



Public Works Department

September 12, 2013

San Mateo County Transportation Authority
Attn: Mr. Joel Slavit
1250 San Carlos Avenue
P.O. Box 3006
San Carlos, CA 94070

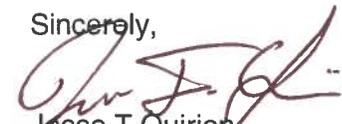
Subject: San Mateo County Transportation Authority Grade Separation Project Application

Dear Mr. Slavit:

The City of Menlo Park is respectfully submitting the attached application for a Ravenswood Avenue Grade Separation Study under the San Mateo County Transportation Authority, Measure A funds Call for Projects dated August 5, 2013. The attached application includes a completed Project Application Form and relevant attachments as outlined below.

The City of Menlo Park would like to thank you for the opportunity to respond to the SMCTA Call for Grade Separation Projects. We look forward to the opportunity to continue to partner in a solution to address the City of Menlo Park's interests in grade separation alternatives.

Sincerely,



Jesse T Quirion
Transportation Manager

Attachment A: Project Location Map
Attachment B: Figures B-1 through Figure B-6
Attachment C: Photos of Existing At-Grade Crossing
Attachment D: Community Engagement Background
Attachment E: City Council Resolution 6167
Attachment F: Menlo Park Rail Statement of Principles
Attachment G: Menlo Park City Council Position Statement Summary
Attachment H: Figures H-1 through H-6
Attachment I: JPB Concurrence Letter for Consistency with Blended System
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Cc: City Council
Alex D. McIntyre, City Manager
Chip Taylor, Public Works Director

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Application

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Applicant Material

I. **Attachments:** Check the attachments which are included:

Mandatory Attachments

- JPB Concurrence Letter for Consistency with Caltrain/HSR blended system
- Sponsor Governing Board Resolution*

Date: August 27, 2013 (required by October 11, 2013)

**An endorsement letter from the sponsor's City Manager/Executive Director must be provided if the resolution is not obtained by the application deadline.*

- Non-Supplantation of Funds Certificate
- Location Maps, Photos, and if available, Schematic Plans
- Reports Documenting Any Accident History

Optional Attachments

- Letters of Support

(List any additional attachments)

- Community Engagement Background
- Menlo Park Rail Statement of Principles
- Menlo Park City Council Position Statement Summary
- Figures H-1 through H-6

Application

I. **Project Readiness** – Up to 20 points

- a. Overall Project Description – Describe the overall project (the entire project ultimately to be constructed).

The existing Ravenswood Avenue at-grade crossing of Caltrain is a critical rail crossing within the Menlo Park corridor. This crossing is within the Menlo Park El Camino Real/Downtown Specific Plan Area, and falls within the City's Priority Development Area. The proposed project, the Ravenswood Avenue Grade Separation Study, would expand on the 2003-2004 Grade Separation Studies prepared by BKF Engineers and complete an in depth study of alternatives for the Ravenswood Avenue crossing. The prior study identified six alternatives for Ravenswood Avenue; however, no alternative has been recommended as a preferred alternative. This Study would refine the preliminary concepts identified in the prior study in order to develop design concepts and gain community consensus around a preferred alternative.

- b. Project Scope (Phases Requesting Measure A Funds) – Describe the work to be completed with requested Measure A funds.

The Ravenswood Avenue Grade Separation Study project extents are proposed to include Ravenswood Avenue between El Camino Real and Laurel Street. The intersections of Ravenswood Avenue with Merrill Street and Alma Street will also be reviewed as part of the project, since they will require closure or reconfiguration with grade separation of Ravenswood Avenue.

- c. Attach a map(s), schematic plans and relevant photos of the project scope location.

See Attachment A for project location map.

See Attachment B, Figures B-1 through B-6 for schematic plans.

See Attachment C for photos of the existing at-grade crossing.

- d. Project Schedule – Provide the schedule information for the project scope. [Optional: provide any known schedule information for subsequent phases of the overall project.]

Project Phases	Start Date (Month/Year)	Completion Date (Month/Year)	Total Duration (#Months)	Status (e.g., Completed, In Progress)	Notes
Planning (e.g., Alternatives Analysis, Feasibility Study)	January 2014	June 2015	18 months		There is not enough information to propose a time frame for completion of design or construction for the project at this time. Should funding become available in the "New Measure A Grade Separation Funding Program", for the Ravenswood Avenue grade separation, the project could begin construction with the next 4-7 years.
Preliminary Eng./ Environmental					
Design (PS&E)					
ROW					
Construction					

- e. Overall Project Activity to Date- Provide a narrative summary of the overall project activity to date. Induce a discussion on what work may have been completed and what work is in progress. (Include online links to any completed documents, or include electronic copies if the documents are not available online.)

The City of Menlo Park completed a grade separation study prepared by BKF Engineers on June 2003, and completed a supplemental feasibility study on September 2004. Six alternatives were identified, but no preferred alternative has been chosen.

The original study can be found:

<http://www.menlopark.org/departments/eng/GradeSeparation.pdf>

The supplemental grade separation study can be found:

<http://www.menlopark.org/departments/eng/GradeSeparationSupplement.pdf>

Both reports were presented to the City Council in a study session, community meetings, and an update was presented on November 13, 2012. At the same meeting, the City Council authorized staff to submit a letter of interest to the TA for the Measure A eligible grade separation project in Menlo Park for the planning phase of the Ravenswood Avenue rail crossing. Additionally, Attachment D summarizes feedback and background information from previous Council sessions conducted as part of the 2004 study.

On August 27, 2013, City Council adopted a resolution (Attachment E) consistent with the TA's requirements and authorized staff to submit an application for Measure A Grade Separation Program Funding for the proposed project.

- f. Identify potential issues/risks (e.g., funding, environmental, right of way, community concerns) that could affect delivery/implementation of the overall project description.

The proposed Feasibility Study would identify potential environmental, right-of-way, and

community concerns with various alternatives, and identify a preferred alternative. It would also identify alternatives that are consistent with the Caltrain-High Speed Rail blended system, consistent with Measure A funding requirements.

- g. Identify the agencies/project team involved with the project, respective roles and the resources that will be available to carry out the implementation of the project scope.

The Feasibility Study would be led by the City of Menlo Park's Public Works Department, including staff from both the Transportation and Engineering Divisions. Caltrain staff would be invited to provide feedback on the study and findings as a key stakeholder. It is anticipated that a consultant would be retained to execute the technical analysis and assist with public outreach during the scope of the project.

- h. Is the project listed and consistent with any adopted state, regional, county and/or local plans? (Include online links to any completed documents, or include electronic copies if the documents are not available online.)

The project is consistent or does not conflict with the City of Menlo Park's General Plan (Circulation Element), El Camino Real/Downtown Specific Plan, and Comprehensive Bicycle Development Plan.

http://www.menlopark.org/departments/pln/gp/mp_gp_land-use-and-circulation.pdf

http://www.menlopark.org/departments/pln/ecr-d/sp/ecr-d_specific-plan_final.pdf

<http://www.menlopark.org/departments/trn/bikeplan.pdf>

- i. What measures will be taken to ensure the project is consistent with and does not preclude or adversely impact the potential implementation of the Caltrain/HSR blended system?

Menlo Park has approved a "Statement of Principles" regarding rail within the City and is included Attachment F to this letter. The Statement set out an intent to "protect and enhance the character of Menlo Park and maximize the local benefits and the long-term potential of rail." Council has also clarified its position in a "Council Position Summary" statement opposing any elevated tracks within Menlo Park and only supports an at or below grade option for rail with two tracks through Menlo Park. These approved documents clearly state the desire of Menlo Park for any grade separation projects. The "Council Position Summary Statement" is included at Attachment G.

Corresponding to these documents, all alternatives would be identified to be consistent with the Caltrain/HSR blended system with two tracks through Menlo Park.

- j. How will the project be planned and designed so that the rail alignment is consistent with neighboring crossings and/or stations, if applicable?

The proposed Feasibility Study would identify potential issues or concerns with alignments that would conflict with adjacent crossings or the existing Menlo Park station platform, the southern end of which is located approximately 250-300 feet from Ravenswood Avenue.

II. Safety and Traffic Improvement – Up to 35 points

Data requested in this section is needed to obtain a CPUC Grade Separation Priority List Program Priority Index Number. The project applicant is only responsible for providing information for roadway and accident history, either for a) Existing At-Grade Crossings, or b) Alteration or Reconstruction of Existing Grade Separated Crossings, whichever is applicable to the project.

a. Existing At-Grade Crossing Data

Is Project Part of a Consolidation (multiple crossings within the project footprint that are not separately severable)? *No*

If yes, list the following information for each separate street crossing: *N/A*

Street Crossing Name: *Ravenswood Avenue*

Posted Vehicle Speed Limit: *25 mph*

Average Daily Vehicle Traffic	
Autos	<i>23,986 vpd</i>
School Buses	<i>N/A</i>
Passenger Buses	<i>90 per day*</i>
HazMat Trucks	<i>Unknown</i>
Total Vehicle Count	<i>24,076 vpd</i>
Date of Count(s):	<i>5/3/2012</i>

**Note 60 SamTrans buses and City of Menlo Park shuttles cross Caltrain at Ravenswood Avenue each day. Additionally, several private employer shuttles also service the Menlo Park Caltrain site and cross Caltrain at Ravenswood carrying passengers. An additional 30 trips per day are estimated for private shuttles.*

Accident Data History			
Total Number of Trains vs. Vehicle vs. Pedestrian Accidents*			
Source: <i>California Statewide Integrated Traffic Records System (SWITRS)</i>	Date: <i>2007-02-22</i>	Killed: <i>0</i>	Injured: <i>0</i>
Source:	Date:	Killed:	Injured:
Source:	Date:	Killed:	Injured:
Source:	Date:	Killed:	Injured:

*List all accidents separately from August 5, 2003 to August 5, 2013. For each accident, specify the accident date, the number of fatalities and injuries

Is there a parallel road to the track within 200 feet? *Yes*

Are there traffic signals within 200 feet? *No*

**Ravenswood Avenue/El Camino Real intersection is signalized, within 500 feet of this rail crossing.*

Is there an entrance/exit within 100 feet? *Yes*

Is there a raised median on each approach? *Yes*

Is there curvature on the road that impairs visibility to vehicular traffic? *No*

b. Alteration or Reconstruction of Existing Grade Separated Crossing Data

**This section does not apply, as the proposed project falls within Part A.*

III. **Need** – Up to 35 points

- a. Describe the project need and benefits to the operation of Caltrain as well as the community in the vicinity of the project.

