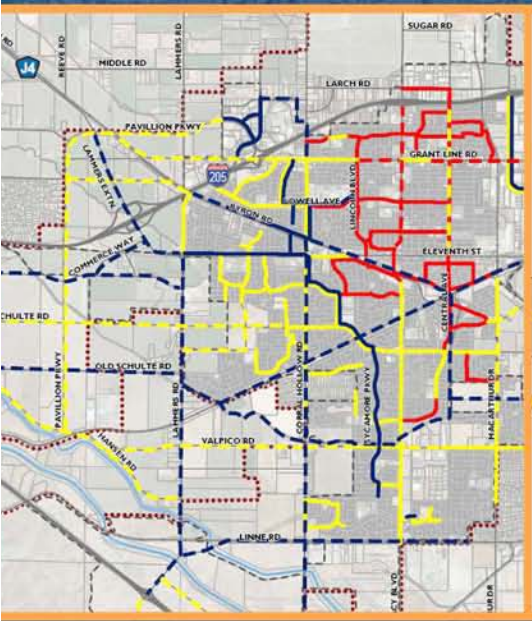
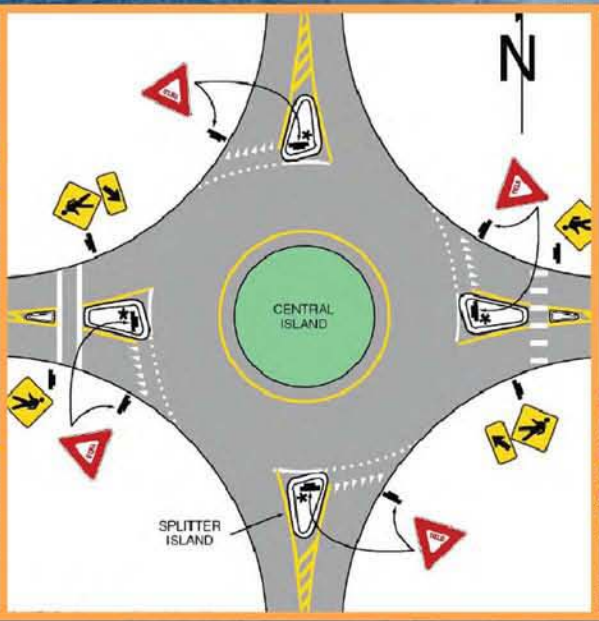
Citywide Transportation Master Plan

Draft Environmental Impact Report

(State Clearinghouse No. 2012012032)





Prepared for:
City of Tracy

March 2012

RBF CONSULTING
A Baker Company

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CITYWIDE TRANSPORTATION MASTER PLAN

DRAFT
ENVIRONMENTAL IMPACT REPORT
(State Clearinghouse No. 2012012032)

March 2012

Prepared for:

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1.0 INTRODUCTION

1.1 BACKGROUND

This Draft Environmental Impact Report (EIR) has been prepared to analyze the potential environmental effects that may result from the proposed Citywide Transportation Master Plan (Project) in the City of Tracy, San Joaquin County, California, pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.), and the *CEQA Guidelines* (California Code of Regulations [CCR] Title 14, Section 15000 et seq.).

CEQA requires California public agencies to consider the environmental consequences of projects for which they have discretionary authority. The public agency with the principal responsibility for carrying out or approving a project is the "lead agency." The City of Tracy (City) is the lead agency for the proposed Project. CEQA requires the lead agency to prepare an EIR if there is substantial evidence, in light of the whole record, that a project may have a significant effect on the environment. A significant effect is defined in CEQA as a substantial adverse physical change in the environment.

The proposed Citywide Roadway and Transportation Master Plan (TMP) is a comprehensive update of the 1994 City of Tracy TMP in fulfillment of Objective CIR-1.1, Action A1 of the Circulation Element of the City of Tracy General Plan (General Plan), which states, "Update the Roadway Master Plan upon adoption of the General Plan." The proposed TMP builds upon the goals and objectives contained in the Circulation Element of the General Plan and the City of Tracy Sustainability Action Plan (SAP). The TMP provides a comprehensive review of the City's transportation system and identifies improvements and expansions to the existing system required to accommodate future growth anticipated by the General Plan. Many improvements and expansions to the City's existing transportation system were identified during the preparation of the General Plan and its associated EIR, as noted in the Circulation Element of the General Plan EIR, Objective CIR-1.1, Action A1 ensures the City's TMP is updated to include a comprehensive inventory of roadway expansions and improvements necessary to accommodate the growth envisioned by the General Plan, as well as maintain circulation continuity throughout the roadway network.

The TMP includes an additional five years of growth beyond the General Plan horizon year to establish consistency with the most recent San Joaquin Council of Governments (SJCOG) land use development assumptions, employment forecasts, and travel demand model. Due to the City's regionally important geographic location, a location that experiences a variety of daily transportation travel modes to, from, and through the City, utilizing the most recent SJCOG model facilitates a consistent identification of uniform improvements between the regional agencies that are responsible for freeways, Congestion Management Agency (CMA) roads, local roads, and transit services.

Tracy is located within San Joaquin County (County). The City occupies a central location in the San Joaquin Valley, 60 miles east of San Francisco and 68 miles south of Sacramento. Improvements and expansions proposed for the City's existing transportation system would occur at various locations throughout the City and its Sphere of Influence (SOI), generally within existing right-of-way owned by the City; however, a substantial number of the identified improvements may require additional right-of-way. The City's SOI includes the current City limits, plus the area immediately outside of the City that the City expects to annex and urbanize in the future. Land uses surrounding the proposed improvements and expansions vary depending on the location and could consist of either commercial, residential, industrial, agricultural, recreational, and open space uses, water courses, or freeways.

1.2 HISTORY

Following its preliminary review of the proposed Project (pursuant to Section 15060 of the *CEQA Guidelines*), the City of Tracy prepared a draft Initial Study according to Section 15063 of the *CEQA Guidelines* to determine if the Project would have a significant effect on the environment. The draft Initial Study found that the Project would have the following potentially significant impacts:

- Air Quality - conflicts with the applicable air quality management plan; contribution to an existing air quality violation; cumulatively considerable net increase in criteria pollutants; exposure of sensitive receptors to substantial pollutant concentrations; and, creation of objectionable odors affecting a substantial number of people;
- Biological Resources – loss of sensitive and special-status plant and wildlife species and their habitat; and, loss or disruption of regulated riparian or wetland habitat;
- Cultural Resources – damage or destruction of unknown cultural resources or buried human remains;
- Geology and Soils – risks associated with expansive soils;
- Greenhouse Gas Emissions – generation of greenhouse gas (GHGs) emissions; and, conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the GHG emissions;
- Hazards and Hazardous Materials – short-term, temporary, construction-related interference with emergency response; and, potential to increase wildland fire hazards;
- Hydrology and Water Quality – alteration of existing drainage patterns leading to on- or offsite erosion;
- Noise - short-term, temporary, increases in noise and groundborne vibration during construction;
- Public Services – short-term, temporary, increases in Fire and Police Department response times during construction;
- Transportation/Traffic – delays in emergency response times during construction; and,
- Utilities/Service Systems – environmental effects associated with the construction of storm drainage facilities.

In accordance with *CEQA Guidelines* Section 15063 (b)(1)(A), the City concluded that, based on the results of the draft Initial Study, there is substantial evidence that the Project would have potentially significant air quality and GHG emission impacts, requiring the preparation of an EIR, as mitigation measures for these impacts were not readily or practicably feasible at the time the draft Initial Study was prepared. All other impacts identified in the draft Initial Study have been mitigated with measures reviewed by and acceptable to City; refer to Appendix A (Notice of Preparation [NOP], Draft Initial Study, and Public Comments). Thus, only two topical environmental issues, Air Quality and Greenhouse Gas Emissions, require evaluation in this EIR.

It should be noted that the General Plan EIR determined that GHG emissions under the SAP would not meet San Joaquin Valley Air Pollution Control District (SJVAPCD) criteria, and impacts would be significant and unavoidable. Thus, the City adopted a Statement of Overriding Considerations due to significant and unavoidable impacts. As described in greater detail below under Section 1.5, the GHG analysis for the proposed Project tiers off of the General Plan EIR and incorporates it by reference.

As noted in Section 1.1 above, the proposed TMP has prepared in fulfillment of Action A-1 of the City's General Plan. A comprehensive analysis of the environmental effects associated with implementation of the General Plan was addressed in the General Plan EIR certified February 2011. As identified in Article

12, Section 15183(a) of the State CEQA Guidelines, …"projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies". As such, this EIR's primary focus is on those impacts associated with implementation of the TMP that were not previously contemplated by the City's General Plan EIR. As provided for in Section 15183(b)(4), this EIR limits its examination of environmental effects to those significant effects, which as a result of substantial new information, were not known at the time that the General Plan EIR was certified.

1.3 PURPOSE OF THE EIR

An EIR is an informational document that is written to inform public agency decision-makers and the public of the significant environmental effects of a proposed project. The purpose of an EIR is to:

- Analyze the environmental effects of a proposed project;
- Indicate mitigation measures to avoid or minimize the potentially significant environmental effects of a proposed project; and,
- Identify alternatives to the project that would avoid or substantially lessen the significant effects of the project.

Environmental effects that are addressed in an EIR consist of potentially significant, adverse effects of the project across a full spectrum of environmental topics; growth-inducing effects of the project; and, significant cumulative effects of past, present, and reasonably anticipated future projects.

It is not the purpose of an EIR to recommend either approval or denial of a project. Rather, EIRs provide relevant information that will assist decision-makers in their decision to approve or deny a project. If significant environmental impacts that cannot be reduced to a less than significant level are identified for the Project, the lead agency must prepare a Statement of Overriding Considerations, pursuant to Section 15093 of the *CEQA Guidelines*.

1.4 INTENDED USES OF THE EIR

This EIR has been prepared at the program-level under CEQA Guidelines Section 15168 to assess and document the environmental impacts of the Citywide Roadway and Transportation Master Plan. Therefore, subsequent activities undertaken pursuant to the Master Plan would be examined in the light of this EIR to determine whether any additional environmental documentation must be prepared. (14 CCR § 15168(c).) The Program EIR approach is appropriate for the TMP because it allows comprehensive consideration of the reasonably anticipated scope of the TMP and will serve as the base document for any future environmental review necessary for development of improvements identified in the TMP.

This EIR provides the foundational CEQA compliance documentation upon which the City's, responsible agencies', and all other applicable agencies' consideration of and action on all necessary and/or desirous permits, approvals and other grants of authority (collectively, "approvals") shall be based. This includes without limitation all those approvals set forth in this EIR, as well as any additional approvals necessary and/or desirous to implement the proposed Project.

State CEQA Guidelines Section 15168(c) states that subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared. Subsequent project-specific activities undertaken pursuant to the TMP would be evaluated in light of this Program EIR to determine whether additional environmental documentation is required (State *CEQA Guidelines* Sections 15168(b) and (c)). Section 15168(c)(2) states that if the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required. Section 15168(c)(4) says that the agency should use a written checklist or similar device to document the evaluation of the activity to determine whether the environmental effects of the operation are covered in the program EIR. If a subsequent activity undertaken pursuant to the TMP would have effects not within the scope of this Program EIR, the Lead Agency must prepare a new Initial Study leading to either a Negative Declaration, a Mitigated Negative Declaration, or project level EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis.

Public Resources Code Section 21093 encourages a lead agency to "tier" from a previously certified program EIR whenever feasible. In this way, future environmental documents can focus on site-specific and unique issues relating to individual development proposals and allows lead agencies to concentrate on issues ripe for decision and exclude from consideration issues already decided or not ripe for decision (*State CEQA Guidelines* Sections 15168(c), 15385). The tiered or site-specific analysis may incorporate by reference discussions, mitigation measures, and alternatives developed in the previously certified program EIR, and concentrate on the issues specific to the project analyzed in the tiered document (Public Resources Code Section 21094; *State CEQA Guidelines* Sections 15168(c), 15385).

1.5 SCOPE OF THE EIR

As provided for in Sections 15063 and 15126 of the *CEQA Guidelines*, the focus of this EIR is limited to specific issues and concerns identified by the City as causing potentially significant effects on the environment.

To determine the scope of this EIR, the City prepared a draft Initial Study (IS) (Appendix A), as described above under Section 1.2 (History). The purpose of the draft Initial Study is to assist in the preparation of an EIR by focusing the EIR on the effects determined to be significant, identifying the effects determined not to be significant, and explaining why such potentially significant effects would not be significant.

An NOP (Appendix A) was distributed for the proposed Project on January 12, 2012. An NOP is a document that is sent by the lead agency to notify public agencies and interested parties that the lead agency plans to prepare an EIR for a project. The purpose of the NOP is to solicit comments from public agencies and interested parties, and to identify issues that should be considered in the EIR. The NOP for the proposed Project was sent to trustee and responsible agencies, members of the public, other interested parties, and the California Office of Planning and Research, State Clearinghouse (SCH) on January 12, 2012. The SCH received the document on January 13, 2012. This began the 30-day public review period, which ended on February, 13, 2012. During the review period, public agencies and members of the public had the opportunity to respond to the NOP to identify issues of special concern to them and to suggest additional issues to be considered in the EIR.

As noted above, under Section 1.2 (History), the draft Initial Study identified many potentially significant environmental effects that could occur as a result of the Project. However, prior to the release of the draft Initial Study, the City agreed to mitigation measures, which would mitigate all of the potentially significant impacts identified in the draft Initial Study with the exception of certain air quality and GHG

emission impacts. At the time the draft Initial Study was prepared, mitigation measures for specific air quality and GHG emission impacts were not readily or practicably feasible. Moreover, as also addressed in Section 1.2, this EIR relies on the provisions of Section 15183(a) and (d) of the State CEQA Guidelines, thereby limiting the analysis to those significant effects that were not known at the time the General Plan EIR was certified. Thus, only two topical environmental issues, Air Quality and Greenhouse Gas Emissions, require evaluation in this EIR.

Pertinent documents relating to this Draft EIR have been cited and incorporated, in accordance with Sections 15148 and 15150 of the *State CEQA Guidelines*, to eliminate the need for inclusion of voluminous engineering and technical reports within the CEQA document. Of particular relevance are those previous EIRs that present information regarding descriptions of environmental settings, future development-related growth, and cumulative impacts. This Draft EIR incorporates the following documents by reference:

- City of Tracy General Plan – The City of Tracy General Plan serves as the major tool for directing growth within the City and provides a comprehensive guide to accommodate the City's growth. The General Plan presents information on existing conditions within the City, including physical, social, cultural, and environmental resources and opportunities. The General Plan looks at trends, issues, and concerns that affect the region, includes City goals and objectives, and provides policies to guide development. The General Plan provides information regarding air quality and GHGs. The General Plan is available for review at the following location: City of Tracy, Department of Development and Engineering Services, 333 Civic Center Drive, Tracy, CA 95376.
- City of Tracy General Plan EIR – The City General Plan EIR assesses the potential environmental impacts associated with the General Plan. The General Plan EIR consists of the Draft EIR, the Final EIR, and its various amendments and supplements. The EIR summarizes potential environmental impacts associated with implementation of the City's General Plan, including growth-inducing and cumulative impacts. In addition, the General Plan EIR included program-wide mitigation measures to reduce potential adverse environmental impacts. The General Plan EIR provides information regarding existing conditions and identifies potential impacts. In particular, the General Plan EIR concluded that GHG reductions would be significant and unavoidable and a Statement of Overriding Considerations was adopted. The General Plan EIR is available for review at the following location: City of Tracy, Department of Development and Engineering Services, 333 Civic Center Drive, Tracy, CA 95376.

1.6 CONTENT OF THE EIR

This Draft EIR incorporates two environmental topic areas determined by the draft Initial Study to have potential impacts: Air Quality and Greenhouse Gas Emissions (pursuant to Sections 15148 and 15150 of the *State CEQA Guidelines*, the Project's GHG analysis tiers off of the General Plan EIR and incorporates it by reference). This Draft EIR also incorporates issues identified during the public review period. For each environmental issue, the EIR first describes the environmental setting (existing conditions), then discusses and analyzes the potential related physical impacts that could occur as a result of Project implementation.

For each potentially significant impact, the EIR specifies ways to mitigate the impact, including one or a combination of the following measures:

- Relevant standards and regulations of agencies with jurisdiction over this Project; and/or,

- Project-specific mitigation designed to mitigate one or more Project impacts.

1.7 TERMINOLOGY USED IN THE EIR

This EIR uses the following terminology to describe the significance of the proposed Project's environmental impacts:

- An "environmental impact" is a direct or indirect effect that would be caused by the Project that constitutes a physical change to the existing natural or man-made conditions within the area affected by the Project.
- "No impact" is the lack of any environmental impact, and no mitigation is required.
- A "less than significant" impact or an impact that is "not significant" is an environmental impact that would cause no substantial adverse change in the environment and, as such, requires no mitigation.
- A "potentially significant" or "significant" impact is an environmental impact that could or would cause a substantial adverse change in the environment. In such a case, an impact has been identified that, although potentially significant, can be avoided or reduced to less than significant levels through mitigation. Such mitigation may include Project design features that have been incorporated into the Project or existing requirements, such as municipal code or ordinance, engineering and design requirements (e.g., California Building Code), and standard regulations set by regional, state and federal agencies. A further description of mitigation measures is provided below.
- A "significant and unavoidable" impact is an environmental impact that could or would cause a substantial adverse change in the environment and cannot be avoided if the Project is implemented; mitigation may be recommended, but would not reduce the impact to a less than significant level.
- "Mitigation measures" are defined in *CEQA Guidelines* Section 15370 as:
  - Avoiding the impact altogether by not taking a certain action or parts of an action
  - Minimizing the impact by limiting the degree or magnitude of the action and its implementation
  - Rectifying the impact by repairing, rehabilitating or restoring the affected environment
  - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
  - Compensating for the impact by replacing or providing substitute resources or environments

1.8 EFFECTS FOUND NOT TO BE SIGNIFICANT

As noted above under Section 1.4 (History), the City prepared a draft Initial Study following its preliminary review of the Project. The draft Initial Study identified potential Project impacts on several environmental resources and determined that the majority of these impacts could be mitigated to less than significant levels with the exception of certain air quality and GHG emissions impacts. Refer to the draft Initial Study, which is included as Appendix A to this EIR, for detailed descriptions regarding why the Project would have less than significant impacts associated with the following environmental topical areas:

- Aesthetics
- Agriculture and Forest Resources
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

1.9 OTHER AGENCIES THAT MAY USE THE EIR

1.9.1 RESPONSIBLE AND TRUSTEE AGENCIES

This EIR is intended to be used by trustee and responsible agencies (as defined by Sections 15381 and 15386 of the *CEQA Guidelines*) that may have review or discretionary authority over the Project or some component thereof. Based on Section 15381, there are no trustee agencies with discretionary authority over the proposed Project. However, agencies that also may use this Draft EIR in their review of the Project or that may have responsibility for approval of certain Project elements include, but are not limited to, the following:

- California Office of Planning and Research
- San Joaquin Valley Air Pollution Control District (SJVAPCD)

1.9.2 OTHER AGENCIES, ORGANIZATIONS, AND GROUPS

Other agencies, organizations, and/or special interest groups not formally identified as a trustee or responsible agency, but otherwise anticipated to be participants in the local review process for the Project, include, but are not limited to, the following:

- California Department of Fish and Game (CDFG)
- California Regional Water Quality Control Board (RWQCB)
- California Public Utilities Commission (PUC)
- California Department of Transportation (Caltrans)
- California Department of Water Resources (DWR)
- Pacific Gas and Electric (PG&E)
- San Joaquin Council of Governments (SJCOG)

- San Joaquin County
- San Joaquin Regional Rail Commission (SJRRC)
- San Joaquin Regional Transit District (SJRTD)
- San Luis and Delta-Mendota Water Authority (SLDMWA)
- Union Pacific Railroad Corporation (UPRR)
- United States Bureau of Reclamation (USBR)
- United States Fish and Wildlife Service (USFWS)

1.10 ENVIRONMENTAL REVIEW PROCESS

1.10.1 PUBLIC REVIEW OF DRAFT EIR

In accordance with CEQA, a good faith effort has been made during the preparation of this EIR to contact affected agencies, organizations, and persons who may have an interest in this Project. This Draft EIR, with an accompanying Notice of Completion (NOC), will circulate to the State Clearinghouse, trustee agencies, responsible agencies, and other government agencies, and interested members of the public for a 45-day review period, as required by CEQA. The review period is March 30, 2012 through May 13, 2012. During this review period, public agencies and members of the public may provide written comments on the analysis and content of the EIR. In reviewing a Draft EIR, readers should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and on ways in which the significant effects of the Project might be avoided or mitigated.

All written comments on this Draft EIR must be mailed (i.e., postmarked), faxed, e-mailed, or delivered by 5:00 pm on May 13, 2012, and addressed as follows:

Mail or Delivery:
City of Tracy
Development and Engineering Services Department
333 Civic Center Plaza
Tracy, CA 95376
Attention: William Dean, Assistant Director,
Development and Engineering Services Department

Fax:
William Dean, Assistant Director,
Development and Engineering Services Department
City of Tracy
(209) 831-6400

Email:
William.Dean@ci.tracy.ca.us

All comments received on the Draft EIR during the 45-day public review period will be responded to by the City in the Final EIR.

1.10.2 CERTIFICATION OF FINAL EIR AND PROJECT APPROVAL PROCESS

The following elements will collectively compose the Final EIR:

- The Draft EIR (including the Appendices);
- A list of persons, organizations, and public agencies that commented on the Draft EIR;
- Copies of all comments received; and,
- Written responses to those comments and any supporting documentation.

For a period of at least ten days prior to any public hearing during which the lead agency takes action to certify the EIR, the Final EIR will be made available to, at a minimum, the trustee and responsible agencies that provided written comments on the Draft EIR. Pursuant to Section 15090(a) of the *CEQA Guidelines*, the Final EIR must be certified before the lead agency can take action on (approve or deny) the project.

After the EIR is certified, the City will begin evaluating the merits of the Project and conduct public hearings to decide whether to approve the proposed Project or not. Before approving (or conditionally approving) the Project, the City of Tracy must prepare Findings, in accordance with Section 15091 of the *CEQA Guidelines*. The findings must briefly explain the rationale behind each finding for each significant environmental impact identified for the Project. If significant environmental impacts that cannot be reduced to a less than significant level are identified for the Project, the lead agency must prepare a Statement of Overriding Considerations, pursuant to Section 15093 of the *CEQA Guidelines*.

Certification of the Final EIR and approval of the CEQA Findings, Mitigation Monitoring and Reporting Program, and the Statement of Overriding Considerations may be considered during one final public hearing. The certification of the Final EIR must be the first in this sequence of approvals.

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2.0 EXECUTIVE SUMMARY

2.1 PROJECT UNDER REVIEW

The proposed Project, the Citywide Roadway and Transportation Master Plan (TMP), is a comprehensive update of the 1994 City of Tracy TMP in fulfillment of Objective CIR-1.1, Action A1 of the Circulation Element of the City of Tracy General Plan (General Plan), which states, "Update the Roadway Master Plan upon adoption of the General Plan." As noted in the Circulation Element of the General Plan EIR, implementation of Objective CIR-1.1, Action A1 ensures the City's TMP is updated to include a comprehensive inventory of roadway expansions and improvements necessary to accommodate the growth envisioned by the General Plan, as well as maintain circulation continuity throughout the roadway network.

The proposed TMP builds upon the goals and objectives contained in the Circulation Element of the General Plan and the City's Sustainability Action Plan (SAP). The proposed TMP provides a comprehensive review of the City's transportation system and identifies improvements and expansions to the existing system required to accommodate future growth anticipated by the General Plan. The TMP includes an additional five years of growth beyond the General Plan horizon year to establish consistency with the most recent San Joaquin Council of Governments (SJCOG) land use development assumptions, employment forecasts, and travel demand model. Due to the City's regionally important geographic location, a location that experiences a variety of daily transportation travel modes to, from, and through the City, utilizing the most recent SJCOG model facilitates a consistent identification of uniform improvements between the regional agencies that are responsible for freeways, Congestion Management Agency (CMA) roads, local roads, and transit services.

Tracy is located within San Joaquin County (County). The City occupies a central location in the San Joaquin Valley, 60 miles east of San Francisco and 68 miles south of Sacramento. Improvements and expansions proposed for the City's existing transportation system would occur at various locations throughout the City and its Sphere of Influence (SOI), generally within existing right-of-way owned by the City; however, a limited number of the identified improvements may require additional public right-of-way and/or private property and/or easements. The City's SOI includes the current City limits, plus the area immediately outside of the City that the City expects to annex and urbanize in the future. Land uses surrounding the proposed improvements and expansions vary depending on the location and could consist of commercial, residential, industrial, agricultural, recreational, and open space uses, water courses, or freeways.

2.2 SUMMARY OF POTENTIAL IMPACTS

Under the California Environmental Quality Act (CEQA), a significant impact on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise and objects of historic and aesthetic significance. As identified in Chapter 4 (Environmental Analysis) of this Draft Environmental Impact Report (EIR), the proposed Project has the potential to result in significant environmental impacts as summarized below.

2.2.1 AIR QUALITY

- Project construction would result in potentially significant short-term increases in particulate (fugitive dust) and exhaust emissions that could be reduced to less than significant with implementation of mitigation measures identified in Section 4.2 (Air Quality).
- Due to the amount of growth that is projected to occur by TMP forecast year 2035, impacts associated with long-term mobile source emissions would be considered significant and unavoidable due to exceedances of established thresholds for Reactive Organic Gases (ROG) and particulate matter $(PM)_{10}$.
- The Project would not exceed established thresholds for nitrogen oxides (NO_X), carbon monoxide (CO) hotspots, odors, or toxic air contaminants and related impacts would be less than significant.
- The TMP's anticipated VMT for the year 2035 exceeds the VMT considered in the General Plan for horizon year 2030. As concluded in the General Plan EIR, the General Plan would not be consistent with the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Clean Air Plans. Furthermore, as discussed within the General Plan EIR, the projected growth within the City would lead to an increase in the region's VMT, beyond what has been identified by the San Joaquin Council of Governments (SJCOG) and SJVAPCD. Therefore, as the proposed Project would result in VMT beyond what was anticipated in the General Plan, the proposed Project would also exceed the projected growth beyond what has been identified by the SJCOG and SJVAPCD. Impacts associated with plan consistency would be considered significant and unavoidable for the proposed Project.
- Finally, the Project would result in a significant and unavoidable cumulative impact from increases in criteria air pollutants.

2.2.2 GREENHOUSE GAS EMISSIONS

- As identified in Section 4.3 (Greenhouse Gas Emissions), the VMTs associated with the TMP exceed those forecast for the 2030 General Plan. The General Plan EIR indicated that all feasible mitigation measures for greenhouse gas (GHG) emissions were included in the General Plan and the City's SAP. No additional measures beyond those found in the SAP have been found feasible to reduce GHG emissions associated with the proposed Project. The General Plan EIR determined that GHG emissions under the SAP would not meet SJVAPCD criteria, and impacts would be significant and unavoidable. As the proposed Project contemplates growth beyond the General Plan, and the Project would result in greater impacts than those identified in the General Plan EIR, impacts associated with the proposed Project would be significant and unavoidable.
- In addition, the Project's cumulative impacts associated with GHG emissions would be significant and unavoidable.

2.3 GROWTH INDUCING AND CUMULATIVE IMPACTS

Chapter 5 (Growth Inducing and Cumulative Impacts) of this Draft EIR evaluates the cumulative and growth-inducing impacts of the proposed Project. The proposed Project would result in cumulatively considerable air quality and GHG emissions impacts. The Project is not expected to induce unplanned growth or development in the vicinity of the Project site.

2.4 SUMMARY OF ALTERNATIVES EVALUATED

Chapter 6 (Alternatives) of this EIR evaluates alternatives to the proposed Project in accordance with *CEQA Guidelines* Section 15126.6. These alternatives include:

- Alternative 1: No Project/No Updated Transportation Master Plan
- Alternative 2: Transportation Master Plan Limited to General Plan 2030 Horizon Year
- Alternative 3: Increased Residential/Reduced Commercial

2.4.1 NO PROJECT/NO BUILD (STATUS QUO)

Under the No Project/No Updated Transportation Master Plan Alternative (Alternative 1), the proposed TMP would not be adopted and the existing (1994) TMP would remain in effect. Thus, none of the improvements or expansions to the City's existing transportation system required to accommodate future growth anticipated by the General Plan would be implemented. The City's transportation system would not benefit from Smart Growth, Context-Sensitive design, and Complete Streets guidelines, strategies, principles, and design elements. Moreover, a variety of techniques designed to help the City meet sustainability and GHG reduction goals would not be undertaken, and various other policies that address bicycle/pedestrian circulation, roadway design/operation, traffic calming, access management, standards/design for park and ride facilities, and Intelligent Transportation Systems (ITS) would not be implemented.

Although roadway locations are primarily the same in the existing and proposed TMPs, the roadway network for the proposed TMP shows better connection between origins and destinations, which would reduce trip lengths, compared to the existing TMP. Additionally, the proposed TMP identifies substantially reduced roadway cross sections. New roadways in the proposed TMP include the Pavilion Parkway Extension to the south, the Hansen Road connection between Schulte Road and Lammers Road, improved collector streets between the arterials, and expressways. The proposed TMP identifies reduced roadways on the south side of I-580 for the Tracy Hills development area. Finally, the proposed TMP would have less overall vehicle miles traveled compared to the existing TMP.

2.4.2 TRANSPORTATION MASTER PLAN LIMITED TO GENERAL PLAN 2030 HORIZON YEAR

Under Alternative 2, the TMP would project growth to the year 2030, the same as the growth projection year identified by the General Plan for Traffic and Circulation. Thus, Alternative 2 would have the same land use assumptions and density as that contemplated by the General Plan, but it would not be consistent with the most recent SJCOG land use development assumptions, employment forecasts, and/or travel demand model. All other elements of the TMP under Alternative 2 would be the same or similar as those identified by the proposed Project. This alternative was selected for its ability to reduce the amount of VMT associated with the proposed TMP, and the corresponding air pollutant and GHG emissions.

2.4.3 INCREASED RESIDENTIAL/REDUCED COMMERCIAL

Both the proposed TMP and Alternative 3 identify improvements and expansions to the City's existing transportation system required to accommodate future growth to the year 2035. However, Alternative 3 assumes different land uses in the year 2035 than the proposed TMP. Alternative 3 assumes a 160-acre area near the I-205 expansion area could reasonably be expected to develop with low density residential uses rather than the commercial uses assumed by the TMP; refer to Figure 6-1 (Alternative 3). This alternative was selected for its ability to reduce the amount of VMT associated with the proposed TMP, and the corresponding air pollutant and GHG emissions.

