

Proposal for

Professional Services for the CEQA Transportation Update for SB 743 Compliance

December 9, 2019

PREPARED FOR:



PREPARED BY:

FEHR & PEERS



December 9, 2019

Dai Vu
City Engineer
City of Garden Grove
11222 Acacia Parkway
PO Box 3070
Garden Grove, California 92842

Subject: Proposal to Provide Professional Services for the CEQA Transportation Update for SB 743 Compliance

Dear Mr. Vu,

We are pleased to offer our advanced research into SB 743 implementation paired with lessons learned from both regional implementation studies and local guidelines development. Based upon our assistance to the state in crafting the guidelines and subsequent work with several agencies to create implementation documents, we have the materials and experience to provide VMT methodology options, VMT thresholds, and the latest information regarding VMT mitigation. Much of this information is shared on our website (<https://www.fehrandpeers.com/sb743/>).

We offer an advanced knowledge of SB 743 implementation and are the premier consulting firm assisting agencies become compliant with the state law by the July 2020 deadline. We also specialize in custom tool building with a variety of existing tools that calculate trip generation, VMT estimates, and TDM effectiveness estimates. Our latest examples include VMT forecasting and a mitigation testing tool for the City of Los Angeles, and GIS-based VMT screening tools developed for WRCOG (<http://gis.fehrandpeers.com/WRCOGVMT/>), and El Dorado County/City of Placerville (<http://alpha.blueraster.io/fehrand-peers/VMT/20190606/>). Our Orange County office has also conducted similar efforts for SBCTA and multiple cities throughout Orange County. Our research, knowledge, and experience will support the City of Anaheim in becoming compliant with SB 743 and the new CEQA Guidelines Section 15064 by July 2020.

Our research, knowledge, and experience will support the City of Garden Grove in becoming compliant with SB 743 by July 2020. We look forward to your selection process and the potential to create an outcome with benefits that extend throughout the City. Thank you for this opportunity.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Pack'.

Jason Pack
Principal-in-Charge
Fehr & Peers
Tel: 949-308-6312
j.pack@fehrandpeers.com

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Our mission is to empower every employee to develop effective and innovative transportation solutions that improve communities

1. Executive Summary

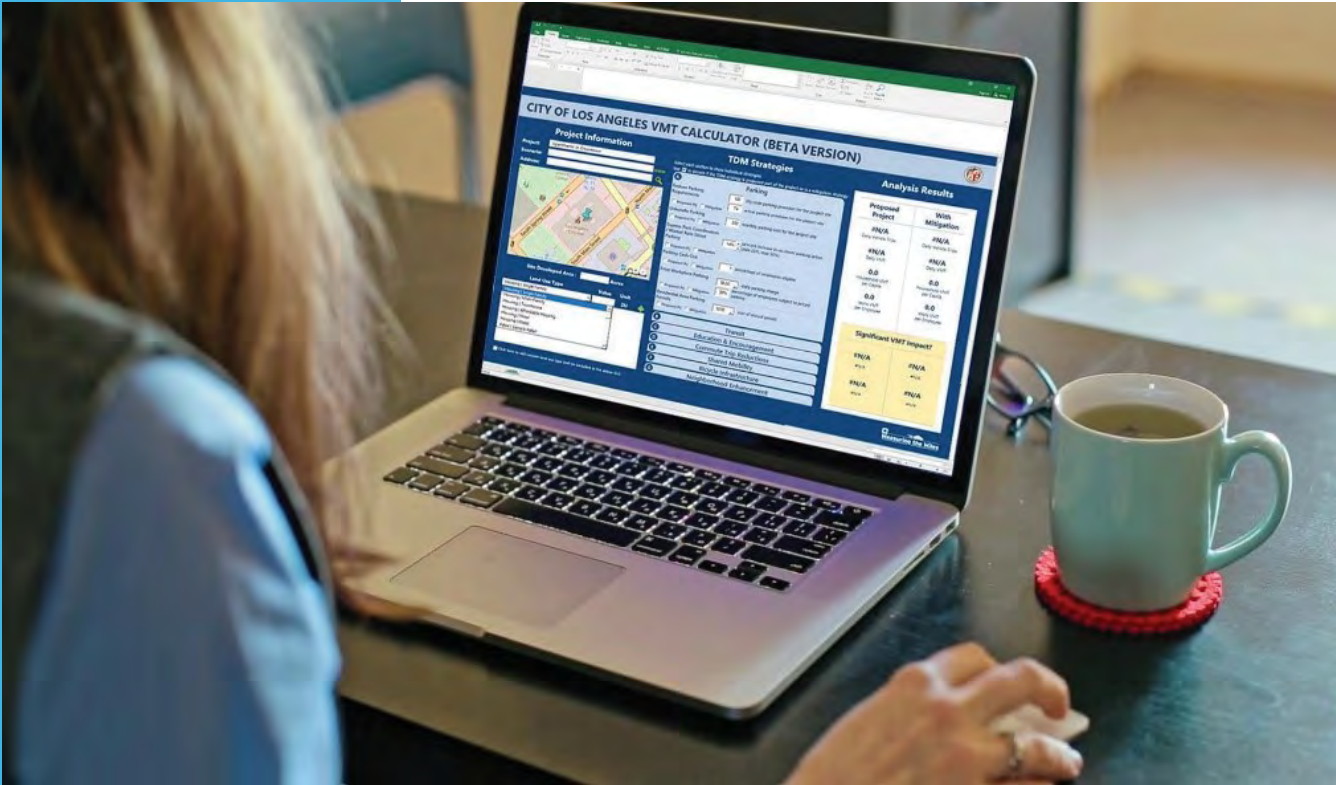
On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process intended to fundamentally change transportation impact analysis as part of California Environmental Quality Act (CEQA) compliance. In summary, SB 743 eliminates Level of Service (LOS) as a basis for determining significant transportation impacts under CEQA and provides a new performance metric – Vehicle Miles of Travel (VMT). With this change, the State is shifting the focus from measuring a project's impact to drivers to measuring the impact of driving (VMT) to achieve their goals of reducing greenhouse gas (GHG) emissions, encouraging infill development, and improving public health through active transportation. The updated CEQA Guidelines incorporating this change were certified by the Natural Resources Agency in December 2018.

In response to SB 743, the City of Garden Grove issued a Request for Proposal (RFP) soliciting professional services to assist the City with the development of new transportation impact thresholds to adhere to CEQA requirements.

