



## STAFF REPORT

**City Council Meeting Date:** 1/14/2020  
**Staff Report Number:** 20-004-CC

**Regular Business:** Amend the agreement with AECOM Technical Services, Inc. for the Ravenswood Avenue railroad crossing study

### Recommendation

Staff recommends that City Council authorize the city manager to amend the agreement with AECOM Technical Services, Inc. for the Ravenswood Avenue railroad crossing study. The scope of the amended agreement is consistent with the direction received from the City Council Rail Subcommittee (Rail Subcommittee) July 16, 2019, to proceed with evaluation of a fully elevated over downtown alternative.

### Policy Issues

The project was included in the 2018 City Council's work plan and the final project study report (PSR) was adopted by the City Council in early 2019. The additional scope of work was requested by the City Council to further evaluate two additional options: a fully elevated grade separation over downtown and a multicity tunnel option. While the project was not prioritized in the City Council's 2019 work plan, staff is continuing to advance the project as resources allow.

The project is consistent with the City Council rail policy (Attachment B) and with the 2016 general plan goals to increase mobility options to reduce traffic congestion and greenhouse gas emissions; increase safety; improve Menlo Park's overall health, wellness, and quality of life through transportation enhancements; support local and regional transit that is efficient, frequent, convenient and safe; provide a range of transportation choices for the Menlo Park community; and to promote the safe use of bicycles as a commute alternative and for recreation.

### Background

In March 2016, City Council awarded a contract to a consultant team, led by AECOM, to perform the Ravenswood Avenue railroad crossing PSR. Over 50 meetings were held for the project and feedback received was incorporated into the project analysis. On May 8, 2018, the City Council approved the selection of Alternative A (an underpass crossing at Ravenswood Avenue and keeps Oak Grove, Glenwood and Encinal Avenues open to all modes of traffic as existing,) and provided general direction to staff to bring back the following additional items at a future meeting:

- Letters to Palo Alto, Atherton, Redwood City, Mountain View and Sunnyvale to request consideration of a multicity trench or tunnel
- Letter to Caltrain to request a bicycle/pedestrian path adjacent to the rail within Caltrain right of way
- Additional scope of work and appropriation request to prepare (1) a financial assessment of a trench/tunnel; (2) a conceptual design, noise, tree, and visual impact assessment of a fully elevated alternative

On November 28, 2018, the agenda packet for the City Council meeting December 4, 2018 was released including the staff report addressing the above requests. The draft PSR and draft scope for additional studies were attached to that staff report for public review and comment. Staff returned to City Council January 15, 2019 with a summary of all comments received on both documents and suggested edits to the scope. At that time, City Council directed staff to revise the preferred alternative to Alternative C (hybrid grade separation with Ravenswood, Oak Grove, and Glenwood Avenues grade separated and Encinal Avenue to remain open, at grade.)

On January 31, 2019 the Rail Subcommittee received an update on the Ravenswood Avenue railroad crossing project including a discussion of the comments received on the draft documents and a “fully elevated over downtown” rail profile option. Approximately 25 community members were in attendance and 22 provided public comment. The Rail Subcommittee discussed options for a rating criteria system that would reflect the various land uses adjacent to the rail corridor along the length.

On March 5, 2019, City Council approved the final PSR identifying Alternative C as the preferred alternative, which completed the current grant funded scope of work. No direction was given regarding the draft scope for additional studies at that time.

On April 22, 2019, the Rail Subcommittee received a brief update on the Ravenswood Avenue railroad crossing project. Approximately 10 community members and stakeholders attended the meeting and spoke regarding the need to coordinate with the Middle Avenue pedestrian and bicycle rail crossing and advance the Middle Avenue project as soon as possible, given the benefits of a rail tunnel.

On May 21, 2019, City Council received a oral presentation from professor Michael Bennon of the Stanford Global Project Center regarding the feasibility of a rail tunnel in Menlo Park and information regarding the proposed land use densities that could be needed to finance a rail tunnel. Since this was an informational presentation, no direction was given as a result of this presentation.