2.4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative in an EIR, which is an alternative that would result in the fewest or least number of significant environmental impacts. If the "No Project" Alternative is the environmentally superior alternative, *CEQA Guidelines* Section 15126.6 (e)(2) requires that another alternative that could feasibly attain most of the project's basic objectives be chosen as the environmentally superior alternative. Based on the above analysis, summarized in Table 6-1, the environmentally superior alternative is Alternative 2. Construction impacts would be equivalent under Alternative 2 and the proposed Project. However, Alternative 2 projects growth to the year 2030 and the proposed TMP projects growth to the year 2035, which results in substantially less projected housing and employment opportunities than are assumed under the TMP. Thus, Alternative 2 would result in less VMT and associated emissions than the proposed Project and air quality and GHG impacts would be reduced, but would still remain significant and unavoidable due to the total amount of growth projected under Alternative 2.

2.5 OTHER CEQA CONSIDERATIONS

Chapter 7 (Other CEQA Considerations) of this Draft EIR provides a discussion of the significant and unavoidable impacts and the significant irreversible changes of the proposed Project. As described in this chapter, the proposed Project would result in significant and unavoidable impacts on air quality and GHG emissions.

2.6 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123 requires that EIRs summarize areas of controversy known to the lead agency and issues to be resolved. Issues were identified during the Notice of Preparation (NOP) review period and have been addressed in the Draft EIR. No apparent substantial areas of controversy not already addressed in this Draft EIR were identified. Comment letters received from organizations and public agencies in response to the NOP are included in Appendix A (Notice of Preparation (NOP), Draft Initial Study, and Public Comments).

2.7 MITIGATION MONITORING AND REPORTING

CEQA requires public agencies to set up mitigation monitoring and reporting programs to ensure compliance with those measures adopted or made as a condition of project approval to mitigate or avoid significant environmental effects identified in an EIR. A mitigation monitoring and reporting program incorporating the mitigation measures set forth in this document will be considered and acted upon by the Tracy City Council for adoption concurrent with the adoption of the findings of this EIR and prior to a determination on whether or not to approve the proposed Project.

2.8 SUMMARY TABLE

Table 2-1 (Summary of Impacts and Mitigation) provides a summary of the proposed Project's potentially significant impacts, the level of significance of the impact before mitigation, the mitigation measures proposed to reduce or avoid the potentially significant effects, and the level of significance of the impact after mitigation.

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Table 2-1
Summary of Impacts and Mitigation

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Air Quality			
4.2-1 - Implementation of the Project would result in temporary construction-related dust and vehicle emissions within the Project site.	Potentially Significant Impact	4.2-1a - Prior to the issuance of any grading, building, or other construction permit, the City shall require future applicants to demonstrate conformance with SJVAPCD Rule VIII. The Development and Engineering Services Department shall require that the grading plans, building plans, and specifications stipulate compliance with the following control measures in SJVAPCD Regulation VIII: • Properly and routinely maintain all construction equipment, as recommended by manufacturer's manuals, to control exhaust emissions. • Shut down equipment when not in use for extended periods of time, to reduce exhaust emissions associated with idling engines. • Encourage ride-sharing and use of transit transportation for construction employees commuting to the Project site. • Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment. • Curtail construction during periods of high ambient pollutant concentrations. • Construction equipment shall operate no longer than eight cumulative hours per day. • All construction vehicles shall be equipped with proper emission control equipment and kept in good and proper running order to reduce NO_X emissions. • All construction activities within the Project site shall be discontinued during the first	Less Than Significant Impact

Table 2-1
Summary of Impacts and Mitigation

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		stage smog alerts. • Construction and grading activities shall not be allowed during first stage ozone alerts. (First stage ozone alerts are declared when ozone levels exceed 0.20 ppm for the 1-hour average.) 4.2-1b - Prior to the issuance of any grading, building, or other construction permit, the City shall require future applicants to demonstrate conformance with SJVAPCD Rule VIII. The Development and Engineering Services Department shall require that the grading plans, building plans, and specifications stipulate compliance with the following control measures in SJVAPCD Regulation VIII: • Water previously disturbed exposed surfaces (soil) a minimum of three-times/day or whenever visible dust is capable of drifting from the site or approaches 20 percent opacity. • Water all haul roads (unpaved) a minimum of three-times/day or whenever visible dust from such roads is capable of drifting from the site or approaches 20 percent opacity. • All access roads and parking areas shall be covered with asphalt-concrete paving or water sprayed regularly. • Dust from all onsite and offsite unpaved access roads shall be effectively stabilized by applying water or using a chemical stabilizer or suppressant. • Reduce speed on unpaved roads to less than 15 miles per hour. • Install and maintain a trackout control	

Table 2-1
Summary of Impacts and Mitigation

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		device that meets the specifications of SJVAPCD Rule 8041 if the site exceeds 150 vehicle trips per day or more than 20 vehicle trips per day by vehicle with three or more axles. • Stabilize all disturbed areas, including storage piles, which are not being actively utilized for construction purposes using water, chemical stabilizers or by covering with a tarp, other suitable cover or vegetative ground cover. • Control fugitive dust emissions during land clearing, grubbing, scraping, excavation, leveling, grading or cut and fill operations with application of water or by presoaking. • When transporting materials offsite, maintain a freeboard limit of at least six inches and cover or effectively wet to limit visible dust emissions. • Limit and remove the accumulation of mud and/or dirt from adjacent public roadways at the end of each workday. (Use of dry rotary brushes is prohibited except when preceded or accompanied by sufficient wetting to limit visible dust emissions and use of blowers is expressly forbidden). • Stabilize the surface of storage piles following the addition or removal of materials using water or chemical stabilizer/suppressants. • Remove visible track-out from the site at the end of each workday. • Cease grading activities during periods of high winds (greater than 20 miles per hour [mph] over a one-hour period). • Asphalt-concrete paving shall comply with	

Table 2-1
Summary of Impacts and Mitigation

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		SJVAPCD Rule 4641 and restrict use of cutback, slow-cure, and emulsified asphalt paving materials. • Grading should be conducted in phases. • The Project site shall not be cleared of existing vegetation cover for the preparation of construction until the issuance of grading permits required by construction. • The Project applicant shall revegetate graded areas as soon as it is feasible after construction is completed.	
4.2-2 - The proposed Project would result in an overall increase in the local and regional pollutant load due to direct impacts from vehicle emissions.	Potentially Significant Impact	4.2-2 - Project impacts to air quality would be reduced through implementation of the efficiency measures identified in the TMP related to Smart Growth, Context-Sensitive design, and Complete Streets. Improved access, pedestrian and bicycle facilities, increased transit, and improved traffic flow inherently reduce mobile source air pollutants. However, the Project impacts on regional air quality would be significant as the Project's emissions would contribute to region-wide emissions that cause exceedances of the state and federal standards and no other feasible mitigation measures are available.	Significant and Unavoidable Impact
4.2-3 - Implementation of the proposed Project could conflict with the most recent air quality management plan.	Potentially Significant Impact	Implement the efficiency measures identified in the TMP related to Smart Growth, Context-Sensitive design, and Complete Streets. Improved access, pedestrian and bicycle facilities, increased transit, and improved traffic flow to inherently reduce mobile source air pollutants. However, as concluded in the General Plan EIR, the General Plan would not be consistent with SJVAPCD's Clean Air Plans. Thus, the proposed project would also not be consistent with SJVAPCD's Clean Air Plans. No other feasible mitigation measures are available.	Significant and Unavoidable Impact

Table 2-1
Summary of Impacts and Mitigation

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.2-1 - Implementation of the proposed Project could impact regional air quality levels on a cumulatively considerable basis.	Potentially Significant Impact	Implement Mitigation Measures 4.2-1a and 4.2-1b. No other feasible mitigation measures are available.	Significant and Unavoidable Impact
Greenhouse Gas Emissions			
4.3-1 - Greenhouse gas emissions generated by the proposed Project would have a significant impact on the environment.	Potentially Significant Impact	No feasible mitigation beyond measures included in the General Plan, Sustainability Action Plan, and Transportation Master Plan are available.	Significant and Unavoidable Impact
4.3-2 - Implementation of the proposed Project would not conflict with an applicable greenhouse gas reduction plan, policy, or regulation.	Less Than Significant Impact	No mitigation is required	Not applicable
4.3-3 - Greenhouse gas emissions resulting from development associated with implementation of the proposed Project would impact greenhouse gas levels on a cumulatively considerable basis.	Potentially Significant Impact	No feasible mitigation beyond measures included in the General Plan, Sustainability Action Plan, and Transportation Master Plan are available.	Significant and Unavoidable Impact

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3.0 PROJECT DESCRIPTION

3.1 PROJECT SUMMARY

As described in Section 1.0, the Citywide Roadway and Transportation Master Plan (TMP), is a comprehensive update of the 1994 TMP in fulfillment of Objective CIR-1.1, Action A1 of the Circulation Element of the City of Tracy General Plan (General Plan), which states, "Update the Roadway Master Plan upon adoption of the General Plan." Many improvements and expansions to the City's existing transportation system were identified during the preparation of the General Plan and its associated Environmental Impact Report (EIR), As noted in the Circulation Element of the General Plan EIR, General Plan implementation of Objective CIR-1.1, Action A1 ensures the City's TMP is updated to include a comprehensive inventory of roadway expansions and improvements necessary to accommodate the growth envisioned by the General Plan, as well as maintain circulation continuity throughout the roadway network.

The TMP is the principal policy document for guiding the provision of adequate and efficient access to the City of Tracy (City) transportation system for all user groups (motorists, pedestrians, bicyclists, and transit users). The proposed TMP provides a comprehensive review of the City's transportation system and identifies improvements and expansions to the existing system required to accommodate future growth anticipated by the City of Tracy General Plan (General Plan). The proposed TMP builds upon the goals and objectives contained in the Circulation Element of the General Plan and the City's Sustainability Action Plan (SAP) by proposing Smart Growth, Context-Sensitive design, and Complete Streets guidelines, strategies, principles, and design elements. The TMP strives to balance existing and future transportation infrastructure needs with safe access for all user groups.

The TMP projects growth to the year 2035, an additional five years past the growth projection year identified by the General Plan for Traffic and Circulation[1]. The TMP includes an additional five years beyond the General Plan horizon year to establish consistency with the most recent San Joaquin Council of Governments (SJCOG) land use development assumptions, employment forecasts, and associated travel demand. Due to the City's regionally important geographic location, a location that experiences a variety of daily transportation travel modes to, from, and through the City, utilizing the most recent SJCOG model facilitates a consistent identification of uniform improvements between the regional agencies that are responsible for freeways, Congestion Management Agency (CMA) roads, local roads, and transit services.

The proposed TMP consists of the following: a description of the existing transportation system and conditions (Chapter 2); a description of the future roadway conditions within the City based on projected growth (Chapter 3); recommended improvements to accommodate future growth; recommended actions to support the goals and objectives of the General Plan's Circulation Element; and, recommended transportation strategies, principles, and design elements intended to meet sustainability and greenhouse gas (GHG) emission reduction goals (Chapter 4); and, finally identification of the preliminary anticipated costs associated with the recommended infrastructure improvements (Chapter 5). (It should be noted that fees required for the recommended infrastructure improvements are identified in a separate document.) Both of these documents are on file with the City of Tracy and can be reviewed both online and/or by request to the City of Tracy Public Works Department, which is located at 520 Tracy Boulevard, Tracy, CA 95376.

[1] The General Plan only has a "horizon year" for Traffic and Circulation.

3.2 PROJECT LOCATION/SURROUNDING LAND USES

Tracy is located within San Joaquin County (County), east of the Coastal Range that separates the San Joaquin Valley from the San Francisco Bay Area. The City occupies a central location in the San Joaquin Valley, 60 miles east of San Francisco and 68 miles south of Sacramento. The nearest urban areas are the cities of Lathrop and Manteca. Figure 3-1 (Regional Location Map) illustrates the regional location of the City. Figure 3-2 (Tracy Future Service Areas) identifies the future service areas within the City.

Improvements and expansions proposed for the City's existing transportation system would occur at various locations throughout the City and its Sphere of Influence (SOI), generally within existing right-of-way owned by the City; however, a limited number of the identified improvements may require additional public right-of-way and/or private property and/or easements. The alignments of these additional rights-of-way, property, and/or easements at Valpico, Lammers, Schulte, and other local streets were included in the 1994 TMP.

The City's SOI includes the current City limits, plus the area immediately outside of the City that the City expects to annex and urbanize in the future. Land uses surrounding the proposed improvements and expansions vary depending on the location and could consist of commercial, residential, industrial, agricultural, recreational, and open space uses, water courses, or freeways.

3.3 PROJECT SETTING

3.3.1 OVERVIEW

The majority of the City is located on flat land in the center of a triangle that is formed by of several Interstate highways (I-205, I-580 and I-5). This orientation provides multiple access points for regional travel and goods distribution to the west towards the San Francisco Bay Area, to the south towards southern California, and to the north to the Sacramento metropolitan area. As a result, a substantial amount of goods movement occurs within the City with relatively high volumes of truck traffic on Tracy Boulevard and on I-580 adjacent to the City. Personal automobile use is the primary form of transportation utilized by Tracy residents.

3.3.2 TRANSPORTATION INFRASTRUCTURE

Transportation infrastructure within the City includes roadways, bicycle facilities (i.e., bike lanes/parking), sidewalks, parking, park and ride lots, rail lines (freight and commuter), bridges and culverts, traffic control, and intelligent transportation systems (ITS).

ROADWAYS

Roadways within the City's transportation network are part of a hierarchal classification system that is based on function and jurisdictional oversight and range from regional facilities serving high volumes of vehicles (i.e., I-205, I-580 and I-5) to local roadways providing access to low volumes of vehicles, such as neighborhoods streets, with a variety of roadways in between serving varying levels of use.

Source: City of Tracy General Plan (2005)

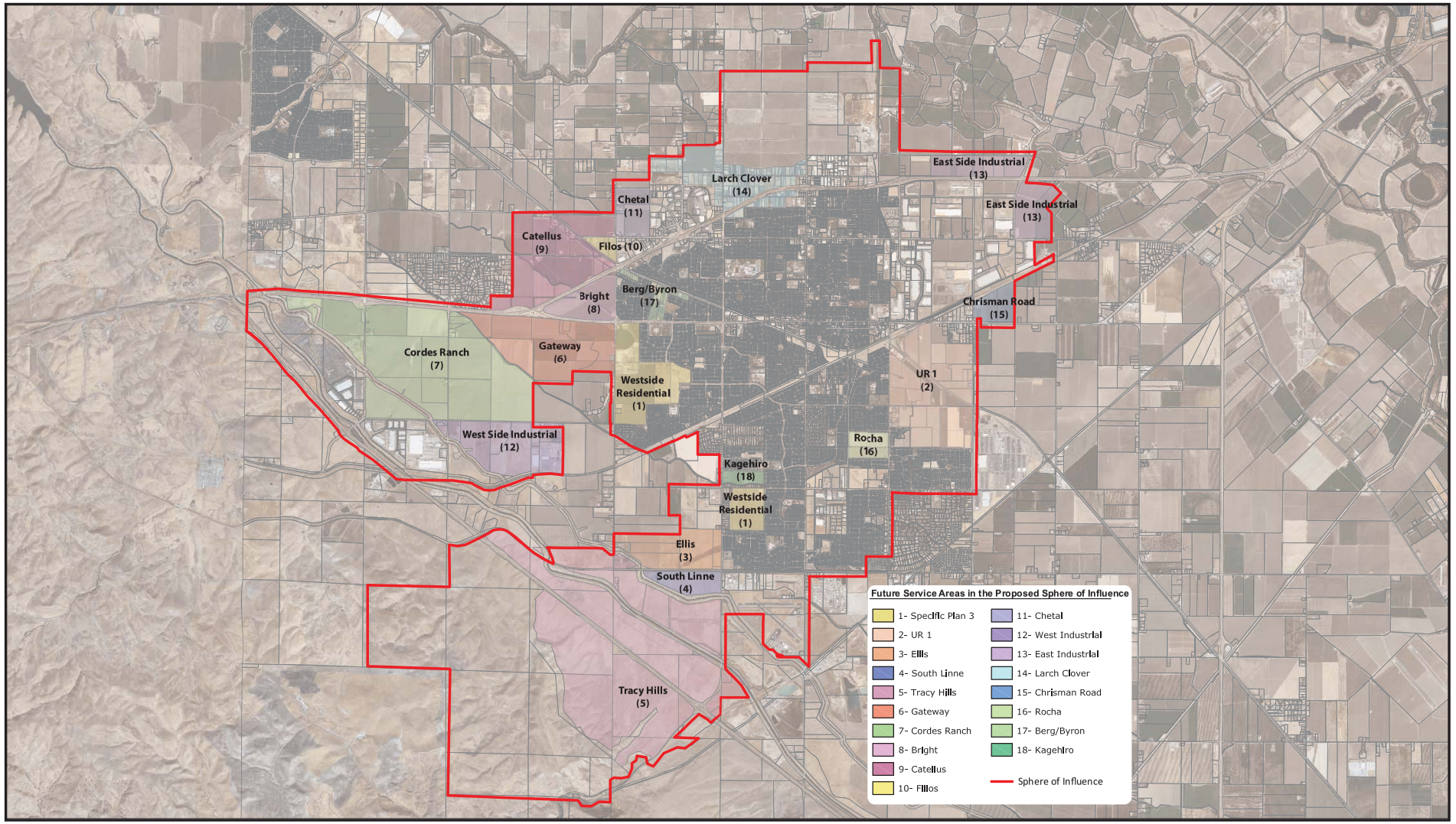
RBF CONSULTING
A Baker Company

Not to Scale

Tracy Transportation Master Plan EIR

Regional Location Map

Figure 3-1



Source: City of Tracy Infrastructure Master Plan (2012)

RBF CONSULTING A Baker Company

Not to Scale

Tracy Transportation Master Plan EIR

Future Service Areas

Figure 3-2

Truck Routes

Currently there are three types of truck routes within Tracy: "Through Truck Routes," "Local Truck Routes," and Surface Transportation Assistance Act (STAA) truck routes. These routes are indicated throughout the City with the appropriate signage specific to each route. As the names indicate, Through Truck Routes allow trucks to travel through the City without loading or unloading freight and Local Truck Routes are restricted to trucks only delivering freight within the confines of the City. The STAA allows large trucks to operate on the Interstate and certain primary routes called collectively the National Network (NN). Through the City of Tracy, I-205 is a STAA route. I-580 to the south of the City limits is also a designated STAA route. Both routes are designated as NN STAA routes. The existing truck route network within the City connects truck traffic on I-205 to the industrial areas in the south and northeast via MacArthur Drive, and also the commercial areas in the north and central via Larch Road, Eleventh Street, and Grant Line Roads. Truck access to I-580 is provided via a through truck route on Corral Hollow Road via the I-580 interchange to the south.

Truck Stop

There is one designated truck stop within the City located on North Tracy Boulevard ¼ mile to the north of the I-205 / Tracy Boulevard interchange. Services offered at this truck stop include refueling, truck parking, truck permit services, load monitors, driver lounges, showers, and laundry.

BICYCLE FACILITIES

The City has an extensive bicycle network that includes all three bikeway categories as defined by the California Department of Transportation (Caltrans): Class I Bikeways (Bike Paths) – physically separated from roadways; Class II Bikeways (Bike Lanes) – share a portion of the roadway with motorized vehicles and are separated by stripping and are signed and marked for the exclusive use of bicycles; and, Class III Bikeways (Bike Routes) – share the roadway with motorized vehicles. Although the bikeway system is broad, there are critical gaps that limit its effectiveness to serve cyclists, including:

- Three segments along Grant Line Road (between MacArthur Drive and Tracy Boulevard; Tracy Blvd and Lincoln Boulevard; and under the I-205 overpass);
- Tracy Boulevard between West 11th Street and I-205;
- Two segments on MacArthur Drive between Valpico Road and just north of Schulte Road;
- One segment south of Valpico Road; and,
- One segment along Valpico Road between MacArthur Drive and Tracy Boulevard.

The City has several requirements for bicycle parking as outlined in its Municipal Code.

PEDESTRIAN CIRCULATION

The City of Tracy is pedestrian friendly with widespread sidewalk coverage and pedestrian crossing with Americans with Disabilities Act (ADA) ramps along major roadways and in residential neighborhoods. However, similar to bikeway facilities, the City has critical gaps in sidewalk coverage. These gaps include multiple segments along Corral Hollow Road south of Schulte Road, along Byron west of Corral Hollow, along Tracy Boulevard south of Valpico Road, and along Grant Line Road west of Corral Hollow and east of East Street. In addition to the critical gaps, ADA routes have not been established along existing sidewalks to specific destinations in the City.

PARKING

Parking services provided directly by the City include on-street parking and several off-street parking lots. In addition, the City regulates the supply of parking in new developments through the Zoning Code and City Standard Plans.

PARK AND RIDE LOTS

A Park-and-Ride lot is generally used to park vehicles, while the vehicle owner uses a public transport or carpooling to commute. Vehicles are parked in the facility during the day and retrieved when the commuter returns. There are five Park and Ride lots within the City: (1) Naglee Road (Naglee Road /Pavillion Parkway intersection); (2) Prime Outlets (MacArthur Drive /E. Pescadero Avenue); (3) Tracy Transit Station (southeast corner 6th Street /Central Avenue intersection); (4) 6th Street and Central Avenue (northwest corner of the intersection); (5) Altamont Commuter Express (ACE) Train Station (Tracy Boulevard /Linne Road intersection).

RAIL LINES

Three major rail lines run east to west through the City. Each of these lines consists of several spurs that are used to access the industrial areas throughout the City. These lines are currently owned and operated by the Union Pacific Railroad Corporation (UPRR), which also operates freight rail service through the region. The main line runs along the southern border of Tracy along Linne Road. This line is used for both freight and commuter rail service operated by Altamont Commuter Express (ACE). Approximately ten freight trains and six commuter rail trains operate daily on this track. The remaining lines run through the center of Tracy and are primarily used for freight delivery or train car storage.

Railroad Crossings

There are 19 at-grade railroad crossings and one grade separated railroad crossing within the City. These crossing are distributed throughout the City with two crossings on each of these major streets: Corral Hollow Road, Tracy Boulevard, and MacArthur Drive.

BRIDGES AND CULVERTS

The City's bridge system consists of a network of 14 bridges and culverts that provide transportation access over several creeks, canals, and a system of aqueducts that run throughout the City.

TRAFFIC CONTROL SYSTEMS

Traffic control systems in the City are used to direct drivers, pedestrians, and bicyclists in a safe and efficient manner and include, but are not limited to traffic signals, stop signs, pavement markings, and roadway signs.

INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) are transportation networks that include information and communication technologies that are designed to improve the safety and operation of transportation infrastructure. There are numerous types of ITS systems that range from simple variable message signs to more advanced real time vehicle parking guidance systems. There are 65 signalized intersections within the City that are operating via traffic signal controllers located inside special cabinets at each local

intersection. The traffic signal controllers are managed by Quicknet traffic management control and software system. The City's existing traffic signal communication infrastructure (citywide) primarily consists of twisted pair copper wire signal interconnect cable and conduit that interconnect the existing traffic signals. At designated roadway segments communications are provided over microwave and/or radio communications.

3.3.3 INTERSECTION OPERATIONS

LEVEL OF SERVICE STANDARDS

The operations of roadway intersections are described with the term level of service. Level of Service (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, as the best operating conditions, to LOS F, or the worst operating conditions. LOS E represents "at-capacity" operations. When traffic volumes exceed the intersection capacity, stop-and-go conditions result, and operations are designated as LOS F. The City of Tracy has established LOS D, where feasible, as the minimum acceptable LOS for roadway and overall intersection operations. Intersections operating at LOS D have some congestion and operate with longer delays (greater than 25 – 35 seconds for unsignalized intersections and greater than 35 – 55 seconds for signalized intersections). However, there are certain locations where these standards do not apply. The following lists the exceptions to the LOS D standard:

- Within ¼ mile of any freeway, LOS E shall be allowed on roadways and at intersections to discourage inter-regional traffic from using City streets.
- In the Downtown and Bowtie area of Tracy LOS E, shall be allowed.
- At intersections where construction of improvements is not feasible, the LOS may fall below the City's LOS D standard.
- During construction of intersection improvements or funded but not yet constructed, the LOS may temporarily fall below the City's LOS D standard.

The Caltrans identifies LOS C as acceptable in all cases and LOS D as acceptable on a case-by-case basis. San Joaquin County uses LOS D as the minimum acceptable LOS for roadway and intersection operations.

EXISTING LEVELS OF SERVICE

All intersections operate at an acceptable LOS during the existing weekday AM and PM peak hours except for the following intersections.

- Corral Hollow Road/Eleventh Street
- MacArthur Drive/Shulte Road
- MacArthur Drive/Valpico Road
- Byron Road/Grant Line Road

3.3.4 REGULATORY OVERSIGHT

Multiple agencies govern the transportation infrastructure in and around Tracy:

- Interstate Freeways – Caltrans
- Regional Transportation Planning – San Joaquin County, San Joaquin Council of Governments, and City of Tracy
- Transit – San Joaquin Regional Rail Commission, San Joaquin Regional Transit District, and City of Tracy
- Local Streets – City of Tracy

3.4 PROJECT CHARACTERISTICS

As stated in Section 3.1, the proposed Project is a comprehensive update of the 1994 TMP in fulfillment of Objective CIR-1.1, Action A1 of the Circulation Element of the City of Tracy General Plan (General Plan). The proposed TMP builds upon the goals and objectives contained in the Circulation Element of the General Plan and the City's SAP. The proposed TMP provides a comprehensive review of the City's transportation system and identifies improvements and expansions to the existing system required to accommodate future growth anticipated by the General Plan. The TMP includes an additional five years of growth beyond the General Plan horizon year to establish consistency with the most recent SJCOG land use development assumptions, employment forecasts, and travel demand model. Due to the City's regionally important geographic location, a location that experiences a variety of daily transportation travel modes to, from, and through the City, utilizing the most recent SJCOG model facilitates a consistent identification of uniform improvements between the regional agencies that are responsible for freeways, Congestion Management Agency (CMA) roads, local roads, and transit services.

3.4.1 TRAFFIC FORECASTING

Although the General Plan and EIR forecast traffic conditions to the year 2030, the TMP forecasts future traffic conditions to the year 2035 (referred to as the "Horizon Year" in the TMP), which is consistent with the SJCOG travel demand model and provides for the maximum possible infrastructure planning, as noted above. To determine how traffic from the year 2035 affects the future roadway system, the following steps, which are described in greater detail below, were necessary: (1) develop land use assumptions for the year 2035 (land use assumptions for build-out were developed too); (2) determine trip generation based on future land use assumptions that incorporate sustainability strategies; and, (3) distribute trips throughout the roadway network.

LAND USE ASSUMPTIONS

The year 2035 traffic forecasts were developed by adjusting the General Plan 2030 development assumptions to represent reasonable expectations for development by the year 2035 (Horizon Year) accounting for residential and non-residential growth[2]. City of Tracy staff developed the land use

[2] The City adopted a residential Growth Management Ordinance (GMO) in 1987. The goal of the GMO is to achieve a steady and orderly growth rate that allows for the adequate provisions of services and community facilities, and includes a balance of housing opportunities. According to the GMO, builders must obtain a Residential Growth Allotment (RGA) in order to secure a residential building permit. Residential growth under the General Plan will be limited by the GMO. In 2012, the GMO will allow for at least 219 building permits, possibly more, based on the permit activity between 2009 and 2012. Between 2013 and 2025, 600 building permits per year (on average) will

assumptions by allocating growth to SOI areas (refer to Figure 3-2) in the City identified by the General Plan based on a combination of considerations, including:

- How advanced each area is in the entitlement process;
- Existing or expected conditions of approval; and,
- Anticipated environmental or jurisdictional constraints.

City staff also provided build-out development assumptions based on consultations with each of the owners of the major development areas. However, it should be noted that the build-out scenario reflects a time horizon that is far into the future (beyond 2035) that the assumptions regarding land use and development are too speculative to rely on for accuracy and thus, the TMP does not make any recommendations for the City's transportation roadway system under this scenario, (e.g., beyond year 2035).

Compared to the 2030 General Plan, the amount of projected housing and employment opportunities increase under the land use assumptions developed for the year 2035 and build-out. The amount of growth assumed for each scenario is depicted in Table 3-1, Transportation Master Plan Land Use Assumptions within Tracy SOI. As indicated in Table 3-1, during the year 2035 scenario, housing increases by approximately 1,600 units compared to the General Plan 2030 land use assumptions and the number of jobs increase by approximately 15,600. While the build-out scenario includes modest housing growth over year 2035 conditions with an approximate 3,000 unit increase, the employment growth is much greater with an approximately 120,000 additional jobs.

Table 3-1
Transportation Master Plan Land Use Assumptions within Tracy SOI

Scenario	Single Family[1]	Multi-Family[1]	Single and Multi-Family[1]	Retail[2]	Service[2]	Other[2]	Total Employment
Existing (2006)	20,195	6,594	26,789	3,610	9,644	10,850	24,104
2030 General Plan SOI (2030)	29,068	9,858	38,926	11,500	15,276	21,777	48,553
Horizon Year (2035)	27,229	13,297	40,526	15,091	18,751	30,340	64,182
Build-out	29,214	14,343	43,557	35,189	59,915	88,928	184,033

1. Single and Multi-Family land uses represented by number of dwelling units.
2. Non-residential land uses represented by number of employees.
Source: Draft Citywide Roadway Transportation Master Plan, February 2012

TRIP GENERATION

The TMP bases the number of vehicle trips generated by future development assumed for the Horizon and build-out scenarios on local trip generation surveys, which are locally validated vehicle trip rates for Tracy. Sustainability strategies that were developed for the City's SAP and the TMP were applied to the Horizon Year land uses where applicable. The application of these strategies effectively reduced the trip generation rates due to increased density/diversity, more connectivity, and/or improved access to regional

be allowed under the GMO. Thus, between the years 2008 and 2025, the number of residential units allowed under the City's GMO is 8,419 units.

destinations. Other sustainability strategies identified by the SAP also reduced trip generation and trip lengths, and improve fuel efficiency. Table 3-2, Peak Hour Vehicle Trip Generation, identifies the morning (AM) and evening (PM) peak hour trip generation for the various land uses within the City. Table 3-3, Trip Reductions Due to SAP Measures – Year 2035, presents the trip reductions due to the SAP transportation measures for the Future Service Areas and for Tracy as a whole. The Future Service Areas achieve a greater reduction in trips than Tracy as a whole because many of the SAP transportation measures address only new developments – most of which occur in the SOI.