Fehr & Peers has been at the forefront of developing VMT metrics and thresholds for jurisdictions throughout the State of California. We assisted the Governor's Office of Planning and Research (OPR) during their development of the State guidance in response to SB 743 and have assisted or are currently assisting a multitude of agencies, both large and small. Within Orange County alone, these include the cities of Santa Ana, Brea, Yorba Linda, Orange, Fullerton, Placentia, La Habra, Buena Park, Anaheim, Westminster, and CSU Fullerton. We have the necessary experience with running regional travel demand models and with evaluating the effectiveness of Travel Demand Management (TDM) measures in reducing VMT. We are able to offer all of the services required by the City of Garden Grove in response to your RFP.

Jason Pack would serve as our Principal-in-Charge for this effort. He has been a principal-in-charge on all the SB 743 efforts out of the Orange County Office. Jason will provide local context and consistency with the region including the North Orange County Collaborative SB 743 Project, Anaheim SB 743 Project, and Santa Ana SB 743 Project. Spencer Reed will serve as Project Manager. Spencer works out of Fehr & Peers' Orange County Office and has direct experience conducting VMT analysis for several jurisdictions as project manager. Jinghua Xu is our travel demand forecasting (modeling) expert. She has experience in the development of many travel demand models, including OCTAM, and has been actively overseeing most VMT related forecasting efforts throughout the Southern California Region for Fehr & Peers.

We are ready, able, qualified, and keenly interested in all the services requested by the City.



City of Los Angeles VMT Calculator

2. Project Approach and Understanding

What Decisions Does City of Garden Grove Need to Make to Implement SB 743?

The implementation of SB 743 is a three-step process. First, the City will need to define the VMT screening criteria for use in transportation impact analyses. The City can decide to screen-out certain projects, such as small projects or projects located close to high quality transit, from needing a VMT impact analysis.

Next, the City will define its VMT impact thresholds. The City's impact thresholds should be consistent with the goals and policies outlined in the General Plan. Finally, the City's transportation impact assessment (TIA) guidelines should be updated to reflect the new metrics and thresholds. The City can determine if other elements of the historical methodologies and approach to traffic impact studies in the City are appropriate as is, or if the city wants to recommend changes for evaluating the local transportation effects of a project.

The updated CEQA guidelines have a new section for determining the significance of transportation impacts (Section 15064.3). While OPR produced a Technical Advisory to help lead agencies think about the variety of implementation questions they face when shifting to a VMT metric, lead agencies must still make their own specific decisions about VMT methodology, thresholds, and mitigation. The implementation of new CEQA guidance in the City of Garden Grove requires the following decisions:

Technical Advisory on Evaluating Transportation Impacts in CEQA, OPR, December 2018

http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

1. VMT Screening & Qualitative Review:

The first step is to determine when a VMT analysis is required. OPR recommends that projects be screened from a VMT analysis based on their size, location, or accessibility to transit. In addition, transportation infrastructure projects that are not adding new travel lanes may be screened from further VMT analysis.

2. VMT Analysis Methodology: If the project requires a VMT analysis, the City can use the regional travel demand model to estimate a project’s VMT. OPR recommends that VMT be reported as “Home-Based VMT” per capita for residential projects and “Home-Based Work VMT” per employee for office projects. Total VMT per service population can be reported for large-scale retail projects or other project types, such as special event venues and hotels. The City has the discretion to select a methodology, reporting metric, and model most appropriate for their jurisdiction.

3. VMT Impact Thresholds: The City has discretion to develop and adopt their own, or rely on thresholds recommended by other agencies, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence. OPR recommends that projects exceeding a level of 15 percent below existing VMT per capita or per employee when compared to the regional average may indicate an impact.

4. VMT Mitigation: The types of mitigation that effect VMT are those that encourage multimodal travel, reduce the number of single-occupant vehicles generated by the site, or reduce the length of trips. This can be accomplished by changing the land uses being proposed or by implementing TDM measures.

Each of these topics will be addressed in this effort.

SB 743 Implementation in Garden Grove

We propose to begin the process of implementing SB 743 by collecting baseline VMT data for the City and reviewing future VMT trends based on the regional OCTAM model developed by Orange County which is consistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). We would then use the VMT data to

test pilot projects and consider options for the preferred VMT methodology, thresholds, and potential mitigations. Finally, we would update the City's TIA guidelines to inform the scope and analysis methodologies for future studies in the City, suggest changes to the City's General Plan Circulation Element for consistency, and discuss potential options for incorporating VMT into the City's traffic impact fee program and other City documents.

Implementation Process



Scope of Work

This section provides an overview of the scope of work we propose to provide the SB 743 implementation services requested by the City. Tasks 1 through 4 are required to be compliant with SB743 by the July 1, 2020 deadline. Tasks 5 and 6 have been included in response to the RFP. While these are not required for compliance, they will help City staff in determining VMT related impacts with future projects. Optional Task 7 is recommended by Fehr & Peers based on our experience implementing SB743 in other jurisdictions.

Please note that the scope and associated hours/staffing can be tailored based on future discussions with City staff.

Task 1 - Kick-off and Coordination Meetings

Fehr & Peers will attend a kick-off meeting with City staff. The purpose of the meeting will be to discuss the City's goals and objectives for the study.

Fehr & Peers has budgeted for twelve progress calls. Fehr & Peers staff will prepare for and attend up to two additional in-person meetings with City staff. We have found that such meetings are critical to City staff making the important decisions regarding methodologies, screening criteria, and impact thresholds that need to be made as the study progresses.

Deliverable: City staff kick-off and coordination meetings.

Task 2 - VMT Metrics and Thresholds VMT Analysis

Fehr & Peers will analyze existing and projected VMT levels for the City of Garden Grove using data from the current OCTAM regional travel demand model. We will calculate VMT using the Production/Attraction (PA)

and Origin/Destination (OD) methodologies. We will run the OCTAM model to develop existing and future VMT data for the following metrics:

- Citywide and Countywide VMT
- Total VMT per capita
- Household VMT per capita
- Work VMT per employee
- Total VMT per service population

This analysis will provide the basis for the development of VMT metric, screening, and threshold options in the subsequent portions of this task.

VMT Metrics and Threshold Options for Land Use and Transportation Projects

Fehr & Peers will develop VMT impact threshold options for land use projects based on policy goals discussed with City staff and consistent with SB 743 guidance from the State. The guidelines will describe where and when the selected VMT metrics should be applied. As part of this task, Fehr & Peers will

document how the various threshold options would meet the substantial evidence requirements under CEQA. Transportation projects will also be addressed, including accounting for induced demand.

VMT Screening Options

Fehr & Peers will develop VMT screening options for land use projects based on policy goals discussed with City staff and consistent with SB 743 guidance from the State. OPR has provided guidance related to several opportunities for screening projects that would generate low VMT, including screening based on project size, retail nature (local-serving versus regional), located in a low-VMT area, and in a transit priority area. The City will need to make decisions regarding the different screening opportunities presented.