The Ravenswood Avenue grade crossing is one of the most critical rail crossings in the Menlo Park corridor. This project is within the Menlo Park El Camino Real and Downtown Specific Plan. The Menlo Park El Camino Real/Downtown Specific Plan accommodates all travel modes, with an emphasis on pedestrians, bicyclists and transit users. Focusing new development in an area well served by transit and with a mix of uses in close proximity reduces the reliance on private motor vehicles, helping to minimize traffic congestion, the amount of land dedicated to parking and greenhouse gas emissions.

The Specific Plan proposes safety enhancements at the intersection of Ravenswood Avenue and Alma Street. In particular, the Alma Street Civic Walk and Ravenswood Gateway are proposed to be connected by a safe and upgraded pedestrian crossing. Improvements to this intersection could include: enhanced pavement markings, additional warning lights, new or extended turn limitations, and “quad gates” at the Caltrain tracks. Such changes may be expedited in advance of other Specific Plan improvements, if desired.

The average daily traffic (ADT) volume on El Camino Real is approximately 38,000 vehicles. The vehicular volumes are highest south of Menlo Avenue/Ravenswood Avenue and north of Valparaiso Avenue/Glenwood Avenue. Between Menlo Avenue/Ravenswood Avenue and Valparaiso Avenue/Glenwood Avenue in the downtown area, the through movement volumes decrease by approximately 25% (based on the peak hour intersection turning movement data, with some northbound vehicles turning right onto Ravenswood Avenue, heading east, and southbound vehicles turning right onto Valparaiso Avenue).

Ravenswood Avenue has an average daily traffic (ADT) volume of approximately 24,100 vehicles per day (vpd). It is classified as an arterial roadway and is a vital east and west link through Menlo Park. The intersection of Alma Avenue is immediately adjacent to the rail crossing and has a high pedestrian volume, especially for pedestrians walking to and from the rail station on the northwest corner of the intersection.

The following figures are included in Attachment H describing traffic vehicle circulation, pedestrian, circulation, and bicycle circulation for the ECR/Downtown Specific Plan:

- *Figure H-1 shows the classification of roadways in the Specific Plan area and surroundings. The vehicular circulation system is consistent with the City’s General Plan.*
- *Figure H-2 illustrates proposed pedestrian improvements in the plan area.*
- *Figure H-3 depicts the location for existing and recommended bicycle facilities. The recommended facilities include those planned in the City’s Bicycle Development Plan.*

- *Figure H-4 illustrates the enhanced network of pedestrian and bicycle-friendly linkages between downtown, the station area, the Civic Center, and along and across El Camino Real.*

The goal for this Project is to provide Menlo Park the opportunity to evaluate alternatives for grade separation of the rail crossing of Ravenswood. Some of the issues that would be included in the analysis 1) cost difference between grade separation alternatives; 2) better understanding of traffic, pedestrian, and bicycle patterns for the various alternatives; 3) potential impacts associated with the various alternatives such as noise, aesthetics, and station configuration; and 4) evaluation of alternatives not included in the prior studies –a fully depressed train (trench); and selection of a project alternative to complete the planning phase for the Project and ultimately for inclusion in the preliminary engineering and environmental phase of the Project. The Project would have a full community engagement phase to provide an opportunity for the public to provide input at various stages of the analysis.

- b. Describe how and the extent to which the overall project will mitigate current safety and local traffic concerns.

A limited number of train involved collisions have occurred at the Ravenswood Avenue crossing, even though it serves the highest vehicle volume of the crossings in Menlo Park. As described in Section II, between August 5, 2003 and August 5, 2013, one vehicle-involved with train incident was reported in the SWITRS system and no pedestrian-involved with train incidents were reported. However, within the same 10-year period, 22 collisions were reported at Ravenswood Avenue/Alma Street intersection, located just east of the Caltrain crossing; of these, one involved a pedestrian and one involved a bicyclist, both of which were injured, and 19 other injuries occurred. Five collisions also were reported at Ravenswood Avenue/Merrill Street intersection, located just west of the Caltrain crossing, even though the intersection is limited to right-turns in and out only.

The signalized intersection of Ravenswood Avenue at El Camino Real (SR 82) and the Caltrain crossing and gates induce delay and congestion along Ravenswood Avenue which causes challenges for motorists, bicyclists, and pedestrians navigating the Ravenswood Avenue/Alma Street intersection and contributes to the collision history at this location. By grade separating the Ravenswood Avenue crossing and reducing the number of conflict points, reduced delay and congestion and a reduction in the number of collisions at the intersections would be expected.

- c. Economic Development/Land Use: To what extent does the overall project support regional, county, or local land use policies and/or designations? For example, does the project support/or is an impetus to facilitate new transit-oriented development or economic activity in a Priority Development Area or Specific Plan Area?

The Ravenswood Avenue grade separation project is fully located within Menlo Park's Priority Development Area (PDA), which includes Ravenswood Avenue between El Camino Real and Laurel Street. It is located also within the Menlo Park El Camino Real/Downtown Specific Plan, approved by the City Council on June 2012.

The El Camino Real/Downtown Specific Plan (Plan) establishes a framework for private and public improvements on El Camino Real, in the Caltrain station area and in downtown Menlo

Park for the next several decades. The Plan's focus is on the character and extent of enhanced public spaces, the character and intensity of private infill development and circulation and connectivity improvements. It includes a strategy for implementation of public space improvements, such as wider sidewalks and plazas, and other infrastructure improvements. The overall intent of the Plan is to preserve and enhance community life, character and vitality through public space improvements, mixed use infill projects sensitive to the small- town character of Menlo Park and improved connectivity. The Plan reflects the outcome of an extensive community outreach and engagement process. The project area is illustrated in Figure H-5 showing proposed land uses, public plazas/open space, parks, and development opportunities.

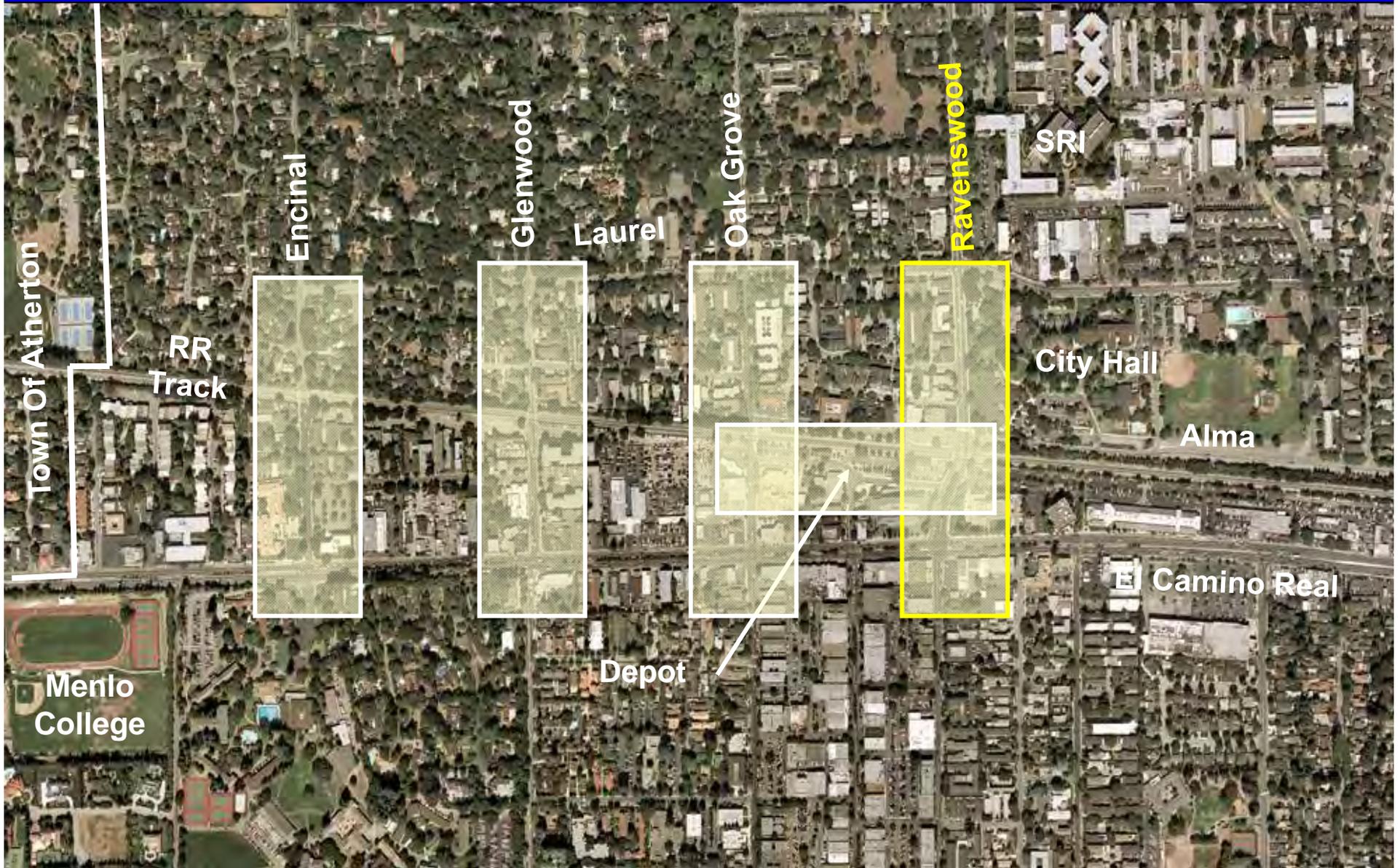
The illustrative plan, as shown in Figure H-6, depicts how the plan area could potentially build out over the next several decades in conformance with the overall planning principles and within the land use and development regulations and design guidelines contained in subsequent chapters. It is important to emphasize that the illustrative plan indicates only one potential development concept and that the actual build-out will likely vary from the initial projection. As envisioned, the full build-out of the plan area could result in up to approximately 330,000 square feet of additional retail and commercial development, 680 new residential units and 380 new hotel rooms, resulting in 1,357 new jobs and 1,537 additional residents.