Table 3-2
Peak Hour Vehicle Trip Generation

Land Use	Units	AM Peak Hour Tracy Model[1]	AM ITE Peak Hour[2]	PM Peak Hour Tracy Model[1]	PM ITE Peak Hour[2]
Single-Family	Dwelling Units	0.55	0.75	1.05	1.01
Multi-Family (Apartment)	Dwelling Units	0.31	0.51	0.59	0.62
Retail (Shopping Center)	Employees	1.90	1.00	3.46	3.73
Office (General Office Building)	Employees	0.22	0.48	0.42	0.46
Other (Warehousing)	Employees	0.17	0.51	0.33	0.59
1. Trip generation rate based on local trip generation surveys. 2. Trip generation rate based on the *Institute of Transportation Engineers*. Source: Draft Citywide Roadway Transportation Master Plan, February 2012					

Table 3-3
Trip Reductions Due to SAP Measures –Year 2035

Location	Percentage of Trip Reduction
Future Service Areas	5.8%
Tracy Citywide (SOI)	4.4%
Source: Draft Citywide Roadway Transportation Master Plan, February 2012	

Table 3-4 shows the morning (AM) and evening (PM) peak hour trip generation for each Future Service Area, at year 2035 and build-out. Year 2035 trip generation for the 18 Future Service Areas represents growth of about 125 percent compared to existing citywide trip generation. Build-out trip generation for the Future Service Areas represents growth of 385 percent compared to existing citywide trip generation. In the year 2035, the Future Service Areas with the highest trip generation growth are Tracy Hills, Cordes Ranch, and Gateway, all with between approximately 7,000 and 10,000 PM peak hour trips. Westside Residential, Bright Triangle, Catellus, and Filios all have between approximately 3,000 and 5,000 PM peak hour trips. At build-out, the Larch-Clover Future Service Area has the highest trip growth, at about 45,000 PM peak hour trips. Tracy Hills and Cordes Ranch have between approximately 22,000 and 26,000 PM peak hour trips, Gateway has about 17,500 PM peak hour trips, and Bright Triangle and Catellus have approximately 9,000 – 10,000 trips.

Table 3-4
Estimated Peak Hour Vehicle Trip Generation for Future Service Areas

Future Service Area	Year 2035		Build-Out	
	AM Trips	PM Trips	AM Trips	PM Trips
Area 1 (Westside Residential)	1,800	3,400	1,800	3,400
Area 2 (Urban Reserve 1)	900	1,700	1,900	3,650
Area 3 (Ellis)	1,150	2,150	1,150	2,150
Area 4 (South Linne)	0	0	450	850
Area 5 (Tracy Hills)	5,250	9,850	14,150	26,150
Area 6 (Gateway)	3,850	7,100	9,300	17,450
Area 7 (Cordes Ranch)	4,800	8,950	11,650	22,100
Area 8 (Bright Triangle)	2,450	4,500	5,600	10,250
Area 9 (Catellus)	1,650	3,100	4,750	8,950
Area 10 (Filios)	1,900	3,450	1,900	3,450
Area 11 (I-205 Expansion)	1,550	2,850	4,500	8,150
Area 12 (West Side Industrial)	0	0	1,800	3,500
Area 13 (East Side Industrial)	0	0	1,350	2,650
Area 14 (Larch Clover)	1,000	1,800	24,750	45,050
Area 15 (Chrisman)	900	1,650	1,950	3,650
Area 16 (Rocha)	50	100	300	550
Area 17 (Berg/Byron)	100	150	200	350
Area 18 (Kagehiro)	150	250	150	250
Future Service Area Totals	27,500	51,000	87,650	162,550
Existing (2006) Citywide Total for Comparison	24,000	45,200	24,000	45,200
Source: Draft Citywide Roadway Transportation Master Plan, February 2012				

TRIP DISTRIBUTION

Table 3-5, Citywide Trip Distribution, shows the City's distribution of vehicular trips during both the existing year (2006) and the year 2035. The addition of jobs in the City increases the internal capture of trips, from 62 percent in 2006 to 78 percent in the year 2035. There is still a substantial trip interaction with San Joaquin County in year 2035 because the anticipated increase in jobs in the City would attract residents from the County. However, trips between Tracy and the San Francisco Bay Area drop from 23 percent in 2006 to four percent in the year 2035.

The Tracy Travel Demand Model was developed by Fehr & Peers, Transportation Consutlants and has been updated and re-validated several times. In late 2009, the model was validated to 2006 conditions to support the development of baseline transportation information (vehicle trips and vehicle-miles traveled) for the City's SAP. The year 2006 was chosen for the SAP baseline year because it is the most recent year for which the City has comprehensive input data regarding GHG baseline calculations.

Table 3-5
Citywide Trip Distribution

	Tracy	North Valley	South Valley	San Francisco Bay Area	San Joaquin County
Existing (2006)	62%	8%	3%	13%	14%
Future (Year 2035)	64%	4%	4%	7%	21%%
Source: Draft Citywide Roadway Transportation Master Plan, February 2012					

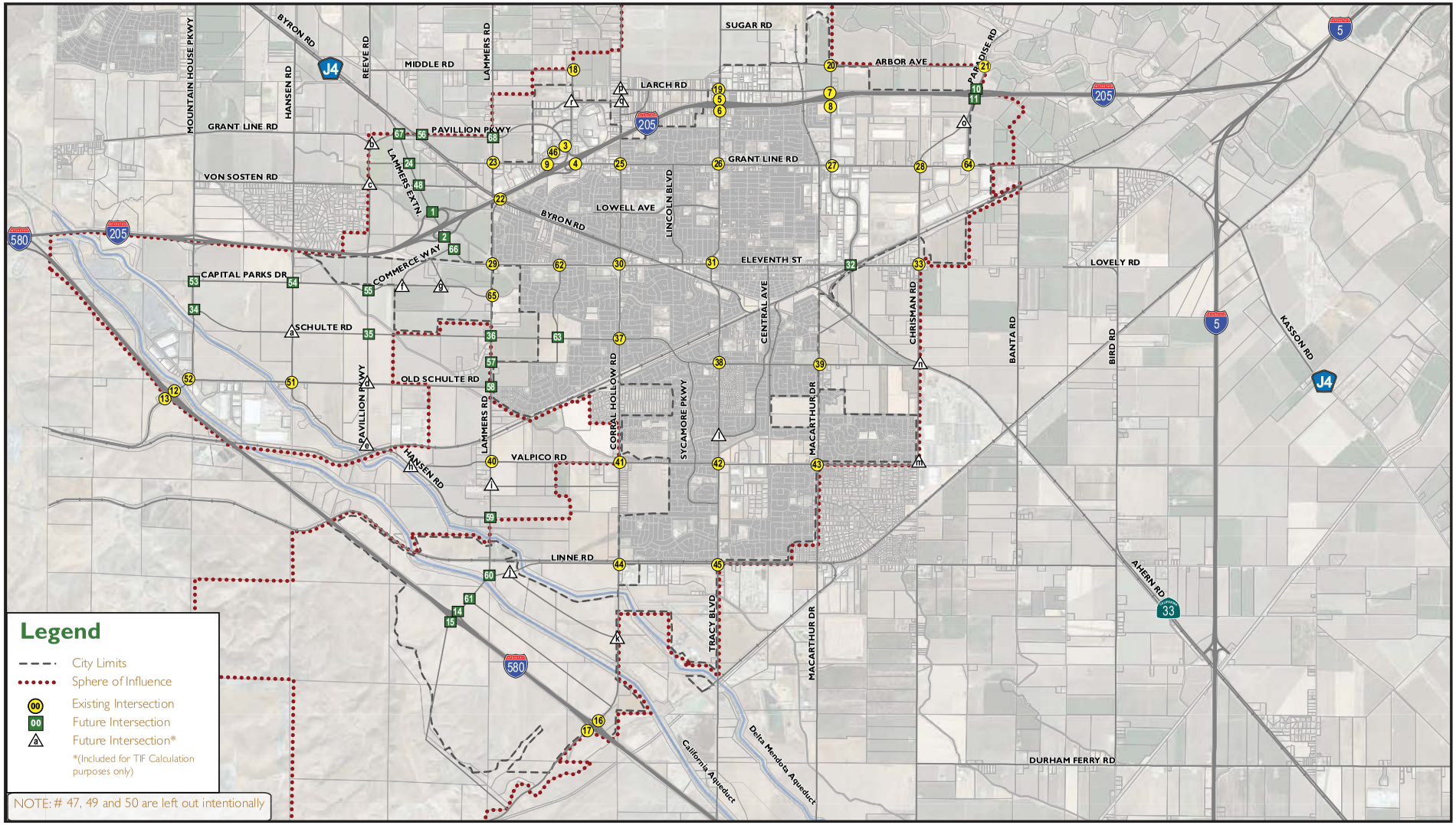
YEAR 2035 FORECASTS

A computer model was run using the trip generation and trip distribution identified above for the year 2035 to determine how traffic from year 2035 traffic forecasts would affect the roadway network of the year 2035. The model was developed in consultation with City staff incorporating SAP strategies. The forecast volumes from the model were post-processed to obtain traffic intersection volumes for year 2035 conditions. Post-processing of the model data to provide peak hour intersection volumes was conducted in accordance with industry standards, which included review of existing traffic volumes for consistency on major corridors within the City. Figure 3-3, TMP Study Intersection Locations, identifies the location of the intersections studied in the TMP. Figures 3-4a and 3-4b, Year 2035 AM(PM) Peak Hour Traffic Volumes, show the forecasted year 2035 AM and PM peak hour intersection traffic volumes for the major study intersections in the City.

Level of service calculations were conducted using the Synchro software program to determine the weekday year 2035 AM and PM peak-hour operations at the study intersections. Figure 3-5, Year 2035 AM(PM) Level of Service, presents the year 2035 AM and PM peak-hour intersection LOS, and Table 3-6, Year 2035 Intersection Level of Service, summarizes the delay and LOS results. As shown in Table 3-6, all of the study intersections are forecast to operate at LOS D or better during the year 2035 weekday AM and PM peak hours except for the following:

- Corral Hollow Road/Eleventh Street
- Tracy Boulevard/Eleventh Street
- Corral Hollow Road/Schulte Road
- Tracy Boulevard/Schulte Road
- Lammers Road/Commerce Way

As stated below, under Section 3.4.3, the TMP incorporates the goals and objectives of the General Plan's Circulation Element and recommends specific actions to meet those goals and objectives. One of the recommended actions in the TMP is to identify locations or areas where the LOS can fall below the standard due to infeasible mitigation measures or where improvements would have an adverse impact to pedestrians or bicycles or other users. The TMP identifies the five intersections listed above as those which can fall below the LOS D standard. This is consistent with General Plan Policy P.2, found under Objective CIR-1.3. Policy P.2 (under Objective CIR-1.3) states that the City may allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience. More specifically, the TMP states that the deficient LOS rating is the LOS standard. Thus, these five intersections do not require further analysis as



Source: City of Tracy Infrastructure Master Plan (2012)

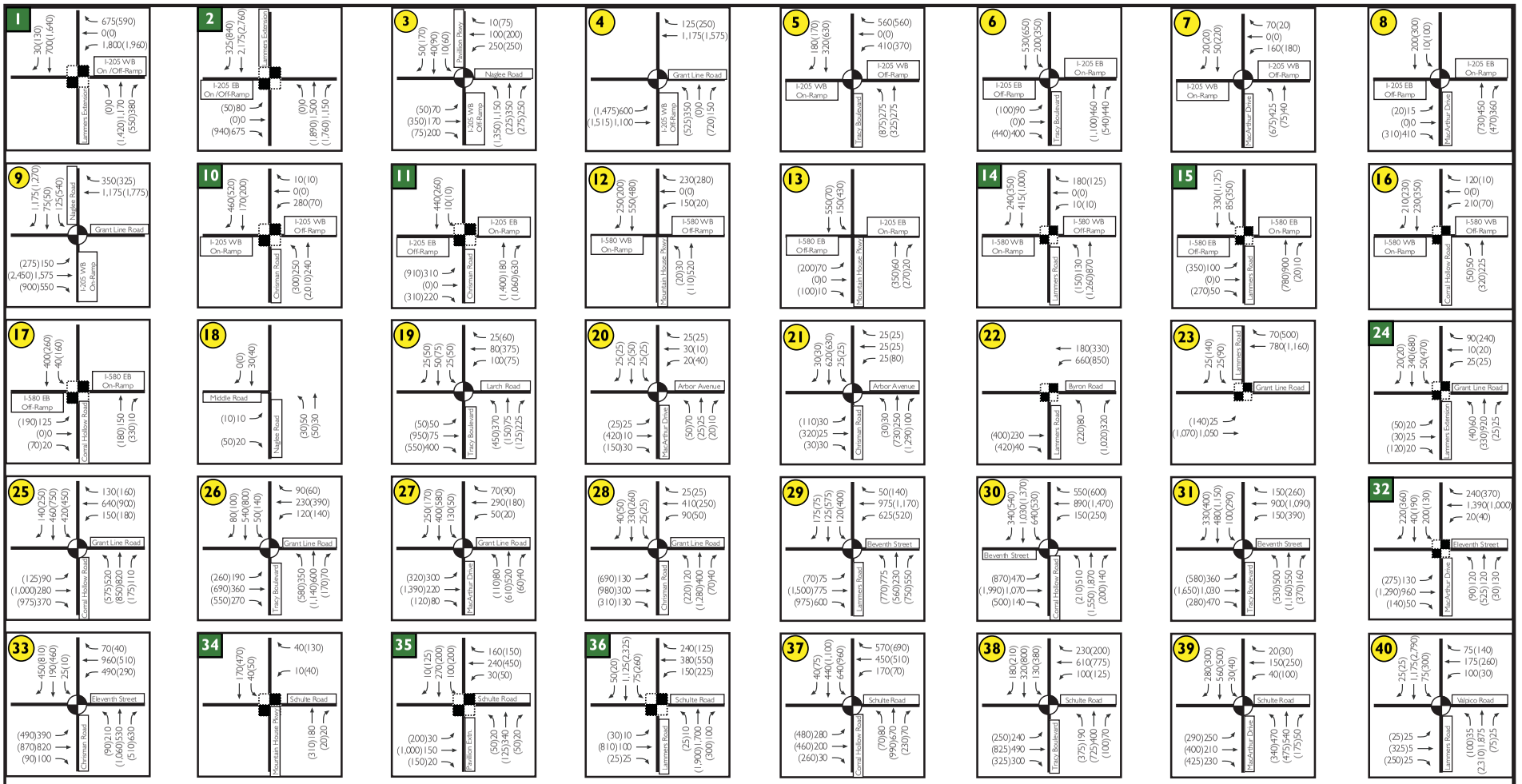
RBF CONSULTING A Baker Company

Not to Scale

Tracy Transportation Master Plan EIR

TMP Study Intersection Locations

Figure 3-3



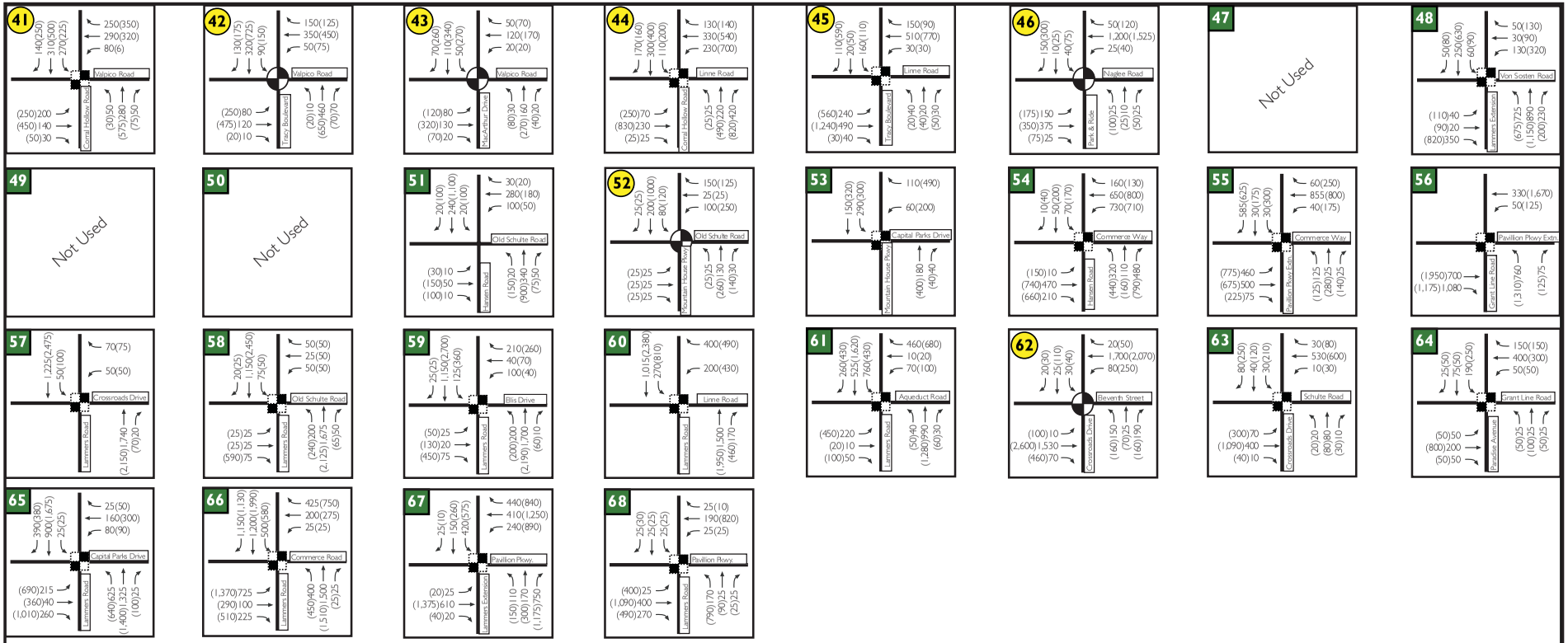
Source: City of Tracy Infrastructure Master Plan (2012)

RBF CONSULTING A Baker Company

Tracy Transportation Master Plan EIR

Year 2035 AM (PM) Peak Hour Traffic Volumes

Figure 3-4a



Legend:

- 00 Future Intersection
- 00 Existing Intersection
- Existing Signal Control
- Future Signal Control
- # (#) AM (PM) Volume

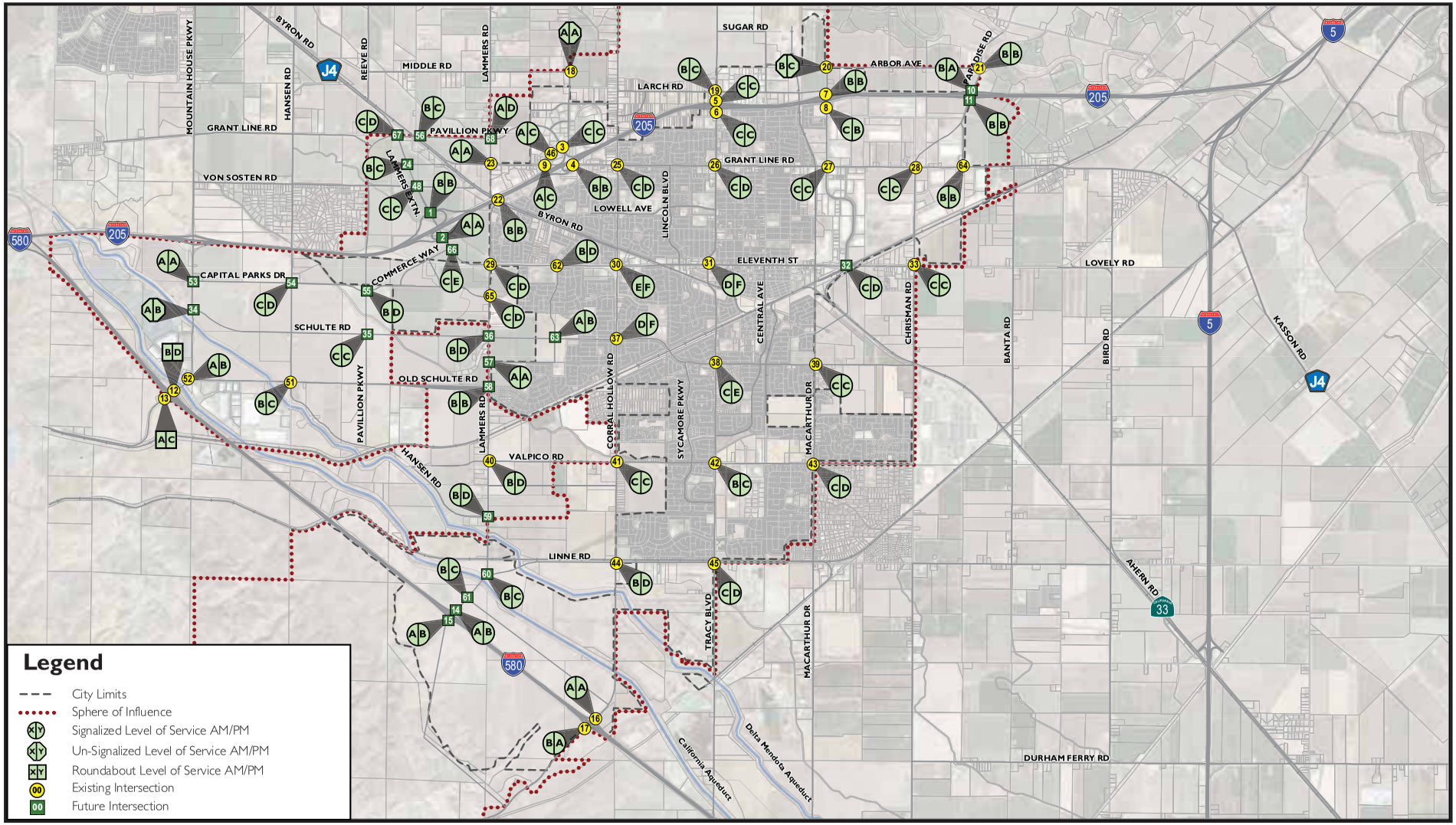
Source: City of Tracy Infrastructure Master Plan (2012)

RBF CONSULTING A Baker Company

Tracy Transportation Master Plan EIR

Year 2035 AM (PM) Peak Hour Traffic Volumes

Figure 3-4b



Source: City of Tracy Infrastructure Master Plan (2011)

RBF CONSULTING A Baker Company

Not to Scale

Tracy Transportation Master Plan EIR

Year 2035 AM (PM) Level of Service

Figure 3-5

part of this EIR, given General Plan Policy P.2 under Objective CIR-1.3, which allows individual intersections to fall below the City's LOS standards due to certain overriding circumstances.

In addition, the TMP studied a connection (extension) from Grant Line Road along a Lammers Road alignment to Byron Road via a new railroad over-crossing immediately north of the Byron Road under crossing of the I-205. This connnection is dependant on the approval of a relocated railway crossing. The construction of the link would alleviate traffic conditions at all the intersections to the north and the west of the link, since trips will be diverted from those streets to the Byron connector. The intersections of Byron Road/Lammers Road, Byron Road /Grant Line Road and Lammers Road /Eleventh Street are expected to increase in delay. This improvement is different than what was identified in the General Plan. The General Plan identified a signal controlled interchange for the intersection of Byron and Lammers Road. However, no additional impacts were identified as a result of the proposed extension; refer to Table 3-6, below for the LOS results.

Table 3-6
Year 2035 Intersection Level of Service

Number	Intersection	Control Type	Delay		LOS	
1	I-205 WB Ramps/Lammers Extension	Signal	15	18	B	B
2	I-205 EB Ramps/Lammers Extension	Signal	3	5	A	A
3	I-205 WB Ramps/Naglee Road	Signal	23	28	C	C
4	I-205 EB Ramps/Grant Line Road	Signal	10	14	B	B
5	I-205 WB Ramps/Tracy Boulevard	Signal	25	23	C	C
6	I-205 EB Ramps/Tracy Boulevard	Signal	28	23	C	C
7	I-205 WB Ramps/MacArthur Drive	Signal	15	15	B	B
8	I-205 EB Ramps/MacArthur Drive	Signal	21	19	C	B
9	Naglee Road (I-205 WB Ramps) /Grant Line Road	Signal	7	20	A	B
10	I-205 WB Ramps/Chrisman	Signal	16	8	B	A
11	I-205 EB Ramps/Chrisman	Signal	11	16	B	B
12	I-580 WB Ramps/Mountain House Parkway	RAB	0.58	0.77	*	*
13	I-580 EB Ramps/Patterson Pass Road	RAB	0.55	0.67	*	*
14	I-580 WB Ramps/Lammers Road	Signal	7	14	A	B
15	I-580 EB Ramps/Lammers Road	Signal	9	18	A	B
16	I-580 WB Ramps/Corral Hollow Road	Signal	9	7	A	A
17	I-580 EB Ramps/Corral Hollow Road	Signal	8	14	A	B
18	Naglee Road/Middle Road	SSS	9	9	A	A
19	Larch Road/Tracy Boulevard	Signal	19	23	B	C
20	MacArthur Drive/Arbor Avenue	SSS	11	19	B	C
21	Paradise Road/Arbor Avenue	Signal	12	16	B	B
22	Lammers Road/Byron Road	Signal	15	17	B	B
23	Lammers Road/Grant Line Road	Signal	7	10	A	B
24	Byron Extension/Lammers Extension	Signal	12	20	B	B
25	Corral Hollow Road/Grant Line Road	Signal	33	40	C	D

Table 3-6
Year 2035 Intersection Level of Service

Number	Intersection	Control Type	Delay		LOS	
26	Tracy Boulevard/Grant Line Road	Signal	27	47	C	D
27	MacArthur Drive/Grant Line Road	Signal	27	35	C	C
28	Chrisman Avenue/Grant Line Road	Signal	21	32	C	C
29	Lammers Road/Eleventh Street	Signal	33	45	C	D
30	Corral Hollow Road/Eleventh Street	Signal	59	82	E	F
31	Tracy Boulevard/Eleventh Street	Signal	39	108	D	F
32	MacArthur Drive/Eleventh Street (North)	Signal	28	31	C	C
33	Chrisman Avenue/Eleventh Street (South)	Signal	33	30	C	C
34	Mountain House Parkway/Schulte Road	SSS	10	13	A	B
35	Pavillion Extension/Schulte Road	Signal	21	28	C	C
36	Lammers Road/Schulte Road	Signal	19	54	B	D
37	Corral Hollow Road/Schulte Road	Signal	38	88	D	F
38	Tracy Boulevard/Schulte Road	Signal	29	63	C	E
39	MacArthur Drive/Schulte Road	Signal	34	34	C	C
40	Lammers Road/Valpico Road	Signal	19	36	B	D
41	Corral Hollow Road//Valpico Road	Signal	25	32	C	C
42	Tracy Boulevard/Valpico Road	Signal	19	27	B	C
43	MacArthur Drive/Valpico Road	Signal	33	51	B	D
44	Corral Hollow Road/Linne Road	Signal	18	50	B	D
45	Tracy Boulevard/Linne Road	Signal	27	38	C	D
46	Naglee Road/Park and Ride	Signal	5	21	A	C
48	Lammers Extension/Van Sosten	Signal	23	31	C	C
51	Hansen Road/Old Schulte Road	Signal	14	22	B	C
52	Mountain House Parkway/Schulte Road	Signal	14	14	B	B
53	Mountain House Parkway/Capital Parks Drive	Signal	5	10	A	A
54	Hansen Road/Capital Parks Drive	Signal	24	45	C	D
55	Pavillion Extension/Capital Parks Drive	Signal	17	42	B	D
56	Pavillion Extension/Grant Line Extension	Signal	12	29	B	C
57	Lammers Road/Crossroads Drive	Signal	5	6	A	A
58	Lammers Road/Schulte Road	Signal	13	15	B	B
59	Lammers Road/Ellis Drive	Signal	20	44	B	D
60	Lammers Road/Linne Road	Signal	13	24	B	C
61	Lammers Road/South Aqueduct Road	Signal	19	34	B	C
62	Crossroads Drive/Eleventh Street	Signal	16	44	B	D
63	Crossroads Drive/Schulte Road	Signal	9	16	A	B

Table 3-6
Year 2035 Intersection Level of Service

Number	Intersection	Control Type	Delay		LOS	
64	Paradise Road/Grant Line Road	Signal	17	20	B	B
65	Lammers Road/Capital Parks Drive	Signal	23	55	C	D
66	Lammers Road/Commerce Way	Signal	28	60	C	E
67	Pavillion Parkway/Lammers Extension	Signal	24	45	C	D
68	Pavillion Parkway/Lammers Road	Signal	22	42	C	D
Conditions with Planned Lammers-Byron Connector						
	Lammers Road / Byron Road (S) (City)	Signal	23	48	C	D
	Lammers Road / Grant Line Road (County)	Signal	22	33	C	C
	Lammers Road / Byron Road (N) (City)	Signal	21	51	C	D
Note: (*) Intersection analyzed as roundabout; operates acceptably since V/C ratio less than 0.86.						
Source: Draft Citywide Roadway Transportation Master Plan, February 2012						

3.4.2 RECOMMENDED IMPROVEMENTS TO YEAR 2035 ROADWAY NETWORK

The roadway network forms the backbone of the City's transportation system. The land uses in Tracy in the year 2035 necessitate extensive improvements to the existing transportation system. These improvements extend beyond those identified in the City's General Plan. Tracy's transportation network is envisioned as a multi-modal network of roads, bicycle lanes and paths, transit services, and pedestrian facilities that will support the planned land uses in the City by providing mobility to residents and visitors alike. By implementing an improved transportation network the City would be able to proactively enhance the system, accommodate future growth projected to the year 2035, and maintain the quality of life in Tracy. Improvements required for the 2035 roadway network are identified in the TMP, Appendix B to this EIR.

3.4.3 RECOMMENDED ACTIONS TO SUPPORT GENERAL PLAN CIRCULATION ELEMENT GOALS

The TMP incorporates and implements the goals and objectives of the General Plan's Circulation Element and recommends specific actions to meet those goals and objectives. Table 3-7, TMP Goals, Objectives, and Recommended Actions, lists the General Plan Circulation Element Goals and Objectives and the actions recommended by the TMP to implement those goals and objectives.

Table 3-7
TMP Goals, Objectives, and Recommended Actions

Goal 1: A roadway system that provides access and mobility for all of Tracy's residents and businesses while maintaining the quality of life in the community.

Objective Cir-1.1: Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.

Recommended Action: Implement a complete streets policy for new and retrofitted roads that ensures that adequate right-of-way is provided to enable safe access for all users (motorists, pedestrians, bicyclists, transit vehicles and users). Include flexibility in the policy to balance the function and users for various roadway classifications. Include amenities such as street lighting, landscaping, and transit stops that contribute to the complete street concept.

Incorporate context sensitive design features to improve mobility for all users. Refer to the cross sections presented in Section 4.7 (of the TMP) for details on travel lane widths, median widths, shoulders, bicycle and pedestrian facilities, and landscaping and public utility easements.

Objective Cir-1.2: Provide a high level of street connectivity.

