
**CHANGE ORDER 10 TO THE AGREEMENT BETWEEN THE CITY OF
SUNNYVALE AND KIMLEY-HORN AND ASSOCIATES, INC. FOR THE
MARY AVENUE OVERCROSSING EIR PROJECT**

Consultant shall perform the following Additional Services:

Task 10.1: Traffic Impact Analysis

Kimley-Horn will complete the following tasks to address City staff's request that is outside of the original contract scope of services:

- 1) Data Collection
 - a. Adjust Existing Conditions volumes to 2021
 - i. Based on a growth rate from other studies
- 2) Travel Demand Modeling
 - a. Hexagon will provide updated outputs from a more recent version of the City's travel demand model than the one used in the prior analysis. This model includes updates to the LSAP, El Camino Real Specific Plan, and Downtown Specific Plan. See attachment for scope from Hexagon. Note that Hexagon fees for this task are included in fees listed under Task 10.2.
- 3) Baseline Conditions
 - a. Revise Existing Conditions – intersection level of service (LOS) analysis and travel time analysis. This scope of work includes 26 intersections.
 - b. Revise Near-term Conditions – intersection LOS analysis and travel time analysis
 - c. Revise Cumulative Conditions – – intersection LOS analysis and travel time analysis.
- 4) Plus Project Scenarios Analysis (intersection and LOS analysis)
 - a. Existing + Alt 1
 - b. Near-term + Alt 1
 - c. Cumulative + Alt 1
 - d. Existing + Alt 2
 - e. Near-term + Alt 2
 - f. Cumulative + Alt 2
 - g. Existing + Alt 3
 - h. Near-term + Alt 3
 - i. Cumulative + Alt 3
- 5) Alternatives Analysis: This task includes evaluating project alternatives at the same level of detail as the project in the EIR to compare LOS metrics and a matrix for public meetings.
- 6) Admin Draft TIA – standalone TIA: The TIA will cover LOS analysis and will not become part of the EIR. If needed, operational deficiencies will be evaluated and improvements recommended.
- 7) Draft TIA – standalone TIA
- 8) Final TIA – standalone TIA
- 9) Responses to DEIR Comments and FEIR (Note that this task applies to both Task 10.1 and 10.2. Official responses will be prepared as part of the EIR process as described in the original scope.)

Fee: \$106,105

Task 10.2: Vehicle Miles Traveled Analysis

Exhibit A to Change Order 10
Dated March 31, 2021

Vehicle Miles Traveled (VMT) guidelines published by the California Governor’s Office of Planning and Research (OPR)¹ provide a list of transportation projects that would likely not lead to “a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis.” However, since the construction of a bridge is not on that list, this project would need to include an induced travel analysis. As such, Kimley-Horn will perform a quantitative induced travel analysis and VMT assessment as defined in the guidelines as methodology to “estimate VMT impacts from roadway expansion projects”. The VMT assessment will be evaluated using the same City travel demand model used in Task 10.1 for the traffic impact analysis to determine whether the construction of the Project would lead to a measurable increase in VMT for the City of Sunnyvale.

As a subconsultant to Kimley-Horn, Hexagon will calculate daily VMT’s for the roadways within the boundaries of the study area, to be defined by Kimley-Horn in coordination with City staff. Quantitative VMT results will be provided for Options 1, 2, 3, and 5 in 2016 and 2035. A qualitative VMT result will be provided for Option 4 because the travel demand model cannot accurately estimate the change in mode shift due to a pedestrian and bicycle bridge. VMT’s will be calculated by multiplying the daily traffic volumes by the distance of the roadway segments in the study area.

While is it common practice to calculate daily traffic at roadway segments by adding the volumes from the morning (5:00 AM – 9:00 AM), midday (9:00 AM-3:00 PM), afternoon (3:00 PM – 7:00 PM) and night (7:00 PM – 5:00 AM) time-period traffic assignments, Hexagon found that this method does not result in accurate estimates of daily traffic when compared to observed 24-hour counts. It was found that applying factors to the AM and PM peak-hour traffic assignments result in much better match of modeled and observed daily traffic volumes. Based on ADT counts from the City of San Jose and Caltrans it was found that applying factors to the AM and PM peak-hour traffic assignments results in a very strong correlation between the counts and modeled volumes. Regression analysis of daily traffic volumes at almost 400 locations showed a 92% correlation between observed and modeled ADT volumes. Therefore, daily volumes will be calculated by applying factors to the AM and PM peak hour traffic assignments.