IV. Funding and Budget – Up to 10 points

Provide the projected cost and funding information for the project scope. [Optional: provide any known projected cost and funding information for subsequent phases of the overall project.]

Project Scope Phases	Total Cost Estimate (A+B+C)	Current Measure A Request (A)	Other Funding (C)	Source of Other Funding	Notes
Planning (e.g., Alternatives Analysis, Feasibility Study)	\$750,000	\$750,000	\$0	N/A	
Preliminary Eng./ Environmental	TBD	TBD	TBD	TBD	
Design (PS&E)	TBD	TBD	TBD	TBD	
ROW	TBD	TBD	TBD	TBD	
Construction	TBD	TBD	TBD	TBD	

Attachment A: Grade Sep. Study Location Map



Attachment B: Options Considered

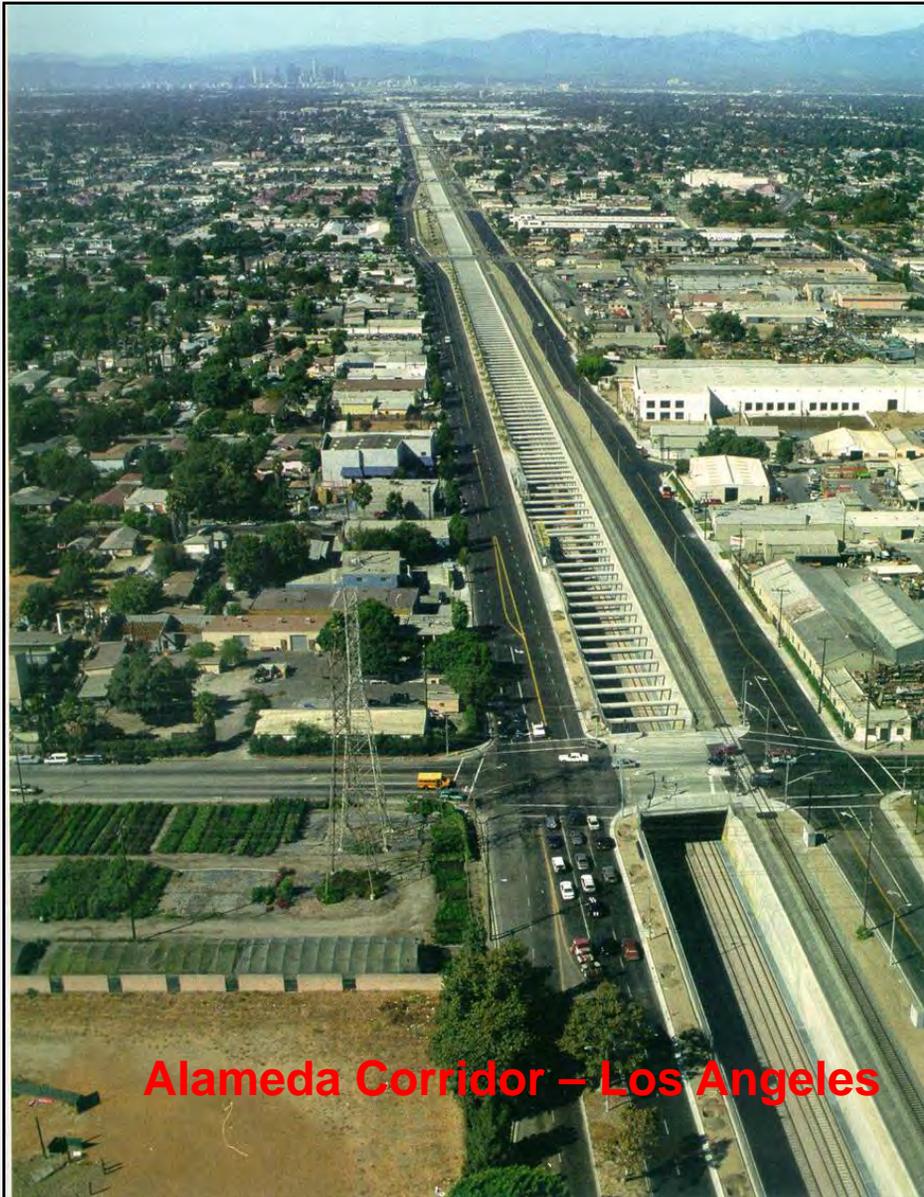
“Trench” Alternative – elevate roads and depress the railroad track ~ 30 feet separation

“Overpass” Alternative – keep the tracks at present grade and elevate roads ~ 30 feet sep.

“Underpass” Alternative – keep the tracks at grade and depress the roads ~ 20 feet sep.

“Split” Alternative – elevate tracks and depress roads to create an ~ 20 foot separation

Figure B-1: Trench Alternative



Alameda Corridor – Los Angeles

Issues

- Creates trench thru City with high fences
- Depressed station platforms – passenger comfort
- High cost
- Utility relocations
- High construction impacts

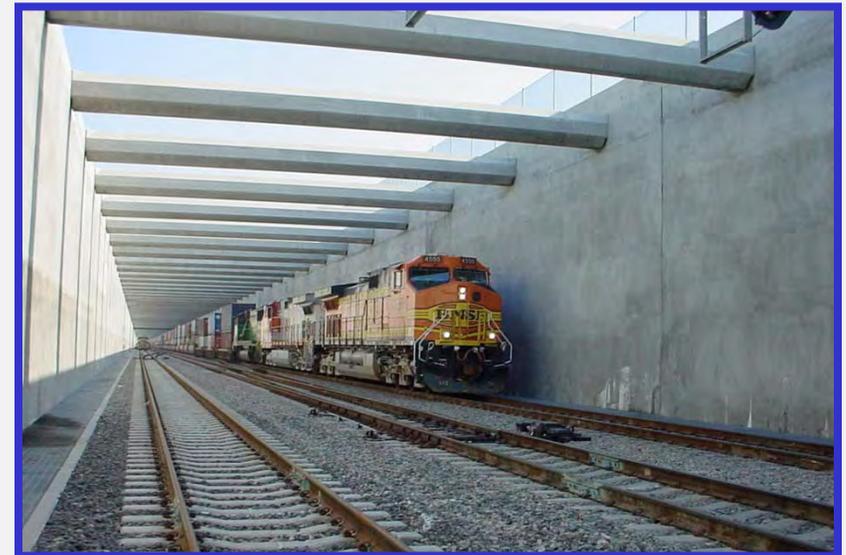


Figure B-3: Overpass Alternative



San Antonio Road Mountain View

Issues

- Requires 30-foot high bridge
- Overpass will be about 1100 ft long
- Requires raising El Camino Real
- Major visual impacts
- Largest footprint