Recommended Action: Utilize access management techniques to provide appropriate spacing of access points on parkways, arterials, and collectors. Utilize context sensitive design principles from Designing Walkable Urban Thoroughfares: A Context Sensitive Approach (Institute of Transportation Engineers, 2010) such as:

- Building network capacity and redundancy through a dense, connected network rather than through an emphasis on high levels of vehicle capacity on individual arterial facilities
- Minimizing direct property access onto parkways, arterials through design of a connected network of closely spaced arterial and collector thoroughfares and local street connections.
- Providing closer spacing of roadways and shorter blocks for areas with higher pedestrian and bicycle activity.
- Provide a well connected road system that encourages walking and cycling and maintains a quality of life for all Tracy residents.

Objective Cir-1.3: Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.

Recommended Action: Identify locations or areas where the LOS can fall below the standard due to infeasible mitigation measures or where improvements would have an adverse impact to pedestrians or bicycles or other users. The following locations are exempt from t he City's LOS D standard:

- Any intersections or roadways within ¼ mile of any freeway where LOS E is allowed to discourage interregional traffic from using City streets.
- Any intersections or roadways located in the Downtown and Bowtie area where LOS E shall be allowed.
- At intersections where construction of improvements is not feasible, the LOS may fall below the City's LOS C standard.
- During construction of intersection improvements, the LOS may temporarily fall below the City's LOS C standard.
- The following five intersections that are projected to operate at LOS E or F under Horizon Year Conditions (for these locations, these deficient LOS ratings is the LOS standard):
    - Corral Hollow Road/Eleventh Street (LOS E – AM Peak Hour, LOS F - PM Peak Hour)
    - Tracy Boulevard/Eleventh Street (LOS F – PM Peak Hour)
    - Corral Hollow Road/Schulte Road (LOS F – PM Peak Hour)
    - Tracy Boulevard/Schulte Road (LOS E - PM Peak Hour)
    - Lammers Road/Commerce Way (LOS E – PM Peak Hour)
- Caltrans facilities where Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on all State Highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.), however, Caltrans recognizes that it may not always be feasible. For Caltrans intersections, City of Tracy impact criteria applies. For freeway segments, LOS D or better is considered acceptable.
- County of San Joaquin facilities where LOS D is the minimum acceptable LOS for roadway and intersection operations.
- Develop multi-modal LOS analysis procedures and standards to evaluate other facilities (bicycle, pedestrian, and transit) in addition to roads.

Table 3-7
TMP Goals, Objectives, and Recommended Actions

Objective Cir-1.4: Protect residential areas from commercial truck traffic.
Recommended Action: Erect signs providing notice of adopted truck routes (see Section 4.10 [of the TMP] for map of existing and future truck routes) and enforce the use of designated truck routes except for the purpose of pick-up or delivery of materials or merchandise. Provide the heavy vehicle roadway system to encourage commercial growth.
Objective CIR-1.5: Protect residential areas from through traffic and high travel speeds by facilitating free flow of traffic on major streets.
Recommended Action: Utilize sustainable transportation system operation elements (see the sustainability matrix Tables 4.1 and 4.2 [in the TMP]) to improve system efficiency. For example, implementation of ITS technologies such as corridor signal timing plans and traffic signal interconnect can enhance the flow of traffic.
Objective CIR-1.6: Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.
Recommended Action: Implement traffic calming on residential or collector streets as appropriate in accordance with the city's traffic calming program. Construct roadways to discourage speeding.
Objective CIR-1.7: Minimize traffic-related impacts such as noise and emissions on adjacent land uses.
Recommended Action: Utilize rubberized asphalt in roadway projects to reduce roadway noise. Implement ITS technologies, such as signal coordination, to manage traffic progression and to lower speeds. Consider implementation of roundabouts, instead of traffic signals or stop-control, to reduce delays and emissions.
Objective CIR-1.8: Minimize transportation-related energy use and impacts on the environment.
Recommended Action: As indicated in Table 4.2 [of the TMP], utilize sustainable materials such as recycled materials, permeable surfaces, non-toxic, and biodegradable materials for roadway projects. Utilize LED (light emitting diodes) or solar panels for traffic signals and street lights to lower operating and maintenance costs and to decrease energy consumption.
Goal 2: Adequate interregional access.
Objective CIR-2.1: Support regional planning and implementation efforts to improve interregional highways and interregional travel efficiency.
Recommended Action: Coordinate between adjacent municipalities and jurisdictions along arterials, crossing borders and at interchanges with freeways.
Objective CIR-2.2: Discourage interregional travel from diverting from freeways onto Tracy streets.
Recommended Action: In conjunction with actions under Objective Cir-1.5, utilize ITS technologies to manage the flow of traffic onto city streets.
Goal 3: Safe and convenient bicycle and pedestrian travel as alternative modes of transportation in and around the city.
Objective CIR-3.1: Achieve a comprehensive system of citywide bikeways and pedestrian facilities.
Recommended Actions: Consistent with the cross sections standards in Section 4.7 [of the TMP], provide Class I bike trails on parkways and arterials and Class II bike lanes on collectors. Class III bike routes shall be considered on roadways where sufficient width for a dedicated lane is not provided. Implement a comprehensive Safe Routes to School Program. Seek funding opportunities at all levels to implement pedestrian improvements and projects. Provide pedestrian enhancements at intersections, where feasible. Enhancements include high visibility crosswalks, pedestrian countdown timers, and adequate crossing times, median refuge islands for wide streets, smaller curb radii, and shorter cycle lengths. Consider preparation of a streetscape plan to define & coordinate design elements (street furniture, lighting, landscaping, width of pedestrian path, and buffer zones) when planning a walkable thoroughfare. Create a pedestrian and bicycle safety action plan to identify steps to reducing the number of pedestrian and bicycle crashes. The plan will present existing deficiencies, identify appropriate improvements to address these deficiencies, and include implementation strategies. This plan should include public education programs to educate pedestrians, bicyclists, and motorists.

Table 3-7
TMP Goals, Objectives, and Recommended Actions

Goal 4: A balanced transportation system that encourages the use of public transit and high occupancy vehicles.
Objective CIR-4.1: Promote public transit as an alternative to the automobile.
Actions: Utilize sustainable transportation system operation elements (see Tables 4.1 and 4.2 [in the TMP]) to encourage and improve transit usage. For example, implementation of measures such as transit signal priority, queue jump lanes, dedicated bus lanes, and improved shelter facilities will provide faster service, increased rider satisfaction and ridership. Require new employment centers to participate in trip reducing strategies such as Transportation Demand Management program and to provide incentives for their participation. Provide transit service/connections to major pedestrian generators such as major employment and retail centers and transit-oriented developments. Consider changes to the Zoning Ordinance to allow a reduced parking supply that is less than code requirements thus encouraging use of alternative modes of transportation.
Objective CIR-4.2: Work to achieve connectivity between all modes of transportation.
Recommended Actions: Seek reconstruction opportunities on thoroughfares to provide and improve multi-modal access and circulation. Measure T-5 of the City's Sustainable Action Plan - February 1, 2011 (SAP) lists several smart growth, urban design and planning measures including amendments to the zoning ordinance to require adequate pedestrian access, closure of sidewalk gaps, establishment of walkability standards, and amendment or creation of subdivision design standards to address spacing and connectivity. These goals must be implemented in the development of all specific plans in the city and where roads and intersections are reconstructed.
Source: Draft Citywide Roadway Transportation Master Plan, March 2012

3.4.4 SUSTAINABILITY POLCIES, STANDARDS, AND PERFORMANCE MEASURES/SMART GROWTH DESIGN ELEMENTS/COMPLETE STREETS PRINCIPLES/CONTEXT SENSITVE DESIGN

The TMP identifies various techniques to help the City meet sustainability and GHG reduction goals. These techniques range from specific roadway design measures to shifts in City policy. The complete list of these methods and the corresponding benefits is included in Appendix B (City of Tracy Citywide Transportation Master Plan). In addition to the methods to meet sustainability and GHG reduction goals, the TMP also identifies smart growth design elements for various aspects of the City's transportation system. Table 3-8, TMP Smart Growth Design Elements, lists the smart growth design elements identified in the TMP for the City's Horizon Year transportation system.

The Tracy TMP includes extensive use of Complete Streets and Smart Growth principles through the development of a transportation system that will address all future transportation needs:

- Transit (bus, and rail)
- Cycling
- Walking
- Private vehicle movement
- Good vehicle movement

Table 3-8
TMP Smart Growth Design Elements

Transportation System Feature	Smart Growth Design Element
Railroads	Provide safe and efficient crossings for all modes across railroads to enhance connectivity between land uses and amenities.
Bicycle and Pedestrian Circulation	• Width of on-street bike lanes is recommended at five feet with a desired width of six feet. However, wider bike lanes also encourage vehicular speeding when cyclists are not present. The TMP recommends five foot bicycle lanes where the lane is adjacent to a curb and four feet where the travel lane is adjacent to on-street parking. Off-street bicycle paths can be eight feet for bicycle only facilities and ten feet for shared (multi-use) facilities accommodating both cyclists and pedestrians. • Driveway access management varies by roadway type with frequent driveways on lower speed roadways and residential streets, and infrequent driveways on motorist thoroughfares. • Limit bicycle use on sidewalks to avoid conflicts with streetscape and pedestrians. • Provide bicycle detection traffic control devices consistent with the California Manual on Uniform Traffic Control Devices (MUTCD) for Class II facilities. • Provide shared roadway bicycle marking consistent with the California MUTCD for Class III facilities. • Incorporate bicycle facilities for new and retrofitted roads to meet complete streets design principles which ensure adequate right-of-way is provided to enable safe access for all users (motorists, pedestrians, bicyclists, transit vehicles and users).
Bridges and Culverts	• Provide safe and efficient crossings for all modes across bridges to enhance connectivity between land uses and amenities. • Since bridges, culverts, and over/underpasses often are spanning major obstacles within the community, when planning right-of-way, planning and design of facilities, consider opportunities to incorporate trails and bikeways within crossings.
Roadways	• The recommended cross sections incorporate context sensitive and smart growth design principles to improve mobility for all users (bicyclists, pedestrians, transit vehicles, and motorists) and to achieve several other purposes including reduced maintenance costs, reduced environmental impacts, slower vehicle speeds, and improved pedestrian safety. These cross sections include narrower street widths (ten and 11 feet versus 12 feet), which reduces the amount of right-of-way required and reduces the cost of construction. Narrower roads also help to reduce vehicle speeds and reduce the crossing distances for pedestrians at intersections. Furthermore, Highway Capacity Manual 2010 indicates that a narrow lane has no reduction in saturation flow rate and thus the level of service has no effect. Narrower lanes reduce the capacity of certain roads and care was taken as to minimize the reduction of capacity below acceptable standards. The reduction in right-

Table 3-8
TMP Smart Growth Design Elements

Transportation System Feature	Smart Growth Design Element
	of-way provides more space for other uses such as additional landscaping for beautification and for water treatment, wider sidewalks to promote walkability, and room for utility corridors. • Allow implementation of roundabouts, which provide superior benefits to all-way stop and signalized intersections in terms of reducing delay, noise sustainability, and greenhouse gas emissions.
Park and Ride Facilities	• Continue to consider opportunities to share parking facilities for Park and Ride use where parking operations provide complimentary peak demands. Examples of opportunities to utilize parking facilities for dual purpose include theater or shopping center uses that have peak parking demands during the evening or weekend when a Park and Ride facility would otherwise be in low demand. • Provide a high level of connectivity, beyond typical design expectations for a land use to connect to alternative transportation systems such as transit, bicycle, and park and ride facilities. With enhanced efforts to strengthen connectivity, a higher quality of life is provided through provision of multiple transportation options.
Truck Facilities	• Maximum lane widths are 11 feet for all new roadway cross sections. • Minimize the truck route designation in areas where high levels of pedestrian, bicycle, and transit usage are desired, since truck routes require increased curb returns at intersections increasing crossing distances for pedestrians and bicyclists. • Where heavy trucking activity is proposed, consider the provision of parallel Class I bicycle routes over the designation in the road hierarchy and consider the accommodation of pedestrians and bicyclists concurrent with truck turn analysis during design review.
Source: Draft Citywide Roadway Transportation Master Plan, March 2012	

Every transportation element of the TMP includes implementation of Smart Growth and Complete Streets principles. Complete streets are roadways designed to safely and comfortably provide for the needs of all users, including, but not limited to, motorists, cyclists, pedestrians, transit and school bus riders, movers of commercial goods, persons with disabilities, seniors, and emergency users. Sustainable complete streets are complete streets which simultaneously aim to minimize adverse environmental effects, including, but not limited to, issues concerning drainage and stormwater runoff. Sustainable complete streets also form a comprehensive, integrated network supporting sustainable and transit-oriented development, and complementing sustainable land use patterns. Thus, the implementing principles in the TMP involve a road network system that is designed to provide a comprehensive grid system of hierarchal streets that provides for a well-connected City, reduces trip lengths, promotes non-motorized travel, and reduces the per capita emission of greenhouse gasses. Additional, comprehensive information is included in the TMP that further identifies guidelines for use in the detail design and implementation of the TMP.

In addition to Smart Growth and Complete Streets principles, the TMP promotes Context-Sensitive design, which as generally defined applies to all highways and streets whose adjacent land uses require accommodation of pedestrians and bicyclists, serious consideration of street aesthetics, and a degree of traffic calming. Context sensitive design recognizes placemaking and pedestrian comfort as legitimate goals for road projects.

3.4.5 OTHER POLICY RECOMMENDATIONS

The TMP establishes many other policies that are intended to be comprehensive, but also dynamic, and can be revised as needed to adapt to the changing needs of the region. City officials and staff will use these policies in the TMP to guide ongoing development, use of City resources, and implementation of projects and programs. These policies address, among other things, bicycle/pedestrian circulation, roadway design/operation, traffic calming, access management, standards/design for park and ride facilities, and ITS.

BICYCLE/PEDESTRIAN CIRCULATION

As noted above, in Table 3-8, one of the Smart Growth Design Elements of the TMP is the required incorporation of bicycle facilities on new and retrofitted roads. Specifically, the TMP requires that every proposed parkway (expressway), arterial, and collector road network segment in the TMP incorporate bicycle facilities. The TMP also expects that every new commercial and office development provide bicycle facilities onsite according to new zoning standards. In addition, the TMP states that every structure constructed in the City in the future that crosses a barrier, such as a freeway, river, channel, or railroad will include pedestrian and bicycle facilities in order to improve connectivity for these modes of travel. If the approaching roadway segments do not include pedestrian and bicycle facilities, the TMP recommends that they still be provided on the structure, to provide for safe and efficient crossings where no other crossing options exist. The TMP also recommends that the City's next update of its Bicycle Master Plan include a Bicycle Transportation Plan.

ROADWAY DESIGN/OPERATION

The TMP documents the road hierarchy, its functionality, and operations and identifies typical cross sections for the various types of roadways in the City. Table 3-9, Recommended Cross Section Characteristics, summarizes key recommended cross section characteristics for the types of streets in the City.

Table 3-9
Recommended Cross Section Characteristics

Street Type	Right-of-Way	Lanes	Bike Facility	Sidewalk
Parkway	115 feet to 159 feet	4 to 8	Yes (Class I Bike Path)	Yes
Arterial	74 feet to 121 feet	2 to 6	Yes (Class I Bike Path)	Yes
Collector	52 feet to 66 feet	2	Yes (Class II Bike Lane)	Yes
Residential/Alley	18 feet to 56 feet	1 to 2	No	Yes (2 lanes only)
Industrial	60 feet to 62 feet	2	No	Yes
Source: Draft Citywide Roadway Transportation Master Plan, February 2012				

Sufficient right-of-way may not be provided in these recommended cross sections to accommodate a bus stop or pull-out where the bus moves completely out of the traveled way. For those locations, additional right-of-way must be provided to meet San Joaquin Regional Transit standards for a bus stop or turnout. In locations where utility cabinets or other obstructions (e.g. poles, signs, etc.) may be placed within the right-of-way designated for sidewalks and Class I bikeways, the sidewalks and bikeway are to meander around the obstructions. Additional right-of-way may also be required to implement these meandering paths per the utility company standards. Additional right-of-way is required should light-rail or streetcar systems be planned.

TRAFFIC CALMING

The TMP identifies traffic calming measures to reduce vehicle speeds, alter driver behavior, and improve safety for all users. The TMP requires future specific plans in the City to incorporate planning level traffic calming measures. The exact traffic calming measures are to be determined at the design phase in conjunction with the procedures outlined in the City's traffic calming program. Moreover, the TMP states that all residential streets must include traffic calming measures, as appropriate and that collector streets may include traffic calming measures on a case by case basis, which would also be determined at the design phase.

TRAFFIC CIRCLES/ROUNDABOUTS

The TMP identifies traffic circles and roundabouts as an alternative form of traffic control to standard intersection layouts. According to the TMP, traffic circles (mini-roundabouts) are typically provided on residential street and commercial properties as a way to calm traffic and reduce speeds, while roundabouts are typically located on larger streets and can be used to accommodate heavy merge and weaving maneuvers.

ACCESS MANAGEMENT

As stated in the TMP, access spacing (spacing of roadways, spacing of signals and driveways, type of median openings, turn lanes, and right-of-way management) can affect the efficient movement of goods and traffic. The TMP stipulates that existing or future roadway networks in specific plan areas need to consider the impacts of these design variables on reducing congestion, preserving capacity on key roadways, and allowing safe and efficient access to local properties.

STANDARDS/DESIGN FOR PARK AND RIDE FACILITIES

The TMP recommends that during large land use planning efforts, such as the General Plan Update, Specific Plan preparation, and community planning efforts there be consideration of the opportunity and the applicability of Park and Ride facilities. Additionally, the TMP states that consideration of Park and Ride facilities should be coordinated with bicycle route planning, transit planning, and roadway circulation system planning to provide convenient, efficient, and safe linkages and interoperability between transportation modes. Moreover, the TMP states that during the design of Park and Ride facilities environmental concepts should be considered to illustrate the City's dedication to sustainability and minimizing resource use. Design measures with co-benefits for consideration include canopy structures with photovoltaics to provide shade and generate energy on-site, native and drought tolerant landscaping to reduce water demand, bioswales to provide landscaping while reducing pollutant discharge. Utilization of decomposed granite (DG), or recycled asphalt cement concrete (ACC) are examples of recycling materials to exemplify a reduced environmental burden at the facility. In addition, the TMP encourages the provision of incentives for vehicles with reduced pollution or non-polluting

engines, such as electric charging stations, sheltered parking, premium location parking, provision of wider parking spaces than typical, and bicycle amenities such as lockers and parking racks. Finally, the TMP states that the quality of services at each Park and Ride facility should be considered to determine how to increase comfort for users with amenities such as, enclosed and safe shelters, information panels, carpooling networking, restrooms, showers, seating, park like landscaping, etc.

INTELLINGENT TRANSPORTATION SYSTEMS

The TMP identifies a vision for the City's ITS system, as well as recommendations for the City's ITS infrastructure. According to the TMP, the City's ITS vision is to bring the benefits of an enhanced multi-modal transportation system that collects and disseminates traffic information from various modes of transportation in order to provide operational effectiveness along the signalized intersections and Project corridors and thereby increasing mobility and reducing travel times for motorists. It is envisioned that the City will have a citywide state-of the-art reliable and consistent ITS infrastructure that uses the latest technology that will accomplish the following: assist the City in managing the traffic at intersections and roadway segments; enhance staff efficiency through remote monitoring; provide troubleshooting capabilities system adjustments; and, compliment the City's existing traffic signal surveillance, control, and monitoring program. It is also envisioned that the City will participate in regional transportation management and share travel information with adjacent local agencies including Caltrans and San Joaquin County in order to enhance mobility throughout the region.

3.4.6 COST ESTIMATES FOR RECOMMENDED IMPROVEMENTS

The Final chapter of the TMP presents an opinion of anticipated cost estimates for the proposed Horizon Year roadway network improvements as recommended in the TMP. The cost estimates are based upon initial planning and would require further refinement at a later date when additional studies and design of the improvements commence. As indicated previously, a separate, but companion document to the TMP identifies the fees required of new development for transportation infrastructure improvements recommended by the TMP. Both the TMP and its associated fee document are on file with the City of Tracy and can be reviewed both online and/or by request to the City of Tracy Public Works Department, which is located at 520 Tracy Boulevard, Tracy, CA 95376.

3.5 PROJECT OBJECTIVES

Following are the Project objectives:

- Provide an Implementation Plan for the Circulation Element of the City of Tracy General Plan (2011).
- Serve as a comprehensive planning document or blueprint that identifies and requires improvements to the existing transportation system and expands upon the system to accommodate future development consistent with the General Plan. The system includes transit passenger movement, goods movement, pedestrian movement, bicycle movement, and private vehicular movement.
- Establish a framework of goals, policies, and implementation methodology that outlines improvement projects and programs, identifies financial resources and allocates funding, and sets project priorities to provide a safe and efficient transportation system that meets the community's needs.
- Guide the development of transportation infrastructure and services as growth occurs under the General Plan.

- Facilitate a transportation system that is a multi-modal network of roads, bicycle lanes and paths, transit services, and pedestrian facilities that will support the planned land uses in the City by providing mobility to residents and visitors alike.
- Balance existing and future transportation infrastructure needs with safe access for all user groups (motorists, pedestrians, bicyclists, and transit users) by incorporating strategies, principles, and design elements such as Smart Growth design elements, Context-Sensitive Design, and Complete Street guidelines.
- Facilitate the provision of an improved transportation system that enhances mobility, accommodates future growth, and maintains the quality of life in Tracy.
- Establish policies and priorities to maintain and improve the transportation system.
- Maintain consistency with the San Joaquin County Expressways Study,
- Preserve four-lane maximum arterial widths where possible to promote a more walkable, bikeable environment, particularly in new areas of future development where sustainable practices can be applied in an equitable manner.
- Decrease right-of-way and vehicular lane widths to implement Complete Street principles.
- Maintain consistency with the roadway plans in entitled project areas (Ellis Specific Plan and Gateway).
- Provide maximum roadway v/c ratios of 0.8 – 0.9 (roughly corresponding to a LOS D - E operation on a link-volume basis) to the greatest extent possible.
- Ensure the provision of bicycle and pedestrian facilities that connect people and places.
- Develop a comprehensive bicycle and pedestrian system that ensures a multi-modal infrastructure network.
- Develop a comprehensive circulation system that identifies bridge and culvert crossings to minimize traffic conflicts and preserve open space and preservation areas.
- Develop a comprehensive Park and Ride system that supports resident transit usage or carpooling to commute from the City.
- Provide a nexus for a Traffic Impact Fee Program that will fund the development of the planned transportation system through payment of impact fees by all future development.
- Develop Travel Demand Management (TDM) principles that reduce private vehicle trips and build on the regional TDM programs developed by the SJCOG.
- Provide for a comprehensive transit system on all new collector, arterial, and expressway roadways and provide the opportunity to expand transit services on existing roadways.

4.0 ENVIRONMENTAL ANALYSIS

4.1 INTRODUCTION

This chapter discusses the potential environmental impacts and presents the findings of the environmental analysis conducted for this Draft Environmental Impact Report (Draft EIR), as required by the California Environmental Quality Act (CEQA). The following environmental issues are evaluated in Section 4.2 and Section 4.3, respectively, Air Quality and Greenhouse Gas Emissions.

4.1.1 ORGANIZATION OF CHAPTER

Each of the sections in this chapter are organized as follows:

- **Existing Conditions** are on-site and surrounding environmental conditions in existence at the time of publication of the Notice of Preparation (NOP), as well as relevant regulatory standards and requirements.
- **Environmental Analysis** first specifies the applicable significance thresholds (i.e., criteria by which the level of significance of each potential impact is evaluated), and then describes changes that would result in the existing physical environment should the proposed project be implemented. The analysis focuses on the changes that might be significant impacts if the project is implemented.

Project impacts are identified within each section. A summary of the potential impact is presented first, its level of significance is specified second, environmental analysis is provided third, and any required mitigation is identified last. If mitigation is required, the section concludes with the residual level of significance after mitigation.

4.1.2 MITIGATION MEASURES

Potentially feasible mitigation measures must be identified when significant impacts are identified. Adopted mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. Each mitigation measure is numbered sequentially so that it directly correlates to the impact it addresses.

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4.2 AIR QUALITY

This section evaluates potential short- and long-term air quality impacts that would result from buildout of the City of Tracy *Citywide Roadway and Transportation Master Plan* (TMP). Information in this section is based primarily on the California Environmental Quality Act (CEQA); the *2007 Ozone Plan*, *2007 PM_{10} Plan,* and the *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI), prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD); Air Quality Data (California Air Resources Board 2008 through 2010); *City of Tracy General Plan, Draft and Final Recirculated Supplemental EIR* (dated February 1, 2011), the *City of Tracy Sustainability Action Plan* (dated February 1, 2011), and the *Citywide Roadway and Transportation Master Plan*, prepared by RBF Consulting (dated February 2012).

4.2.1 ENVIRONMENTAL SETTING

The Project site is located in the San Joaquin Valley Air Basin (Basin), which is characterized as having an "inland Mediterranean" climate (a semi-arid environment with cool winters, dry summers, and moderate rainfall). The Basin is approximately 250 miles long and averages 35 miles wide. The Basin is the second largest in the state and is defined by the Sierra Nevada Mountains to the east (8,000 to 14,000 feet in elevation), the Coastal Range to the west (averaging 3,000 feet in elevation), and the Tehachapi Mountains to the south (6,000 to 8,000 feet in elevation). The Basin is considered a "bowl" since it has generally flat topography with a slight downward gradient to the northwest.

CLIMATE

The climate within the Basin is characterized by moderate temperatures and comfortable humidities with precipitation limited to a few storms during the winter season (November through April). The average annual temperature varies little throughout the Basin, and the summer high averages 90 degrees Fahrenheit. All portions of the Basin have had recorded temperatures of over 100 degrees in recent years. January is usually the coldest month at all locations while July and August are usually the hottest months of the year. Periods of heavy fog are frequent and low stratus clouds, occasionally referred to as "high fog" are a characteristic climatic feature. Precipitation is typically 9.25 inches annually in the San Joaquin Valley floor.

WIND

One of the most important climatic factors is the direction and intensity of the prevailing winds. During the summer months, the wind usually originates at the northern end of the San Joaquin Valley and flows in a south-southeasterly direction into the Mojave Desert Air Basin. In the winter, the wind originates from the southern end of the San Joaquin Valley and flows in a northeasterly direction. With very light average wind speeds (less than 10 miles per hour), the Basin has a limited capability to disperse air contaminants horizontally. Whether there is air movement or stagnation during the morning and evening hours (before these dominant patterns take effect) is one of the critical factors in determining the smog condition on any given day.

SUNLIGHT

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original, or "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form "secondary" pollutants (primarily oxidants). Since this process is time-dependent, secondary pollutants can be formed many miles

downwind from the emission sources. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of the San Joaquin Valley.

TEMPERATURE INVERSIONS

A temperature inversion is a reversal in the normal decrease of temperature as altitude increases. In most parts of the country, air near ground level is warmer than the air above it. Semi-permanent systems of high barometric pressure fronts establish themselves over the Basin, deflecting low-pressure systems that might otherwise bring cleansing rain and winds. The height of the base of the inversion is known as the "mixing height" and controls the volume of air available for the mixing and dispersion of air pollutants.

The interrelationship of air pollutants and climatic factors are most critical on days of greatly reduced atmospheric ventilation. On days such as these, air pollutants accumulate because of the simultaneous occurrence of three unfavorable factors: low inversions, low maximum mixing heights, and low wind speeds. Although these conditions may occur throughout the year, the months of July, August, and September generally account for more than 40 percent of these occurrences.

The potential for high contaminant levels varies seasonally for many contaminants. During late spring, summer, and early fall, light winds, low mixing heights and sunshine combine to produce conditions favorable for the maximum production of oxidants, mainly ozone. When strong surface inversions are formed on winter nights, especially during the hours before sunrise, coupled with near-calm winds, carbon monoxide from automobile exhausts becomes highly concentrated. The highest yearly concentrations of carbon monoxide and oxides of nitrogen are measured during November, December, and January.

LOCAL AMBIENT AIR QUALITY

The SJVAPCD and California Air Resources Board (CARB) monitor ambient air quality at approximately 250 air-monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The following air quality information briefly describes the various types of pollutants monitored at the Tracy-Airport Monitoring Station and the Stockton-Hazelton Monitoring Station. Air quality data from 2008 through 2010 is provided in Table 4.2-1 (Local Air Quality Levels).

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency, as seen in high altitudes) are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of CO. Exposure to high levels of CO can slow reflexes and cause drowsiness, as well as result in death in confined spaces at very high concentrations.

Nitrogen Dioxide. Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone (O_3), and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (i.e., motor vehicle engines, power plants, refineries, and other industrial operations).

Table 4.2-1
Local Air Quality Levels

Pollutant	Primary Standard		Year	Maximum[1] Concentration	Number of Days State/Federal Std. Exceeded
	California	Federal			
Carbon Monoxide (CO)[2] (1-Hour)	20 ppm for 1 hour	35 ppm for 1 hour	2008 2009 2010	3.40 ppm 3.40 2.80	0/0 0/0 0/0
Carbon Monoxide (CO)[2] (8-Hour)	9 ppm for 8 hours	9 ppm for 8 hours	2008 2009 2010	1.86 ppm 2.29 1.60	0/0 0/0 0/0
Ozone (O_3) (1-Hour)[3]	0.09 ppm for 1 hour	NA[4]	2008 2009 2010	0.123 ppm 0.104 0.113	11/0 2/0 1/0
Ozone (O_3) (8-Hour)[3]	0.070 ppm for 8 hours	0.075 ppm for 8 hours	2008 2009 2010	0.104 ppm 0.087 0.92	26/16 20/8 8/3
Nitrogen Dioxide (NO_2)[3]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2008 2009 2010	0.048 ppm 0.043 0.040	0/NM 0/NM 0/NM
Particulate Matter (PM_{10})[3,5,6]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2008 2009 2010	126.8 µg/m^3 55.3 22.4	NM/0 NM/0 NM/0
Fine Particulate Matter ($PM_{2.5}$)[3,6]	No Separate State Standard	35 µg/m^3 for 24 hours	2008 2009 2010	85.3 µg/m^3 41.6 42.3	NM/NM NM/NM NM/NM

PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
CO = carbon monoxide
NO_X = nitrogen oxides
ppm = parts per million
µg/m^3 = micrograms per cubic meter
O_3 = ozone
NM = Not Measured (there was insufficient [or no] data available to determine the value from the ADAM database)

Notes:
1 – Maximum concentration is measured over the same period as the California Standard.
2 – Measurements taken at the Stockton-Hazelton Street Monitoring Station (located at 1593 East Hazelton Street, Stockton, California 95205).
3 – Measurements taken at the Tracy-Airport Monitoring Station (located at 5749 South Tracy Boulevard, Tracy, California 95376).
4 – The United States Environmental Protection Agency revoked the Federal 1-hour Standard in June of 2005.
5 – PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
6 – PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Source: California Air Resources Board, *Aerometric Data Analysis and Measurement System* (*ADAM) Air Quality Data Statistics*, http://www.arb.ca.gov/adam/welcome.html, accessed on December 1, 2011.