Case Studies

After developing the VMT threshold options, Fehr & Peers will apply the selected metrics to up three different case studies, to be selected

in consultation with City staff. The case studies will be used to evaluate the project-level VMT impacts for a variety of development types and locations as well as the potential to mitigate impacts with potential TDM strategies/ programs as developed in Task 3. Only TDM strategies that have available research supporting quantifiable trip/ VMT reductions will be included.

Screening and Threshold Recommendations

Fehr & Peers will summarize the results of the aforementioned tasks in a technical memo that demonstrates how the recommended VMT metrics, screening criteria, and impact thresholds support policy goals to improve the VMT performance of new projects, implement the objectives of SB 743, and meet the substantial evidence standard under CEQA.

The proposed guidelines will clarify the methodology for determining significant impacts, such as projects that induce travel demand or increase VMT per capita. The most appropriate methodology(ies) for quantifying the impacts will be identified as well.

Deliverable: Technical memo documenting recommended VMT metrics, screening criteria, and impact thresholds with 3 case studies.

Task 3 - Quantify the Trip Reduction Benefits of TDM for VMT Mitigation

For projects with VMT impacts, it is important to have mitigation options available for implementation to remove or reduce the impact. TDM strategies are reductions available from project site modifications, programming, and operational changes, and have been determined to be among the most effective VMT impact mitigators.

Fehr & Peers will prepare a "menu" of applicable TDM strategies and programs that have the potential to reduce VMT impacts to a less than significant level in the specific context of the City of Garden Grove. The effectiveness of identified TDM strategies will be based on research documented in the 2010 California Air Pollution Control Officers Association (CAPCOA) publication, Quantifying Greenhouse Gas Mitigation Measures (CAPCOA, 2010) as well as all recent available research. We propose to use Fehr & Peers' TDM+ tool to assist in this evaluation.

Deliverable: Tech Memo documenting Mitigation Menu.

Task 4 – Attendance at Community Meetings and Hearings

Fehr & Peers staff will prepare for, attend, and support City staff at the following public meetings, events, or hearings:

- Two community meetings/events
- One Planning Commission Hearing
- One City Council Hearing

Attendance at these meetings could include a presentation to the public, planning commission or City Council. Fehr & Peers will be available for questions and to lead discussions.

Deliverable: Attendance and Presentations at Community meetings/events.

Task 5– VMT Estimation Tool

Fehr & Peers will review available tools for estimating VMT in Orange County. This will include sketch planning tools and available regional travel demand forecasting models (e.g. the planned OCTAM VMT estimation tool).

Fehr & Peers will develop a VMT estimation interactive spreadsheet tool that could be applied to project level review of land use projects in the City of Garden Grove. Fehr & Peers has developed similar tools for the Cities of Los Angeles and San Jose and is currently developing one for the North Orange County Cooperative SB 743 Project.

The tool would enable users to assess VMT project- specific impacts and identify VMT reduction strategies based on land use type and other

development-based factors.

Deliverable: Interactive Spreadsheet Tool.

Task 6 – Staff Training

Fehr & Peers will conduct an in-person training session for Garden Grove staff upon the completion of the VMT estimation tool. This training will include a presentation, a tutorial of sample projects, and a flow chart for planning staff to assist future developers.

Deliverable: In-person training presentation and instructional materials.

**Optional Task 7 -
Transportation Impact
Assessment Guidelines**

Fehr & Peers will develop TIA guidelines for the City to incorporate the new procedures necessary to conduct a project-level VMT-based analysis. This guideline development will also include any pertinent evaluation protocols that result from the revised State CEQA Guidelines pursuant to SB 743. This task will include an evaluation of the City's current TIA practices and, in consultation with City staff, determining which elements should be carried over, such as level of service requirements. In addition, the guidelines will include project components that are critical to Garden Grove when evaluating a proposed development project, which could include such items as site access, quality of and impacts on surrounding pedestrian or bicycle infrastructure, queuing at project driveways, level of

service analyses for intersections close to the project site, and warrant studies at intersections for traffic signals. After presenting the updated draft procedures to City staff, Fehr & Peers will respond to two rounds of consolidated comments before submitting a final draft.

Deliverable: Updated transportation impact assessment guidelines.

3. Team Information and Qualifications

About Fehr & Peers

Fehr & Peers, a S Corporation, has an extensive and successful history providing transportation solutions to public and private sector clients. As technical experts, the creative, cost-effective, and results-oriented solutions we develop position us as one of the preeminent authorities on transportation solutions.

Fehr & Peers is uniquely positioned to guide the SB 743 Implementation for the City of Garden Grove as highlighted below:

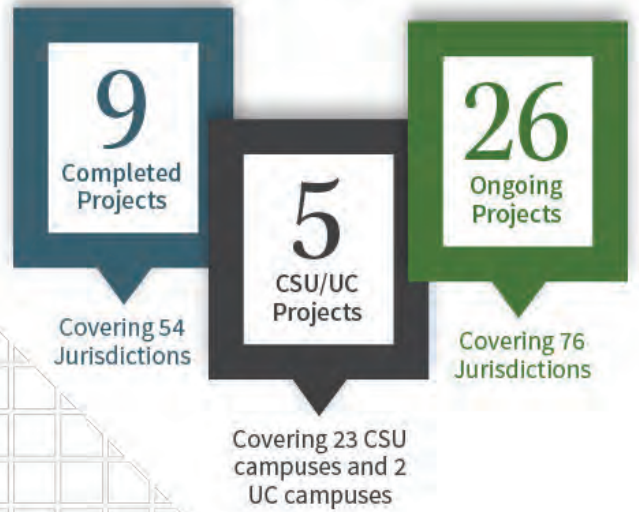
Fehr & Peers has been directly involved with OPR, Caltrans, the State Transportation Agency, and the big four MPOs (SACOG, MTC, SANDAG, and SCAG) helping to develop the recent draft CEQA Guidelines and Technical Advisory related to SB 743 implementation.

Fehr & Peers is already under contract to multiple local agencies statewide to develop SB 743 implementation guidance and tools. Further, we have already performed SB 743 analysis for a variety of projects. Complementing our SB 743 experience is our knowledge of local transportation issues in the City. This local planning context is important when implementing a new statewide law that was not written with full consideration of the unique geographic differences throughout the state.