Figure B-3: Overpass Alternative

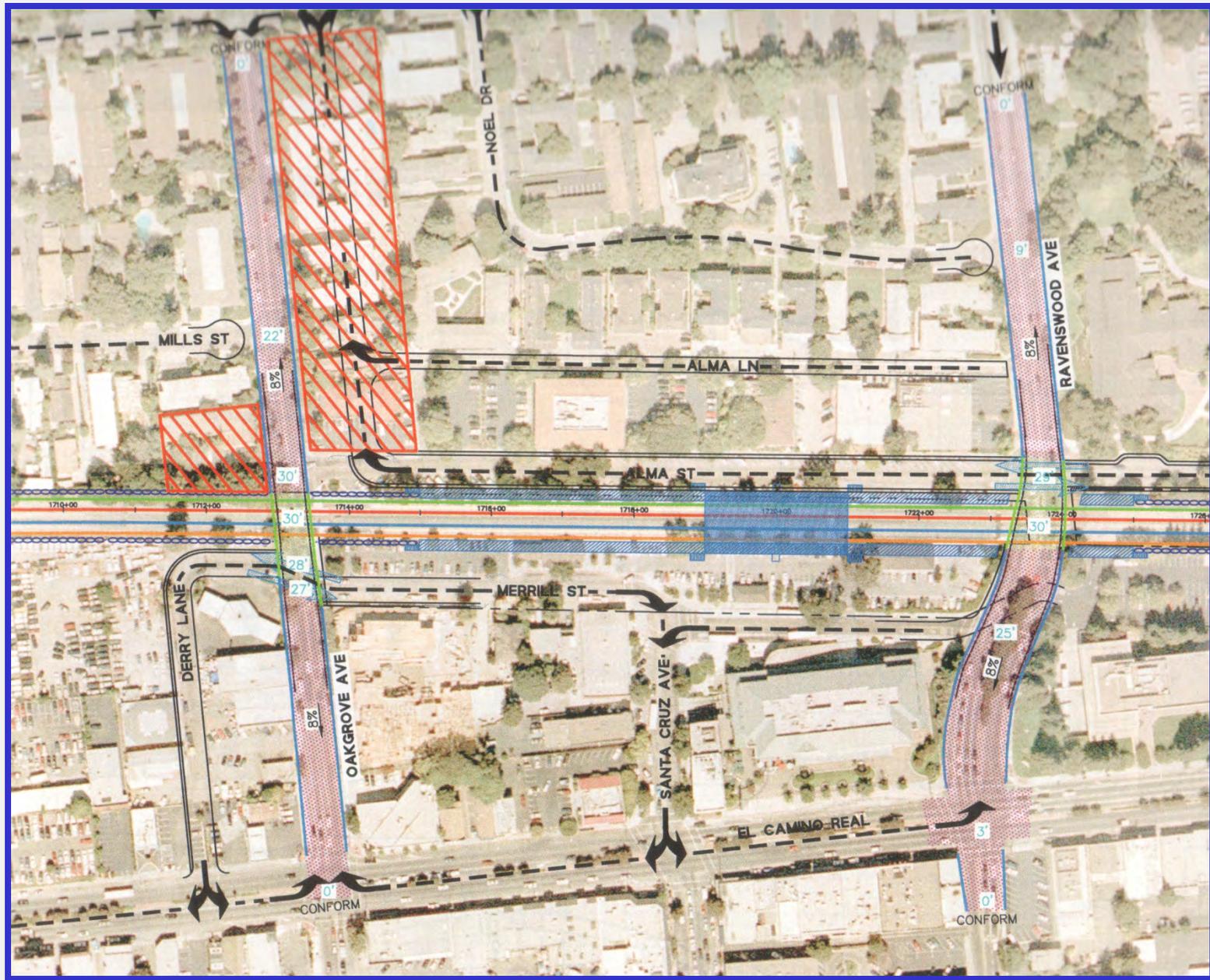


Figure B-4: Underpass Alternative



Jefferson Avenue Redwood City

Issues

- Requires retaining walls up to 20' high
- Limits access to adjacent properties
- Difficult to connect adjacent side streets



Figure B-4: Underpass Alternative

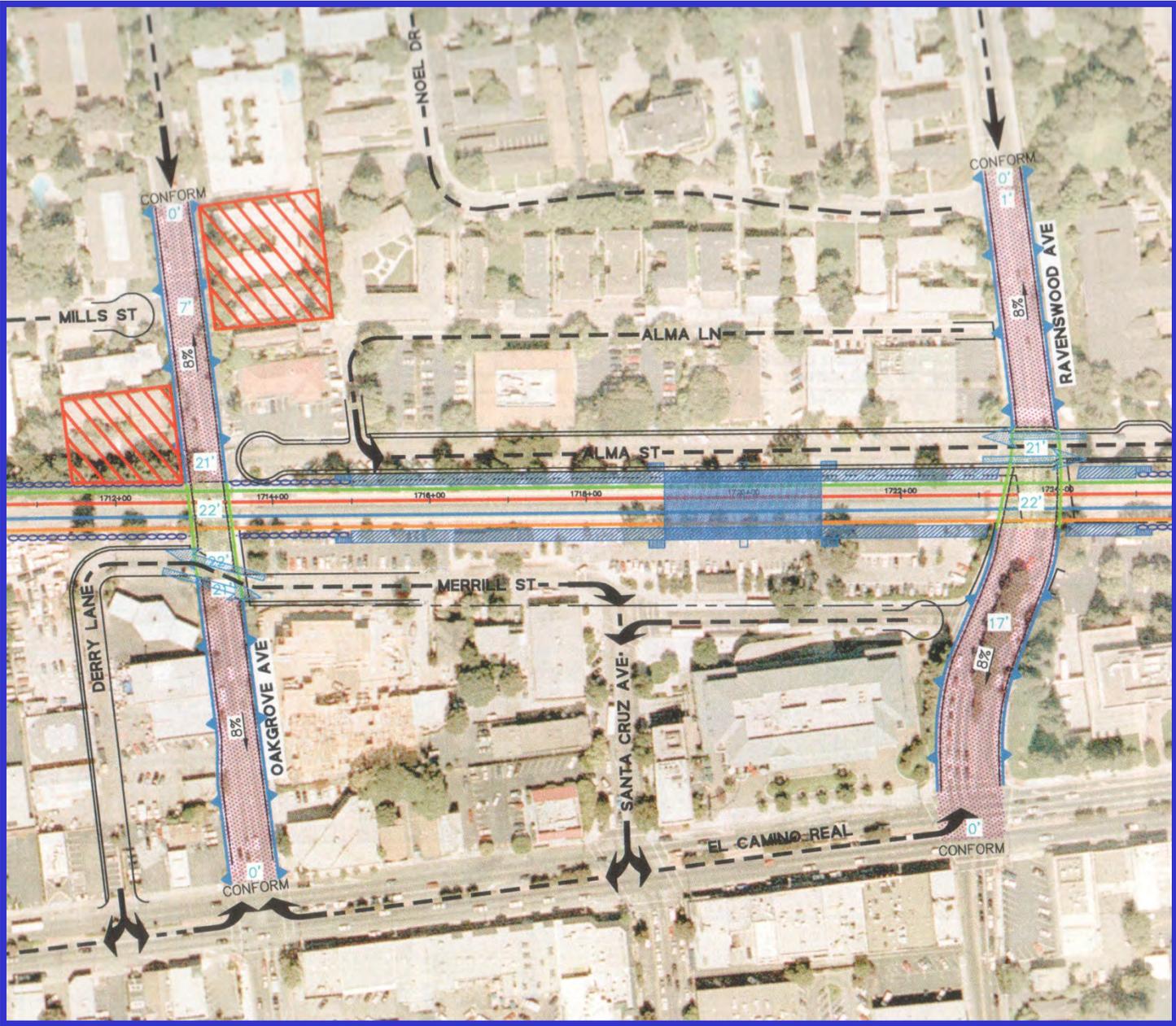


Figure B-5: Split Alternative



Holly Street San Carlos

Issues

- Requires construction along entire corridor (long embankments)
- Train noise may travel further with raised tracks
- Easier to connect side streets – reduced impact to adjacent property



Figure B-5: Split Alternative



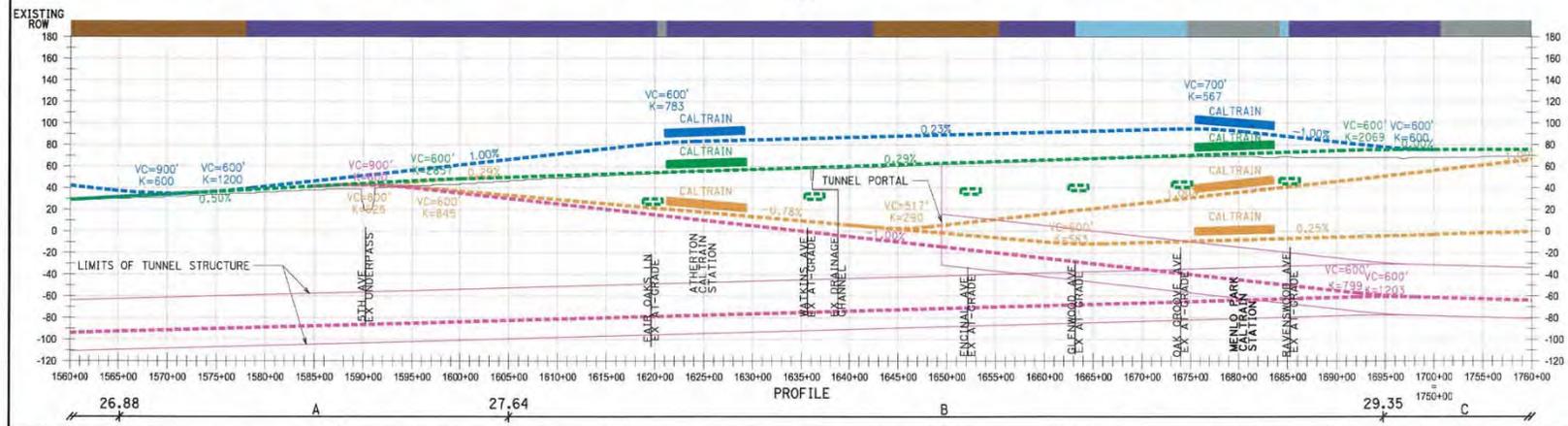
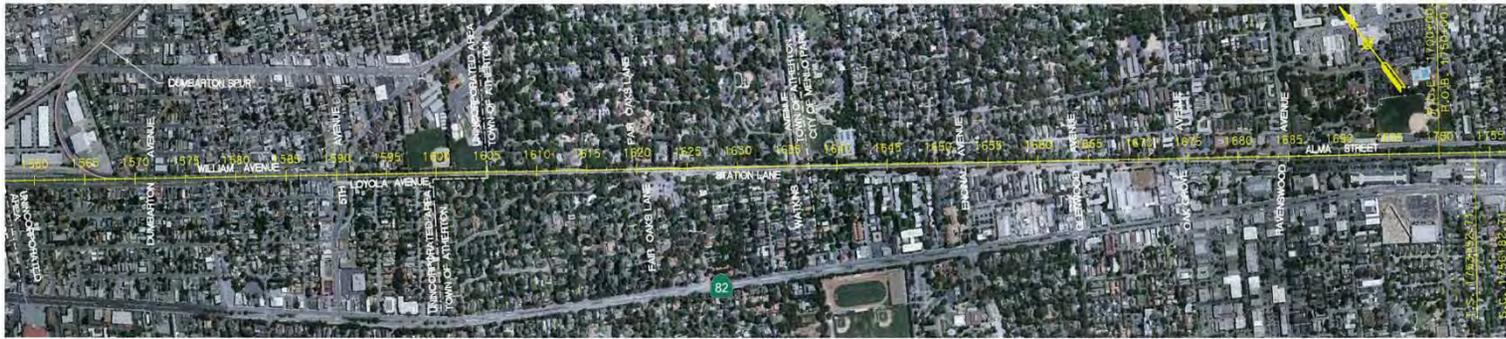
Figure B-6: HSR Alternative Analysis