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air, may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes as well as cause pulmonary dysfunction.

Ozone. O_3 occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" O_3 layer) extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

The "Bad" O_3 is a photochemical pollutant, and needs reactive organic gases (ROGs), NO_X and sunlight to form; therefore, ROGs and NO_X are O_3 precursors. To reduce O_3 concentrations, it is necessary to control the emissions of these O_3 precursors. Significant O_3 formation generally requires an adequate amount of precursors in the atmosphere and a period of several hours in a stable atmosphere with strong sunlight. High O_3 concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While O_3 in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high concentrations of ground-level O_3 (in the troposphere) can adversely affect the human respiratory system and other tissues. O_3 is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children, and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of O_3. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in San Joaquin Valley can result in aggravated respiratory diseases such as emphysema, bronchitis, and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache, and nausea.

Coarse Particulate Matter (PM_{10}). Coarse particulate matter (PM_{10}) refers to suspended particulate matter, which is smaller than 10 microns or 10 one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both state and federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Sulfur Dioxide SO_2. Sulfur dioxide (SO_2) is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Sulfur dioxide is often used interchangeably with sulfur oxides (SO_X) and lead (Pb). Exposure of a few minutes to low levels of SO_2 can result in airway constriction and reduction in breathing capacity in some asthmatics.

Reactive Organic Gases (ROGs) and Volatile Organic Compounds (VOCs). Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and volatile organic compounds (VOCs). Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources

of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Toxic Air Contaminants (TACs). Toxic air contaminants (TACs) (also referred to as hazardous air pollutants [HAPs]), are pollutants that result in an increase in mortality, a serious illness, or pose a present or potential hazard to human health. Health effects of TACs may include cancer, birth defects, and immune system and neurological damage.

TACs can be separated into carcinogens and noncarcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which heath impacts would not occur. Noncarcinogenic TACs differ in that there is a safe level in which it is generally assumed that no negative health impacts would occur. These levels are determined on a pollutant-by-pollutant basis.

TACs are not considered criteria air pollutants and thus are not specifically addressed through the setting of ambient air quality standards. Instead, the EPA and CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (MACT or BACT) to limit emissions.

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. The following types of people are most likely to be adversely affected by air pollution, as identified by CARB: children under 14, elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. Locations that may contain a high concentration of these sensitive population groups are called sensitive receptors and include residential areas, hospitals, day-care facilities, elder-care facilities, elementary schools and parks. Sensitive receptors are located throughout the City and include residential uses, schools, parks, hospitals, and places of worship.

4.2.2 REGULATORY SETTING

FEDERAL FRAMEWORK

U.S. Environmental Protection Agency

The EPA is responsible for implementing the Federal Clean Air Act (FCAA), which was first enacted in 1955 and amended numerous times after. The FCAA established federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are O_3, CO, NO_2 (which is a form of NO_X), SO_2 (which is a form of SO_x), particulate matter less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and lead (Pb). Refer to Table 4.2-2 (National and California Ambient Air Quality Standards).

Table 4.2-2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m^3)	**Nonattainment**	NA[5]	NA[5]
	8 Hours	0.07 ppm (137 μg/m^3)	**Nonattainment**	0.075 ppm (147 μg/m^3)	**Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 μg/m^3	**Nonattainment**	150 μg/m^3	Attainment
	Annual Arithmetic Mean	20 μg/m^3	**Nonattainment**	N/A[6]	Attainment
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 μg/m^3	**Nonattainment**
	Annual Arithmetic Mean	12 μg/m^3	**Nonattainment**	15.0 μg/m^3	**Nonattainment**
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1 Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)	N/A	53 ppb (100 μg/m^3)	Attainment
	1 Hour	0.18 ppm (339 μg/m^3)	Attainment	100 ppb (188 μg/m^3)	N/A
Lead (Pb)	30 days average	1.5 μg/m^3	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 μg/m^3	Attainment
Sulfur Dioxide (SO_2)	24 Hours	0.04 ppm (105 μg/m^3)	Attainment	N/A	N/A
	3 Hours	N/A	N/A	N/A	N/A
	1 Hour	0.25 ppm (655 μg/m^3)	Attainment	75 ppb (196 μg/m^3)	Unclassified
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 μg/m^3	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	Unclassified		
Vinyl Chloride	24 Hour	0.01 ppm (26 μg/m^3)	Unclassified		

μg/m^3 = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable.

Notes:

1 – California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM_{10} and visibility-reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, CARB identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 ppm ambient concentration specified in the 1978 standard.

2 – National standards (other than ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as *attainment/unclassifiable*, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

3 – Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4 – National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

5 – The Federal 1-hour ozone standard was revoked on June 15, 2005 in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas.

6 – The Environmental Protection Agency revoked the annual PM_{10} standard in 2006 (effective December 16, 2006).

Source: California Air Resources Board and U.S. Environmental Protection Agency, September 8, 2010.

STATE FRAMEWORK

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4.2-2, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMP's also serve as the basis for preparation of the State Implementation Plan (SIP) for California.

Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment.

LOCAL FRAMEWORK

San Joaquin Valley Air Pollution Control District (SJVAPCD)

Regional Air Quality Management Districts (AQMD) or Air Pollution Control Districts (APCD) throughout the state are the regulatory authority for each of the air basins within California. These districts have the primary responsibility to control air pollution from all sources other than those directly emitted from motor vehicles, which are the responsibility of the CARB and the EPA, and are required to adopt and enforce rules and regulations (produce attainment plans) that include air pollution control programs designed to achieve the NAAQS and CAAQS within their air basin and enforce applicable state and federal law.

State law recognized that air pollution does not respect political boundaries and, therefore, required CARB to divide the state into separate air basins that each has similar geographical and meteorological conditions. Additionally, many county agencies began to realize that air quality problems are best managed on a regional basis and began to combine their regulatory agencies into regional agencies. This was the case for the Basin, where until 1991 each county operated a local air pollution control district.

The SJVAPCD is one of 35 air quality management districts in the state that have prepared AQMPs to accomplish a five-percent annual reduction in emissions. The SJVAPCD has prepared the *2007 Ozone Plan* to achieve federal and state standards for improved air quality in the Basin regarding ozone. The *2007 Ozone Plan* provides a comprehensive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the Basin. The *2007 Ozone Plan* calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution. The *2007 Ozone Plan* call for a 75 percent reduction in ozone-forming oxides of nitrogen emissions.

The SJVAPCD has also prepared the *2007 PM_{10} Maintenance Plan and Request for Redesignation* (*2007 PM_{10} Plan*). On April 24, 2006, the SJVAPCD submitted a Request for Determination of PM_{10} Attainment for the Basin to CARB. CARB concurred with the request and submitted the request to the

EPA on May 8, 2006. On October 30, 2006, the EPA issued a Final Rule determining that the Basin had attained the NAAQS for PM_{10}. However, the EPA noted that the Final Rule did not constitute a redesignation to attainment until all of the FCAA requirements under Section 107(d)(3) were met.

Section 107(d)(3) of the FCAA states that a nonattainment area can be redesignated to attainment if it meets the following criteria:

1. EPA has determined that the NAAQS have been attained.
2. EPA has fully approved the applicable implementation plan under section 110(k) of the FCAA.
3. EPA has determined that the improvement in air quality is due to permanent and enforceable emission reductions.
4. The state has met all applicable requirements for the area under Section 110 and Part D.
5. EPA has fully approved a maintenance plan, including a contingency plan, for the area under Section 175(A) of the FCAA.

The Basin has met criteria 1, 2 and 4 of Section 103(d)(3). The *2007 PM_{10} Plan* was developed to comply with criteria 3 and 5 and to proceed with the redesignation process for PM_{10} for the Basin. For the purposes of the *2007 PM_{10} Plan,* the SJVAPCD has assumed that the EPA's action on the redesignation request would be complete in 2009.[1] The maintenance plan must provide for continued attainment 10 years after designation. Therefore, the SJVAPCD has targeted 2020 as the maintenance year. Additional maintenance plans will be submitted to demonstrate attainment through Year 2030.

In addition to the *2007 Ozone Plan* and the *2007 PM_{10} Plan,* the SJVAPCD prepared the *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). The GAMAQI provides lead agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality in environmental documents. Local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that the SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. An update of the GAMAQI was approved on January 10, 2002, and has been used as a guidance document for this analysis.

City of Tracy

The City of Tracy Development and Engineering Services Department provides dust control measures within the Engineering Design Construction Standards document (dated December 2009). Specifically, Section 102 (Responsibilities of the Contractor) prohibits contractors from discharging smoke, dust, or any other air contaminant into the atmosphere in such quantity that would violate the regulations of any legally constituted authority.

[1] On September 25, 2008, the EPA redesignated the Basin to attainment for the PM_{10} NAAQS and approved the PM_{10} Maintenance Plan.

4.2.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

California Environmental Quality Act

According to Appendix G of the *CEQA Guidelines*, the proposed Project would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

San Joaquin Valley Air Pollution Control District

For the purposes of this air quality analysis, actions that violate federal standards for criteria pollutants (i.e., primary standards designed to safeguard the health of people considered to be sensitive receptors while outdoors and secondary standards designed to safeguard human welfare) are considered significant impacts. Additionally, actions that violate state standards developed by CARB or criteria developed by the SJVAPCD, including thresholds for criteria pollutants, are considered significant impacts. Projects that would generate 10 tons per year of either ROG or NO_x are considered to have a potentially significant air quality impact. The SJVAPCD has also established a threshold of 15 tons per year for PM_{10}. As previously mentioned, the Basin is classified as a nonattainment area for ozone. In order to achieve the federal and state standards for ozone, it is necessary to regulate ROG and NO_X, which contribute to the formation of ozone. This includes both direct and indirect emissions.

In addition to the thresholds cited above, the SJVAPCD has thresholds applicable to CO emissions that require projects to perform localized CO modeling. These thresholds include the following:

- Project traffic would impact intersections or roadway links operating at level of service (LOS) D, E or F or would cause LOS to decline to D, E or F
- Project traffic would increase traffic volumes on nearby roadways by 10 percent or more
- Project would contribute to CO concentrations exceeding CAAQS of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for one hour

<u>Construction Specific Thresholds</u>

The SJVAPCD's approach to analysis of construction impacts is to require implementation of effective and comprehensive control measures rather than to require detailed quantification of emission concentrations for modeling of direct impacts. PM_{10} emitted during construction can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions and other factors, making quantification difficult. Despite this variability in emissions, experience has shown that there are a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction activities. The

SJVAPCD has determined that compliance with Regulation VIII for all sites and implementation of all other control measures indicated in Tables 6-2 and 6-3 of the GAMAQI would constitute sufficient mitigation to reduce PM_{10} impacts to a level considered less than significant.

Odor-Based Thresholds

Projects that would potentially generate objectionable odorous emissions that would be located near existing sensitive receptors or other land uses where people may congregate could constitute a significant air quality impact to existing uses. Also, residential or other sensitive receptor projects built for the intent of attracting people locating near existing odor sources could also cause a significant air quality impact for the proposed uses. The SJVAPCD suggests a threshold based on the distance of the odor source from people and complaint records for a facility or similar facility. The threshold would be more than one confirmed complaint per year averaged over a three-year period, or three unconfirmed complaints per year averaged over a three-year period.

4.2.4 IMPACTS AND MITIGATION MEASURES

Short-Term (Construction) Emissions

4.2-1 IMPLEMENTATION OF THE PROJECT WOULD RESULT IN TEMPORARY CONSTRUCTION-RELATED DUST AND VEHICLE EMISSIONS WITHIN THE PROJECT SITE.

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis:

Project implementation would facilitate the construction of future transportation-related infrastructure improvements throughout the City. Short-term air quality impacts are predicted to occur during grading and construction operations associated with implementation of the proposed Project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew

Potential odors could arise from the diesel construction equipment used onsite, as well as from architectural coatings and asphalt off-gassing. Odors generated during construction activities would be temporary and are not considered to be a significant impact. Emissions produced during grading and construction activities are short-term, as they would exist only during construction.

The SJVAPCD's approach to CEQA analyses of construction impacts is to require implementation of effective and comprehensive control measures rather than to require detailed quantification of emissions. The Project proposes a plan that would result in the construction of improvements to the roadway system, including new bicycle and pedestrian facilities. The SJVAPCD has developed control measures that can be reasonably implemented to significantly reduce emissions from construction. Compliance with Regulation VIII and implementation of control measures are included in Mitigation Measures 4.2-1a and 4.2-1b. The SJVAPCD considers construction-related emissions from all projects in this region to be mitigated to a less-than significant level if SJVAPCD-recommended equipment exhaust emission controls (collectively called Regulation VIII and included as Mitigation Measure 4.2-1a) and PM_{10} fugitive dust

rules (outlined in Mitigation Measures 4.2-1b) are implemented. With implementation of the proposed mitigation measures, fugitive dust impacts to sensitive land uses throughout the City would be considered less than significant.

Naturally Occurring Asbestos

Pursuant to guidance issued by the Governor's Office of Planning and Research, State Clearinghouse, lead agencies are encouraged to analyze potential impacts related to naturally occurring asbestos. Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. According to the *General Location Guide for Ultramafic Rock in California – Areas More Likely to Contain Naturally Occurring Asbestos* serpentinite and ultramafic rocks are not known to occur within the City and thus there is no potential that the proposed Project would disturb naturally occurring asbestos.

Odors

Potential odors generated during construction operations would be temporary in nature and are concluded to result in less than significant impacts. It should be noted that emissions produced during grading and construction activities are "short-term" in nature as they occur only for the duration of construction.

Mitigation Measures:

4.2-1a Prior to the issuance of any grading, building, or other construction permit, the City shall require all future applicants to demonstrate conformance with SJVAPCD Rule VIII. The Development and Engineering Services Department shall require that the grading plans, building plans, and specifications stipulate compliance with the following control measures in SJVAPCD Regulation VIII:

- Properly and routinely maintain all construction equipment, as recommended by manufacturer's manuals, to control exhaust emissions.
- Shut down equipment when not in use for extended periods of time, to reduce exhaust emissions associated with idling engines.
- Encourage ride-sharing and use of transit transportation for construction employees commuting to the Project site.
- Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment.
- Curtail construction during periods of high ambient pollutant concentrations.
- Construction equipment shall operate no longer than eight cumulative hours per day.
- All construction vehicles shall be equipped with proper emission control equipment and kept in good and proper running order to reduce NO_X emissions.

- All construction activities within the Project site shall be discontinued during the first stage smog alerts.
- Construction and grading activities shall not be allowed during first stage ozone alerts. (First stage ozone alerts are declared when ozone levels exceed 0.20 ppm for the 1-hour average.)

4.2-1b Prior to the issuance of any grading, building, or other construction permit, the City shall require all future applicants to demonstrate conformance with SJVAPCD Rule VIII. The Development and Engineering Services Department shall require that the grading plans, building plans, and specifications stipulate compliance with the following fugitive dust control measures in SJVAPCD Regulation VIII. The mitigation could include the following or may include other measures as determined by the SJVAPCD:

- Water previously disturbed exposed surfaces (soil) a minimum of three-times/day or whenever visible dust is capable of drifting from the site or approaches 20 percent opacity.
- Water all haul roads (unpaved) a minimum of three-times/day or whenever visible dust from such roads is capable of drifting from the site or approaches 20 percent opacity.
- All access roads and parking areas shall be covered with asphalt-concrete paving or water sprayed regularly.
- Dust from all onsite and offsite unpaved access roads shall be effectively stabilized by applying water or using a chemical stabilizer or suppressant.
- Reduce speed on unpaved roads to less than 15 miles per hour.
- Install and maintain a trackout control device that meets the specifications of SJVAPCD Rule 8041 if the site exceeds 150 vehicle trips per day or more than 20 vehicle trips per day by vehicle with three or more axles.
- Stabilize all disturbed areas, including storage piles, which are not being actively utilized for construction purposes using water, chemical stabilizers or by covering with a tarp, other suitable cover or vegetative ground cover.
- Control fugitive dust emissions during land clearing, grubbing, scraping, excavation, leveling, grading or cut and fill operations with application of water or by presoaking.
- When transporting materials offsite, maintain a freeboard limit of at least six inches and cover or effectively wet to limit visible dust emissions.
- Limit and remove the accumulation of mud and/or dirt from adjacent public roadways at the end of each workday. (Use of dry rotary brushes is prohibited except when preceded or accompanied by sufficient wetting to limit visible dust emissions and use of blowers is expressly forbidden).
- Stabilize the surface of storage piles following the addition or removal of materials using water or chemical stabilizer/suppressants.
- Remove visible track-out from the site at the end of each workday.
- Cease grading activities during periods of high winds (greater than 20 miles per hour [mph] over a one-hour period).
- Asphalt-concrete paving shall comply with SJVAPCD Rule 4641 and restrict use of cutback, slow-cure, and emulsified asphalt paving materials.
- Grading should be conducted in phases.

- The Project site shall not be cleared of existing vegetation cover for the preparation of construction until the issuance of grading permits required by construction.
- The Project applicant shall revegetate graded areas as soon as it is feasible after construction is completed.

Level of Significance After Mitigation: Less Than Significant Impact.

Long-Term (Operational) Emissions

4.2-2 THE PROPOSED PROJECT WOULD RESULT IN AN OVERALL INCREASE IN THE LOCAL AND REGIONAL POLLUTANT LOAD DUE TO DIRECT IMPACTS FROM VEHICLE EMISSIONS.

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis:

The Project proposes a plan that builds upon the goals and objectives of the General Plan Circulation Element and the Draft Sustainability Action Plan (SAP). The Project identifies improvements and expansions to the existing system required to accommodate the City's future growth. The Project aims to increase transit usage and opportunities, improve traffic flow in the City, and support the development of new bicycle and pedestrian facilities.

Mobile Source Emissions

According to the SAP, mobile sources are the largest contributor of emissions in the City. The SAP indicates that Tracy residents currently use automobiles more than any other mode of travel. The total daily vehicle miles traveled (VMT) in the City was 3.3 million in 2006. The City's General Plan EIR projected the daily VMT to be 4.78 million at the General Plan horizon year of 2030. The proposed TMP projects the daily VMT to be 6.9 million at the horizon year of 2035. Therefore, implementation of the proposed Project would result in greater VMT than projected in the City's General Plan. While the General Plan EIR forecasts traffic conditions to the year 2030, the TMP looks out another five years, to establish consistency with the most recent San Joaquin Council of Governments (SJCOG) land use development assumptions, employment forecasts, and travel demand model. It is noted that this is due to the growth that has been applied in the TMP to account for the five-year horizon year difference.

As the Project does not proposed any new development that would result in the generation of new traffic trips, the proposed Project would not directly result in an increase in mobile source emissions. However, the proposed Project anticipates an increase in VMT beyond what was forecast in the General Plan EIR. It should be noted that the General Plan does not have a horizon year. The General Plan utilized the year 2030 for traffic modeling purposes because this was the planning year that SJCOG was using at the time. Since completion of the General Plan, SJCOG has updated their planning year to 2035. As a result, the TMP utilizes 2035 to be consistent with the SJCOG traffic forecasts. Neither the 2030 nor the 2035 forecasts represent full build-out of all the development capacity in the General Plan, but rather the residential and non-residential growth that is expected under the growth management ordinance (for residential uses) and based on market trends (for non-residential uses).

The TMP's proposed improvements to the existing transportation system would result in increased efficiency which would result in shorter trips and reduced VMT per person than assumed in the City's General Plan. Although reduced VMT typically results in reduced emissions, the proposed TMP's VMT

and associated emissions are greater than what was assumed in the General Plan solely as a result of the projected growth between 2030 and 2035.

Mobile source emissions resulting from Project implementation were quantified using EMFAC 2007. This model is a transportation based computer model designed to estimate regional air emissions. EMFAC 2007 accounts for specific meteorological conditions and topography that characterize each specific air basin in California. Input into the model was obtained from traffic data within the TMP. The results are presented in Table 4.2-3 (Long-Term Operational Project Emissions). For reference, Table 4.2-3 shows the mobile source emissions associated with the TMP Horizon Year, as well as for Existing Conditions and General Plan Buildout.

Table 4.2-3
Long-Term Operational Project Emissions

Emissions	Pollutant (Tons/Year)		
	ROG	NO_X	PM_{10}
Existing Conditions (2006)			
Area Source[1]	523.50	31.76	295.49
Energy Source[1]	5.80	50.27	4.01
Mobile Source[2]	843.10	3,994.73	168.39
Total Existing Emissions	*1,372.40*	*4,076.76*	*467.89*
General Plan Buildout (2030)			
Area Source[1]	723.80	33.70	308.69
Energy Source[1]	9.18	79.97	6.35
Mobile Source[2]	483.90	1,659.67	129.91
Total 2030 Emissions	*1,216.88*	*1,773.34*	*444.95*
TMP Horizon Year (2035)			
Area Source[1]	775.69	32.69	297.36
Energy Source[1]	10.08	88.17	6.96
Mobile Source[2]	698.92	2,397.13	187.64
Total 2035 Emissions	*1,484.69*	*2,517.99*	*491.96*
Net Increase Over Existing	**112.29**	**-1,558.77**	**24.07**
SJVAPCD Threshold	*10*	*10*	*15*
Is Threshold Exceeded? (Significant Impact?)	**YES**	**NO**	**YES**

ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} = particulate matter 10 microns in diameter or less

Notes:
1. Area and energy source emissions are based on CalEEMod modeling results (worst-case seasonal emissions). Land use assumptions are based on Table 3-1 in Section 3.0 (Project Description).
2. Mobile source emissions are based on EMFAC2007 modeling results, and trip rate/vehicle miles traveled data provided in the *Citywide Roadway Transportation Master Plan* (dated December 2011). Refer to Appendix B (Air Quality and Greenhouse Gas Emissions Data), for detailed model input/output data. NO_X emissions would decrease in future years due to improvements in vehicle emissions and newer on-road vehicle fleet mixes.

Project related vehicle trips would emit criteria pollutants including NO_X and ROG, which are considered ozone precursors. The Project area is a non-attainment area for federal air quality standards for ozone and particulates. NO_X and ROG are regulated as ozone precursors. A precursor is defined by the SJVAPCD as "a directly emitted air contaminant that, when released into the atmosphere forms or causes to be formed or contributes to the formation of a secondary air contaminant for which an ambient air quality standard has been adopted…".

The predicted emissions associated with vehicular traffic (mobile sources) are not subject to the SJVAPCD permit requirements. However, the SJVAPCD is responsible for overseeing efforts to improve air quality within the San Joaquin Valley. The SJVAPCD has prepared an AQMP to bring the San Joaquin Valley into compliance with the CAAQS for ozone. The SJVAPCD reviews land use changes to evaluate the potential impact on air quality. The SJVAPCD has established a significance level for ROG and NO_X of 10 tons per year each and 15 tons per year for PM_{10}.

As shown in Table 4.2-3, Project-related mobile source emissions for ROG, NO_X and PM_{10} attributable to Project implementation would result in exceedances of the SJVAPCD thresholds. As previously stated, the Basin is currently designated as a non-attainment area for ozone and particulates. Emissions of criteria pollutant would further lead to the degradation of ambient air quality. The proposed Project would result in significant exceedances of the SJVAPCD thresholds for ROG and PM_{10}. NO_X emissions would decrease in future years from existing conditions due to improvements in vehicle emissions and newer on-road vehicle fleet mixes.

Table 4.2-3 provides a conservative comparison between the existing conditions and a 2035 scenario. The TMP would implement various measures identified within the SAP and the General Plan EIR that would reduce 2035 emissions from a business as usual scenario. Table 3.7 (Trip Reductions Due to SAP Measures – Horizon Year) of the TMP indicates that the SAP measures that would be implemented through the TMP would result in a 5.8 percent trip reduction in the Future Service Areas, and a 4.4 percent trip reduction Citywide; also refer to Table 3-3 in Section 3.0 (Project Description). These trip reductions would occur from the following TMP benefits:

- Implementation plan of Complete Streets, Sustainable Development, and Smart Growth principles.
- Reduction of right-of-way widths for all street classifications.
- Reduction of travel lane widths.
- Inclusion of sidewalks, Class-I or Class-II bike paths on all collector, arterials, expressways / parkways.
- Elimination of previously proposed grade separated interchanges within the City of Tracy resulting in a savings of approximately $50 million.
- A reduction in trip lengths for 2035 through approximately 2018 levels.
- A forecasted reduction of 6 percent in VMT due implementation of sustainable transportation strategies.
- The provision of transit facilities on all roadway types.

Measures proposed as part of the TMP would result in trip reduction, reduced trip lengths, and fuel efficiency improvements. The proposed Project enhances the City's General Plan goals, objectives, policies, and actions. Emissions reductions from TMP trip reduction features and implementation of the SAP Strategies include efficiency measures related to Smart Growth, Context-Sensitive design, and Complete Streets. Improved access, pedestrian and bicycle facilities, increased transit, and improved traffic flow inherently reduce mobile source emissions. The TMP describes future roadway conditions within the City and recommended improvements to accommodate future growth. The TMP also includes recommended actions to support the goals and objectives of the General Plan's Circulation Element and recommended transportation strategies, principles, and design elements that would reduce criteria air pollutants. However, as the proposed Project contemplates growth beyond what was modeled in the General Plan,the Project would result in greater impacts than those identified in the General Plan EIR. Due to the amount of growth that is projected to occur by TMP horizon year 2035, impacts associated with long-term mobile source emissions would be considered significant and unavoidable due to the exceedances in ROG and PM_{10}.

Area Source Emissions

Area source emissions associated with the TMP would be generated due to an increased demand for electrical energy and natural gas with the development of the proposed Project. This assumption is based on the supposition that those power plants supplying electricity to the site are utilizing fossil fuels. Electric power generating plants are distributed throughout the Basin and western United States, and their emissions contribute to the total regional pollutant burden. The primary use of natural gas by the proposed land uses would be for combustion to produce space heating, water heating, other miscellaneous heating, or air conditioning, consumer products, and landscaping.

Emissions resulting from operation of land uses in the TMP Future Service Areas were quantified using the California Emissions Estimator Model (CalEEMod). Land use assumptions are based on Table 3-1 in Section 3.0 (Project Description). While the General Plan EIR forecasts traffic conditions to the year 2030, the TMP looks out another five years to provide the maximum possible infrastructure planning. Neither the 2030 nor the 2035 forecasts represent full build-out of all the development capacity in the General Plan, but rather the residential and non-residential growth that is expected under the growth management ordinance (for residential uses) and based on market trends (for non-residential uses). Compared to the 2030 General Plan, the amount of projected housing and employment opportunities increase under the land use assumptions developed for the TMP 2035 Horizon Year and build-out scenarios. This increase is due to the temporal increase between the two scenarios. As indicated in Table 4.2-3, due to the amount of growth that is projected to occur by TMP horizon year 2035, stationary source emissions from the proposed project would exceed SJVAPCD thresholds.

Indirect Source Rule

Due to the exceedances of SJVACPD thresholds for ROG and PM_{10}, individual development projects may be subject to SJVAPCD Rule 9510 (Indirect Source Rule [ISR]). It should be noted that the TMP is consistent with the growth projects of the 2030 General Plan, but looks out another five years to establish consistency with the most recent SJCOG land use development assumptions, employment forecasts, and travel demand model. The amount of projected housing and employment opportunities increase under the land use assumptions developed for the TMP 2035 Horizon Year due to the temporal increase between the two scenarios. Although the proposed Project anticipates growth beyond the 2030 General Plan horizon, it does not change the land uses in the General Plan. The General Plan requires participation in the ISR program. As a result, future development under the proposed project would be required to comply with SJVAPCD Rule 9510 (ISR).

Localized CO Emissions

CO emissions are a function of vehicle idling time, meteorological conditions and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (e.g., adversely affect residents, school children, hospital patients, the elderly, etc.). The SJVAPCD requires CO “hotspot” modeling for projects that reduce the LOS on surrounding roadways to an E or an F, or worsens traffic along roadways that are already operating at an LOS F.

Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections. Table 4.2-4 (Project Buildout Carbon Monoxide Concentrations) provides the list of intersections within the Project area that required a CO hotspot analysis.

Table 4.2-4
Project Buildout Carbon Monoxide Concentrations

Intersection[1]	1-Hour CO (ppm)[2]		8-Hour CO (ppm)[1]	
	1-Hour Standard	Future + Project	8-Hour Standard	Future + Project
#30: Corral Hollow Road/11th Street	20 ppm	3.80	9 ppm	2.55
#31: Tracy Boulevard/11th Street	20 ppm	3.80	9 ppm	2.55
#37: Corral Hollow Road/Schulte Road	20 ppm	3.70	9 ppm	2.48
#38: Tracy Boulevard/Schulte Road	20 ppm	3.60	9 ppm	2.41
#66: Lammers Road/Commerce Way	20 ppm	3.80	9 ppm	2.55

Notes:
1. The intersection numbering corresponds to the intersection ID numbers as noted in the *Citywide Roadway Transportation Master Plan* (dated February 2012).
2. As measured at a distance of 10 feet from the corner of the intersection predicting the highest value. Presented one-hour CO concentrations include a background concentration of 3.40 ppm. Eight-hour concentrations are based on a persistence of 0.67 of the one-hour concentration.

The projected traffic volumes were modeled using the BREEZE ROADS dispersion model. The resultant values were then added to an ambient concentration. A receptor height of 1.8 meters was used in accordance with the EPA's recommendations. The calculations assume a meteorological condition of almost no wind (0.5 meters/second), a flat topological condition between the source and the receptor, and a mixing height of 1,000 meters. A standard deviation of five degrees was used for the deviation of wind direction. The suburban land classification was used for the aerodynamic roughness coefficient. This follows the BREEZE ROADS user's manual definition of suburban as "regular coverage with large obstacles, open spaces roughly equal to obstacle heights, villages, mature forests." All of the above parameters are based on the standards stated in the *Transportation Project-Level Carbon Monoxide (CO Protocol)*, December 1997.

For the purposes of this analysis, the ambient concentration used in the modeling was the highest one-hour measurement from 2009 (the latest year data was available) of SJVAPCD monitoring data at the Stockton-Hazelton Monitoring Station. Actual future ambient CO levels may be lower due to emissions control strategies that would be implemented between now and Project buildout. Due to changing meteorological conditions over an eight-hour period which diffuses the local CO concentrations, the eight-hour CO level concentrations have been found to be typically proportional and lower than the one-hour concentrations, where it is possible to have stable atmospheric conditions last for the entire hour. Therefore, eight-hour CO levels were calculated using the locally derived persistence factor as stated in the CO protocol. The local persistence factor is derived by calculating the highest ratio of eight-hour to one-hour maximum locally measured CO concentrations from the most recent three years of data. Table 4.2-1 shows that of the most recent three years of data, year 2009 has the highest eight-hour to one-hour ratio of 0.67.