The results of the VMT assessment will be documented in a separate technical memorandum to become part of the EIR. If needed, impacts will be evaluated and mitigations recommended. This document will include evaluating project alternatives at the same level of detail as the project in the EIR to compare VMT metrics and a matrix for public meetings. Kimley-Horn will prepare and submit an electronic (PDF) copy of the draft report to the City. We will address one set of consolidated, non-conflicting City comments on the draft report. If the comments require additional analysis or data collection beyond that provided for in this Scope of Services, this work will be considered as an additional service. Any additional comment responses, regardless of origin, will also be considered as an additional service. Kimley-Horn will prepare and submit an electronic (PDF) copy of the final report to the City.

¹ Technical Advisory on Evaluating Transportation Impacts in CEQA. Governor’s Office of Planning and Research, State of California. December 2018.

Fee: \$18,800

Task 10.3: Update Project Construction Cost Estimates and Engineering Design Support

This task is an augment of Task 2.1.6 of the original contract. Kimley-Horn will update the previous project cost estimates for the project options last prepared in March 2018. Kimley-Horn will also provide updates to the preliminary design as needed and requested by staff up to the budgeted amount. Additional requests above this amount can be accommodated with written approval from City staff.

Fee: \$12,100

Task 10.4: Update Air Quality Technical Studies

Kimley-Horn will prepare an update to the air quality technical analysis last prepared in December 2017. The technical analysis will use the updated traffic analysis and current air quality modeling (using CalEEMod) methods in the revised analysis.

Fee: \$10,000

Task 10.5: Update Greenhouse Gas Emissions Analysis

Kimley-Horn will prepare an update to the Greenhouse Gas Emissions analysis last prepared in December 2017. The technical analysis will use the updated traffic analysis, including VMT and current greenhouse gas modeling methods (using CalEEMod) in the revised analysis.

Fee: \$8,520

Task 10.6: Update Energy Conservation Analysis

Kimley-Horn will update the Energy Conservation Analysis. In December 2019, the State CEQA Guidelines were updated to require a separate section in environmental documents to consider if a project would have significant impacts on energy conservation or consumption.

Fee: \$7,370

Task 10.7 Update to Biological Resources Analysis

Kimley-Horn will prepare an update to the biological resources analysis. The update will consist of a revalidation of the current biological analysis last prepared in April 2017.

Fee: \$9,710

Task 10.8: Update to Cultural Resources Analysis

Kimley-Horn will prepare an update to the cultural resources analysis. The update will consist of a revalidation of the current cultural analysis last prepared in April 2017.

Fee: \$9,920

Task 10.9: Update to the Noise Analysis

Kimley-Horn will prepare an update to the noise technical analysis last prepared in September 2017. The technical analysis will use the updated traffic analysis and current City noise standards (to be coordinated with City prior to commencement of update) to calculate project increases from traffic noise associated with the project.

Fee: \$10,910

Task: 10.10: Revisions to Admin Draft EIR based on new Appendix G Guidelines

Kimley-Horn will update the EIR analysis for the relevant sections based on the new thresholds of Appendix G of the State CEQA Guidelines. These updated thresholds went into effect in December 2018. This task includes revising the existing sections with the updated thresholds and creating new EIR sections such as Energy and Wildfire. This task also includes assisting the City with the preparation of the updated AB 52 consultation letters.

Fee: \$11,810

Task: 10.11: Project Coordination

This task supplements Task 7.2 in the original contract. Alex Jewell, Kimley-Horn Senior Project Manager, will be responsible for management and supervision of the EIR project team as well as consultation with the City Staff to incorporate City policies into the EIR. Kimley-Horn will coordinate with state and local agencies regarding this environmental document. Alex Jewell will coordinate with all technical staff, consultants, support staff and word processing toward the timely completion of the EIR.

Fee: \$8,500

Task: 10.12 Meeting Attendance

This task supplements Task 7.3 in the original contract. Alex Jewell along with other key Project Team personnel will also be available to attend meetings with City staff and affected jurisdictions, agencies and organizations as needed to identify issues, assess impacts and define mitigation. This scope of work assumes up to 100 hours for meeting attendance. Any additional amount of time beyond this initial budget will require approval from the City. This task assumes that no additional community meetings will be present and that no public meeting facilitation by Apex Strategies will be required.

Fee: \$29,520

Exhibit A to Change Order 10
Dated March 31, 2021

Project Expenses

This task supplements the Document Reproduction task in the original contract. This additional budget includes increased costs associated with the reproduction of EIRs. In particular, costs associated with including USB thumb drives with the EIRs instead of compact disks. USB thumb drives have an increased cost compared to CDs.