On July 16, 2019, the Rail Subcommittee received a brief update on the Ravenswood Avenue railroad crossing project. Eight community members and stakeholders attended the meeting and spoke regarding the desire to remove a trench/tunnel alternative from further consideration, shared both support and concerns about a fully elevated rail alternative, provided specific input regarding the treatment of Encinal Avenue, and concerns about construction impacts. The Rail Subcommittee provided direction to proceed as follows:

1. Eliminate the tunnel option from further study in the scope of work, given the information provided by professor Michael Bennon of the Stanford Global Projects Center at the May 21, 2019, City Council meeting
2. Concur with the creation of three geographic segments presented based on adjacent land uses to evaluate the options in the future (north of Oak Grove Avenue; Oak Grove Avenue to Burgess Drive; south of Burgess Drive)
3. Incorporate the ability to provide a menu/iterative analysis of possible fully elevated options, including starting the rise of the railroad tracks at Atherton border and nearer to Encinal Avenue, into the scope of work and evaluate the pros and cons of each
4. Include assessment of beautification/aesthetic improvements options and a cost comparison to “base” case
5. Include assessment of construction impacts in each alternative

## Analysis

Following the Rail Subcommittee direction July 16, 2019, staff worked with AECOM to revise their proposal for additional services. In addition, the California Public Utilities Commission (CPUC) solicited applications to prioritize grade separation projects in August, which were due in mid-October 2019. In addition, the transportation division of the public works department has three positions vacant, including the previous project manager for the Ravenswood Avenue railroad crossing project. Staff prioritized submittal of an application to the CPUC for a grade separation project in Menlo Park over finalizing the scope of work through fall 2019. Now that the application has been submitted, staff returned attention to the revised scope of work and is returning to City Council to seek authorization to amend AECOM's agreement.

A revised scope of work is provided in Attachment A incorporating the Rail Subcommittee's July 16 direction described above. In summary, the scope of work defines two phases:

- Feasibility study assessment and community engagement process
- Technical evaluation of noise, vibration and potential real estate impacts

The following summary table identifies how each item identified by the Rail Subcommittee was addressed in the final scope of work.

Table 1: Direction on revised scope of work	
1. Eliminate tunnel option from further study	Task removed
2. Geographic segments for criteria evaluation presented July 16, 2019	Segments incorporated into Task 10, comparison matrix
3. Provide option to iterate possible fully elevated options	Included in Task 7, up to six iterations included
4. Include beautification/aesthetic improvement assessment	Added optional Task 11 to retain an architect to assess alternatives
5. Include assessment of construction impacts	Included in Task 7

### Next steps

Following City Council authorization to amend the agreement with AECOM, staff will continue to advance this project as time allows, according to any direction given on the relative priority of this project as part of City Council's 2020 work plan development anticipated in early 2020. Staff resource constraints are discussed further in the Impact on City Resource section below.

### Impact on City Resources

The City Council's approved budget for fiscal year 2019-20 includes \$300,000 in the capital improvement program to advance this project. This budget would be sufficient for the scope of work as included in Attachment A and staff time needed to complete this phase of work, as summarized in Table 2 below.

Table 2: Cost estimate			
Phase	Consultant cost	Staff time	Subtotal
Phase 1: Feasibility Study	\$114,190	\$25,000	\$139,190
Phase 2: Technical evaluations (including optional Task 11 for architect's services)	\$100,960	\$20,000	\$120,960
<b>Subtotal</b>	<b>\$215,150</b>	<b>\$45,000</b>	<b>\$260,150</b>

The staff resources required to perform and manage the additional scope of work may impact other transportation projects. City Council is scheduled to discuss the 2020 work plan in January 2020, which could impact project priorities for this and other projects moving forward. Currently, three vacancies in the transportation division of the public works department will impact staff's ability to deliver this next phase of work when considering other project priorities. Staff will assess project schedules and impacts taking into consideration the City Council work plan direction before reporting back to the Rail Subcommittee with the next project update.