The intersections in the study area currently operate at an LOS ranging from LOS A to LOS F for peak hour activities. At proposed Project buildout, five of these intersections would be reduced to LOS to E or F in an unmitigated condition, requiring CO hotspot analyses. As indicated in Table 4.2-5, CO concentrations would be well below the federal and state standards. The modeling results are compared to the CAAQS for CO of 9 ppm on an eight-hour average and 20 ppm on a one-hour average. Neither the one-hour average nor the eight-hour average would be equaled or exceeded. Impacts in regards to CO hotspots would be less than significant.

Odors

The Project would facilitate future transportation system improvements and would not result in any new land uses that generate odors. The generation of odors and hazardous air pollutants is generally associated with certain types of industrial and agricultural activities. Therefore, the Project is not expected to result in the generation of odors or hazardous air pollutants. The odor impacts are, therefore, considered less than significant.

Toxic Air Contaminants

Implementation of the proposed Project would not result in the long-term operation of any stationary sources of TACs. The General Plan EIR analyzed the maximum individual cancer risks and determined that health risks could occur from exposure to Diesel Particulate Matter (DPM) at distances beyond 500 feet from the edge of Interstate 205 (I-205) and out to almost 500 feet for Interstate 580 (I-580). The proposed Project does not include specific development projects and assumes the same rate of growth and land uses as the General Plan.

The General Plan includes policies under Objective AQ-1.2 that minimize the impact of potential sources of toxic air contaminants. Policies 11 and 12 under Objective AQ-1.2 require that residential developments and other uses with sensitive receptors shall be located an adequate distance from air pollution sources such as freeways and other stationary sources. Under Objective AQ-1.2, Policy 13 requires sources of new toxic air pollutants to prepare a Health Risk Assessment and to establish appropriate buffer zones around those areas that pose substantial health risks, as determined by the Assessment. Finally, Policy 1 under Objective AQ-1.2 requires that the City assess air quality impacts using the latest version of CEQA Guidelines and those prepared by the SJVAPCD. Future development projects would be subject to the policies and mitigation measures within the General Plan. Therefore, impacts would be less than significant in this regard.

Conclusion

As indicated in the analysis above, development under the TMP would result in exceedances of the SJVAPCD thresholds of significance for ROG, NO_X, and PM_{10} from mobile source emissions. Project impacts to air quality would be reduced through implementation of the efficiency measures identified in the TMP related to Smart Growth, Context-Sensitive design, and Complete Streets. Improved access, pedestrian and bicycle facilities, increased transit, and improved traffic flow inherently reduce mobile source air pollutants. However, the Project impacts on regional air quality would be significant as the Project's emissions would contribute to region-wide emissions that cause exceedances of the state and federal standards.

Mitigation Measure: No feasible mitigation measures are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

Plan Consistency

4.2-3 IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH THE MOST RECENT AIR QUALITY MANAGEMENT PLAN.

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis:

Air quality conformity refers to the process whereby transportation plans, programs and projects conform to the requirements of applicable general plans and regional plans. Regional plans that apply to the proposed Project include the SJVAPCD Air Quality Attainment Plans (AQAPs) for ozone and PM_{10}, which are part of the State Implementation Plan (SIP).

The California Clean Air Act (CCAA) requires non-attainment districts with severe to extreme air quality problems to provide for a five percent reduction with non-attainment emissions per year. The AQAPs for ozone and PM_{10} prepared for the Basin by the SJVAPCD fulfills this requirement. Banked emission reduction credits are included in the emissions inventories for the AQAP and provide an additional means to attaining the required five percent reduction in these inventories per year.

Air quality conformity to an implementation plan as required in the CCAA Section 176(c) is defined as: "Conformity to the plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and that such activities would not (i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area." The Air Quality Conformity document adopted July 22, 2010, demonstrates that the federally approved Regional Transportation Plan (RTP) and the Federal Transportation Improvement Program (FTIP) conform to the SIP for controlling air pollution sources.

If a project is found to interfere with the region's ability to comply with federal and state air quality standards, local governments then need to consider project modifications or provide mitigation measures to eliminate the inconsistency of the project plans. In order for a project to be considered "consistent" with the latest AQAP, the project must be consistent with the goals, objectives and assumptions in the respective plan to achieve the federal and state air quality standards. As indicated in Impact 4.2-2, above, the proposed Project would result in exceedances of SJVAPCD thresholds for criteria pollutants. As a result, the proposed Project would be inconsistent with the *2007 Ozone Plan* in this regard.

The City's General Plan provides the foundation for the goals, objectives, policies and actions for the TMP. The proposed Project is intended to enhance the City's General Plan goals, objectives, policies, and actions and would ensure adequate and efficient access for all transportation modes. The TMP brings overlap with policies and goals regarding a "complete streets" policy, context-sensitive design, mode split targets, VMT and per capita reduction goals. The TMP provides further clarification on specific policies and actions to meet the goals and objectives of the City's General Plan. As depicted in Table 4.2-5 (TMP and General Plan Consistency), recommended actions for future transportation planning, design and implementation, supplements each objective and are provided to meet the goals, objectives, and policies. As noted in Table 4.2-5, the proposed TMP is consistent with the City's General Plan.

Table 4.2-5
TMP and General Plan Consistency

General Plan	Transportation Management Plan
Circulation Element	
Goal CIR-1: A roadway system that provides access and mobility for all of Tracy's residents and businesses while maintaining the quality of life in the community.	**Consistent.** The proposed TMP would be consistent with, and help implement Goal CIR-1. Refer to the discussions below.
Objective CIR-1.1: Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served. **Policies P1 through P6:** General Plan Policies P1 through P6, which support Objective CIR-1.1, state that the City should develop context-based street designs, preserve rights-of-way needed for future roadway and interchange improvements, continue to apply traffic mitigation fee programs to fund transportation infrastructure, continue to pursue regional, County and State funding to fund roadway projects, shall continue to participate in regional transportation funding decisions, and identify necessary improvements to various intersections on I-205 and I-580 based on land use designations.	**Consistent.** The TMP recommends the following actions to meet Goal CIR-1, Objective CIR-1.1, and Policies P1 through P6: • Implement a complete streets policy for new and retrofitted roads that ensures that adequate right-of-way is provided to enable safe access for all users (motorists, pedestrians, bicyclists, transit vehicles and users). Include flexibility in the policy to balance the function and users for various roadway classifications. Include amenities such as street lighting, landscaping, and transit stops that contribute to the complete street concept. • Incorporate context sensitive design features to improve mobility for all users. The TMP would be consistent with Goal CIR-1, Objective CIR-1.1, and Policies P1 through P6, as implementing complete streets would result in improved access for all transportation modes. These context-based street designs would vary based upon location and function of the areas within the City. These recommended actions would result in a more efficient transportation system.

Objective CIR-1.2: Provide a high level of street connectivity.
 	
Policies P1 through P6: General Plan Policies P1 through P6, which support Objective CIR-1.2, state that the City shall ensure that the street system results in a high level of connectivity, implement a connected street pattern with multiple route options for vehicles, bikes, and pedestrians, provide vehicular, bicycle, and pedestrian connections in new development, develop residential street alignments and designs that provide connectivity while discouraging highspeed cut-through traffic, design new development with a grid or modified grid pattern to facilitate traffic flows, and minimize grading impacts in hillside areas.
	Consistent. The TMP recommends the following actions to meet Goal CIR-1, Objective CIR-1.2, and Policies P1 through P6:
	
	• Utilize access management techniques to provide appropriate spacing of access points on parkways, arterials, and collectors. Utilize context sensitive design principles from Designing Walkable Urban Thoroughfares: A Context Sensitive Approach (Institute of Transportation Engineers, 2010) such as:
	  • Building network capacity and redundancy through a dense, connected network rather than through an emphasis on high levels of vehicle capacity on individual arterial facilities
	  • Minimizing direct property access onto parkways, arterials through design of a connected network of closely spaced arterial and collector thoroughfares and local street connections.
	  • Providing closer spacing of roadways and shorter blocks for areas with higher pedestrian and bicycle activity.
	  • Provide a well connected road system that encourages walking and cycling and maintains a quality of life for all Tracy residents.
	
	The TMP would be consistent with Goal CIR-1, Objective CIR-1.2, and Policies P1 through P6, as implementing access management techniques would result in improved access for all transportation modes throughout the City. These design principles would result in higher street

	connectivity, and would be applied appropriately to the context of the area.

Objective CIR-1.3: Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.
 	
Policies P1 through P10: General Plan Policies P1 through P10, which support Objective CIR-1.3, state that the City shall strive for LOS D on all streets and intersections, allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, ensure roadways and freeways conform to the operational service requirements of the applicable agency, determine the LOS of major streets based on an estimation of peak hour conditions using future average daily traffic forecasts, determine the LOS for project-specific development approvals based on the direct estimation of peak hour conditions, allow the preparation of traffic studies for new developments to determine the project's impacts, consider access control and minimization of median openings, and encourage the use of right-turn-in/rightturn-out only turning movements where local and collector streets intersect arterial streets with medians.
	Consistent. The TMP recommends the following actions to meet Goal CIR-1, Objective CIR-1.3, and Policies P1 through P10:
	
	• Identify locations or areas where the LOS can fall below the standard due to infeasible mitigation measures or where improvements would have an adverse impact to pedestrians or bicycles or other users. The following locations are exempt from the City's LOS D standard:
	  • Any intersections or roadways within ¼ mile of any freeway where LOS E is allowed to discourage inter-regional traffic from using City streets.
	  • Any intersections or roadways located in the Downtown and Bowtie area where LOS E shall be allowed.
	  • At intersections where construction of improvements is not feasible, the LOS may fall below the City's LOS C standard.
	  • During construction of intersection improvements, the LOS may temporarily fall below the City's LOS C standard.
	  • The following five intersections are projected to operate at LOS E or F under Horizon Year Conditions (for these locations, these deficient LOS ratings is the LOS standard):
	  • Corral Hollow Road/Eleventh Street (LOS E - AM Peak Hour, LOS F - PM Peak Hour)
	  • Tracy Boulevard/Eleventh Street (LOS F - PM Peak Hour)
	  • Corral Hollow Road/Schulte Road (LOS F - PM Peak Hour)
	  • Tracy Boulevard/Schulte Road (LOS E - PM Peak Hour)
	  • Lammers Road/Commerce Way (LOS E - PM Peak Hour)
	  • Caltrans facilities where Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on all State Highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.), however, Caltrans recognizes that it may not always be feasible. For Caltrans intersections, City of Tracy impact criteria applies. For freeway segments, LOS D or better is considered acceptable.
	  • County of San Joaquin facilities where LOS D is the minimum acceptable LOS for roadway and intersection operations.
	  • Develop multi-modal LOS analysis procedures and standards to evaluate other facilities (bicycle, pedestrian, and transit) in addition to roads.
	
	The TMP would be consistent with Goal CIR-1, Objective CIR-1.3, and Policies P1 through P10, as identifying the locations and areas where the LOS or improvements would negatively affect pedestrians and bicycles would allow improvement in mobility and access. This would improve the efficiency and functionality of the City's transportation system and would enhance the quality of life in the community.

Objective CIR-1.4: Protect residential areas from commercial truck traffic. **Policies P1 and P2:** General Plan Policies P1 and P2, which support Objective CIR-1.4, state that significant new truck traffic generating uses shall be limited to locations along designated truck routes, in industrial areas or within ¼-mile of freeways, and that the City shall enforce designated truck routes based on the existing City ordinance.	**Consistent.** The TMP recommends the following action to meet Goal CIR-1, Objective CIR-1.4, and Policies P1 and P2: • Erect signs providing notice of adopted truck routes and enforce the use of designated truck routes except for the purpose of pick-up or delivery of materials or merchandise. Provide the heavy vehicle roadway system to encourage commercial growth. The TMP would be consistent with Goal CIR-1, Objective CIR-1.4, and Policies P1 and P2, as this recommended action would inform the community of designated truck routes. Designated truck routes would also increase mobility throughout the City and improve the quality of life by separating truck traffic from sensitive uses.
Objective CIR-1.5: Protect residential areas from through traffic and high travel speeds by facilitating free flow of traffic on major streets. **Policies P1 and P2:** General Plan Policies P1 and P2, which support Objective CIR-1.5, state that the use of local residential streets by non-local and commercial traffic shall be discouraged, and the City shall coordinate the timing of traffic signals on arterials to facilitate traffic movement.	**Consistent.** The TMP recommends the following action to meet Goal CIR-1, Objective CIR-1.5, and Policies P1 and P2: • Utilize sustainable transportation system operation elements to improve system efficiency. For example, implementation of ITS technologies such as corridor signal timing plans, and traffic signal interconnect can enhance the flow of traffic. The TMP would be consistent with Goal CIR-1, Objective CIR-1.5, and Policies P1 and P2, as implementing this action would result in improved efficiency in the transportation system. An improved transportation system would encourage travel on major streets as opposed to cut-through travel in residential areas. Enhanced traffic flow as a result of this action would increase mobility within the City.
Objective CIR-1.6: Maximize traffic safety for automobile, transit, bicycle users, and pedestrians. **Policies P1 and P2:** General Plan Policies P1 and P2, which support Objective CIR-1.6, state that the City shall design streets using context-sensitive design principles, and that new development shall implement traffic calming measures where necessary.	**Consistent.** The TMP recommends the following action to meet Goal CIR-1, Objective CIR-1.6, and Policies P1 and P2: • Implement traffic calming on residential or collector streets as appropriate in accordance with the city's traffic calming program. Construct roadways to discourage speeding. The TMP would be consistent with Goal CIR-1, Objective CIR-1.6, and Policies P1 and P2, as the implementation of traffic calming measures increases safety for all transportation modes and would, therefore, result in improved quality of life within the community.
Objective CIR-1.7: Minimize traffic-related impacts such as noise and emissions on adjacent land uses. **Policies P1 and P2:** General Plan Policies P1 and P2, which support Objective CIR-1.7, state that appropriate buffers and screening mechanisms shall be incorporated into projects to limit traffic impacts, and soundwalls shall only be used next to major arterials and high-volume facilities.	**Consistent.** The TMP recommends the following actions to meet Goal CIR-1, Objective CIR-1.7, and Policies P1 and P2: • Utilize rubberized asphalt in roadway projects to reduce roadway noise. Implement ITS technologies, such as signal coordination, to manage traffic progression and to lower speeds. • Consider implementation of roundabouts, instead of traffic signals or stop-control, to reduce delays and emissions. The TMP would be consistent with Goal CIR-1, Objective CIR-1.7, and Policies P1 and P2, as implementing these actions would reduce traffic noise and delays. Mobility throughout the City's transportation system would be improved with implementation of these actions.
Objective CIR-1.8: Minimize transportation-related energy use and impacts on the environment.	**Consistent.** The TMP recommends the following actions to meet Goal CIR-1, Objective CIR-1.8, and Policies P1 and P2:

Policies P1 and P2: General Plan Policies P1 and P2, which support Objective CIR-1.8, state that transportation project shall avoid disrupting sensitive environmental resources, and when possible, road construction projects shall use sustainable materials.	• Utilize sustainable materials such as recycled materials, permeable surfaces, non-toxic, and bio-degradable materials for roadway projects. • Utilize LED (light emitting diodes) or solar panels for traffic signals and street lights to lower operating and maintenance costs and to decrease energy consumption. The TMP would be consistent with Goal CIR-1, Objective CIR-1.8, and Policies P1 and P2, as the use of sustainable materials and alternative energy sources for traffic signals and street lights would minimize transportation-related energy use within the City.
Goal 2: Adequate interregional access.	**Consistent.** The proposed TMP would be consistent with, and help implement Goal CIR-2. Refer to the discussions below.
Objective CIR-2.1: Support regional planning and implementation efforts to improve interregional highways and interregional travel efficiency. **Policies P1 through P4:** General Plan Policies P1 through P4, which support Objective CIR-2.1, state that the City shall continue to cooperate with regional and State agencies regarding the transportation system, ensure land needed for park-and-ride facilities is conserved, work with other agencies to develop alternative transportation routes and preserve right-of-way north of the I-205 for a future parallel regional roadway.	**Consistent.** The TMP recommends the following actions to meet Goal CIR-2, Objective CIR-2.1, and Policies P1 through P4: • Coordinate between adjacent municipalities and jurisdictions along arterials, crossing borders and at interchanges with freeways. The TMP would be consistent with Goal CIR-2, Objective CIR-2.1, and Policies P1 through P4, as the recommended action would result in increased coordination between agencies regarding the regional transportation system which would consequently improve regional mobility.
Objective CIR-2.2: Discourage interregional travel from diverting from freeways onto Tracy streets. **Policy P1:** General Plan Policy P1, which supports Objective CIR-2.2, states that the City shall consider techniques such as freeway ramp metering or signal timing changes to discourage inter-regional travel from traveling onto Tracy streets.	**Consistent.** The TMP recommends the following action to meet Goal CIR-2, Objective CIR-2.2, and Policy 1: • In conjunction with actions under Objective Cir-1.5, utilize ITS technologies to manage the flow of traffic onto city streets. The TMP would be consistent with Goal CIR-2, Objective CIR-2.1, and Policy 1, as this recommended action would manage the flow onto City streets and improve access and mobility.
Goal 3: Safe and convenient bicycle and pedestrian travel as alternative modes of transportation in and around the city.	**Consistent.** The proposed TMP would be consistent with, and help implement Goal CIR-3. Refer to the discussions below.
Objective CIR-3.1: Achieve a comprehensive system of citywide bikeways and pedestrian facilities. **Policies P1 through P7:** General Plan Policies P1 through P7, which support Objective CIR-3.1, state that the City shall incorporate bicycle and pedestrian facilities on all roadways, separate vehicular from bicycle and pedestrian traffic where possible, ensure a high level of connectivity within the bicycle and pedestrian e bicycle and pedestrian system, establish a ½ mile walkability standard, require new development to include bicycle and pedestrian facilities, and require new commercial developments to provide bicycle parking and/or storage facilities.	**Consistent.** The TMP recommends the following action to meet Goal CIR-3, Objective CIR-3.1, and Policies P1 through P7: • Provide Class I bike trails on parkways and arterials and Class II bike lanes on collectors. Class III bike routes shall be considered on roadways where sufficient width for a dedicated lane is not provided. • Implement a comprehensive Safe Routes to School Program. • Seek funding opportunities at all levels to implement pedestrian improvements and projects. • Provide pedestrian enhancements at intersections, where feasible. Enhancements include high visibility crosswalks, pedestrian countdown timers, and adequate crossing times, median refuge islands for wide streets, smaller curb radii, and shorter cycle lengths. • Consider preparation of a streetscape plan to define &

	coordinate design elements (street furniture, lighting, landscaping, width of pedestrian path, and buffer zones) when planning a walkable thoroughfare. • Create a pedestrian and bicycle safety action plan to identify steps to reducing the number of pedestrian and bicycle crashes. The plan will present existing deficiencies, identify appropriate improvements to address these deficiencies, and include implementation strategies. This plan should include public education programs to educate pedestrians, bicyclists, and motorists. The TMP would be consistent with Goal CIR-3, Objective CIR-3.1, and Policies P1 through P7, as these recommended actions would result in enhanced pedestrian and bicycle travel throughout the City which would encourage residents to consider alternative transportation modes.
Goal 4: A balanced transportation system that encourages the use of public transit and high occupancy vehicles.	**Consistent.** The proposed TMP would be consistent with, and help implement Goal CIR-4. Refer to the discussions below.
Objective CIR-4.1: Promote public transit as an alternative to the automobile. **Policies P1 through P6:** General Plan Policies P1 through P6, which support Objective CIR-4.1, state that the City shall promote efficient and affordable public transportation, continue to partner with regional agencies regarding transit facilities, continue to operate the Tracey fixed-route and paratransit systems, seek funding for additional transit service expansion, require developments to provide transit-related opportunities, and encourage efforts for additional regional transit service.	**Consistent.** The TMP recommends the following actions to meet Goal CIR-4, Objective CIR-4.1, and Policies P1 through P6: • Utilize sustainable transportation system operation elements to encourage and improve transit usage. For example, implementation of measures such as transit signal priority, queue jump lanes, dedicated bus lanes, and improved shelter facilities will provide faster service, increased rider satisfaction and ridership. • Require new employment centers to participate in trip reducing strategies such as Transportation Demand Management program and to provide incentives for their participation. • Provide transit service/connections to major pedestrian generators such as major employment and retail centers and transit-oriented developments. • Consider changes to the Zoning Ordinance to allow a reduced parking supply that is less than code requirements thus encouraging use of alternative modes of transportation. The TMP would be consistent with Goal CIR-4, Objective CIR-4.1, and Policies P1 through P6, as these recommended actions allow for additional transit opportunities throughout the City which would encourage residents to increase transit ridership.
Objective CIR-4.2: Work to achieve connectivity between all modes of transportation. **Policies P1 through P6:** General Plan Policies P1 through P6, which support Objective CIR-4.2, state that the City shall complete the Multi Modal Transit Center, continue to implement arterial street standards, encourage the expansion of transit services, develop a fully integrated multi-modal transportation system, provide an efficient, effective, and coordinated transit system, and encourage transit use, walking, bicycling, and other	The TMP recommends the following action to meet Goal CIR-4, Objective CIR-4.2, and Policies P1 through P6: • Seek reconstruction opportunities on thoroughfares to provide and improve multi-modal access and circulation. • Measure T-5 of the City's Draft Sustainability Action Plan - February 2011 (SAP) lists several smart growth, urban design and planning measures including amendments to the zoning ordinance to require adequate pedestrian access, closure of sidewalk gaps, establishment of walkability standards, and amendment or creation of subdivision design standards to address spacing and connectivity. These goals must be

non-motorized forms of transportation.	implemented in the development of all specific plans in the city and where roads and intersections are reconstructed. The TMP would be consistent with Goal CIR-4, Objective CIR-4.2, and Policies P1 through P6, as these recommended actions would result in increased transit and alternative transportation options. Multi-modal access would encourage residents to become less dependent on automobile travel.

The Project would not result in new development within the City. However, as previously noted, the Project's VMT anticipated for 2035 exceeds the VMT considered in the General Plan and corresponding General Plan EIR for 2030. As described above, the General Plan does not have a horizon year, but utilized the year 2030 for traffic modeling purposes to be consistent with the SJCOG model. Since completion of the General Plan, SJCOG has updated their planning year to 2035. As a result, the TMP utilizes 2035 to be consistent with the SJCOG traffic forecasts. As concluded in the General Plan EIR, the General Plan would not be consistent with SJVAPCD's *Clean Air Plans.* Furthermore, as discussed within the General Plan EIR, the projected growth within the City would lead to an increase in the region's VMT, beyond what has been identified by the anticipated SJCOG and the SJVAPCD. Therefore, the proposed Project would result in estimated VMT beyond what was anticipated in the General Plan and what has been identified by the SJCOG and SJVAPCD. Impacts associated with plan consistency with the SJVAPCD *Clean Air Plans* would also be considered significant and unavoidable for the proposed Project.

Mitigation Measure: No feasible mitigation measures are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

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4.3 GREENHOUSE GAS EMISSIONS

This section evaluates greenhouse gas (GHG) emissions associated with the proposed Project and analyzes Project compliance with applicable regulations. Consideration of the Project's consistency with applicable plans, policies and regulations, as well as the introduction of new sources of GHGs, is included in this section.

4.3.1 ENVIRONMENTAL SETTING

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[1] The greenhouse effect traps heat in the troposphere through a threefold process as follows: short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit it into space and toward the Earth. This "trapping" of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

GLOBAL CLIMATE CHANGE GASES

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs normally associated with the proposed Project include the following:[2]

- *Water Vapor (H_2O)*. Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively.

  The primary human-related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.

- *Carbon Dioxide (CO_2)*. Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 36 percent.[3] Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining GWPs for other GHGs.

[1] The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

[2] All GWPs are given as 100 year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change. Climate Change (Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*, 1996).

[3] U.S. Environmental Protection Agency, *Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2009*, April 2011.

- *Methane (CH_4)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the U.S., the top three sources of methane are landfills, natural gas systems and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production and power generation. The GWP of methane is 21.

- *Nitrous Oxide (N_2O)*. Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production and nitric acid production. The GWP of nitrous oxide is 310.

- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs range from 140 for HFC-152a to 11,700 for HFC-23.[4]

- *Perfluorocarbons (PFCs)*. Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semi conductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).[5] The GWP of PFCs range from 6,500 to 9,200.

- *Sulfur hexafluoride (SF_6)*. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio compared to carbon dioxide (four parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).[6]

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O_3) depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The U.S. is scheduled to achieve a 100 percent reduction to the cap by 2030. The GWPs of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b.[7]

[4] U.S. Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010. http://www.epa.gov/highgwp/scientific.html

[5] Ibid.

[6] Ibid.

[7] U.S. Environmental Protection Agency, *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*, dated October 29, 2009. http://www.epa.gov/EPA-AIR/1996/January/Day-19/pr-372.html

- *1,1,1 trichloroethane*. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 110 times that of carbon dioxide.[8]

- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the EPA's Final Rule (57 FR 3374) for the phase out of O_3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with GWPs ranging from 4,600 for CFC 11 to 14,000 for CFC 13.[9]

4.3.2 REGULATORY SETTING

FEDERAL FRAMEWORK

The Federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (EPA) to define national ambient air quality standards (national standards) to protect public health and welfare in the U.S. The FCAA does not specifically regulate GHG emissions; however, on April 2, 2007, the U.S. Supreme Court in *Massachusetts v. U.S. Environmental Protection Agency*, determined that GHGs are pollutants that can be regulated under the FCAA. The EPA adopted an endangerment finding and cause or contribute finding for GHGs on December 7, 2009. The final rule was effective January 14, 2010.

Under the endangerment finding, the EPA Administrator found that the current and projected atmospheric concentrations of the six key GHGs (CO_2, CH_4, N_2O, HFCs, PFCs and SF_6) threaten the public health and welfare of current and future generations. Under the cause of contribute finding, the EPA Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Based on these findings, on April 1, 2010, the EPA finalized the light-duty vehicle rule controlling GHG emissions. This rule confirmed that January 2, 2011, is the earliest date that a 2012 model year vehicle meeting these rule requirements may be sold in the U.S. On May 13, 2010, the EPA issued the final GHG Tailoring Rule. This rule set thresholds for GHG emissions that define when permits under the Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. Implementation of the Federal rules is expected to reduce the level of emissions from new motor vehicles and large stationary sources.

STATE FRAMEWORK

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring, and that there is a real potential for severe adverse environmental, social and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

[8] Ibid.
[9] U.S. Environmental Protection Agency, *Class I Ozone Depleting Substances*, August 19, 2010. http://www.epa.gov/ozone/ods.html

There are currently no state regulations in California that establish ambient air quality standards for GHGs. However, California has passed laws directing the California Air Resources Board (CARB) to develop actions to reduce GHG emissions, and several state legislative actions related to climate change and GHG emissions have come into play in the past decade.

Assembly Bill 1493 (AB 1493). AB 1493 required CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR Section 1900, 1961), and adoption of Section 1961.1 (13 CCR Section 1961.1), require automobile manufacturers, beginning with the 2009 model year, to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons). The regulations would reduce GHG emissions from California passenger vehicles by about 22 percent by 2012 and about 30 percent by 2016.[10]

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against CARB to prevent enforcement of 13 CCR Sections 1900 and 1961, as amended by AB 1493 and 13 CCR 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al*. [456 F.Supp.2d 1150, 1172, E.D. Cal. 2006]). The suit in the U.S. District Court for the Eastern District of California contended that California's implementation of regulations that regulate vehicle fuel economy would violate various federal laws, regulations, and policies.

In January 2007, the judge hearing the case accepted a request from the California Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the U.S. Supreme Court case, *Massachusetts v. U.S. Environmental Protection Agency*, the primary issue in question was whether the FCAA authorizes the EPA to regulate CO_2 emissions. The EPA contended that the FCAA does not authorize regulation of CO_2 emissions, whereas Massachusetts and ten other states, including California, sued the EPA to begin regulating CO_2. As mentioned above, the U.S. Supreme Court ruled on April 2, 2007, that GHGs are "air pollutants" as defined under the FCAA and that the EPA is granted authority to regulate CO_2 (*Massachusetts v. U.S. Environmental Protection Agency* [2007] 549 U.S. 05-1120).

On December 12, 2007, the U.S. District Court for the Eastern District of California rejected the automakers' claim by finding that if California receives appropriate authorization from the EPA (the last remaining factor in enforcing the standard), these regulations would be consistent with and have the force of federal law. This authorization to implement more stringent standards in California was requested in the form of a FCAA Section 209(b) waiver in 2005. Since that time, the EPA has failed to act in granting California authorization to implement the standards. California filed a suit against the EPA for the delay. The EPA denied California's request for the waiver to implement AB 1493 in late December 2007. California filed a suit against the EPA for its decision to deny the FCAA waiver. On January 21, 2009,

[10] California Air Resources Board, *Fact Sheet, Climate Change Emission Control Regulations*, http://www.arb.ca.gov/cc/ccms/factsheets/cc_newfs.pdf, accessed on September 21, 2010.

CARB submitted a letter to EPA Administrator Jackson regarding California's request to reconsider the waiver denial. [11] The EPA approved the waiver on June 30, 2009.[12]

Assembly Bill 32 (AB 32). California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

The executive order directed the secretary of the Cal/EPA to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard

[11] California Air Resources Board, http://www.arb.ca.gov/newsrel/arbwaiverrequest.pdf, accessed on September 21, 2010.

[12] U.S. Environmental Protection Agency, http://www.epa.gov/otaq/climate/ca-waiver.htm, accessed on September 21, 2010.

(LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009, CARB approved the proposed regulation to implement the LCFS. The LCFS will reduce GHG emissions from the transportation sector in California by about 16 million metric tons (MMT) in 2020. The LCFS is designed to reduce California's dependence on petroleum, create a lasting market for clean transportation technology, and stimulate the production and use of alternative, low-carbon fuels in California. The LCFS is designed to provide a durable framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. One standard is established for gasoline and the alternative fuels that can replace it. A second similar standard is set for diesel fuel and its replacements.

The standards are "back-loaded"; that is, there are more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the LCFS will be based on a combination of strategies involving lower carbon fuels and more efficient, advanced-technology vehicles.

Senate Bill 1368 (SB 1368). SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emissions rate from a baseload combined-cycle, natural gas–fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by CPUC and CEC.

Senate Bill 97 (SB 97). SB 97, signed August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the state Resources Agency, to prepare, develop and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions). SB 97 also removes, both retroactively and prospectively, the legitimacy of litigation alleging inadequate CEQA analysis of effects of GHG emissions in the environmental review of projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E). This provision was repealed by operation of law on January 1, 2010; at that time, any such projects that remain unapproved will no longer be protected against litigation claims of failure to adequately address climate change issues. In the future, this bill will only protect a handful of public agencies from CEQA challenges on certain types of projects, and only for a few years time.

As set forth more fully below, in June 2008, OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible.[13] OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in Section 15064.7 of the *CEQA*

[13] Governor's Office of Planning and Research (OPR), *CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, June 19, 2008.