Subsection #5-1

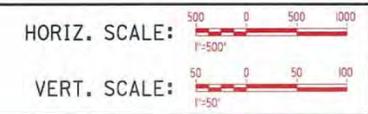
Length: 2.8 miles Land Use: Urban

North of 5th Avenue to North of SCL/SM County Line (MP. 26.88 to MP. 29.72)

This subsection is located in the Cities of Atherton and Menlo Park, with a small portion in unincorporated San Mateo County. The Caltrain tracks are at-grade, and with one exception, all street crossings are at-grade. Generally, the streets that cross the tracks are two-lane collectors serving residential areas. In most cases, these streets are integral parts of the local street network.



San Francisco - San Jose
 DRAFT Preliminary Vertical Alternatives Discussion
 March 17, 2010



Attachment C: Photos of Existing At-Grade Crossing, Looking North



Attachment C: Photos of Existing At-Grade Crossing, Looking South



Background Summary of Previous Council Sessions

Menlo Park Potential Caltrain Grade Separation

On June 2003, BKF Engineers, Planners and Surveyors (BKF) completed a preliminary grade separation study for the Caltrain railroad tracks and roadways in Menlo Park, appended in a link to this staff report. The study areas included grade separation at Ravenswood Avenue, Oak Grove, Glenwood, and Encinal Avenues. The preliminary study included the assumption of 4-tracks within Menlo Park and the tracks would be at-grade at both the north and south City limits. This preliminary study also included four alternatives consisting of road overpass, road underpass, trench, and split (rail over road) for the grade crossings in Menlo Park. The study included preliminary information regarding the impact of the alternatives within Menlo Park. The four alternatives were to be further evaluated and refined in future studies, and other potential alternatives were to be developed to the same level as the previous four.

The Council directed that the grade separations be nominated in a list of possible future projects to be considered for inclusion for funding under the proposed reauthorization of the San Mateo County Measure A sales tax for transportation improvements. At the time, Council supported the split grade separation, and directed staff to further evaluate the deep underpass, potential to close Encinal and Glenwood, evaluate aesthetic considerations, and continue public outreach. The staff report for this 2003 BKF study session is attached as Attachment C, Staff Report #03-101.

On October 19, 2004, Council received a supplemental grade separation feasibility study report, appended in link to this staff report, evaluating Council's concerns stated above. The supplemental study established that the deep underpass would have greater impacts and be more costly, and the closure of Encinal and Glenwood would not be practical. The prior studies resulted in furthering the City's knowledge of grade separations but due to funding limitations, not all aspects of the grade separations could be studied. Council did not make any recommendations at that point, and the motion included meeting with other cities and possibly state representatives. Several meetings were held with elected officials of Atherton, Palo Alto, Mountain View and Redwood City. At those meetings, it was clear that each city had different issues and concerns with grade separations. The staff report for this 2004 BKF Supplemental study session is attached as Attachment D, Staff Report #04-207.

On November 27, 2007, staff provided a comprehensive update to Council on the Caltrain Grade Separation Footprint Study, including the 2003 and 2004 Menlo Park grade separation studies. At that meeting, staff indicated additional studies were needed, since all previous studies ultimately did not result in the City selecting a preferred alternative, and the City has not taken a formal position on whether or not should pursue grade separations. In order for Menlo Park to be prepared for the next steps in evaluating the various alternatives, an additional study would be needed to address some of the different aspects the previous studies did not evaluate. More particularly, the additional study would provide Menlo Park the opportunity to evaluate some of the following issues not addressed previously include: 1) cost difference between grade separation alternatives; 2) better understanding of traffic patterns for the

various alternatives; 3) potential impacts associated with the various alternatives such as noise, aesthetics, and station configuration; and 4) evaluation of alternatives not included in the prior studies –a fully depressed train (trench) and a fully elevated train. These issues were also discussed at a Menlo Park and Town of Atherton City Council joint study session on January 29, 2008. The staff reports for these study sessions are attached as Attachment E – Staff Report #07-200, and Attachment F - Staff Report #08-014.

Since 2003, Caltrain has signed a Memorandum of Understanding (MOU) with the California High Speed Rail Authority for funding Early Investment Projects, such as the electrification of the Caltrain corridor along the Peninsula as well as Positive Train Control. Caltrain is also currently performing a service plan/operation study as well as traffic analysis of the at-grade intersections with the addition of high speed rail trains during the peak hour with shared tracks. Grade separations in Menlo Park may be a consideration for the at-grade crossings, depending on the impacts and results of the two studies. Caltrain is currently reviewing passing tracks with 4-tracks in some areas or potentially 3-tracks over a larger area, which may affect Menlo Park directly.

Recently, the State appropriated funding for the Caltrain Early Investment Program to implement the Caltrain Advanced Signal System Project to allow the operation of electrified Caltrain service. This project is intended to enhance the Caltrain system and would also be compatible with a future blended system that supports Caltrain and high-speed rail service.



TRANSPORTATION DIVISION

Council Meeting Date: June 10, 2003

Staff Report# 03-101

Study Session Agenda Item # 1

STUDY SESSION: Review Findings and Recommendations of Grade Separation Study Report

The purpose of this study session is to review the findings and recommendations of the engineering feasibility study of alternatives for grade separating the City of Menlo Park's four public street grade crossings of the Caltrain rail line.

BACKGROUND

On July 10, 2001, the Menlo Park City Council authorized staff to obtain funding from the San Mateo County Transportation Authority (SMCTA) to fund a study of grade separating the City's street crossings of the Caltrain rail line. Funds for this purpose were subsequently granted by the SMCTA and on July 16, 2002 the City Council authorized the feasibility study. The purpose of the grade separation feasibility study is to determine if there are more desirable ways of grade separating the streets from the tracks than were evident in 1990 when the City last performed a grade separation feasibility study.

The feasibility study was led by BKF Engineers/Surveyors/Planners. The engineering analysis is now completed. This study session is an opportunity for the Council to consider the technical work and findings in depth. At the Council's discretion, it can make decisions regarding any further actions with regard to grade separations at a future Council meeting with this matter agendaized as a "regular business" item. The Council may wish to consider supporting grade separations as a regional project for the 2004 ballot to reauthorize Measure A. Approval of a Measure A reauthorization project list is agendaized under regular business later this evening.

ANALYSIS

The Engineers Report on the project accompanies this staff report. Key findings and implications of the engineers analysis are summarized below.

The Peninsula Corridor Joint Powers Board (JPB)'s long range plan would operate the Caltrain service in a manner that will require a 4-track grade-separated system between San Jose and San Francisco. Even if the JPB's interest was solely expansion to a 4-track system, California Public Utilities Commission (PUC) regulations require that crossings involving four tracks be grade separated.

The above circumstances hold two important implications for Menlo Park. One is that grade separations are eventually likely to be built in Menlo Park without any requirement of substantial City funding toward their construction and without City government taking the lead to initiate the project development. The second is that the City has the choice of proactively planning the form of the future rail system through the center of the City, or

attempting to influence the design at such time as the Menlo Park segment becomes a priority for the JPB. The City also has the choice of opposing development of grade separations and/or any additional rail tracks through Menlo Park.

Theoretically, there are six ways to grade separate the roadway crossings of the tracks:

- 1) Leave the roads at grade and depress the tracks below the roadways;
- 2) Leave the tracks at grade and elevate the roadways over the tracks;
- 3) Leave the tracks at grade and depress the roadways beneath the tracks;
- 4) Partially elevate the tracks and partially depress the roadways;
- 5) Partially depress the tracks and partially elevate the roadways;
- 6) Leave the roadways at grade and elevate the tracks above the roadways.