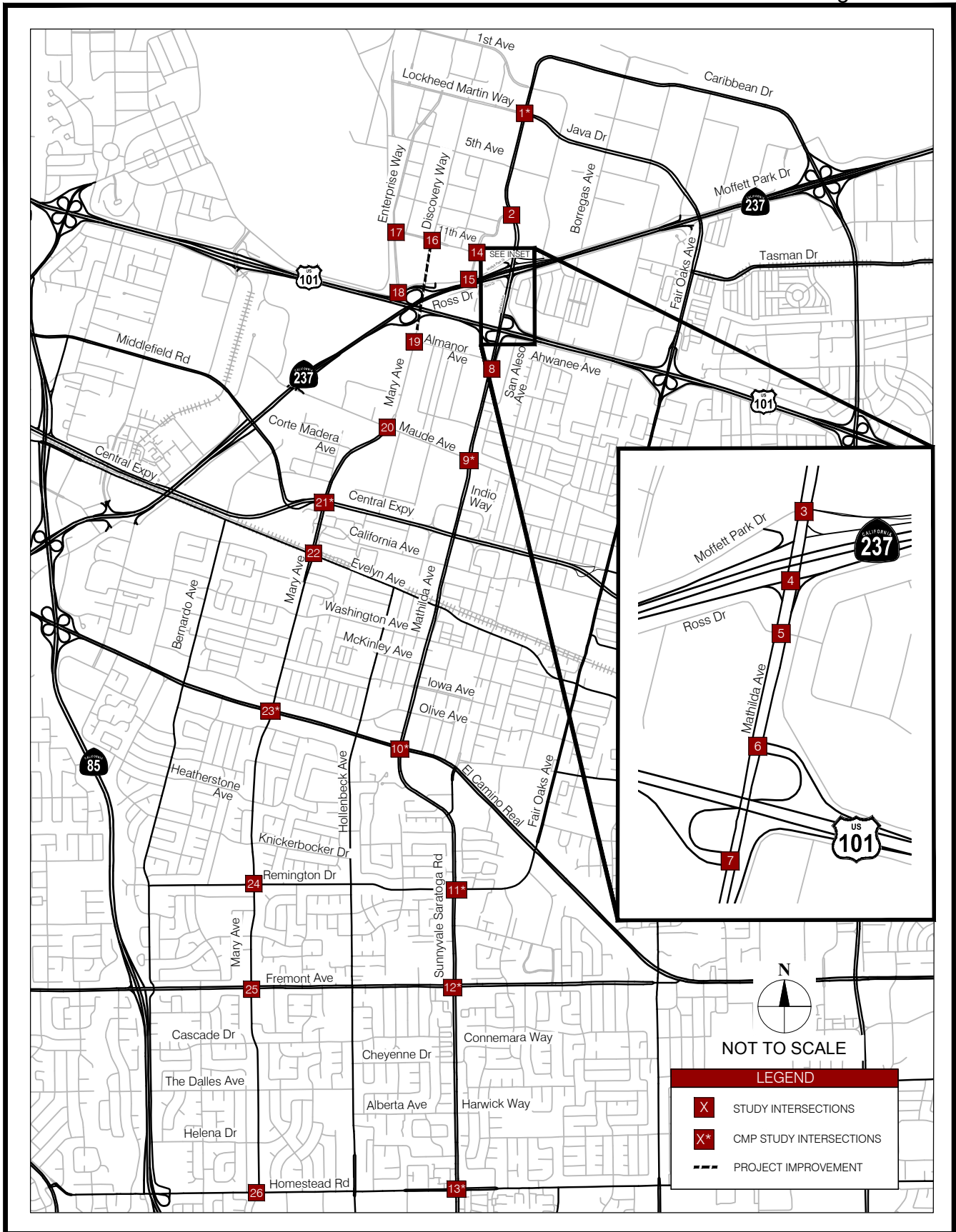
Fee: \$5,000

Total Labor Fee: \$248,265

Contingency* (10%): \$24,827

*Only to be used with written authorization from City staff.

Total Fee: \$273,092





HEXAGON TRANSPORTATION CONSULTANTS, INC.

March 9, 2021

Ben Huie
Kimley-Horn
4637 Chabot Drive, Suite 300
Pleasanton, CA 94588

Subject: *Proposal to Develop Traffic Forecasts for the Mary Avenue Extension Project in Sunnyvale, CA*

Dear Mr. Huie:

Hexagon Transportation Consultants, Inc. is pleased to submit this proposal to develop traffic forecasts for the Mary Avenue Extension Project in Sunnyvale, California. It is our understanding that the forecasts for this project developed in 2017 need to be revised using a different set of land use assumptions. The forecasts developed in 2017 for the 2035 horizon year were based on the City of Sunnyvale General Plan land use assumptions. Since then, several large development projects in Sunnyvale are planned and the City wants those projects to be included in the traffic analysis of the Mary Avenue Extension Project.