Guidelines that will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state.

On December 30, 2009, the Resources Agency adopted the *CEQA Guidelines* Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the *CEQA Guidelines* Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The *CEQA Guidelines* Amendments became effective on March 18, 2010.

Senate Bills 1078 and 107 and Executive Order S-14-08. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. Executive Order S-14-08 was November 2008 and expands the state's Renewable Energy Standard to 33 percent renewable power by 2020.[14] Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the state come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Senate Bill 375 (SB 375). SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

CARB Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations.[15] CARB's Scoping Plan contains the main strategies California will implement to reduce carbon dioxide equivalent (CO_2eq[16]) emissions by 174 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO_2eq under a business as usual (BAU)[17] scenario

[14] Office of the Governor, *Press Release: Governor Schwarzenegger Advances State's Renewable Energy Development*, http://gov.ca.gov/press-release/11073/, accessed on September 21, 2010.

[15] California Air Resources Board, *Climate Change Scoping Plan, A Framework for Change*, December 2008.

[16] Carbon Dioxide Equivalent (CO_2eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

[17] "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions. See http://www.arb.ca.gov/cc/inventory/data/forecast.htm. Note that there is significant controversy as to what BAU means. In

(This is a reduction of 42 MMT CO_2eq, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020).

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. At the time CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

In *Association of Irritated Residents, et al. v. California Air Resources Board, et al*., the Superior Court of California for the County of San Francisco (Superior Court) issued a Final Order on May 20, 2011 that prevents CARB from implementing a statewide GHG regulatory program. Although the court upheld the impact analysis contained in the environmental document for the Scoping Plan, the court found that the analysis of project alternatives was not sufficient for informed decision-making and public review under CEQA. The court found that CARB violated CEQA by failing to fully evaluate possible alternatives to the measures described in the Scoping Plan, and focused specifically on the cap and trade program. The court noted that CEQA requires that CARB undertake a similar analysis of the impacts of each alternative so that the public may know not only why cap and trade was chosen, but also why the alternatives were not.

It should be noted that the Superior Court held in the favor of CARB on all substantive challenges to the State's compliance with AB 32 mandates. The Court stated that "as the agency with technical expertise and the responsibility for the protection of California's air resources, CARB has substantial discretion to determine the mix of measures needed to 'facilitate' the achievement of GHG reductions."[18]

On June 1, 2011, CARB filed a notice of appeal with the Court of Appeal, First Appellate District and followed up its appeal with a Petition for a Writ of Supersedeas, asking the First Appellate District to stay the Superior Court's decision. CARB's intent was to clarify the scope of the order, which enjoins CARB's implementation of all measures in the Scoping Plan, including programs like improved energy efficiency, clean car standards, and low-carbon fuel regulations. The First Appellate District granted CARB's Petition for Writ of Supersedeas, staying the Superior Court's injunction and allowing CARB to move forward with Scoping Plan implementation until the Court of Appeal renders a decision or issues another order. As a result of the lawsuit, CARB has adjusted the implementation schedule for the cap and trade program and compliance obligations have been pushed back.

CARB also released a *Supplement to the AB 32 Scoping Plan Functional Equivalent Document* on June 13, 2011, which is designed to address the CEQA flaws first identified by Superior Court. The Supplement provides an expanded analysis of the five alternatives to the Scoping Plan, including a no project alternative, a variation of the proposed combination of reduction measures proposed in the Scoping Plan, and three alternatives based on specific programs including cap-and-trade, source-specific regulatory requirements, and a carbon fee or tax.

determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

[18] Superior Court of California, County of San Francisco, *Statement of Decision: Association of Irritated Residents, et al v. California Air Resources Board*, March 18, 2011.

LOCAL FRAMEWORK

City of Tracy Sustainability Action Plan

On February 1, 2011, the City adopted a Sustainability Action Plan (SAP) in response to AB 32. Consistent with the recommendations of the CARB Scoping Plan, the City's SAP establishes a GHG reduction goal of 29 percent of community and municipal GHG emissions from 2020 BAU projected levels. To achieve the reduction goal, the SAP provides various goals and best practices that focus on energy, transportation and land use, solid waste, water use, agriculture and open space, biological resources, air quality, public health, and economic development. The SAP reduction targets are based on the following objectives:

- 20 percent increase in the percentage of City employees who participate in travel demand management programs from 2006 levels.
- 20 percent increase in the percentage of non-City employees who participate in travel demand management programs from 2006 levels.
- 20 percent reduction in the municipal VMT from 2006 levels.
- 20 percent reduction in the community VMT per capita from 2006 levels.

To make sure objectives are reached, the action plan measures were established from ideas that were developed during community workshops. Some of the ideas that are applicable to transportation planning are:

- Installing parking, shower and dressing facilities, and creating a bicycle sharing program to promote bicycle usage;
- Increasing transit route coverage to be within ½ mile of all residents and ¼ mile of 75 percent of residents in new developments;
- Filling the gaps in sidewalks along key pedestrian routes; and
- Develop a bottleneck improvement program to execute improvements along the City's key corridors.

4.3.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

CEQA Thresholds

According to Appendix G of the *CEQA Guidelines*, the proposed Project would have a significant adverse environmental impact if it causes one or more of the following to occur:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs

San Joaquin Valley Air Pollution Control District Thresholds

Under CEQA, the SJVAPCD is an expert commenting agency on air quality and GHG emissions within its jurisdiction or impacting its jurisdiction. The SJVAPCD adopted the *Climate Change Action Plan* in

August 2008. The *Climate Change Action Plan* was developed to assist local land use agencies and businesses in complying with state requirements.

In December 2009, the SJVAPCD adopted their *Guidance for Valley Land-Use Agencies in Addressing GHG Emissions Impacts for New Projects Under CEQA* (GHG Guidance) to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Joaquin Valley Air Basin. This document provides SJVAPCD-recommended procedures for evaluating potential air quality and GHG impacts during the environmental review process consistent with CEQA requirements. The SJVAPCD GHG Guidance establishes standards that require projects to reduce their GHG emissions by at least 29 percent from BAU levels, through the application of Best Performance Standards (BPS) or other mitigation measures, to achieve a less than cumulatively significant impact under CEQA. To have a less than significant individual and cumulative impact on global climate change, projects must be determined to have reduced or mitigated GHG emissions by 29 percent, consistent with the GHG emission reduction targets established in CARB's AB 32 Scoping Plan.

Process for Evaluating GHG Significance

- Projects determined to be exempt from the requirements of CEQA would have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project-specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would have a less than significant individual and cumulative impact for GHG emissions. 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. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing BPS would not require quantification of project-specific GHG emissions. Consistent with *CEQA Guidelines*, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project-specific GHG emissions and demonstration that project-specific GHG emissions would be reduced or mitigated by at least 29 percent, including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29 percent GHG emission reduction would be determined to have a less than significant individual and cumulative impact for GHG.
- Notwithstanding any of the above provisions, projects requiring the preparation of an EIR for any other reason would require quantification of project-specific GHG emissions. Projects implementing BPS or achieving at least a 29 percent GHG emission reduction would be determined to have a less than significant individual and cumulative impact for GHG.

The use of BPS streamlines the significance determination process by pre-quantifying the emission reductions that would be achieved by a specific GHG emission reduction measure and pre-approving the use of such a measure to reduce project-related GHG emissions. Establishing BPS also streamlines the CEQA review process by providing project proponents, lead agencies and the public with clear guidance on how to reduce GHG emissions impacts. Thus, project proponents would be able to incorporate project-specific GHG reduction measures during the initial project design phase, which could reduce project-specific GHG impacts to less than significant levels.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Greenhouse Gas Emissions Impacts

4.3-1 GREENHOUSE GAS EMISSIONS GENERATED BY THE PROPOSED PROJECT WOULD HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT.

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis:

In addition to proposing Smart Growth, Context-Sensitive Design, and Complete Streets guidelines, strategies, principles, and design elements, the City of Tracy Transportation Master Plan (TMP) builds upon the goals and objectives contained in the Circulation Element of the General Plan and the City's Sustainability Action Plan (SAP). The TMP includes an additional five years of growth past the year identified by the General Plan to provide the maximum possible infrastructure planning and to be consistent with the San Joaquin Council of Governments (SJCOG) travel demand model. Direct Project-related GHG emissions include emissions from area sources and mobile sources. Table 4.3-1 (Greenhouse Gas Emissions) presents the estimated CO_2, N_2O and CH_4 emissions associated with General Plan and TMP.

Mobile source emissions resulting from Project implementation were quantified using EMFAC 2007 and the vehicle miles traveled (VMT) associated with the TMP. Emissions resulting from operation of land uses in the SOI area studied in the TMP, including Future Service Areas, were quantified using the California Emissions Estimator Model (CalEEMod). Land use assumptions are based on Table 3-1 in Section 3.0 (Project Description). Note that neither the 2030 nor the TMP 2035 forecasts represent full build-out of all the development capacity in the General Plan, but rather the residential and non-residential growth that is expected under the growth management ordinance (for residential uses) and based on market trends (for non-residential uses). The CalEEMod computer model outputs contained within the Appendix B (Air Quality and Greenhouse Gas Emissions Data) outline the assumptions used to calculate mobile source and area source GHG emissions. Operational GHG estimations are based on energy emissions from natural gas usage, water transport, as well as automobile emissions. Total GHG emissions during operations of the 2035 TMP would be 2,881,730.04 $MTCO_2eq$/year. The net increase of Project-related GHG emissions over existing conditions would total 1,516,238.56 $MTCO_2eq$/year, an increase of approximately 11 percent.

Table 4.3-1
Greenhouse Gas Emissions

Source	CO_2 Metric Tons/year	N_2O Metric Tons of CO_2eq[3]	CH_4 Metric Tons of CO_2eq[3]	Total Metric Tons of CO_2eq
EXISTING GHG EMISSIONS				
Direct Emissions				
▪ Area Source[1]	74,243.95	198.40	3,860.85	78,302.69
▪ Mobile Source[2]	857,924.96	54,744.64	1,082.04	913,751.65
Total Direct Emissions[5]	932,168.91	54,943.04	4,942.89	992,054.34
Indirect Emissions				
▪ Electricity Consumption[1]	158,170.46	861.80	118.86	159,151.27
▪ Water[1]	90,021.16	13,568.70	35,853.09	139,443.96
▪ Waste[1]	33,395.70	0.00	41,446.23	74,841.91
Total Indirect Emissions[4]	281,587.32	14,430.50	77,418.18	373,437.14
Total Existing Emissions	***1,213,756.23***	***69,373.54***	***82,361.07***	***1,365,491.48***
GENERAL PLAN 2030 GHG EMISSIONS				
Direct Emissions				
▪ Area Source[1]	91,711.27	288.30	4,020.03	96,018.80
▪ Mobile Source[2]	1,285,392.52	22,744.44	587.39	1,308,724.35
Total Direct Emissions[5]	1,377,103.79	23,032.74	4,607.42	1,404,743.15
Indirect Emissions				
▪ Electricity Consumption[1]	270,180.14	1,469.40	206.85	217.856.80
▪ Water[1]	178,333.29	26,976.20	71,282.19	276,591.26
▪ Waste[1]	64,248.10	0.00	79,735.95	143,984.14
Total Indirect Emissions[4]	512,761.53	28,445.60	151,224.99	692,432.20
Total General Plan 2030 Emissions	***1,889,865.32***	***51,478.34***	***155,832.41***	***2,097,175.35***
TRANSPORTATION MASTER PLAN 2035 GHG EMISSIONS				
Direct Emissions				
▪ Area Source[1]	92,265.36	300.70	3,869.67	96,434.27
▪ Mobile Source[2]	1,856,545.31	32,850.72	848.40	1,890,244.43
Total Direct Emissions[5]	1,948,810.67	33,151.42	4,718.07	1,986,678.70
Indirect Emissions				
▪ Electricity Consumption[1]	318,017.15	1,726.70	247.38	319,991.98
▪ Water[1]	246,070.63	37,317.80	98,621.46	382,010.82
▪ Waste[1]	86,141.45	0.00	106,907.01	193,048.54
Total Indirect Emissions[4]	650,229.23	39,044.50	205,775.85	895,051.34
Total Transportation Master Plan Emissions	***2,599,039.90***	***72,195.92***	***210,493.92***	***2,881,730.04***
TOTAL NET GHG EMISSIONS (2035 Emissions Beyond Existing Conditions)	***1,385,283.67***	***2,822.38***	***128,132.85***	***1,516,238.56***

Notes:
1. Emissions calculated using CalEEMod computer model. Land use assumptions are based on Table 3-1 in Section 3.0 (Project Description).
2. Mobile source emissions are based on EMFAC2007 modeling results, and trip rate/vehicle miles traveled data provided in the *Citywide Roadway Transportation Master Plan* (dated February 2012).
3. CO_2 Equivalent values calculated using the U.S. Environmental Protection Agency Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/cleanenergy/energy-resources/calculator.html, accessed December 2010.
4. Totals may be slightly off due to rounding.

Refer to Appendix B (Air Quality and Greenhouse Gas Emissions Data), for detailed model input/output data.

Conclusion

As shown in Table 4.3-1, total Project-related emissions would be 2,881,730.04 $MTCO_2eq$/year. It should be noted that the proposed Project would achieve a reduction in trips with implementation of the TMP and SAP transportation measures. Emissions reductions from TMP trip reduction features and implementation of the SAP Strategies include efficiency measures related to Smart Growth, Context-Sensitive design, and Complete Streets. Improved access, pedestrian and bicycle facilities, increased transit, and improved traffic flow inherently reduce mobile source emissions. The TMP describes future roadway conditions within the City and recommended improvements to accommodate future growth. The TMP also includes recommended actions to support the goals and objectives of the General Plan's Circulation Element and recommended transportation strategies, principles, and design elements intended to meet sustainability and GHG emission reduction goals.

The TMP traffic forecasts were developed by adjusting the General Plan 2030 development assumptions to represent reasonable expectations for development by the year 2035 (Horizon Year). City of Tracy staff developed the land use assumptions by allocating growth to various areas in the City identified by the General Plan based on a combination of considerations, including how advanced each area is in the entitlement process; existing or expected conditions of approval; and, anticipated environmental or jurisdictional constraints.

Compared to the 2030 General Plan, the amount of projected housing and employment opportunities increase under the land use assumptions developed for the TMP year 2035 and build-out scenarios. This increase is due to the temporal increase between the two scenarios. As indicated in Section 3.0 (Project Description), during the 2035 year scenario, housing increases by approximately 1,600 units compared to the General Plan 2030 land use assumptions, and the number of jobs increases by approximately 15,600. The TMP anticipates a greater increase of jobs than housing units based on the allocation of projected growth based on the City's growth management ordinance (for residential uses) and based on market trends (for non-residential uses). The increase in jobs anticipated under the TMP 2035 scenario is a result of the sustainability goals of the TMP and would achieve an increased jobs/housing balance. The jobs/housing balance would support of a diverse range of business activities, incentives to attract new businesses and industries, and increased development in the City.

Table 3.7 (Trip Reductions Due to SAP Measures – Horizon Year) of the TMP indicates that the SAP measures that would be implemented through the TMP would result in a 5.8 percent trip reduction in the Future Development Areas, and a 4.4 percent trip reduction Citywide; also refer to Table 3-3 in Section 3.0 (Project Description). Implementation of the SAP measures would balance land uses within the City by promoting more efficient future land use patterns as well as implementing complete streets smart growth design elements.

As discussed in the General Plan EIR, implementation of the SAP would achieve a 22 to 28 percent reduction in GHG emissions from BAU conditions throughout the City. The SJVAPCD requires a 29 percent reduction from BAU projected emissions for GHG impacts to be considered less than significant. As the SAP would not achieve the SJVAPCD reduction requirement, the City's General Plan EIR determined that GHG emissions reductions would be significant and unavoidable and a Statement of Overriding Considerations was adopted. The CEQA analysis for the proposed Project tiers off of the General Plan EIR pursuant to CEQA Guidelines Sections 15148 and 15150 and incorporates it by reference. However, the TMP projects growth to the year 2035, an additional five years past the growth projection year identified by the General Plan for Traffic and Circulation[19]. The TMP includes an

[19] The General Plan only has a "horizon year" for Traffic and Circulation; all other elements of the General Plan do not expire.

additional five years of growth beyond the General Plan horizon year to establish consistency with the most recent San Joaquin Council of Governments (SJCOG) land use development assumptions, employment forecasts, and travel demand model. Consequently, the VMTs associated with the TMP exceed those forecast for the 2030 General Plan analysis. The General Plan EIR indicated that all feasible mitigation measures for GHG emissions were included in the General Plan and SAP. No additional measures beyond those found in the SAP have been found feasible to reduce GHG emissions associated with the proposed Project. The General Plan EIR determined that GHG emissions under the SAP would not meet SJVAPCD criteria, and impacts would be significant and unavoidable. As the proposed Project contemplates growth beyond what was modeled in the General Plan, and the Project would result in greater impacts than those identified in the General Plan EIR, impacts associated with the proposed Project would be significant and unavoidable.

Mitigation Measure: No feasible mitigation beyond measures included in the General Plan, Sustainability Action Plan, and Transportation Master Plan are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

Consistency with Applicable GHG Plans, Policies, or Regulations

4.3-2 IMPLEMENTATION OF THE PROPOSED PROJECT WOULD NOT CONFLICT WITH AN APPLICABLE GREENHOUSE GAS REDUCTION PLAN, POLICY OR REGULATION.

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis:

The City SAP establishes a GHG emission reduction target that is based on SJVACPD threshold of a 29 percent reduction from BAU emissions. The City's target was also developed following a review of sustainability targets set by other entities, such as the Attorney General's Office, and have been refined iteratively and concurrently with the sustainability measures.

The City has developed a variety of policies and measures as part of the SAP that are intended to meet applicable policies and regulations to reduce GHG emissions. The SAP includes 39 measures in the energy, transportation and land use, solid waste and water sectors that would reduce GHG emissions. The City General Plan also includes various policies that are applicable to the proposed Project. For example, the following describes the relevant policies that would reduce GHG emissions:

- The Community Character Element policies encourage the development of urban green spaces, promote the incorporation of pedestrian and bicycle access into site design, and discourage new strip commercial development.
- The Economic Development Element includes policies encouraging green businesses, local procurement of green products, and employment opportunities that reduce the need for vehicle trips.
- The Circulation Element provides policies to encourage the use of non-motorized transportation, transit, and low-emission vehicles; avoid disrupting sensitive environmental resources during transportation projects; and use sustainable materials in road construction and repair projects.

- The Open Space and Conservation Element incorporates resource conservation through construction and development practices, expanding the urban forest, and using water efficient landscaping techniques.
- The Public Facilities Element includes policies that require standards to reduce water and wastewater treatment demand in new development and redevelopment.
- The Air Quality Element policies encourage green building standards for new development, encourage solar panels on new development, encourage use of light emitting diodes (LED) for outdoor lighting, and reduce GHG emissions from municipal operations and new development.

Consistent with the SAP, the TMP includes policies and measures to increase transit usage and opportunities, to improving traffic flow in the city, to support development of new bicycle and pedestrian facilities, and other land use policies.

The General Plan and SAP measures would increase the percentage of jobs in Tracy that are filled by residents of Tracy to 72 percent, an increase of 32 percent from the conditions in 2000.[20] According to the General Plan EIR, this increase in worker capture would significantly decrease commute trips for Tracy residents, a major component of Tracy's GHG emissions inventory. As described above, the TMP builds upon the goals and objectives in the General Plan and SAP, and anticipates additional jobs beyond the General Plan 2030 horizon. It should be noted that the number of added jobs anticipated in 2035 outweigh the number of anticipated dwelling units by approximately 10 to 1. This would further contribute to a jobs/housing balance within the City, thereby building upon the General Plan.

In total, the General Plan and SAP would reduce 2020 BAU GHG emissions by between 382,422 and 486,115 $MTCO_2eq$. As indicated in the General Plan EIR, an additional reduction of between 21,086 and 124,779 $MTCO_2eq$ is needed in order to fully achieve a 29 percent reduction from BAU projected emissions. As part of the process to develop the General Plan and SAP, many potential measures were considered. Some of the potential measures were not included in the SAP due to the lack of data or examples and political and/or economic constraints. As the remaining reductions are needed in order to reach the GHG target, the General Plan EIR determined that GHG emissions reductions would not achieve the SJVAPCD threshold of 29 percent. The proposed Project would be consistent with SAP as it builds upon the goals and objectives contained in the Circulation Element of the General Plan and the SAP by proposing Smart Growth, Context-Sensitive design, and Complete Streets guidelines, strategies, principles, and design elements. As the proposed Project would be consistent with the City's SAP, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance After Mitigation: Not applicable.

[20] City of Tracy, *General Plan Draft Recirculated Supplemental EIR*, February 1, 2011.

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5.0 GROWTH INDUCING AND CUMULATIVE IMPACTS

5.1 GROWTH INDUCING IMPACTS

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) evaluate the "growth-inducing" effects of a proposed project. According to Section 15126.2(d) of the *CEQA Guidelines*, growth-inducing effects include:

- Fostering economic or population growth, or the construction of additional housing;
- Removing obstacles to population growth;
- Taxing existing community services or facilities, requiring the construction of new facilities that could cause significant environmental effects; and,
- Encouraging and facilitating other activities that could significantly affect the environment, either individually or cumulatively.

A project can directly or indirectly induce growth. Construction of new housing would directly induce growth. However, if a project creates substantial new permanent employment opportunities, it could indirectly induce growth by stimulating the need for additional housing and services to support the new employment demand. It could also indirectly induce growth by removing infrastructure limitations or regulatory constraints on a required public service, such as roads or water service.

Section 15126.2(d) also states that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. However, it should be noted that growth can be detrimental if it is not consistent with land use plans and growth management policies established to ensure orderly growth and development that is supported by adequate public services. Should a proposed project induce growth beyond planned levels or rates or exceed reliable population projections, it could indirectly cause additional adverse impacts on the environment and public services beyond those identified, mitigated, or acknowledged in local planning documents. Therefore, this growth inducement analysis evaluates the consistency of the growth caused or induced by the proposed Project (Citywide Transportation Master Plan [TMP]) with the growth envisioned for the City of Tracy (City) in the City of Tracy General Plan (General Plan).

It should be noted that the Project proposes improvements and expansions to the City's existing transportation system that are necessary to accommodate future growth anticipated by the General Plan. The General Plan 2030 development assumptions were adjusted to represent reasonable expectations for development by the year 2035. The TMP includes an additional five years of growth beyond the General Plan horizon year to establish consistency with the most recent San Joaquin Council of Governments (SJCOG) land use development assumptions, employment forecasts, and travel demand model. In addition, establishing consistency with the SJCOG model makes it possible to consistently identify improvements that are uniform between the regional agencies that are responsible for freeways, Congestion Management Agency (CMA) roads, local roads, and transit services.

The improvements and expansions proposed by the TMP would not serve the full build-out of all the development capacity in the General Plan, but rather the residential and non-residential growth that is expected under the Growth Management Ordinance[1] (GMO) (for residential uses) and based on market trends (for non-residential uses). The proposed improvements would facilitate the provision of adequate and efficient access to the City transportation system for all user groups and maintain the quality of life in the City.

5.1.1 FOSTER ECONOMIC GROWTH

The TMP proposes improvements and expansions to the City's existing transportation system, which would generate temporary construction-related jobs. However, the Project does not propose to add any new, long-term employment opportunities in the City beyond what is established in the General Plan. Thus, the Project would have a temporary, direct growth inducing effect on employment in the City, but it would not foster long-term economic growth beyond that identified in the General Plan. The TMP would facilitate the provision of an adequate and efficient transportation system that maintains the quality of life in the City. However, it is unlikely that this would attract new businesses and result in an indirect generation of new employment opportunities beyond that identified in the General Plan. Nonetheless, an efficient transportation system would facilitate the movement of goods, which could indirectly foster economic growth.

5.1.2 POPULATION AND HOUSING GROWTH

No housing is proposed as part of this Project; and, therefore Project implementation would not directly induce population growth. As described above, projects that do not directly induce population growth still have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. The construction of improvements proposed by the TMP would create temporary construction-related jobs, but these jobs are not likely to generate population or housing growth. The TMP proposes to extend roads into areas planned for growth by the General Plan.

5.1.3 REMOVE OBSTACLES TO GROWTH

The TMP proposes improvements and expansions to the City's transportation system. The increase in infrastructure capacity resulting from implementation of the TMP would serve residential growth expected under the City's General Plan and limited by the GMO and non-residential growth based on market trends, and would also provide an adequate and efficient transportation system that maintains the quality of life in the City and consistency between the regional agencies that are responsible for freeways, CMA roads, local roads, and transit services. Thus, while the TMP would increase infrastructure capacity, this would be necessary to serve identified growth and to maintain the quality of life in the City and consistency between the regional agencies.

[1] The City adopted a residential Growth Management Ordinance (GMO) in 1987. The goal of the GMO is to achieve a steady and orderly growth rate that allows for the adequate provisions of services and community facilities, and includes a balance of housing opportunities. According to the GMO, builders must obtain a Residential Growth Allotment (RGA) in order to secure a residential building permit. Residential growth under the General Plan will be limited by the GMO. In 2012, the GMO will allow for at least 219 building permits, possibly more, based on the permit activity between 2009 and 2012. Between 2013 and 2025, 600 building permits per year (on average) will be allowed under the GMO. Thus, between the years 2008 and 2025, the number of residential units allowed under the City's GMO is 8,419 units

5.1.4 TAX EXISTING COMMUNITY SERVICES OR FACILITIES

Substantial increases in population growth may tax existing community services and facilities, thus requiring the construction of new facilities that could cause significant environmental effects. The construction of new facilities may also result in the need to expand service capacity, which would then allow future population growth. The proposed Project recommends improvements and expansion to the City's existing transportation system to provide an adequate and efficient transportation system that maintains the quality of life in the City and maintains consistency between the regional agencies that are responsible for freeways, CMA roads, local roads, and transit services. The proposed Project would serve growth identified by the General Plan, plus an additional five years beyond the General Plan growth projections for Traffic and Circulation. While the service capacity of the City's transportation system would increase, the increase would not result in future population growth that could substantially tax existing public services and facilities, as this growth would be constrained by the City's GMO. Moreover, the improvements and expansions recommended by the TMP would not tax the City's transportation system, but rather would facilitate the provision of an adequate and efficient transportation system that maintains the quality of life in the City.

5.2 CUMULATIVE IMPACTS

Section 15130 of the *CEQA Guidelines* requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Where the incremental effect of a project is not "cumulatively considerable," a lead agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. A cumulative impact is created as a result of the combination of the project evaluated in the EIR together with other reasonably foreseeable projects causing related impacts.

Unless otherwise specified, the cumulative setting is the City Planning Area, which includes the City, its Sphere of Influence (SOI), and the surrounding Planning Area. Under CEQA, the discussion of cumulative impacts should focus on the severity of the impacts and the likelihood of their occurrence. This cumulative scenario includes all development envisioned through 2030, with a development pattern consistent with the "Preferred" alternative of the City General Plan EIR, plus an additional five years of growth to establish consistency with the with the most recent SJCOG land use development assumptions, employment forecasts, and travel demand model. As noted above, the TMP does not assume full build-out of all the development capacity in the General Plan areas, but rather the residential growth that is expected under the GMO and non-residential growth that is based on market trends. More specifically, the General Plan 2030 development assumptions were adjusted to represent reasonable expectations for development by the year 2035 (Horizon Year). City of Tracy staff developed the land use assumptions by allocating growth to areas in the City identified by the General Plan based on a combination of considerations, including:

- How advanced each area is in the entitlement process;
- Existing or expected conditions of approval; and,
- Anticipated environmental or jurisdictional constraints.

Table 5-1 (Transportation Master Plan Cumulative Development Land Use Assumptions) identifies the existing and projected number of residential units and employment opportunities in the City.

Table 5-1
Transportation Master Plan Cumulative Development
Land Use Assumptions within Tracy SOI

Scenario	Single Family[1]	Multi-Family[1]	Single and Multi-Family[1]	Retail[2]	Service[2]	Other[2]	Total Employment
Existing (2006)	20,195	6,594	26,789	3,610	9,644	10,850	24,104
2030 General Plan SOI (2030)	29,068	9,858	38,926	11,500	15,276	21,777	48,553
Horizon Year (2035)	27,229	13,297	40,526	15,091	18,751	30,340	64,182
Build-out	29,214	14,343	43,557	35,189	59,915	88,928	184,033

1. Single and Multi-Family land uses represented by number of dwelling units.
2. Non-residential land uses represented by number of employees.
Source: Draft Citywide Roadway Transportation Master Plan, February 2012

There are two approaches to identifying cumulative projects and the associated impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur in the General Plan areas by the Year 2035 based on the GMO for residential growth and market trends for non-residential growth.

5.2.1 AIR QUALITY

5.2-1 IMPLEMENTATION OF THE PROPOSED PROJECT COULD IMPACT REGIONAL AIR QUALITY LEVELS ON A CUMULATIVELY CONSIDERABLE BASIS.

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis:

The San Joaquin Valley Air Pollution Control District (SJVAPCD) *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The document also states "any project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact." Impacts of local criteria pollutants are cumulatively significant when modeling shows that the combined emissions from the proposed Project and other existing and planned projects would exceed air quality standards.

The GAMAQI states that cumulative carbon monoxide (CO) impacts are accounted for in the CO hotspot analysis. As discussed in Impact 4.2-2, under Long-Term (Operational) Emissions, CO impacts would be less than significant; however, mobile sources would be significant and unavoidable (refer to Table 4.2-4). As the Project would result in mobile source emissions in exceedance of the SJVAPCD regional thresholds, the Project would also result in significant and unavoidable cumulative impacts.

The proposed Project would be consistent with and would enhance the City's *General Plan*. The *General Plan EIR* analyzed the long-term development of the City and found that buildout under the *General Plan* is projected to lead to substantial increases in vehicle travel and contribute to existing air quality issues in the Basin. As the proposed Project anticipates greater vehicle miles traveled (VMT) than the *General Plan*, the Project would also result in a cumulatively significant impact. As a result, the proposed Project would have significant air quality impacts at both the Project and the cumulative level.

Mitigation Measure: Implement Mitigation Measures 4.2-1a and 4.2-1b. No other feasible mitigation measures are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

5.2.2 GREENHOUSE GAS EMISSIONS

5.2-2 GREENHOUSE GAS EMISSIONS RESULTING FROM DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT WOULD IMPACT GREENHOUSE GAS LEVELS ON A CUMULATIVELY CONSIDERABLE BASIS.

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Although the proposed TMP would be consistent with the City's General Plan and Sustainability Action Plan (SAP) and would incorporate relevant measures within the SAP, Project greenhouse gas (GHG) emissions would not meet SJVAPCD criteria and impacts would be significant and unavoidable. Project-generated GHGs in combination with GHG emissions from other known and reasonably foreseeable projects would result in a much greater amount of GHG emissions.