### **Environmental Review**

The results of this phase of the Project will identify required environmental reviews and studies required to advance the project. Environmental reviews and studies will be completed as part of the next phase of work.

### **Public Notice**

Public notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours before the meeting. Additional notifications are being made through the project webpage, a public works project list email blast.

### **Attachments**

- A. Revised scope of additional work
- B. Hyperlink – rail policy: [menlopark.org/DocumentCenter/View/6388/City-Council-Rail-Policy?bidId](http://menlopark.org/DocumentCenter/View/6388/City-Council-Rail-Policy?bidId)

Report prepared by:  
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Report reviewed by:  
Justin Murphy, Deputy City Manager

December 19, 2019

Nicole Nagaya  
City of Menlo Park  
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Menlo Park, CA 94025

**RE: Ravenswood Avenue Railroad Crossing Project, Extra Work Request (Amendment 3)**

Dear Nikki:

At the May 8, 2018 City Council meeting, Council directed that additional scope items be considered for the project. Per these City Council meeting minutes, additional scope items included “(1) a financial assessment for a trench/tunnel and; (2) a conceptual design, noise, tree, and visual impact assessment of a fully elevated alternative.” However, subsequent to the City Council meeting, the Rail Subcommittee recommended on July 16, 2019 that the financial assessment for the trench/tunnel be removed following a presentation to the City Council by Professor Michael Bennon of the Stanford Global Project Center on May 21, 2019. Below is a description of the scope of work for evaluating a fully elevated alternative only.

**SCOPE OF WORK****Task 1: Project Management**Task 1.1 Project Administration

Due the additional scope items described below which extends the schedule, AECOM will provide additional project management services for the period of approximately 6 months from the Notice to Proceed. These services include:

- Coordinating with in-house design staff, subconsultants, and the City
- Conducting additional check-in conference calls
- Monitoring schedule and budget status and preparing invoices

Task 1.6 CPUC Grade Separation Nomination

AECOM will assist the City in the completion of the CPUC’s GSN-1 form, which is required for Nomination for Separation of Existing At-Grade Crossing. The nominations help the CPUC establish a priority list of railroad grade separation projects most urgently in need of separation. The form will include the three at-grade crossings proposed for separation in the City’s currently identified preferred Alternative C: Ravenswood Avenue, Oak Grove Avenue and Glenwood Avenue.

**Phase 1: Feasibility Assessment**

The following tasks are structured in two phases to evaluate the potential feasibility of a fully elevated in downtown alternative. Phase 1 (Task 7) provides a feasibility study and review of similar built projects to provide examples of how a project might look and integrate into the community. Phase 1 includes a community engagement process and series of Rail subcommittee, Complete Streets Commission and Planning Commission and City Council meetings to provide input and direction. Direction to proceed to Phase 2 (Technical evaluations described in tasks 8, 9, 10, 11) would be initiated following Phase 1, only with direction by the City Council to staff to proceed,

## Task 7: Fully Elevated in Downtown Alternative Analysis

### Task 7.1 Collection of Sample Projects

AECOM will identify up to and provide photographs of fully elevated rail systems from other, similar (elevated rail) projects around the world. AECOM will also provide order-of-magnitude (square foot) cost estimates, as available, of these sample projects.