Scope of Work

The following scope of work was prepared based on input from City staff and information provided in your March 4, 2021 e-mail. The scope of services assumes the following:

- Base year will be the same as before and represents 2016 conditions. The base model (validation) forecasts were compared with 2016 traffic counts. The 2013 land use data in the project area was updated with land use developments that were constructed and occupied between 2013 and 2016. To be consistent with the 2035 land use data, minor updates to the 2016 land use data will be made.
- Future year 2035 will assume the City's Existing General Plan plus the Downtown Specific Plan, LSAP, ECR Specific Plan, and Fortinet land use developments.
- Since none of the project scenarios would result in measurable shifts in the mode of travel, the same peak hour trip tables will be used for all project scenarios. Note that the Sunnyvale model (or any other trip-based travel demand model in the Bay Area) does not have the capability to forecast reasonable estimates of potential shifts in bicycle and pedestrian mode of travel resulting from the project.
- The peak hour traffic assignment procedure will be updated to produce more accurate traffic volumes and travel speeds on the roadway segments in the study area.
- The number study intersections has been reduced from 50 to approximately 25.



Mr. Ben Huie
March 9, 2021
Page 2 of 3

Task 1: Base Year (2016) Forecasts.

Hexagon will develop 2016 AM and PM peak hour forecasts for the following project scenarios:

- 2016 Existing Conditions
- 2016 Four Lane Scenario
- 2016 Two Lane Scenario
- 2016 Non-SOV Scenario

Task 2: Horizon Year (2035) Forecasts.

Hexagon will develop 2035 AM and PM peak hour forecasts for the following project scenarios:

- 2035 No Project Scenario
- 2035 Four Lane Scenario
- 2035 Two Lane Scenario
- 2035 Non-SOV Scenario

Task 3: Vehicle Miles Traveled

Hexagon will calculate daily VMT's for the roadways within the boundaries of the study area, to be defined by Kimley-Horn. VMT's will be provided for all 2016 and 2035 scenarios. VMT's will be calculated by multiplying the daily traffic volumes by the distance of the roadway segments in the study area.

While it is common practice to calculate daily traffic at roadway segments by adding the volumes from the morning (5:00 AM – 9:00 AM), midday (9:00 AM-3:00 PM), afternoon (3:00 PM – 7:00 PM) and night (7:00 PM – 5:00 AM) time-period traffic assignments, Hexagon found that this method does not result in accurate estimates of daily traffic when compared to observed 24-hour counts. It was found that applying factors to the AM and PM peak-hour traffic assignments result in much better match of modeled and observed daily traffic volumes. Based on ADT counts from the City of San Jose and Caltrans it was found that applying factors to the AM and PM peak-hour traffic assignments results in a very strong correlation between the counts and modeled volumes. Regression analysis of daily traffic volumes at almost 400 locations showed a 92% correlation between observed and modeled ADT volumes. Therefore, daily volumes will be calculated by applying factors to the AM and PM peak hour traffic assignments.

Task 4: Travel Forecasting Results

Hexagon will provide the following products:

- 2016 and 2035 AM and PM peak hour link volume plots for all scenarios
- 2016 and 2035 AM and PM congested travel speeds plots for all scenarios
- 2016 and 2035 AM and PM v/c-ratio plots for all scenarios
- 2016 and 2035 AM and PM travel time plots for all scenarios
- A table with daily VMT's for all scenarios
- 2016 and 2035 AM and PM peak hour model estimated turning movements at approximately 25 intersections

A brief Technical Memorandum will be prepared documenting the results of the travel forecasts.



Mr. Ben Huie
March 9, 2021
Page 3 of 3

Task 5: Response to Comments

The results of the travel forecasts will be reviewed by you and another engineering firm. This task includes attending two (zoom) meetings to discuss the forecasting results and respond to questions.

Additional Services

Any work not specifically referenced in the above Scope of Services—for example completing traffic forecasts for additional land use or network scenarios and attending meetings — shall be considered additional services.

Budget and Schedule

The fee for completing tasks 1-5 will be \$15,000. Additional Services shall be provided upon authorization and will be billed separately. Billings will be conducted monthly, on a percent complete basis. This price quote is good for 30 days from the date of this letter. After that time, please contact us for an updated proposal. We can provide you with a copy of our standard contract agreement upon request. The forecast will take about four weeks to complete after we receive notice to proceed.

We look forward to working with you and appreciate your consideration of Hexagon for this assignment. If you have any questions, please do not hesitate to call.

Sincerely,

Hexagon Transportation Consultants, Inc.

A handwritten signature in blue ink, appearing to read 'At van den Hout', is written over the company name.

At van den Hout
Vice President