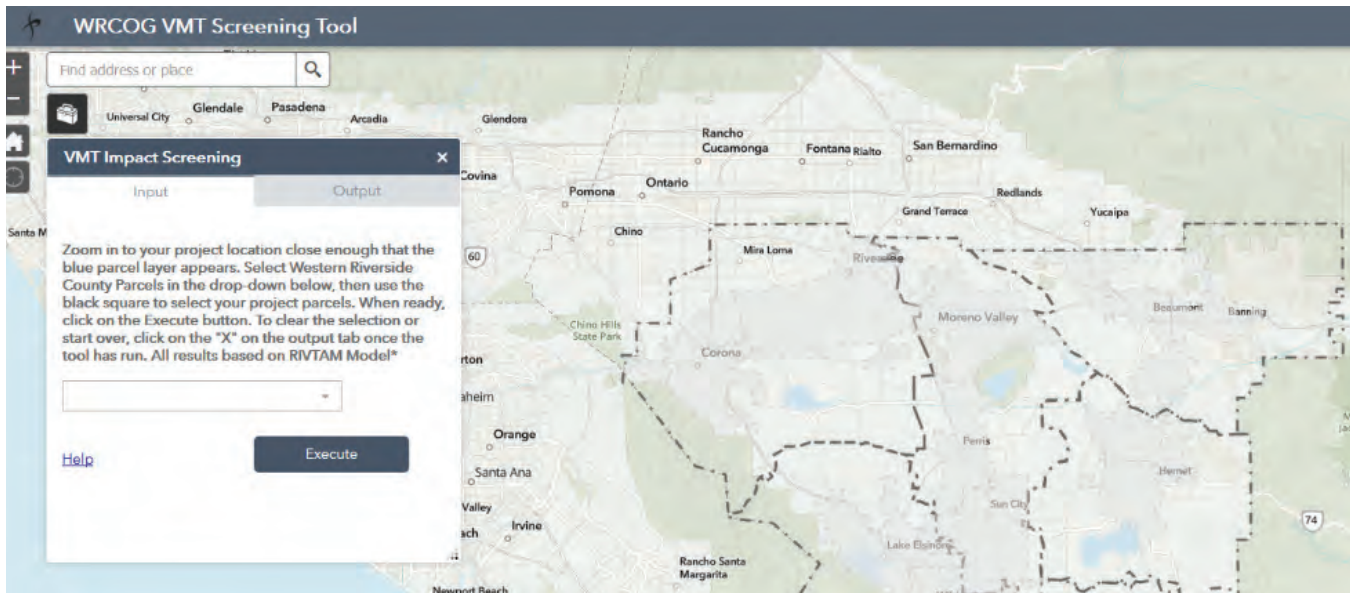
Finally, Fehr & Peers has been actively involved in research projects to quantify VMT and the development of VMT reduction strategies. We funded our own research to build better VMT forecasting models using big data such as cell-phone based global positioning system (GPS) and have worked for a variety of national and state agencies or entities to investigate the effectiveness of transportation demand management (TDM) strategies including projects funded by US EPA, the Strategic Highway Research Program, the California Air Resources Board (CARB), and the California Air Pollution Control Officers Association (CAPCOA). The results of our research provide a head start to the development of tools and to the identification of effective mitigation strategies for this project to ensure efficient use of the available budget.

Senate Bill 743 Implementation

Fehr & Peers is leading SB 743 implementation projects throughout California with a wide range of state, regional, and local governments:



Similar Projects



WRCOG SB 743 Implementation Pathway

Client: Western Riverside Council of Governments

Year Completed: 2019

Contact: Chris Gray

951-955-8304

cgray@wrcog.us

Key Personnel: Jason Pack, Jinghua Xu

Fehr & Peers created a strategy and tools for WRCOG and local jurisdictions to implement SB 743 in Western Riverside County. We evaluated existing travel demand models, developed baseline VMT data, developed a series of VMT estimation methodologies and thresholds, and identified priority mitigation measures. We developed a tool to determine the options for VMT analysis and requirements depending on the project characteristics. The tool is a GIS based website that allows developers and agencies to easily access VMT information by traffic analysis zones. We developed a series of case studies that applied the developed tool, methodologies, and thresholds.

This project was on budget and was delivered in twelve months which was on schedule.

"WRCOG could not be more pleased with the work that Fehr & Peers performed for us related to SB 743. They completed all of the tasks within the allotted budget and time. We were also happy with their outreach efforts including their coordination with our member agencies. They did an excellent job of communicating a complicated subject to our Board members and other key stakeholders."

- Christopher Gray, Director of Transportation & Planning, Western Riverside Council of Governments (WRCOG)

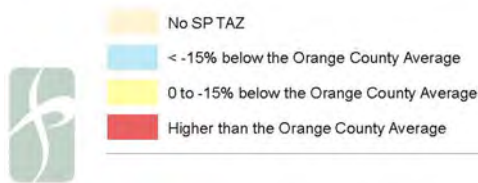
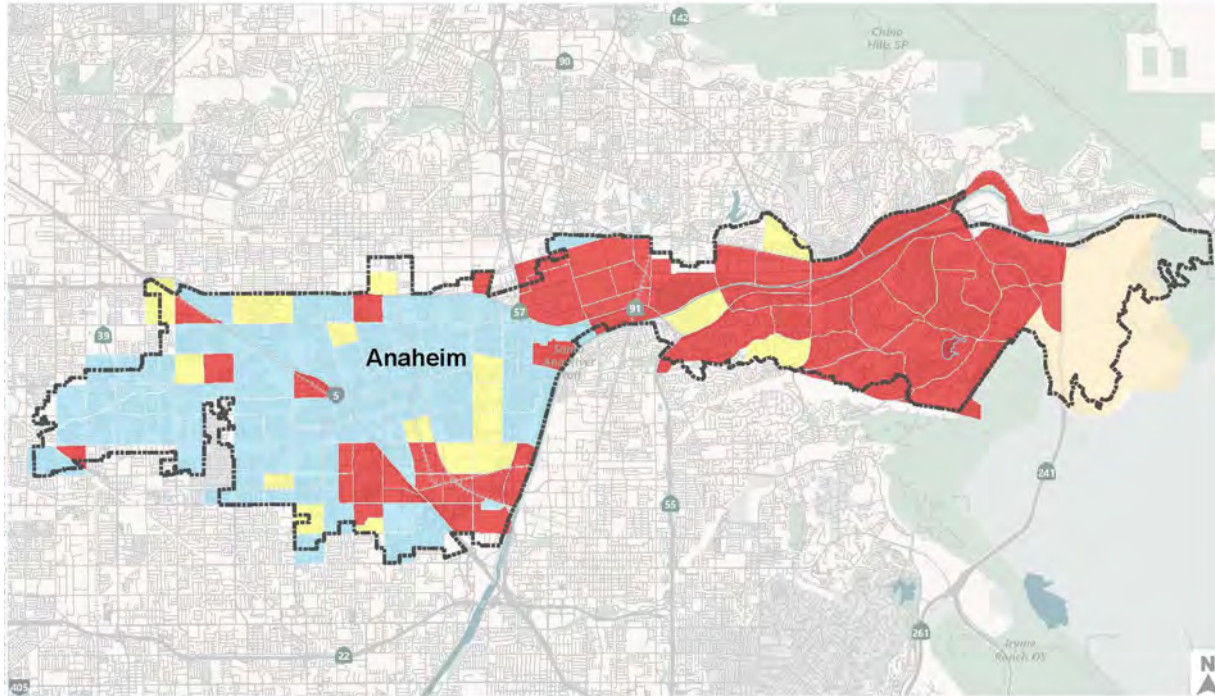