Of these, option "4" of partially elevating the tracks and partially depressing the roadways appears the most feasible from considerations of community benefits and impacts, constructability, right-of-way requirements and costs. A brief evaluation of the other options is below.

Evaluation of Other Options

A key consideration is that vertical clearance requirements are different, depending on whether the rails pass above the roadways or the roadways pass above the rails. When the roadways pass beneath, the vertical separation necessary between the running surface of the road and the top of the rails is 20 feet. Where the rails pass beneath the roadways, the necessary vertical separation between the surface of the road and the top of rails is about 30 feet. This differential makes it much more difficult to maintain linkages to nearby roadways and driveways and to avoid acquisition of private property due to severance of access or in order to maintain access to other affected properties.

Depressing the rails completely below grade (Option 1) is not feasible because of constraints at the San Francisquito Creek crossing (and potentially at the Atherton limit also). Option 5, a variant of Option 1 involving a partially depressed railway, would be far more costly than other alternatives because of the extent of excavated material, the extent of construction of retaining walls, the need to provide extensive drainage systems and the more extensive need to relocate utilities. Furthermore, it would not achieve the appealing results commonly expected because the walls of the trench structures would project above ground and be topped by high fences, creating a continuous (except at the street crossings) physical and visual barrier across the community.

Option 2, roadway overpasses with the road left at grade, is not feasible because the extreme height (and consequent length) of the structures necessary would create extensive severance of access to roads as well as public and private property, resulting in the need for extensive acquisition of private property. All four of the long, high structures would be visually intrusive – as high as a 3-story commercial building – and would have forms difficult to soften with landscape. In addition, the overcrossing at Ravenswood would not reach grade until west of El Camino Real, necessitating undesirable retaining walls between the street and the sidewalks on the El Camino and Menlo Avenue frontages near their intersection with Ravenswood.

Option 3, leaving the rails at grade and depressing the roadways beneath them, is essentially a refinement of the rejected 1990 plans and exhibits the same fundamental

difficulty. Because of the necessary depth of the undercrossing and consequent length of the approach slopes to it, there would be extensive severance of access to roads and public and private facilities. This would necessitate extensive acquisition of property to compensate for loss of access or to restore access for other properties and facilities.

Option 6, leaving the roads at grade and fully elevating the rails, is significantly more costly than Option 4 and exaggerates the least desirable features of that plan. Its greater height and mass would be a greater visual obstruction and a form more difficult to soften with architectural treatments and with landscape. Its greater height would also increase the sense of invasion of privacy and concern for broadcast of undesirable train noise. Its construction would also involve transport of considerably more materials than Option 4.

Implementation of Preferred Plan

As previously noted, the preferred alternative is Option 4, which would partially elevate the tracks and partially depress the roadways. This option, or any concept that involves changing the grade of the rails, would involve construction of all four grade separations as a single project. A construction period of about two years would be required.

Construction sequence for the preferred alternative would be as follows:

- 1) Temporary tracks to maintain rail operations during the construction period would be built at grade, west of the existing rail line.
- 2) Temporary road crossings would be constructed alongside the existing crossings.
- 3) New structures would be constructed on the existing road alignments and the rail gradient would be altered along the existing main line (while rail operations continue on the temporary tracks).
- 4) When the new structures and the alterations to the mainline rail grade are complete, traffic will be shifted to the new structures on the original roadway alignments (with impaired vertical clearance), the gaps in the mainline that provided the temporary roadway crossings will be filled in, rail operations will be shifted back to the now grade-separated mainline, and the temporary construction tracks will be removed.
- 5) One at a time, the grade separation structures will be finished out to full vertical clearance.

The grade separation project would involve acquisition of private property for right-of-way in two relatively inconsequential strips. One would be an approximately 10 foot wide strip within the City's Plan Lines for the extension of Garwood Way through to Dairy Lane, which is an essentially undevelopable area of land. The other is an approximately 10 foot strip paralleling the tracks along the current east fence line of the Menlo Station complex, essentially the strip between the parking area and the fence line. The need for these right-of-way acquisitions is to provide land to achieve the JPB's objective of a four-track mainline; it is not a consequence of which grade separation project option is chosen.

Developing the four track mainline and the temporary tracks to maintain rail operations during its construction will necessitate some temporary, minor construction easements on private property. However, construction needs pose a significant issue within the train

station area. The former depot and rail freight buildings (now occupied by the Chamber of Commerce and the model railroaders respectively) are historic structures. If the structures can be relocated and preserved within the station complex, consequences of right-of-way needs in the station area would be minimized. However, if the buildings must be maintained in their exact locations, there would be significant consequences in the construction period and thereafter. In that case, the temporary tracks to maintain rail operations during construction would have to be in Merrill Street in the block between Santa Cruz and Oak Grove Avenues. This block would have to be closed to motor vehicle traffic for most of the construction period, with obvious impacts on local circulation and for businesses that depend on Merrill Street for access. Also, because the mainline tracks would need to be offset to the east to leave the depot building undisturbed on its present location, Alma Street would be significantly narrowed permanently in the block between Ravenswood and Oak Grove, and would be only wide enough to sustain one-way traffic in that block. This is an issue in the case of all grade separation alternatives that would change the elevation of the tracks, not just the preferred Option 4.

Construction of the widened rail line and the temporary surface trackage would potentially involve significant loss of mature trees in the corridor. Modern technology makes it possible to transplant or to uproot, store and replant large trees with a high rate of survival. This technology could allow some existing trees to be preserved and thereby, to develop a project landscaped with a mature tree canopy immediately upon completion.

Grade separations would eliminate the principal source of disturbing rail-related noise concerns in this area; the sounding of train horns and crossing warning bells. Raising the grade of the rails (as in the preferred alternative) would change (broaden) the area over which the sounds of engine noises and of the passage of steel wheels on steel rails projects. However, acoustic studies indicate the changes would not be at levels that would be disturbing or even noticeable to the normal person. Ultimately, electrification may eliminate engine noise. Including noise mitigation in the project (such as extending retaining walls above the train undercarriage level) could potentially limit the propagation of wheel-on-track sounds.

Elevating the grade of the rails poses issues of privacy intrusion and view interruptions for persons living close to the tracks. The poses a trade-off since those most directly impacted by the privacy/view issue are the same people who benefit most through the elimination of train horn and crossing warning bell noise.

Preliminary findings of the work were presented to the public at a public meeting on December 10, 2002. In advance of that session, which had an attendance estimated in excess of 150 individuals, all households and non-residential addresses in Menlo Park were mailed invitations to the meeting. On April 10, 2003 a special joint session of the Planning and Transportation Commissions was held to review the study findings.

Next steps

The study has, at this point, fully carried out the Council's charge of providing engineering feasibility information as to how grade separation of the City street crossings of the tracks could be carried out and what the consequences might be. If the Council wishes to take further action, it could agendize this matter at a subsequent meeting and consider the following steps, many of which are not mutually exclusive:

- Direct staff to continue with a public outreach process in order to disseminate information about the potential project and to gauge public opinion in a manner responsive to Policy II-A-18 of the General Plan (see Policy Issues below).
- Direct the Planning and Transportation Commissions to: consider the study findings in the update of the General Plan; incorporate the study recommendations in the General Plan update or initiate an amendment to the current General Plan to incorporate the study recommendations, in advance of the General Plan update process.
- Direct staff to seek funding for further engineering, planning and urban design of the project from the JPB and SMCTA and, upon obtaining funds, to proceed with such studies.
- Request that the JPB prepare a “Project Report” (more detailed railroad design engineering) in coordination with the planning/urban design studies that the City might lead.
- Request that SMCTA include (or not include) funding for the Menlo Park grade separations as a “Caltrain project” in the Measure A reauthorization. (This particular action could be taken at the “regular business” item on Measure A Extension that is included on tonight’s agenda.)
- Take no further action at this time.

IMPACT ON CITY RESOURCES

Since the JPB’s plans now envision a four-track system on the entire route from San Jose to San Francisco and since PUC regulations require that crossings involving four tracks be grade separated, the grade separation project has essentially become a Caltrain improvement issue. The City’s reasonable expectation in the matter is that the cost to implement grade separation of the Caltrain line through Menlo Park, and to plan and design it, would be fully funded through reauthorization of the San Mateo County Measure A sales tax plus state and possibly federal funds, without significant contribution by the City. If the City desires to undertake further engineering and urban design studies of the concepts, these could likely be funded (including City staff time to coordinate the project) through current or future Measure A regional monies specially allocated to the City for this purpose (as distinct from Measure A monies allocated to the City for its discretionary use).

The dedication of staff time to the grade separation matter will impact the availability of staff to address other community transportation issues.

POLICY ISSUES

General Plan policy 11-A-18 states that the City shall conduct a thorough feasibility study of the grade separation projects included in the Measure A sales tax expenditure plan, including all impacts of such proposed projects and alternatives to the proposed projects, and shall support only those grade separations that provide sufficient traffic and rail

service benefits to offset potential negative impacts to the community. The City shall evaluate all alternatives to any grade separations and shall attempt to gauge public opinion, possibly through an advisory election, before proceeding with a grade separation project. Any approval of a grade separation project shall include findings specifying why the alternatives are not suitable and the reasons for proceeding with the grade separation project.

Given that it is the JPB's intent to develop a four-track operation and that PUC code requires grade separation of crossings involving four tracks, the City may wish to revisit this policy and determine if the demonstration of need has been fulfilled.