On December 30, 2009, the Natural Resources Agency adopted the *CEQA Guideline*s Amendments prepared by Office of Planning and Research, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the *CEQA Guidelines* Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The *CEQA Guidelines* Amendments became effective on March 18, 2010. The Natural Resources Agency originally proposed to add subdivision (f) to Section 15130 to clarify that Sections 21083 and 21083.05 of the Public Resources Code do not require a detailed analysis of GHG emissions solely due to the emissions of other projects (i.e., State *CEQA Guidelines*, § 15130(a)(1); *Santa Monica Chamber of Commerce v. City of Santa Monica* (2002) 101 Cal.App.4th 786, 799). Rather, the proposed subdivision (f) would have provided that a detailed analysis is required when evidence shows that the incremental contribution of the Project's GHG emissions is cumulatively considerable when added to other cumulative projects (i.e., *Communities for a Better Environment v. California Resources Agency* (2002), supra, 103 Cal.App.4th at 119-120). In essence, the proposed addition would be a restatement of law as applied to GHG emissions. Analysis of GHG emissions as a cumulative impact is consistent with case law arising under the National Environmental Policy Act (e.g., *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1215-1217 [9th Cir. 2008]). Other portions of the *CEQA Guidelines* Amendments address how lead agencies may determine whether a project's emissions are cumulatively considerable (e.g., Proposed Sections 1506(h)(3) and 15064.4). However, public comments noted that the new subdivision merely restated the law, and was capable of misinterpretation. The Natural Resources Agency, therefore, determined that because other provisions of the *CEQA Guidelines* Amendments address the analysis of GHG emissions as a cumulative impact, and because the reasoning of those is fully explained in the Initial Statement of Reasons, subdivision (f) should not be added

to the *CEQA Guidelines*. The deletion was reflected in the revisions that were made available for further public review and comment on October 23, 2009.

It is generally the case that individual projects are of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory.[2] GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.[3] The TMP is a City-wide planning document and encompasses various potential development projects that would result from the growth anticipated in the General Plan. The TMP builds upon the goals and objectives contained in the Circulation Element of the General Plan and the SAP. The TMP takes the growth projections an additional five years past the year identified by the General Plan to provide the maximum possible infrastructure planning and to be consistent with the SJCOG travel demand model. However, because the Project's impacts associated with GHG emissions would be significant and unavoidable, the Project's cumulative-related GHG emissions would also be significant and unavoidable.

Mitigation Measure: No feasible mitigation beyond measures included in the General Plan, Sustainability Action Plan, and Transportation Master Plan are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

[2] California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, 2008.
[3] Ibid.

6.0 ALTERNATIVES

6.1 INTRODUCTION

Section 15126.6 of the California Environmental Quality Act Guidelines (*CEQA Guidelines*) requires an Environmental Impact Report (EIR) to describe and evaluate a reasonable range of alternatives to a proposed project. The purpose of the evaluation is to identify ways to mitigate or avoid the significant effects that a project may have on the environment. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to select and evaluate only those alternatives necessary to permit a reasoned choice (*CEQA Guidelines* Section 15126.6[f]). An EIR does not need to consider every conceivable alternative to a proposed project, nor is it required that an EIR consider alternatives that are infeasible. Rather, it must consider alternatives that could feasibly attain most of the project's basic objectives, while avoiding or substantially lessening any significant adverse environmental effects of the project. The EIR must evaluate the comparative merits of the alternatives and provide sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project to foster informed decision-making and public participation. In addition, *CEQA Guidelines* Section 15126.6(e) requires that an EIR specifically evaluate the impacts associated with the alternative of "no project" to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.

This chapter provides a brief description of the proposed Project, Project goals and objectives, and potentially significant Project impacts, followed by a description and evaluation of each alternative selected for inclusion in the EIR. Finally, this chapter concludes with a comparison of the alternatives and identification of the environmentally superior alternative.

6.2 PROJECT SUMMARY

6.2.1 PROJECT CHARACTERISTICS

As described in Chapter 3 (Project Description), the proposed Project, the Citywide Roadway and Transportation Master Plan (TMP), is a comprehensive update to the City of Tracy's 1994 TMP in fulfillment of Objective CIR-1.1, Action A1 of the Circulation Element of the City of Tracy General Plan (General Plan), which states, "Update the Roadway Master Plan upon adoption of the General Plan." Many improvements and expansions to the City's existing transportation system were identified during the preparation of the General Plan and its associated Environmental Impact Report (EIR), As noted in the Circulation Element of the General Plan EIR, implementation of General Plan Objective CIR-1.1, Action A1 ensures the City's TMP is updated to include a comprehensive inventory of roadway expansions and improvements necessary to accommodate the growth envisioned by the General Plan, as well as maintain circulation continuity throughout the roadway network.

The TMP is the principal policy document for guiding the provision of adequate and efficient access to the City of Tracy (City) transportation system for all user groups (motorists, pedestrians, bicyclists, and transit users). The proposed TMP provides a comprehensive review of the City's transportation system and identifies improvements and expansions to the existing system required to accommodate future growth anticipated by the General Plan. The proposed TMP builds upon the goals and objectives contained in the Circulation Element of the General Plan and the City's Sustainability Action Plan (SAP) by proposing Smart Growth, Context-Sensitive design, and Complete Streets guidelines, strategies, principles, and design elements. The TMP strives to balance existing and future transportation infrastructure needs with safe access for all user groups.

The TMP projects growth to the year 2035, an additional five years past the growth projection year identified by the General Plan for Traffic and Circulation. The TMP includes an additional five years beyond the General Plan horizon year to establish consistency with the most recent San Joaquin Council of Governments (SJCOG) land use development assumptions, employment forecasts, and travel demand model. Due to the City's regionally important geographic location, a location that experiences a variety of daily transportation travel modes to, from, and through the City, utilizing the most recent SJCOG model facilitates a consistent identification of uniform improvements between the regional agencies that are responsible for freeways, Congestion Management Agency (CMA) roads, local roads, and transit services.

6.2.2 PROJECT OBJECTIVES

As stated in Section 3.5, the TMP Project objectives are as follows:

- Provide an Implementation Plan for the Circulation Element of the City of Tracy General Plan (2011).
- Serve as a comprehensive planning document or blueprint that identifies and requires improvements to the existing transportation system and expands upon the system to accommodate future development consistent with the General Plan. The system includes transit passenger movement, goods movement, pedestrian movement, bicycle movement, and private vehicular movement.
- Establish a framework of goals, policies, and implementation methodology that outlines improvement projects and programs, identifies financial resources and allocates funding, and sets project priorities to provide a safe and efficient transportation system that meets the community's needs.
- Guide the development of transportation infrastructure and services as growth occurs under the General Plan.
- Facilitate a transportation system that is a multi-modal network of roads, bicycle lanes and paths, transit services, and pedestrian facilities that will support the planned land uses in the City by providing mobility to residents and visitors alike.
- Balance existing and future transportation infrastructure needs with safe access for all user groups (motorists, pedestrians, bicyclists, and transit users) by incorporating strategies, principles, and design elements such as Smart Growth design elements, Context-Sensitive Design, and Complete Street guidelines.
- Facilitate the provision of an improved transportation system that enhances mobility, accommodates future growth, and maintains the quality of life in Tracy.
- Establish policies and priorities to maintain and improve the transportation system.
- Maintain consistency with the San Joaquin County Expressways Study,
- Preserve four-lane maximum arterial widths where possible to promote a more walkable, bikeable environment, particularly in new areas of future development where sustainable practices can be applied in an equitable manner.
- Decrease right-of-way and vehicular lane widths to implement Complete Street principles.
- Maintain consistency with the roadway plans in entitled project areas (Ellis Specific Plan and Gateway).
- Provide maximum roadway v/c ratios of 0.8 – 0.9 (roughly corresponding to a LOS D - E operation on a link-volume basis) to the greatest extent possible.

- Ensure the provision of bicycle and pedestrian facilities that connect people and places.
- Develop a comprehensive bicycle and pedestrian system that ensures a multi-modal infrastructure network.
- Develop a comprehensive circulation system that identifies bridge and culvert crossings to minimize traffic conflicts and preserve open space and preservation areas.
- Develop a comprehensive Park and Ride system that supports resident transit usage or carpooling to commute from the City.
- Provide a nexus for a Traffic Impact Fee Program that will fund the development of the planned transportation system through payment of impact fees by all future development.
- Develop Travel Demand Management (TDM) principles that reduce private vehicle trips and build on the regional TDM programs developed by the SJCOG.
- Provide for a comprehensive transit system on all new collector, arterial, and expressway roadways and provide the opportunity to expand transit services on existing roadways.

6.2.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS

Chapter 4 (Environmental Analysis) of this EIR describes the potential impacts of the proposed Project. As identified in that chapter, the Project would result in potentially significant environmental impacts, some of which could be mitigated to less than significant levels. The following summarizes the proposed Project's impacts:

AIR QUALITY

- Project construction would result in potentially significant short-term increases in particulate (fugitive dust) and exhaust emissions that could be reduced to less than significant with implementation of mitigation measures identified in Section 4.2 (Air Quality).
- Due to the amount of growth that is projected to occur by TMP forecast year 2035, impacts associated with long-term mobile source emissions would be considered significant and unavoidable due to exceedances of established thresholds for Reactive Organic Gases (ROG) and particulate matter $(PM)_{10}$.
- The Project would not exceed established thresholds for nitrogen oxides (NO_X), carbon monoxide (CO) hotspots, odors, or toxic air contaminants and related impacts would be less than significant.
- The TMP's anticipated VMT for the year 2035 exceeds the VMT considered in the General Plan for horizon year 2030. As concluded in the General Plan EIR, the General Plan would not be consistent with the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Clean Air Plans. Furthermore, as discussed within the General Plan EIR, the projected growth within the City would lead to an increase in the region's VMT, beyond what has been identified by the San Joaquin Council of Governments (SJCOG) and SJVAPCD. Therefore, as the proposed Project would result in VMT beyond what was anticipated in the General Plan, the proposed Project would also exceed the projected growth beyond what has been identified by the SJCOG and SJVAPCD. Impacts associated with plan consistency would be considered significant and unavoidable for the proposed Project.
- Finally, the Project would result in a significant and unavoidable cumulative impact from increases in criteria air pollutants.

GREENHOUSE GAS EMISSIONS

- As identified in Section 4.3 (Greenhouse Gas Emissions), the VMTs associated with the TMP exceed those forecast for the 2030 General Plan. The General Plan EIR indicated that all feasible mitigation measures for greenhouse gas (GHG) emissions were included in the General Plan and the City's SAP. No additional measures beyond those found in the SAP have been found feasible to reduce GHG emissions associated with the proposed Project. The General Plan EIR determined that GHG emissions under the SAP would not meet SJVAPCD criteria, and impacts would be significant and unavoidable. As the proposed Project contemplates growth beyond the General Plan, and the Project would result in greater impacts than those identified in the General Plan EIR, impacts associated with the proposed Project would be significant and unavoidable.
- In addition, the Project's cumulative impacts associated with GHG emissions would be significant and unavoidable.

6.3 PROJECT ALTERNATIVES

6.3.1 SELECTION OF ALTERNATIVES

In accordance with the State CEQA Guidelines, appropriate project alternatives are those that meet most of the project's basic objectives and avoid or substantially lessen the significant environmental impacts of the proposed project. The alternatives analyzed in this chapter were selected for their potential to eliminate or reduce Project impacts, or for their potential to generate fewer impacts, or require lesser levels of mitigation. These alternatives include:

- Alternative 1: No Project/No Updated Transportation Master Plan
- Alternative 2: Transportation Master Plan Limited to General Plan 2030 Horizon Year
- Alternative 3: Increased Residential/Reduced Commercial

The Draft EIR does not analyze an alternative site for the proposed Project because the TMP addresses the transportation network in the City of Tracy and could not realistically be expected to be implemented anywhere else but Tracy.

6.3.2 COMPARISON OF ALTERNATIVES

CEQA does not specify the methodology for comparing alternatives. However, the issues and impacts that are most germane to a particular project must be evaluated when comparing an alternative to a proposed project. As such, the issues and impacts analyzed in project alternatives vary depending on the project type and the environmental setting. Long-term impacts (e.g., visual impacts and permanent loss of habitat or land use conflicts) are those that are generally given more weight in comparing alternatives. Impacts associated with construction (i.e., temporary or short-term) or those that are easily mitigable to less than significant levels are considered to be less important.

The alternatives analysis below compares each alternative to the proposed Project according to whether it would have a mitigating or adverse effect for each of the environmental resource areas analyzed in this EIR.

6.3.3 ALTERNATIVES ANALYSIS

ALTERNATIVE 1: NO PROJECT/NO UPDATED TRANSPORTATION MASTER PLAN

Description of Alternative

Under the No Project/No Updated Transportation Master Plan Alternative (Alternative 1), the proposed TMP would not be adopted and the existing (1994) TMP would remain in effect. Thus, none of the improvements or expansions to the City's existing transportation system required to accommodate future growth anticipated by the General Plan would be implemented. The City's transportation system would not benefit from Smart Growth, Context-Sensitive design, and Complete Streets guidelines, strategies, principles, and design elements. Moreover, a variety of techniques designed to help the City meet sustainability and GHG reduction goals would not be undertaken, and various other policies that address bicycle/pedestrian circulation, roadway design/operation, traffic calming, access management, standards/design for park and ride facilities, and Intelligent Transportation Systems (ITS) would not be implemented.

Although roadway locations are primarily the same in the existing and proposed TMPs, the roadway network for the proposed TMP shows better connection between origins and destinations, which would reduce trip lengths, compared to the existing TMP. Additionally, the proposed TMP identifies substantially reduced roadway cross sections. New roadways in the proposed TMP include the Pavilion Parkway Extension to the south, the Hansen Road connection between Schulte Road and Lammers Road, improved collector streets between the arterials, and expressways. The proposed TMP identifies reduced roadways on the south side of I-580 for the Tracy Hills development area. Finally, the proposed TMP would have less overall vehicle miles traveled compared to the existing TMP.

Environmental Impacts Compared to the Project

Air Quality

Alternative 1 would result in greater air quality impacts than the proposed Project. The proposed TMP would increase the amount of vehicle miles traveled (VMT) and result in an associated increase in air pollutant emissions beyond what was analyzed in the General Plan as a result of the additional five years of growth assumed by the TMP. However, due to the policies, improvements, and expansions proposed by the TMP, trip lengths would decrease and other operational benefits resulting in a more efficient transportation system would be provided. In addition, it should be noted that the TMP's trip generation rates were reduced by 5.8 percent due to the application of smart growth characteristics (increased density/diversity, more connectivity, or improved access to regional destinations), as well as the other sustainability strategies identified by the SAP that reduce trip generation and trip lengths, and improve fuel efficiency. Compared to the proposed Project, Alternative 1 would not implement the various improvements to the City's transportation system or implement Smart Growth and Complete Street strategies. As a result, Alternative 1 would result in greater VMT than the proposed Project. Moreover, under Alternative 1, the City's transportation system would become congested and experience increased delays without the proposed improvements and expansions, which in turn would result in increased air pollutant emissions. Furthermore, like the proposed TMP, Alternative 1 would not be consistent with the with the applicable air quality management plan. However, the proposed TMP would implement all applicable goals and policies of the City's General Plan and SAP and Alternative 1 would not. Consequently, Alternative 1 would have greater air quality impacts than the proposed Project.

Greenhouse Gas Emissions

Alternative 1 would result in greater GHG emissions than the proposed Project since the policies, improvements, and expansions proposed by the TMP, would not be provided, trip lengths would not decrease and other operationalbenefits that wouldresult in a more efficient transportation system would not be provided. In addition, congestion and vehicle delays would increase compared to the proposed Project, as none of the proposed improvements and expansions would be implemented. Alternative 1 could potentially produce excessive GHG emissions that could have a significant impact on the environment, and would it conflict with the City's General Plan and SAP, and thus would conflict with the applicable GHG reduction plan, policies, and regulations. Therefore, Alternative 1 would result in greater GHG impacts compared to the proposed Project.

ALTERNATIVE 2: TRANSPORTATION MASTER PLAN LIMITED TO GENERAL PLAN 2030 HORIZON YEAR

Description of Alternative

Under Alternative 2, the TMP would project growth to the year 2030, the same as the growth projection year identified by the General Plan for Traffic and Circulation. Thus, Alternative 2 would have the same land use assumptions and density as that contemplated by the General Plan, but it would not be consistent with the most recent SJCOG land use development assumptions, employment forecasts, and/or travel demand model. All other elements of the TMP under Alternative 2 would be the same or similar as those identified by the proposed Project. This alternative was selected for its ability to reduce the amount of VMT associated with the proposed TMP, and the corresponding air pollutant and GHG emissions.

Environmental Impacts Compared to the Project

Air Quality

Alternative 2 would result in less VMT and associated emissions than the proposed Project because of the temporal difference between the two scenarios. Given that Alternative 2 projects growth to the year 2030 and the proposed TMP projects growth to the year 2035, the amount of projected housing and employment opportunities are reduced under Alternative 2, resulting in a reduction in VMT compared to the proposed TMP. Both Alternative 2 and the proposed TMP would recommend similar improvements to the existing transportation system. As such, each scenario would increase efficiency which would result in shorter trips and reduced VMT per person. Regardless, Alternative 2 would have less VMT and associated emissions overall compared to the proposed TMP due to solely to its reduced density. Because both Alternative 2 and the Project and would result in the construction of similar improvements, potentially significant construction impacts and associated mitigation would be expected to be similar. Alternative 2 projects growth to the year 2030 and would result in a substantial increase in VMT, like the proposed Project. This is because even though the amount of projected housing and employment opportunities are reduced under Alternative 2, resulting in a reduction in VMT compared to the proposed TMP, the VMT reduction would not be enough to avoid exceeding established thresholds for criteria pollutants, thus conflicting with the applicable air quality attainment plan. Therefore, Alternative 2 would still result in significant and unavoidable Project level and cumulative impacts. However, given that Alternative 2 projects growth to the year 2030 and the proposed TMP projects growth to the year 2035, Alternative 2 would result in less projected growth, fewer VMT, and associated emissions compared to the scenario studied for the proposed TMP. Thus, Alternative 2 would result in reduced air quality impacts compared to the proposed Project.

Greenhouse Gas Emissions

The proposed Project would have greater GHG emissions than Alternative 2 because of the additional density associated with its additional five years of projected growth within the Tracy SOI. Although Alternative 2 would have less GHG emissions than the proposed Project, it would still result in significant and unavoidable increases in GHGs due to the amount of growth contemplated and as stated in the General Plan. Alternative 2 would, however, result in reduced impacts associated with GHG emissions compared to the Project.

ALTERNATIVE 3: INCREASED RESIDENTIAL/REDUCED COMMERCIAL

Description of Alternative

Both the proposed TMP and Alternative 3 identify improvements and expansions to the City's existing transportation system required to accommodate future growth to the year 2035. However, Alternative 3 assumes different land uses in the year 2035 than the proposed TMP. Alternative 3 assumes a 160-acre area near the I-205 expansion area could reasonably be expected to develop with low density residential uses rather than the commercial uses assumed by the TMP; refer to Figure 6-1 (Alternative 3). This alternative was selected for its ability to reduce the amount of VMT associated with the proposed TMP, and the corresponding air pollutant and GHG emissions.

Environmental Impacts Compared to the Project

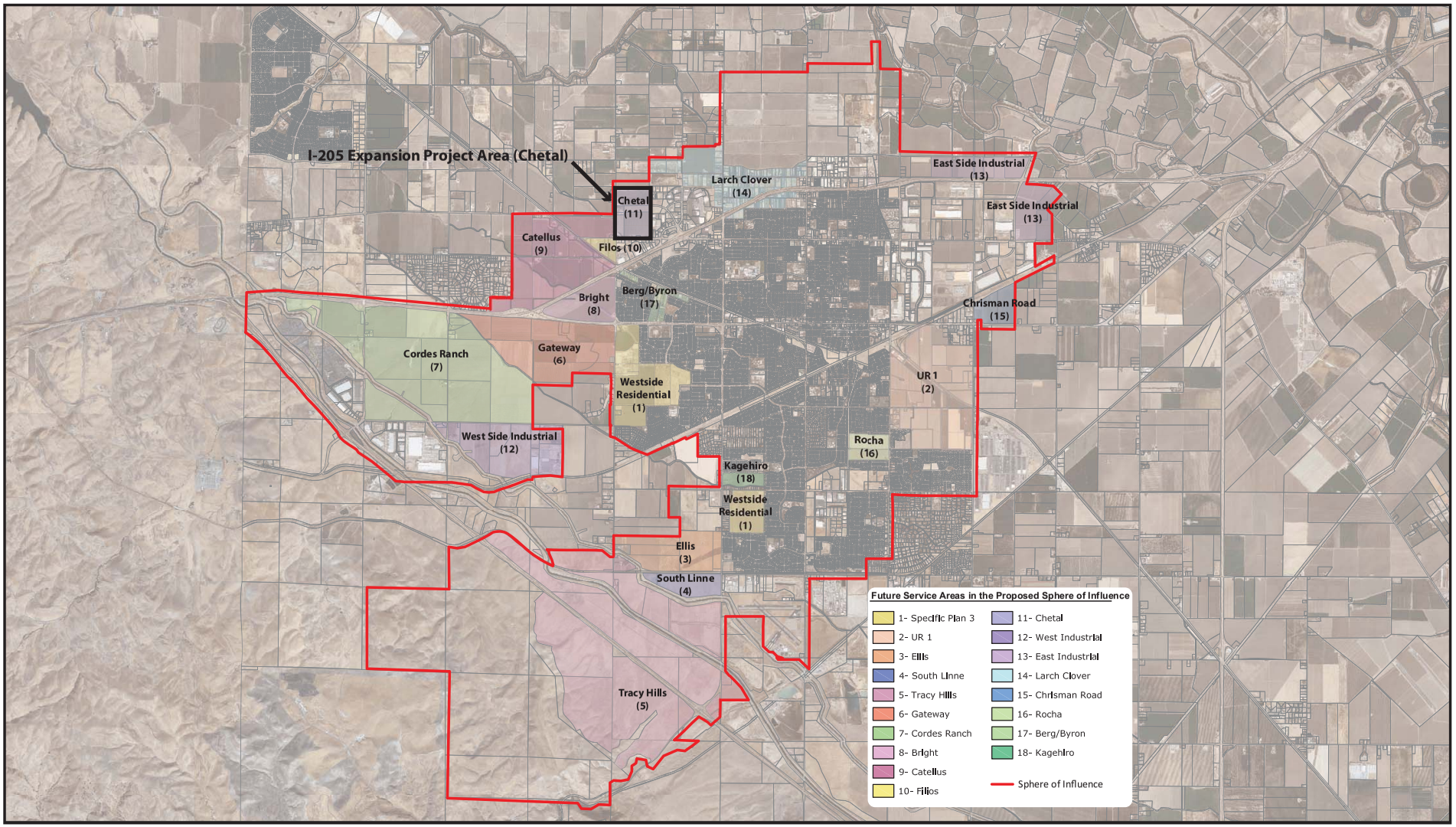
Air Quality

Under Alternative 3, a 160-acre area near the I-205 expansion area would develop with low density residential uses rather than the commercial uses that area assumed under the proposed Project. Currently, this area is primarily developed with commercial uses. The addition of residential uses in this area, as described in Alternative 3, would increase the jobs/housing balance in this area. Additionally, residential uses would generate fewer vehicle trips than commercial uses and peak hour vehicle trips would decrease substantially. The reduction in peak hour trips would improve congestion, but the residential uses allowed under Alternative 3 would result in slightly fewer VMT and associated emissions would be similar to that of the proposed Project. Therefore, impacts would slightly decrease compared to the proposed Project, but would remain significant and unavoidable.

Alternative 3 would require similar improvements and expansions as the proposed TMP. Consequently the construction impacts associated with Alternative 3 would be similar to those under the proposed Project and could be mitigated to less than significant with the same mitigation measures identified for the Project. Due to the amount of growth projected under each scenario, Alternative 3 would exceed established thresholds for criteria pollutants and conflict with the applicable air quality attainment plan, resulting in significant and unavoidable Project-level and cumulative impacts, like the proposed Project. Still, air quality impacts would be reduced compared to the proposed Project.

Greenhouse Gas Emissions

Alternative 3 would produce less GHG emissions than the proposed Project as it would have fewer VMT overall. Although Alternative 3 would reduce GHG emissions, due to the amount of growth assumed by Alternative 3, it would have the same significant and unavoidable impacts. Alternative 3 would, however, result in reduced impacts associated with GHG emissions compared to the Project.



Source: City of Tracy Infrastructure Master Plan (2012)

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Not to Scale

Tracy Transportation Master Plan EIR

Alternative 3

Figure 6-1

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 6-1 (Comparison of Alternative Project Impacts to the Proposed Project) presents a comparison of the impacts associated with the alternatives with those of the proposed Project for each of the environmental resource areas analyzed above.

Table 6-1
Comparison of Alternative Project Impacts to the Proposed Project

Topic	Alternative 1 No Project/ No Updated Transportation Master Plan	Alternative 2 Transportation Master Plan Limited to General Plan 2030 Horizon Year	Alternative 3 Increased Residential/ Reduced Commercial
Air Quality	+	-	-
Greenhouse Gas Emissions	+	-	-

Notes:
+ Greater impact than that of the proposed Project
- Decreased impact from that of the proposed Project
+/– Greater impact with regard to some aspects of impact and decreased impact in other aspects
NC No substantial change in impact from that of the proposed Project

CEQA requires the identification of the environmentally superior alternative in an EIR, which is an alternative that would result in the fewest or least number of significant environmental impacts. If the "No Project" Alternative is the environmentally superior alternative, *CEQA Guidelines* Section 15126.6 (e)(2) requires that another alternative that could feasibly attain most of the project's basic objectives be chosen as the environmentally superior alternative. Based on the above analysis, summarized in Table 6-1, the environmentally superior alternative is Alternative 2. Construction impacts would be equivalent under Alternative 2 and the proposed Project. However, Alternative 2 projects growth to the year 2030 and the proposed TMP projects growth to the year 2035, which results in substantially less projected housing and employment opportunities than are assumed under the TMP. Thus, Alternative 2 would result in less VMT and associated emissions than the proposed Project and air quality and GHG impacts would be reduced, but would still remain significant and unavoidable due to the total amount of growth projected under Alternative 2.

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7.0 OTHER CEQA CONSIDERATIONS

7.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15162(b) of the California Environmental Quality Act Guidelines (*CEQA Guidelines*) requires an environmental impact report (EIR) to discuss the significant impacts of a proposed project that cannot be reduced to a less than significant level. These impacts are referred to as "significant and unavoidable impacts" of the project.

7.1.1 AIR QUALITY

As described in Section 4.2 (Air Quality), the proposed Project would result in the following significant and unavoidable impacts:

- Exceedances of established thresholds for Reactive Organic Gases (ROG) and particulate matter $(PM)_{10}$ as a result of long-term mobile source emissions (Project and cumulative level); and,
- Conflicts with applicable air quality plans (Project and cumulative level).

7.1.2 GREENHOUSE GAS EMISSIONS

As described in Section 4.3 (Greenhouse Gas Emissions), the proposed Project would result in the following significant and unavoidable impacts:

- Generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Project and cumulative level).

7.2 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(c) of the *CEQA Guidelines* requires an EIR to discuss the significant irreversible environmental changes that would result from implementation of a proposed project. Examples include: uses of nonrenewable resources during the initial and continued phases of the project (because a large commitment of such resources make removal or nonuse thereafter unlikely); primary or secondary impacts of the project that would generally commit future generations to similar uses (e.g., highway improvements that would provide access to a previously inaccessible area); and/or, irreversible damage that could result from any potential environmental accidents associated with the project.

Development of the proposed Project would constitute a long-term commitment to transportation infrastructure. It is unlikely that circumstances would arise that would justify the return of the land to its original condition.

A variety of resources, including land, energy, water, construction materials and human resources would be irretrievably committed for the Project's initial construction, infrastructure installation, and connection to existing utilities and its continued maintenance. Construction of the Project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing maintenance and life of the proposed Project. Fossil fuels are the principal source of energy and the Project would increase

consumption of available supplies, including gasoline. These energy resource demands relate to initial Project construction, Project operation, and maintenance.

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9.0 REFERENCES

The following is a list of references used in the preparation of this document. Unless included in the Appendices, copies of all reference reports, memorandums and letters are on file with the City of Tracy, Development and Engineering Services Department. References to publications prepared by federal or state agencies may be found with the agency responsible for providing such information.

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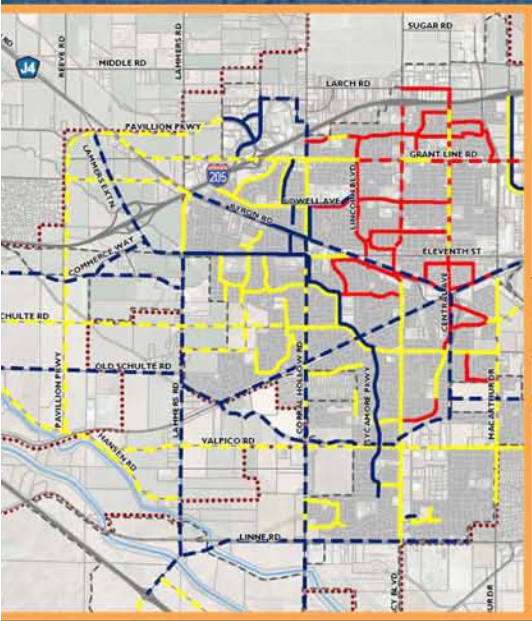

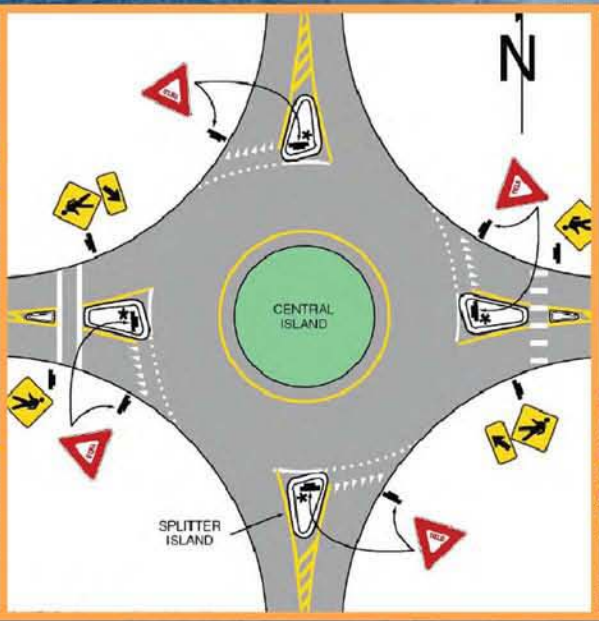

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