Figure 6

O-D VMT per Service Population in Anaheim TAZs as Compared to the Orange County Average (2012)

City of Anaheim SB 743

Client: City of Anaheim
Year Completed: Ongoing
Contact: Rafael Cobian
714-765-4991
RCobian@anaheim.net
Key Personnel: Jason Pack

Fehr & Peers is assisting the city of Anaheim with SB743 implementation. We are evaluating the available tools to conduct VMT analysis and preparing possible strategies for the City in determining VMT analysis methodology and CEQA transportation impact thresholds. We will be updating their traffic impact study guidelines consistent with requirements of SB 743. Fehr & Peers is also provided a guidance document to assist the City with their decision making process. The document consists of potential VMT screening maps, VMT comparison charts, TPA maps, and sample projects. We are providing guidance and recommendations on available project level mitigation and TDM strategies specific to the City of Anaheim. The project includes adoption of CEQA compliant thresholds of significance by the July, 2020 deadline. The project will conclude with recommendations on a future tool for the City to facilitate SB 743.

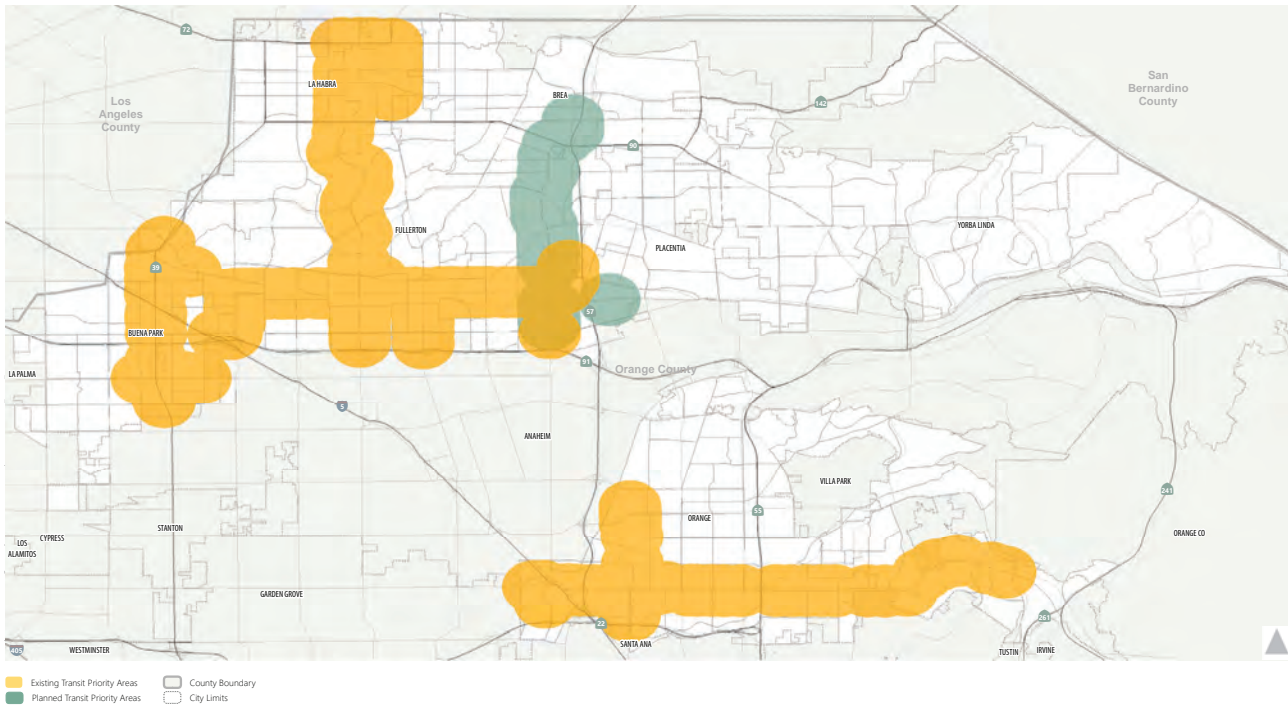


Figure X

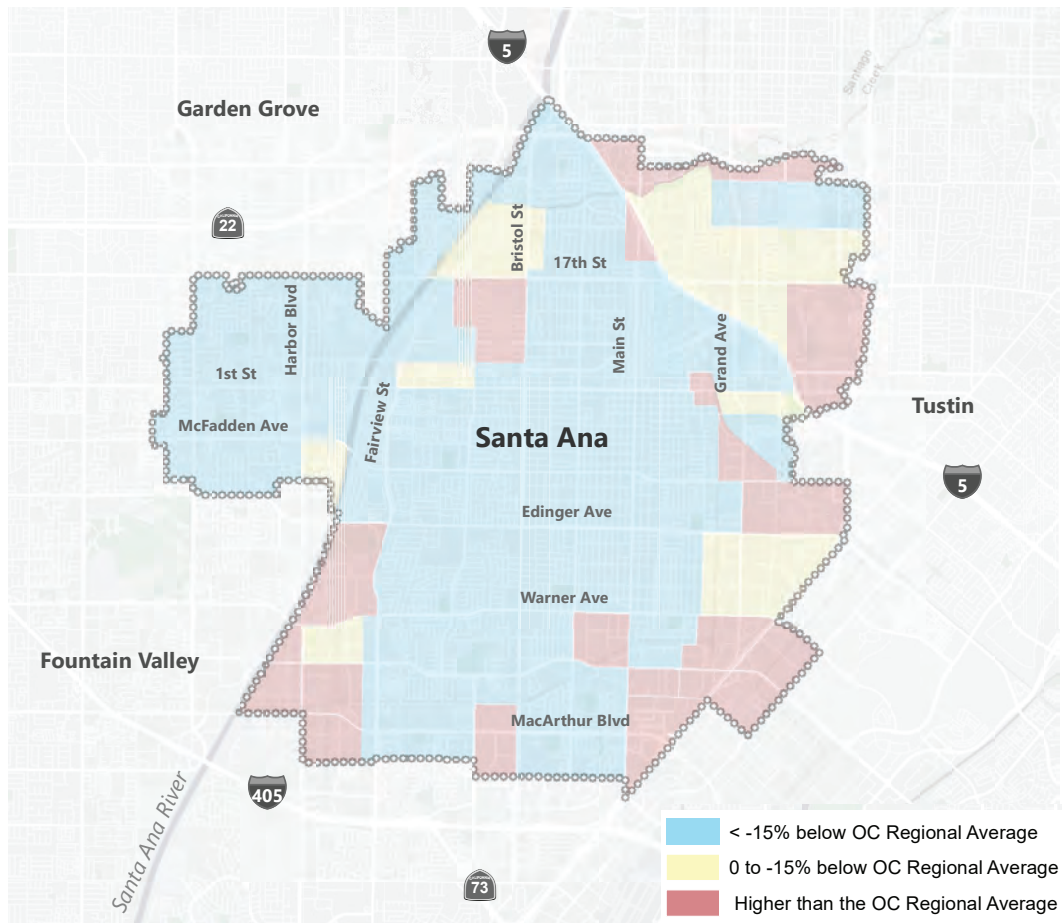
North Orange County Cities
Transit Priority Areas (TPA)