### Task 7.2 Preliminary Engineering

AECOM will develop preliminary engineering for an alternative that will include a fully elevated rail profile at a minimum between Ravenswood Avenue and Oak Grove Avenue with an iterative process to evaluate the elevations at the remainder of the corridor within the Menlo Park city limits. Examples could include conforming at the Atherton city limit or near Encinal Avenue, as well as varying the grade of the railroad. Part of the task below will include determining the resulting profile at Glenwood Avenue and Encinal Avenue for various criteria and constraints. This task will include conducting track profile analyses for a range of fully elevated alternatives (maximum of six) with the following design options:

1. Minimize elevation gain of the railroad tracks at Encinal Avenue as a result of using the maximum grade possible north of Oak Grove Avenue.
2. Similar to #1 above, except use a maximum grade of 1% (Caltrain's maximum allowable grade that does not require a design exception).
3. Begin elevation gain at Menlo Park-Atherton city limits and vary the railroad grades to minimize impacts (elevation and/or right way) to Encinal Avenue.

Each rail profile option shall provide vertical clearance under the railroad tracks on an elevated structure in the downtown station area, between Ravenswood Avenue and Oak Grove Avenue, such that minor modifications, if any, of these two roads and their access points are required.

A maximum of six track profiles will be developed to illustrate rail elevation, construction limits, and roadway depths. Based on City Council input, two of the six track profiles will be selected to complete the following tasks.

- Track and road profiles, shoofly track alignment, and all other basic geometric features of the alternative required to determine the limits of construction and approximate quantities to complete an order-of-magnitude cost estimate. This includes potential construction impacts such as staging and temporary road closures.
- Utility and Right-of-Way requirements and impacts.
- Preliminary cost estimate (using a similar format that was used for Alternatives A & C).

### Task 7.3 Meetings

AECOM will attend and prepare PowerPoint slides for up to six (6) separate meetings: City Council (2), Rail Subcommittee (2), Planning Commission (1) and the Complete Streets Commission (1).

### Task 7.4 Visual Renderings

AECOM will develop renderings that illustrate the visual elements from two different vantage points (camera locations) at up to three (3) locations along the Menlo Park Caltrain corridor for each of the two track profiles considered, for a maximum total of twelve (12) renderings.

### Task 7.5 Draft Technical Memorandum (Fully Elevated Alternatives)

AECOM will prepare a Draft Technical Memorandum to summarize the items prepared as part of Tasks 7.1, 7.2 and 7.4.

### Task 7.6 Develop Final Technical Memorandum (Fully Elevated Alternatives)

AECOM will provide responses to one set of agency comments and prepare a final Technical Memorandum.

## Phase 2: Technical Evaluations

If directed by the City Council through staff, AECOM will conduct the following technical evaluations for a fully elevated over downtown alternative and previously defined alternatives as described in each task below.

### Task 8: Noise Study

AECOM will evaluate how each of the four proposed alternatives, noted below, would affect noise levels; both on a single event (pass-by) basis as well as average daily exposure (such as day-night noise level,  $L_{dn}$ ) which would likely be used to assess environmental noise impacts as per Federal Transit Administration (FTA) noise impact criteria.

The study will include a round of noise measurements describing single event and daily noise exposure for existing conditions. The study will also include prediction of expected changes in noise level (single event and daily exposure) for the different alternatives. The alternatives to be studied are as follows:

- i. Existing (Baseline) Condition (No Build)
- ii. Alternative A: Hybrid with two grade separations
- iii. Alternative C: Hybrid with three grade separations
- iv. Alternative D – Fully elevated with three grade separations (two alternatives)

#### Task 8.1 Review Project information

The AECOM noise team will review provided and relevant project information including other available and relevant noise studies, at our judgment and discretion. At the conclusion of this review, the noise team will develop a data request to the City and/or Caltrain, for any additionally required information.

#### Task 8.2 Site Visit and Noise Measurements

Two AECOM noise specialists will visit the project area and conduct a series of long-and short-term measurements of current existing conditions. The long-term measurements will run for at least 24 hours at two different locations in the noise study area, and short-term measurements will be conducted for a shorter duration (typically 15-30 minutes each) to document ambient conditions and individual train events at another 4 to 8 locations representing a variety of noise-sensitive land uses throughout the study area. The noise team will also carefully identify and document other existing noise sources present as well as buildings, topography and other features that could influence acoustical propagation in the study area.

