Soils, and Seismicity

Septic or Alternative Wastewater Disposal Systems

The development contemplated by the Master Plan would be served by sanitary sewer service provided by the City of Manteca. No septic or alternative wastewater disposal systems would be installed as part of the proposed project. No impacts would occur.

Currently, many if not all of the properties in the non-master plan annexation areas use septic systems. These existing facilities would be maintained and no changes would occur. No new septic or alternative wastewater disposal systems would be installed. No impacts would occur.

7.2.4 - Hazards and Hazardous Materials

Exposure of Schools to Hazardous Materials

There are no schools within 0.25 mile of the Master Plan area and non-master plan annexation areas. The nearest school to the project site is George McParland Elementary School, located 0.69 mile southeast. This condition precludes the possibility of the proposed project exposing schools located within 0.25 mile of the project site to hazardous materials. No impacts would occur.

Private Airstrips

There are no private airstrips in the vicinity of the Master Plan area and non-master plan annexation areas. This condition precludes the possibility of exposing persons residing or working in the project area to aviation hazards associated with private airstrips. No impacts would occur.

Wildland Fires

The Master Plan area and non-master plan annexation areas are surrounded by parcels containing both urban development and agricultural uses. Cal Fire maps indicate that San Joaquin County has no Very High Fire Hazard Severity Zones. In addition, the City of Manteca General Plan does not identify any areas within its planning boundaries as having wildland fire risks. Therefore, development of the Master Plan and annexation of the East and South areas would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impacts would occur.

7.2.5 - Hydrology and Water Quality

Seiches, Tsunamis, or Mudflows

There are no inland water bodies that could be potentially susceptible to a seiche in the project vicinity. This precludes the possibility of a seiche inundating the project site.

The Master Plan area and non-master plan annexation areas are more than 60 miles from the Pacific Ocean, a condition that precludes the possibility of inundation by tsunami.

There are no steep slopes that would be susceptible to a mudflow in the project vicinity, nor are there any volcanically active features that could produce a mudflow in the City of Manteca. This precludes the possibility of a mudflow inundating the project site. No impacts would occur.

7.2.6 - Mineral Resources

Mineral Resources of Statewide or Local Importance

The Master Plan area and non-master plan annexation areas do not contain any known mineral deposits or active mineral extraction operations. According to the City of Manteca General Plan, there are no significant mineral resources within the planning area, and no known mining of mineral resources has occurred in the planning area. The closest mineral resources consist of clay pits located northeast of the City of Lathrop. This condition precludes the possibility of the loss of important mineral resources as a result of the proposed project.

7.2.7 - Population and Housing

Growth Inducement

Buildout of the Master Plan would create as many as 2,588 employment opportunities over a 15-year period, or approximately 173 jobs on an annual basis (refer to Table 2-4 in Section 2, Project Description). Most employment opportunities would be expected to be jobs in the industrial sector (warehousing, logistics, trucking, etc.), with some commercial retail sector jobs. For comparison purposes, the California Employment Development Department indicates that as of June 2010, there were 4,100 unemployed persons in Manteca and 51,300 unemployed persons in San Joaquin County. Accordingly, it would be expected that the Master Plan's new jobs could readily be filled from the local workforce over the 15-year buildout horizon. Therefore, the proposed project would not have the potential to cause substantial direct or indirect population growth.

No land use changes are proposed for the non-master plan areas; therefore, the annexation of these areas would not have the potential to cause substantial direct or indirect population growth.

Displacement of Persons or Housing

The Master Plan boundaries contain six rural residences. Given the small population that resides within these structures, the removal of these buildings would not create a need for the construction of replacement housing elsewhere. No impacts would occur.

No land use changes are proposed for the non-master plan areas; therefore, no displacement of persons or housing would occur.

7.2.8 - Public Services

Schools

The Master Plan does not contain any residential uses and would not directly induce population growth. The new employment opportunities created by the Master Plan would not induce substantial

population growth into the Manteca area from outside areas. Therefore, the Master Plan would not result in the need for new or expanded school facilities. No impacts would occur.

The non-master plan areas would be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer development rights that would allow new construction. Therefore, the annexation of the East and South areas would not result in the need for new or expanded school facilities. No impacts would occur.

Parks

The Master Plan does not contain any residential uses and would not directly induce population growth. The new employment opportunities created by the Master Plan would not induce substantial population growth into the Manteca area from outside areas. Therefore, the Master Plan would not result in the need for new or expanded park facilities. No impacts would occur.

The non-master plan annexation areas will be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer development rights that would allow new construction. Therefore, the annexation of the East and South areas would not result in the need for new or expanded park facilities. No impacts would occur.

Other Public Facilities

The Master Plan does not contain any residential uses and would not directly induce population growth. The new employment opportunities created by the Master Plan would not induce substantial population growth into the Manteca area from outside areas. Therefore, the Master Plan would not result in the need for new or expanded libraries or other public facilities. No impacts would occur.

The non-master plan annexation areas will be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer development rights that would allow new construction. Therefore, the annexation of the East and South areas would not result in the need for new or expanded libraries or other public facilities. No impacts would occur.