Orange County Collaborative SB 743

Client: City of Orange
Year Completed: Ongoing
Contact: Larry Tay
714-744-2225
ltay@cityoforange.org
Key Personnel: Jason Pack, Jinghua Xu

Fehr & Peers is currently preparing strategies and tools for seven cities (Fullerton, La Habra, Orange, Placentia, Brea, Buena Park, and Yorba Linda) in Orange County to implement SB 743. We are evaluating the travel demand model, developing baseline VMT data, and evaluating potential thresholds and mitigation measures and programs. We will develop an interactive spreadsheet tool that will enable users to assess VMT project-specific impacts and VMT reduction measures. We will prepare draft significance criteria and identify up to 8 projects throughout the County to “test” through the significance criteria. We will also prepare updated Traffic Impact Analysis Guidelines for each city. Though this project is in the early stages, it is currently on budget and on schedule to be completed before the July 2020 adoption deadline.



City of Santa Ana SB 743 Implementation

Client: City of Santa Ana

Year Completed: 2019

Contact: Zed Kekula

714-647-5606

z.kekula@santa-ana.org

Key Personnel: Jason Pack, Jinghua Xu

Fehr & Peers guided the City of Santa Ana through the process of updating and adopting the City's traffic impact study guidelines consistent with requirements of SB 743. Fehr & Peers made VMT estimates for the entire Orange County region in support of the recommended thresholds of significance, including screening maps to facilitate City processing of projects. Fehr & Peers also provided a guidance document with sample projects to assist the City with implementation. This effort including education of staff and collaborative meetings to meet City goals. The traffic impact study guidelines are complete. The City VMT thresholds have been adopted by the Santa Ana City Council and the City VMT Impact Study Guidelines are in the final stages for adoption. This project was delivered on budget and on schedule, within the July 2020 adoption deadline.

4. Team Member Qualifications and Experience

Spencer, as Project Manager, resides in our Orange County office and will be responsible for day-to-day management of the project, including QA/QC, Fehr & Peers staff management, and interface with

City staff. Spencer has 8 years of experience managing unique and challenging projects related to CEQA compliance. Locally, Spencer has managed multiple projects in Garden Grove and surrounding Orange County cities. In addition, Spencer has managed multiple projects analyzing and quantifying VMT and impacts. In order to ensure that the City of Garden Grove has access to the best SB 743 subject experts, Spencer will be supported with a Principal-in-Charge. Spencer will be the main point of contact for City.

Jason, as Principal-in-Charge, will be responsible for supervising the overall project, including QA/QC and ensuring that the firm's resources are brought to the project as committed and necessary for its successful outcome. All the staff proposed on this project have worked with municipal agencies throughout their careers.

Resumes are included in the following pages.





Jason Pack, PE **Principal-in-Charge**

Education:
Bachelor of Science
in Civil Engineering,
University of California,
Davis, 1999

Professional
Registration:
Licensed Traffic Engineer,
State of California
(TR2402)

Mr. Pack began working for Fehr & Peers after receiving his degree in Civil Engineering from the University of California, Davis in 1999. He worked in the Bay Area market for over four years and worked in the Sacramento market for another five years before moving to Southern California in 2008. He has worked on a wide variety of transportation projects, from general plans and specific plans to detailed corridor, interchange, and signal coordination studies. Additionally, he has applied or developed travel demand forecast models on over 50 projects in the State of California. Jason services our clients throughout Southern California and Arizona, with projects from Bakersfield to San Diego, and Phoenix to Long Beach. Jason has had papers/presentations accepted to the TRB National Roundabout Conference, the ITE National Conference, and the California APA Conferences. Jason also teaches two classes for the ASCE national webinar series on Roundabout Feasibility Assessment and Process of Signal Coordination.

Selected Projects:

Mr. Pack was either the project manager or principal-in-charge of all the following studies conducted by Fehr & Peers:

- WRCOG SB 743 Implementation, CA
- SBCTA SB 743 Countywide VMT SB 743 Implementation, CA
- CSU SB 743 Guidelines, CA
- County of San Bernardino Transportation Impact Study Guidelines, CA
- Temecula Wine Country TransCAD TDF Model Development, CA
- City of Upland TransCAD TDF Model Development, CA
- Kern COG Long Range Transit Plan Forecasts, CA
- Kern COG Commuter Rail Corridor Studies, CA
- Santa Ana SB 743 Implementation, CA
- Corona SB 743 Implementation, CA
- Eastvale SB 743 Implementation, CA
- Moreno Valley SB 743 Implementation, CA
- North Orange County Collaborative SB 743, CA
- Temecula SB 743 Implementation, CA



Spencer Reed, PE Project Manager

Mr. Reed has eight years of experience in transportation engineering and transportation planning at Fehr & Peers. Spencer brings a wide variety of skills and an innovative analytical perspective to all his projects. His project and technical experience includes microsimulation modeling, traffic impact studies, travel demand modeling, conceptual design, and bicycle and pedestrian planning. Spencer understands that various projects have a wide range of needs and he maintains a steadfast commitment to the efficiency and reliability of results. This devotion is represented in multiple projects throughout the greater Los Angeles area and southern California. Using a combination of experience, data, and innovation; Spencer has been able to provide thoughtful solutions to all aspects of his projects. In having the opportunity to work on many challenging projects with a wide variety of clients and stakeholders, Spencer has developed a reputation of balancing client goals with stakeholder concerns. Mr. Reed has experience managing projects in Garden Grove and the surrounding Orange County jurisdictions as well as managing multiple projects that have conducted VMT analysis.