Other General Plan policies relating to bicyclist and pedestrian access, public transit, roadway circulation, public safety and emergency services do not directly address the subject of grade separations but can be interpreted in a manner supportive of the grade separation concept.

ENVIRONMENTAL REVIEW

Grade separation of existing grade crossings and expansion of trackage on commuter rail operations are both activities that are statutorily exempt from the California Environmental Quality Act. No action currently contemplated by the City in relation to the recommended project would require environmental review. Ultimately, if the JPB and the City were to adopt plans that specifically committed to relocating the historic structures that are in the station complex in order to preserve them, specific documentation related to historic preservation would be required. At the present stage of project development, issues regarding the manner of preservation of the historic buildings are merely being identified and no decisions are being made as to whether the structures will be preserved in place or preserved by being relocated within the station complex.

Dan Smith Jr.
Transportation Consultant

Jamal Rahimi
Transportation Manager

PUBLIC NOTICE: Public Notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting.



PUBLIC WORKS DEPARTMENT

Council Meeting Date: October 19, 2004
Staff Report #: F-1
Agenda #: 04-207

REGULAR BUSINESS: Review of Grade Separation Feasibility Study Findings and Recommendations and Consideration of Further Potential Actions on the Matter

RECOMMENDATION

Staff recommends that the Council consider the findings of the Grade Separation Feasibility Study and take the following actions:

1. Affirm that the "Split" and "Underpass" alternatives are the preferred alternatives for grade separations to be considered for further study work.
2. Request that the Peninsula Corridor Joint Powers Board (JPB) prepare a "project study report" for all four Menlo Park crossings (a more detailed railroad engineering study) in coordination with the City's planning/urban design studies.
3. Consider and give staff direction on the Transportation Commission recommendation to include the City of Palo Alto and Town of Atherton in the next level of project development.

BACKGROUND

Over the past decade, rail traffic on the Caltrain system has increased by roughly one-third. Over the next decade, rail traffic is planned to increase by another ten to twenty percent over current levels. The growth in rail traffic has increased the disruption to east-west travel, raised emergency response concerns and heightened complaints about train horn noise. These considerations made a reexamination of grade separation possibilities timely and appropriate.

In 1990, the City conducted a preliminary feasibility study of constructing grade separations between the Caltrain rail alignment and Ravenswood, Oak Grove, Glenwood and Encinal Avenues. In some cases, the 1990 designs have been rendered obsolete by subsequent development. In other cases, the 1990 designs involved awkward treatments for bicyclist and pedestrian movements and awkward connections to surrounding streets and property accesses.

Given the above considerations, it seemed appropriate for the City to pursue an updated design feasibility study for grade separations. Doing the feasibility study does not commit the City to actually constructing any grade separations; it simply provides Menlo Park with an up-to-date understanding of what feasible alternative design configurations would entail.

On July 1, 2001, the City Council authorized staff to apply to the San Mateo County Transportation Authority for funds to conduct a feasibility study of grade separations at Ravenswood, Oak Grove, Glenwood and Encinal Avenues from the Caltrain rail line and, upon receipt of the Transportation Authority funding commitment, to develop a work scope and solicit consultant proposals for conducting the feasibility study. In October 2001, the Transportation Authority authorized an allocation of \$188,000 to Menlo Park for the purpose of funding such a study.

On July 16, 2002, the City Council authorized the City Manager to enter into an agreement in the amount of \$195,000 with BKF Engineers, Surveyors and Planners to conduct a feasibility study of grade separations at Ravenswood, Oak Grove, Glenwood and Encinal Avenues from the Caltrain rail line.

On June 10, 2003, the City Council held a study session to review the findings and recommendations of the engineering feasibility study of alternatives for grade separating the City of Menlo Park's four public street crossings of Caltrain. The options included in this study were:

- A "Trench" Alternative, which would lower the tracks and keep the roadway at existing grade;
- An "Overpass" Alternative, which would raise the roadway and keep the tracks at existing grade;
- An "Underpass" Alternative, which would lower the roadway and keep the tracks at existing grade; and
- A "Split" Alternative, which would partially lower the roadway and partially raise the tracks.

Following the June 10 study session, acting in regular session on the same date, the Council directed that the grade separations be nominated in a list of possible future projects to be considered for inclusion for funding under the proposed reauthorization of the San Mateo County Measure A sales tax for transportation improvements. Under the current Measure A reauthorization expenditure plan, \$225,000,000 has been programmed for grade separation projects throughout San Mateo County. The crossings within the City of Menlo Park are eligible for this funding along with all other at grade railroad crossings on the Caltrain system. Including funding for Menlo Park's grade crossings in Measure A keeps the City's options open if it chooses to pursue grade separations in the future. The reauthorization of Measure A goes to the voters of San Mateo County in November 2004 for approval.

On September 9, 2003, the City Council reviewed and considered the findings of the study in which staff recommended as the preferred design the Split Alternative, which involves partially elevating the grade of the rails and partially depressing the grade of the streets. Upon conclusion of its deliberations, the Council directed staff to do the following:

1. Continue to consider the Underpass Alternative as well as the Split Alternative.
2. Consider the practicality of closing Encinal Avenue and Glenwood Avenue at the railroad tracks to possibly reduce the scale of the project.
3. Evaluate aesthetic considerations to make the project visually unobtrusive.

4. Conduct further public outreach.
5. Prepare more tangible examples and graphic materials for presentation to the public.

ANALYSIS

The purpose of the current agenda item is to provide Council with the opportunity to provide formal direction as to what further actions should be taken with regard to the grade separation matter. If and when high speed rail is implemented, grade separations would likely be required in Menlo Park. The City of Menlo Park's efforts to date in exploring design options and gathering public input would be helpful in influencing the future course of action regarding the grade separation project.

Monies to fund grade separations in Menlo Park are not likely to be available in the near term future unless the reauthorization of Measure A and/or the Statewide High Speed Rail bond issue are approved by the voters. The reauthorization of Measure A will be brought before the voters in November 2004. The State legislature and the High Speed Rail Authority intend to place on the ballot in November 2006 a statewide measure to authorize bonds to fund the project through design and first stages of construction. The earliest that actual construction funding could be available would be 2007 or 2008.

Split vs. Underpass Alternatives

The work to refine the Split Alternative focused on minimizing the extent to which the rails are elevated. Based on this additional work, it appears that it would be practical to limit the raising of the track to about seven feet as compared to the ten-foot rise indicated in the initial reports.

Staff has completed a refined assessment of the Underpass Alternative in which the tracks remain at their present grade and the roads are depressed deep enough to pass beneath the tracks. In so doing, staff has identified several issues associated with this design. Because the underpasses go 20 feet below grade, they involve long sloping approaches and long, high retaining walls, which could be considered to be unappealing in appearance. This is illustrated in Appendix B of the consultant report (Attachment A). The long, deep approaches and retaining walls necessitate either severing the connections to some cross streets and private property accesses or extensive regrading of the cross streets and extensive reconfigurations of private property accesses. In addition, solutions to maintain cross street and private property connections compound problematic pedestrian linkages inherent in the deep underpass alternative.

The analysis contained in Appendix A of the consultant report describes the impacts of Underpass and Split design alternatives on the roadway system and the adjacent properties (Attachment A). Based on the results of this study, it appears that the impact on properties around the existing at grade crossings will be greater with the Underpass Alternative than with the Split Alternative. Some of the negative impacts associated with the Split Alternative are the visual impacts of the elevated tracks and removal of trees because of the embankments required to raise the tracks.

Staff recommends that both the Split and Underpass alternatives be studied further. Various options for street connections are available under each alternative. For example, streets parallel to the tracks such as Alma and Merrill could pass over, connect to, or become dead ends at their connections to Ravenswood Avenue and Oak Grove Avenue. Numerous possibilities exist that will significantly affect street circulation and land uses in the area. A more thorough analysis could better identify the advantages and disadvantages of various street connection options under both the Split and Underpass alternatives.

Closing Encinal and Glenwood Crossings

If the Encinal and Glenwood crossings were closed to limit the scale of the grade separation project, it is estimated that approximately 11,000 vehicle trips per day would be shifted to the crossings at Oak Grove Avenue and Watkins Avenue in Atherton. This would introduce significant additional traffic impacts on the adjoining residential areas. Reducing the number of rail crossings could have adverse consequences for both emergency services and ordinary circulation when a collision, breakdown, major incident or ordinary maintenance event obstructs one of the remaining crossings. Bicyclists and pedestrians who now rely on the Glenwood and Encinal crossings may be forced to make out-of-direction travel to use the remaining crossings or may resort to illegal and unsafe trespass crossings at or near the former street crossings. Based on the above considerations staff recommends that all four crossings be studied for grade separation.

Public Outreach

Staff has conducted focused public outreach regarding the impacts of the project on the residential and commercial properties along Oak Grove Avenue, Glenwood Avenue and Encinal Avenue. Business and commercial centers along the railway were invited to a meeting sponsored by the Menlo Park Chamber of Commerce on August 5, 2004 to discuss the conceptual design plans and graphic materials. All the property owners and tenants of the properties along this corridor, along with other interested parties, were also invited to attend a Transportation Commission meeting held on September 8, 2004. At this meeting, a detailed analysis of the Split and Underpass alternatives was presented. The station layout for both alternatives was also presented.