7.2.9 - Recreation

New or Expanded Recreational Facilities

The Master Plan does not contain any residential uses and would not directly induce population growth. The new employment opportunities created by the Master Plan would not induce substantial population growth into the Manteca area from outside areas. Therefore, the Master Plan would not result in the need for new or expanded recreational facilities. No impacts would occur.

The non-master plan annexation areas will be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer development rights that would allow new construction. Therefore, the annexation of the East and South areas would not result in the need for new or expanded recreational facilities. No impacts would occur.

Physical Deterioration of Recreational Facilities

The Master Plan does not contain any residential uses and would not directly induce population growth. The new employment opportunities created by the Master Plan would not induce substantial population growth into the Manteca area from outside areas. Therefore, the Master Plan would not cause physical deterioration of existing recreational facilities from increased usage. No impacts would occur.

The non-master plan annexation areas will be annexed into the City of Manteca. The annexations would not alter any existing land use activities or confer development rights that would allow new construction. Therefore, the annexation of the East and South areas would not cause physical deterioration of existing recreational facilities from increased usage. No impacts would occur.

SECTION 8: PERSONS AND ORGANIZATIONS CONSULTED/LIST OF PREPARERS

8.1 - Persons and Organizations Consulted

8.1.1 - Lead Agency

City of Manteca

Community Development Department

Interim Community Development Director ..... Frederic Clark
Planning Manager..... Mark Meissner
Senior Planner ..... Rochelle Henson

Fire Department

Fire Chief..... Kirk Waters
Fire Marshall ..... Lantz Rey

Police Department

Service Division Commander, Captain ..... John Orcutt

Public Works Department

Senior Engineer - Water ..... Keith Conarroe
Senior Engineer - Traffic Engineering ..... Mark McAvoy

8.1.2 - Public Agencies

State Agencies

California Energy Commission

Supervisor, Local Energy and Land Use Assistance Unit..... Bill Pfanner

California Public Utilities Commission

Rail Corridor Safety Specialist..... Moses Stites

Regional Water Quality Control Board – Central Valley Region

Environmental Scientist, Storm Water Unit..... Daniel Schultz

Regional and Local Agencies

San Joaquin Valley Air Pollution Control District

Permit Services Manager..... Arnaud Marjollet
Director of Permit Services ..... David Warner

San Joaquin Council of Governments

Senior Regional Planner..... Michael Swearingen
Regional Habitat Planner..... Anne-Marie Poggio
Associate Regional Planner..... Laura Brunner

County of San Joaquin Community Development Department

Associate Planner..... Mo Hatef

County of San Joaquin Environmental Health Department

Lead Senior Environmental Registered Health Specialist ..... Rodney Estrada

City of Lathrop

Acting City Engineer ..... Thomas Ruark

Assistant Community Development Director ..... Charlie Mullen, AICP

Manteca Unified School District

Senior Director of Business Services..... Jacqui Breitenbucher

8.2 - List of Preparers

8.2.1 - Lead Agency

City of Manteca

Community Development Department

Interim Community Development Director ..... Frederic Clark
Planning Manager..... Mark Meissner
Senior Planner ..... Rochelle Henson

Fire Department

Fire Chief..... Kirk Waters
Fire Marshall ..... Lantz Rey

Public Works Department

Senior Engineer - Water ..... Keith Conarroe
Senior Engineer - Traffic Engineering ..... Mark McAvoy

Legal Counsel

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Shareholder..... Laurence S. Wiener
Shareholder..... David M. Snow, AICP

8.2.2 - Lead Consultant

Michael Brandman Associates

Project Director ..... Jason M. Brandman
Project Manager ..... Grant Gruber
Assistant Project Manager..... Elena Nuño
Air Quality Scientist..... Cori Wilson
Air Quality Scientist..... Vince Mirabella
Senior Noise Analyst..... Gregory Tonkovich, AICP, INCE
Senior Project Archaeologist..... Carrie Wills, RPA
Biologist ..... Paul Mead
Hydrologist..... Carol Beahan
Senior Editor..... Sandra L. Tomlin
Technical Editor ..... Ed Livingston
GIS Technician..... Karlee McCracken
Executive Assistant ..... Jayne Ingram
Administrative Assistant ..... Alicia Yuen
Reprographics..... José Morelos
Reprographics..... Cole Forbes

8.2.3 - Technical Subconsultants

Fehr & Peers Transportation Consultants

Principal.....John Gard, P.E.
Transportation Engineer.....Katie Spangler

Austin Wiswell Aviation Safety Consultant

Aviation Safety Consultant.....Austin Wiswell

8.3 - Applicant Team

CenterPoint Properties

Development Manager.....Terry Nash

MCR Engineering

Principal, Planning & Entitlement Manager..... Jim Rachels

Law Office of Thomas H. Terpstra

Attorney at Law.....Thomas H. Terpstra

Neil O. Anderson and Associates

Principal.....Garret S.H. Hubbart, G.E.
Project Engineer.....Troy M. Schiess, P.E.

Conestoga-Rovers & Associates

Principal.....Brian C. Boevers
Project Manager..... Erik A. Friedrich, REA II, REP

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