Education:
Bachelor of Science
in Civil Engineering,
California Polytechnic
State University, San Luis
Obispo,
2011

Professional
Registration:
Civil Engineer, State of
California (C83432)

Selected Projects:

Mr. Reed was the project manager of all the following studies conducted by Fehr & Peers which were either located in Orange County or included VMT analysis:

- Garden Grove Downtown Parking Management Plan, Garden Grove, CA
- Cottage Industries Shared Parking and Parking Management Plan, Garden Grove, CA
- Cottage Industries Transportation Impact Analysis, Garden Grove, CA
- Anaheim Resort Mobility Plan, Anaheim, CA
- Anaheim Center City Parking Study, Anaheim, CA
- Santa Ana Downtown Parking Study, Santa Ana, CA
- Leisuretown Transportation Impact Study, Anaheim, CA
- Dupont Pedestrian Crossing, Irvine, CA
- Orange County Fair and Events Center Parking, Costa Mesa, CA
- Century Villages at Cabrillo EIR, Long Beach, CA
- Santa Anita North Barn EIR, Arcadia, CA
- Mental Health Facility at Chino Institution for Men EIR, Chino, CA
- City of Hope Master Plan and EIR, Duarte, CA
- Arroyo Seco Music and Arts Festival EIR, Pasadena, CA
- South Bay Galleria EIR, Redondo Beach, CA



Jinghua Xu, PhD, PE Modeler

Jinghua Xu has more than 15 years of experience. Her expertise includes travel demand model development and application, network modeling and simulation, and transportation planning. Jinghua has extensive experience in modeling with both highway and transit focuses. She has in-depth understanding in model estimation, calibration and validation, and has developed, enhanced and applied a wide range of complicated regional travel demand models for large MPOs, such as SCAG and SANDAG, as well as for counties, such as OCTA, SBCTA.

Education:

Ph.D. in Civil Engineering, University of Massachusetts, Amherst, 2004

M.E. in Transportation Engineering, Beijing Jiaotong University, Beijing, China, 1997

B.E. in Transportation Engineering, Beijing Jiaotong University, Beijing, China, 1994

Professional Registration:

Licensed Civil Engineer, State of California (73925)

Publications:

- An Analytical Modeling Tool for Active Transportation Strategy Evaluation, 16th TRB National Transportation Planning Applications Conference, 2017
- Dynamic Modeling Application for Toll Demand and Price Equilibrium on Toll Facilities, Transportation Research Board 92nd Annual Meeting, 2013, co-authored with S. Ruegg

Jinghua has been heavily involved in transit modeling development and application in California and Nevada, including modeling for FTA New Starts projects. Jinghua has extensive knowledge in the current best practice in modeling, as well as FTA's modeling standards. In addition to passenger travel, Jinghua has extensive research experience in freight modeling, and she has been involved in the enhancement of the current California Statewide Freight Forecasting Model (CSFFM) and goods movement studies for local agencies.

Jinghua has served as project manager, technical leader and key modeler in various modeling projects. She has strong analytical skills and is proficient in various transportation modeling software packages, including but not limited to TransCAD (GISDK), CUBE (Voyager/TP+) and TRANPLAN.

Selected Projects:

- WRCOG VMT Screening Tool, CA
- City of Santa Ana SB 743 Implementation, CA
- Orange County Collaborative SB 743, CA
- County of San Diego SB 743 Guidelines, CA
- OCTAM Active Transportation Tool Development, Orange County, CA
- OCTAM Emission Tool Development, Orange County, CA
- OCTA Transit Master Plan, Orange County, CA
- SANDAG Urban Area Transit Strategy, San Diego, CA
- Caltrans Transportation Modeling/Forecasting Service, CA
- RCTC Truck Study, Development and Implementation of Regional Logistics Mitigation Fee, Riverside, CA
- South OC Mobility Study, Orange County, CA
- San Bernardino County Transportation Analysis Model (SBTAM) Modeling Support, CA
- OCTAM FTA New Starts Update, Orange County, CA
- SCAG Activity-based Model Development and Validation in Support of the 2016 RTP/SCS, CA
- SCAG Mode Choice Model Enhancement and Regional Model Update, CA

5. Implementation Schedule

This section provides a proposed schedule to achieve implementation of the City’s VMT guidelines before the State’s deadline of July 1, 2020 and assumes a kick-off meeting in the first two weeks of January 2020. We are proposing a six-month schedule, ending with Planning Commission and City Council Hearings by June 2020.

We propose that one of the two community meetings occur early in the process, to introduce the issues and options, and that the second occurs once the draft guidelines have been prepared, prior to the Planning Commission and City Council Hearings.

Key decisions from City staff regarding guidance on VMT screening and threshold options would be needed towards the end of Task 2.

As neither Task 5 or Task 6 are required for compliance and to minimize conflicts with achieving implementation of the City’s VMT guidelines, these tasks will occur after July 2020. Optional Task 7 will also occur after July 2020 as it is not required for compliance.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Task 1: Kick-Off and Coordination Meetings	A			A			A		
Task 2: VMT Metrics and Thresholds									
Task 3: Quantify the Trip Reduction Benefits of TDM for VMT Mitigation									
Task 4: Attendance at Community Meetings and Hearings		B		B	C	D			
Task 5: VMT Estimation Tool									
Task 6: Staff Training									E
Optional Task 7: Transportation Impact Assessment Guidelines									

- A - Staff coordination meeting**
- B - Community meetings/events**
- C - Planning Commission Meeting**
- D - City Council Meeting**
- E - Staff Training at City Hall**



Contract Exceptions

1. Services to be Provided, Section 2

Changes Requested: “The services to be performed by CONSULTANT shall consist of the services as further specified in CONSULTANT'S proposal attached hereto as Exhibit "A" and incorporated herein by reference. CONSULTANT agrees that ~~its is~~ provision of Services under this agreement shall be within accepted accordance with customary and usual practices in CONSULTANT'S profession and in accordance with the same degree of care, skill, and diligence as is ordinarily possessed and exercised by professionals providing similar services, currently practicing, under similar circumstances. ~~By executing this Agreement, CONSULTANT warrants that it has carefully considered how the work should be performed and fully understands the facilities, difficulties, and restrictions attending performance of the work under this agreement.”~~

Reasons for Changes: The changes are to provide the applicable standard of care for a professional consultant's services. The definition of the applicable prevailing professional standard of care is clear in California: A professional is to exercise the degree of skill, knowledge, and diligence that other professionals in similar circumstances commonly use. (*See, Gagne v. Bertran* (1954) 43 Cal.2d 481.)