#### Task 8.3 Analyze Noise Measurement Data

The noise measurement data will be analyzed and developed into charts and tables to represent the varying noise environment over the course of the day at each of the measurement locations as well as detailed noise levels for individual train events identifying individual contributions from train cars, locomotives and horn soundings on a per event basis (to the degree possible).

#### Task 8.4 Conduct FTA and CadnaA Noise Modeling

AECOM will conduct an FTA style spreadsheet analysis to predict and compare project related 24-hour ( $L_{dn}$ ) noise levels consistent with methods described in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA VA-90-1003-06), general noise assessment method, at up to 20 different point locations representing noise sensitive locations within the project area. The noise team will also develop more detailed noise models using the CadnaA noise model platform to produce noise contour data for typical maximum noise levels for each alternative.

#### Task 8.5 Conduct Comparative Vibration Analysis

AECOM will conduct a comparative operational train vibration analysis in accordance with FTA general assessment methods for the four identified alternatives. The general assessment does not include or rely

upon vibration measurements and employs on some relatively conservative assumptions regarding soil characteristics, track structures and rail vehicles.

#### Task 8.6 Develop Draft Noise and Vibration Technical Memorandum

AECOM will prepare a technical noise memorandum reporting the methodology, results and conclusions of Tasks 8.1 to 8.5.

#### Task 8.7 Develop Final Noise and Vibration Technical Memorandum

AECOM will provide responses to one set of agency comments and prepare a final technical memorandum.

### **Task 9: Real Estate Impacts**

#### Task 9.1 Develop Draft and Final Real Estate Analysis Technical Memorandum

AECOM will develop a memorandum that will include some examples from past studies to derive order of magnitude estimates of the livability impacts due to changes in the visual and noise conditions as a result of each of the four Build alternatives described in Task 8.

The memorandum will also include a qualitative assessment, focusing on the differences of each Build alternative in the impacted areas (i.e. number/type of affected properties).

### **Task 10: Develop Comparison Method**

#### Task 10.1 Develop Comparison Method

AECOM will develop a comparison matrix/method based on community and Rail Subcommittee feedback, to reflect impacts of each of the two alternatives identified in Task 7.2, plus the two alternatives identified in the PSR (Alternatives A and C), on local land uses in each of the three main area segments of Menlo Park along the Caltrain corridor as defined in the July 16, 2019 Rail Subcommittee meeting:

1. Northern Segment (North of Oak Grove Avenue)
2. Downtown Segment (Between Oak Grove Avenue and Ravenswood Avenue)
3. Southern Segment (South of Ravenswood Avenue)

### **Task 11: Architectural Evaluation (Optional Task)**

#### Task 11.1 Develop Enhanced Aesthetic Concepts

The AECOM will have an architect provide examples, and approximate costs, of some aesthetic features that can be used to help soften the visual appearance of the elevated structure.

#### Task 11.2 Customize Renderings

As an additional optional task, AECOM will customize the renderings for Task 7.4 for up to two unique aesthetic concepts.

## **DELIVERABLES LIST**

The following deliverables will be provided as part of this extra work:

- Visual Renderings (Task 7.4)
- Draft & Final Technical Memorandum of Fully Elevated Alternative (Tasks 7.5 & 7.6)
- Draft & Final Noise and Vibration Technical Memorandum (Tasks 8.6 & 8.7)
- Draft & Final Real Estate Analysis Technical Memorandum (Task 9.1)
- Comparison Matrix (Task 10.1)

## FEE ESTIMATE

A detailed level of effort per task for this Extra Work (Amendment 3) is provided as an attachment.

We look forward to working with the City to complete these additional tasks. If you have any questions, please contact Millette Litzinger at 408.961.8417 or [millette.litzinger@aecom.com](mailto:millette.litzinger@aecom.com).

Yours sincerely,

**AECOM Technical Services, Inc.**

Millette Litzinger, PE  
Project Manager

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Attachments

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