2. Ownership of Work Product, 10.

Change Requested: “All documents or other information developed (“Work Product”) or received by CONSULTANT shall be the property of CITY. CONSULTANT shall provide CITY with copies of these items upon demand or upon termination of this Agreement. However, notwithstanding the foregoing, CONSULTANT shall retain all rights, titles, and interests, including but not limited to all ownership and intellectual property rights, in all inventions, improvements, discoveries, methodologies, models, formats, software, algorithms, processes, procedures, designs, specifications, findings, and other intellectual properties developed, gathered, compiled or produced by CONSULTANT prior to or independently of any of its services under this Agreement (“Background IP”), including such Background IP that CONSULTANT may employ in the performance of this Agreement, or may incorporate into any part of CONSULTANT's Work Product. CONSULTANT grants CITY an irrevocable, non-exclusive, transferable, royalty-free license in perpetuity to use, disclose, and derive from, such Background IP, but only as an inseparable part of the Work Product. Any unauthorized or unintended use, re-use, or modification by CITY of the Work Product prepared and provided by CONSULTANT under this Agreement shall be at CITY's sole risk and without liability to CONSULTANT. Third-party content that may be used or incorporated in the Work Product shall not become the property of CITY. CONSULTANT shall secure all licenses necessary for CITY to utilize CONSULTANT's services and the Work Product for their intended purposes.”

Reasons for Changes: First, we may use or integrate some of our own intellectual properties into our work product, which we believe will enhance our services and further the goals of our clients' project. However, we cannot take the risk of losing our rights to our intellectual properties. The only alternative would be to not use any of them. Second, we may have to use content such as big data provided by third-party data or software providers for which we may receive only a limited-use license and not ownership. It is often necessary for such third-party providers to retain ownership of such data for the uses of other clients or purposes. In such cases, we will secure a license for the City to use such content.

3. Indemnification, 19.

Change Requested: “To the fullest extent permitted by law, CONSULTANT agrees to protect, defend, and hold harmless CITY and its elective or appointive boards, officers, agents, and employees from any and all claims, liabilities, expenses, or damages of any nature, including attorneys' fees, for injury or death of any person, or damages of any nature, including interference with use of property, arising out of, or in any way connected with the negligence, recklessness and/or intentional wrongful conduct of CONSULTANT, CONSULTANT'S agents, officers, employees, subcontractors, or independent contractors hired by CONSULTANT in the performance of the Agreement. The only exception to CONSULTANT'S responsibility to protect, defend, and hold harmless CITY, is due to the negligence, recklessness and/or wrongful conduct of CITY, or any of its elective or appointive boards, officers, agents, or employees. Notwithstanding the foregoing, if any of the services provided by CONSULTANT under this Agreement are design professional services, as defined by California Civil Code section 2782.8, the defense and indemnity obligation under this Section 19. shall be limited to the extent required by California Civil Code section 2782.8.”

Reason for Change: To the extent any of Consultant’s services are categorized as “design professional services,” Consultant is entitled to the limitations on its indemnity obligation as required under California Civil Code section 2782.8.



Insurance Exceptions

Proposal and this Agreement do not guarantee any specific amount of work.

- 3.3 Payment. For work under this Agreement, payment shall be made per monthly invoice. For extra work not a part of this Agreement, a written authorization by CITY will be required and payment shall be based on hourly rates as provided in Exhibit "B".
- 3.4 Records of Expenses. CONSULTANT shall keep complete and accurate records of payroll costs, travel and incidental expenses. These records will be made available at reasonable times to CITY.
- 3.5 Termination. CITY and CONSULTANT shall each have the right to terminate this Agreement, without cause, by giving thirty-(30) days written notice of termination to the other party. If CITY terminates the project, then the provisions of paragraph 3 shall apply to that portion of the work completed.

4. **Insurance Requirements** 4.1 - There is no notice for material change since administratively impossible to comply per insurance carriers

- 4.1 Commencement of Work CONSULTANT shall not commence work under this Agreement until all certificates and endorsements have been received and approved by the CITY. All insurance required by this Agreement shall contain a Statement of Obligation on the part of the carrier to notify the CITY of any material change, cancellation, or termination at least thirty (30) days in advance.
- 4.2 Workers Compensation Insurance For the duration of this Agreement, CONSULTANT and all subcontractors shall maintain Workers Compensation Insurance in the amount and type required by law, if applicable. The insurer shall waive its rights of subrogation against the CITY, its officers, officials, agents, employees, and volunteers.
- 4.3 Insurance Amounts CONSULTANT shall maintain the following insurance for the duration of this Agreement:
 - a) Commercial general liability in the amount of \$1,000,000 per occurrence; (claims made and modified occurrence policies are not acceptable); Insurance companies must be admitted and licensed in California and have a Best's Guide Rating of A-, Class VII or better, as approved by the CITY;
 - b) Automobile liability in the amount of \$1,000,000 ~~per occurrence~~; (claims made and modified occurrence policies are not acceptable) Insurance companies must be admitted and licensed in California and have a Best's Guide Rating of A-, Class VII or better, as approved by the CITY. Combined single limit

- per claim
- c) Professional liability in the amount of \$1,000,000 ~~per occurrence~~; Insurance companies must be acceptable to CITY and have an AM Best's Guide Rating of A-, Class VII or better, as approved by the CITY. If the policy is written on a "claims made" basis, the policy shall be continued in full force and effect at all times during the term of the agreement, and for a period of three (3) years from the date of the completion of services provided. In the event of termination, cancellation, or material change in the policy, professional/consultant shall obtain continuing insurance coverage for the prior acts or omissions of professional/consultant during the course of performing services under the term of the agreement. The coverage shall be evidenced by either a new policy evidencing no gap in coverage, or by obtaining separate extended "tail" coverage with the present or new carrier.

An Additional Insured Endorsement, **ongoing and completed operations**, for the policy under section 4.3 (a) shall designate CITY, its officers, officials, employees, agents, and volunteers as additional insureds for liability arising out of work or operations performed by or on behalf of the CONSULTANT. CONSULTANT shall provide to CITY proof of insurance and endorsement forms that conform to city's requirements, as approved by the CITY.

An Additional Insured Endorsement for the policy under section 4.3 (b) shall designate CITY, its officers, officials, employees, agents, and volunteers as additional insureds for automobiles owned[^], lease, hired, (if any) or borrowed by CONSULTANT. CONSULTANT shall provide to CITY proof of insurance and endorsement forms that conform to CITY's requirements, as approved by the CITY.

(General Liability and
Automobile Liability)

For any claims related to this Agreement, CONSULTANT's[^] insurance coverage shall be primary insurance as respects to CITY, its officers, officials, employees, agents, and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, agents, or volunteers shall be excess of the CONSULTANT's insurance and shall not contribute with it.

If CONTRACTOR maintains higher insurance limits than the minimums shown above, CONTRACTOR shall provide coverage for the higher insurance limits otherwise maintained by the CONTRACTOR.

5. **Non-Liability of Officials and Employees of the CITY.** No official or employee of CITY shall be personally liable to CONSULTANT in the event of any default or breach by CITY, or for any amount, which may become due to CONSULTANT.
6. **Non-Discrimination.** CONSULTANT covenants there shall be no discrimination against any person or group due to race, color, creed, religion,