The issues and concerns raised by the members of the community regarding Caltrain grade separation are summarized below. Many residents believe that with elevated tracks their quality of life and property values will be negatively impacted. They attribute the negative impacts to the visual intrusion of the raised tracks into the neighborhoods and added noise due to higher elevation of the tracks. Residents are concerned about the loss of heritage trees along the railroad right-of-way. They are also concerned about the loss of privacy due to raised tracks and exposure of their homes and back yards to the commuters. Some residents are concerned about impact on access to their properties or total loss of their properties. Affected business and property owners are concerned about the impacts to their business and loss of income during construction. They are also concerned about the permanent impacts of the project on their property due to limited or severed access.

Additional Graphic Materials

In response to the Council's request for additional graphics to illustrate the different options, the City retained Callander Associates. The firm developed a layout for the Menlo Park Caltrain Station under both alternative design concepts. The results of this work are presented in Appendix B of the consultant report (Attachment A). In both instances, the plans call for the relocation of the three existing buildings on the Caltrain Station site because of the need to widen passenger platforms. The main depot building would be moved closer to Santa Cruz Avenue to establish a focal point for the station that could be seen from the Downtown area. The model railroad building would be moved to the north next to Oak Grove Avenue, away from the more heavily traveled areas, while the bike shelter would be moved slightly south.

Possible Next Steps

The Transportation Commission recommended the formation of a subcommittee comprised of Transportation Commissioners, Planning Commissioners and City Council Members to open a dialogue with the Town of Atherton and City of Palo Alto. With the Council's approval, staff would approach senior staff of the neighboring jurisdictions to explore their interests and concerns regarding this issue. If there is an interest in neighboring jurisdictions, staff would define a more specific process where information could be shared and common interests could be explored further. Staff would then return to the Council with the results of this effort in order to seek direction from the Council regarding a further course of action in addressing the Transportation Commission's recommendation.

Summary of Questions for Council Discussion

The issues before the Council for its review and consideration are as follows:

- Should the City receive the grade separation report and take no further action at this time?
- Should the City select the Split and Underpass alternatives as the preferred alternatives for grade separation for further study?
- Should the City request the JPB to prepare a "project study report" for all four crossings in Menlo Park?
- Should the City apply for new grant funding to further analyze the impacts of grade separations in Menlo Park and prepare urban design concepts for the Caltrain Station area?
- Should the City involve the City of Palo Alto and Town of Atherton in the next level of project development?

IMPACT ON CITY RESOURCES

The study grant is now fully expended. The City's expectation is that the cost to implement grade separation of the Caltrain line through Menlo Park, including planning and design, would be fully funded by Caltrain. Likely funding sources include the reauthorization of the San Mateo County Measure A sales tax, State and/or Federal funds, and, potentially, statewide high speed rail funds. If the City desires to undertake

further engineering and urban design studies of the concepts, JPB/SMCTA staff informally indicate that they would consider funding additional studies (including City staff time to coordinate the project) through current or future Measure A regional monies.

The dedication of staff time to the grade separation matter will impact the availability of staff to address other community transportation issues.

POLICY ISSUES

The current Menlo Park General Plan acknowledges the possibility of grade separation of the rail crossings, but takes a non-committal stance toward them. Policy II-A-18 states that, "the City shall conduct a thorough feasibility study of the grade separation projects included in the Measure A sales tax expenditure plan, including all impacts of such proposed projects and alternatives to the proposed projects, and shall support only those grade separations that provide sufficient traffic and rail service benefits to offset potential negative impacts to the community. The City shall evaluate all alternatives to any grade separations and shall attempt to gauge public opinion, possibly through an advisory election, before proceeding with a grade separation project. Any approval of a grade separation project shall include findings specifying why the alternatives are not suitable and the reasons for proceeding with the grade separation project."

The current study addresses many of the items raised in Policy II-18-A. Staff feels that additional studies would be consistent with the direction provided by the General Plan.

ENVIRONMENTAL REVIEW

This project consists of a feasibility study. No action currently contemplated by the City in relation to this study would require environmental review.

Jamal Rahimi
Transportation Manager

Kent Steffens
Director of Public Works

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ATTACHMENT: **Consultant Report**



PUBLIC WORKS DEPARTMENT

Council Meeting Date: November 27, 2007

Staff Report #: 07-200

Agenda Item #: Study Session

STUDY SESSION: Review of the Caltrain Grade Separation Footprint Study and Prior City Studies of Possible Grade Separations with Caltrain Tracks and the Roadways of Ravenswood Avenue, Oak Grove Avenue, Glenwood Avenue, and Encinal Avenue

The purpose of the study session is to provide information to City Council on the Grade Separation Footprint Study performed by Caltrain, and the previous grade separation study performed by the City in 2003-04. No council action is required.

BACKGROUND

At the request of Council Members Boyle and Robinson, the scope of a potential study session on Caltrain grade separations was placed on the Council's October 16, 2007 meeting agenda for discussion. Council directed staff to conduct a study session to educate Council Members on prior studies conducted by Menlo Park and to invite representatives from Caltrain to present information on its more recent Grade Separation Footprint Study. Council specifically indicated that the study session should be educational and it would not be taking a position on grade separations as part of the study session. It further directed staff to coordinate with the Town of Atherton to schedule a joint session on grade separations in January and to let Atherton know when the Menlo Park study session was scheduled so its council members and staff could attend if interested. Atherton has been informed of the November 27 grade separation study session.

The City obtained funding for a grade separation study from the San Mateo County Transportation Authority in July of 2002. The City retained BKF Engineers of Redwood City to conduct the study and worked with Caltrain staff throughout the process. The City's study evaluated four basic alternatives:

- A "Trench" Alternative, which would lower the tracks and raise the roadways
- An "Overpass" Alternative, which would raise the roadway and keep the tracks at existing grade
- An "Underpass" Alternative, which would lower the roadway and keep the tracks at existing grade
- A "Split" Alternative, which would partially lower the roadway and partially raise the tracks

The Council first considered the findings of the Grade Separation Study at a study session on June 10, 2003 (Staff Report 03-101, Attachment A).

The Grade Separation Study was brought back for Council discussion and action on September 9, 2003 (Staff Report 03-142, Attachment B). At that meeting Council directed staff to continue further studies of the "Split" Alternative and "Underpass" Alternative and to develop graphics that were more easily understood by the public. It also gave direction to consider the practicality of closing Encinal Avenue and Glenwood Avenue at the railroad tracks rather than pursuing grade separations.

Supplemental information on the Grade Separation Study was presented to Council on October 19, 2004 (Staff Report 04-207, Attachment C). At that meeting Council gave direction to convene meetings of neighboring cities to determine if there were common interests among the neighboring jurisdictions of Atherton, Palo Alto, Mountain View, and Redwood City. Several meetings were held with elected officials of these neighboring jurisdictions. Each city had different issues with grade separations depending on the configuration of roadways and existing parcels around potential grade separation locations. No formal recommendations or actions were taken as a result of these group meetings.

ANALYSIS

The purpose of this study session is to educate Council Members and the public about potential options for grade separations in Menlo Park. City staff will present information from prior studies on grade separation alternatives completed in 2004. Representatives from Caltrain will present information from a more recent study that evaluated grade separations throughout San Mateo County.

The original goal of the City's grade separation study was to evaluate various alternatives and for City Council to adopt a preferred method for grade separations in Menlo Park. With this information the City could have actively pursued funding for grade separation design and construction. Another potential reason to establish a preferred alternative was to attempt to influence the State if the California High Speed Rail Project is approved by voters and grade separations are required in Menlo Park. Alternatively, the City Council could have determined from the study document that the impacts with certain alternatives were too severe and therefore the City should take a position to prevent grade separations from being constructed in Menlo Park.

The prior grade separation study ultimately did not result in the City selecting a preferred alternative and the City has not taken a formal position on whether or not it should actively pursue grade separations. The prior study resulted in furthering the City's knowledge of grade separations but due to funding limitations, not all aspects of grade separations could be studied. Most notably, some of the information that was not included in prior studies but may be useful includes:

- A study of the noise impacts of the various alternatives
- Cost estimates for the various alternatives
- A study of the traffic impacts resulting from changes in how roadways are reconfigured as a result of grade separations and whether changes in roadway configuration (other than as shown in the study materials prepared to date) could reduce the impacts

Next steps would be to conduct a joint City Council meeting regarding grade separations with the Town of Atherton as directed by Council. Additional funding for further studies in Menlo Park may be available from the San Mateo County Transportation Authority (SMCTA). These sources would be reviewed if further studies are pursued following the joint meeting with Atherton.

In accordance with discussion by Council Members when the scope of this study session was being developed, staff will briefly discuss peripheral topics that were not covered by the earlier grade separation report. These include:

- Potential impacts of grade separation to a future bike/pedestrian tunnel alignment between Ravenswood Avenue and the San Francisquito Creek
- “Top Down” construction methods as a way to potentially reduce construction impacts of an underpass alternative
- Quiet Zones – opportunities and challenges
- A tunneling option – information from the California High Speed Rail Environmental Impact Report

IMPACT ON CITY RESOURCES

The City’s Fiscal Year 2007-08 adopted budget does not include funding for further studies of grade separations in Menlo Park. If the Council chooses to continue evaluating grade separation alternatives or develop new policies around grade separations in 2007-08, staff resources would need to be shifted from other approved transportation division projects. Additional work on grade separations could be considered for Fiscal Year 2008-09 through the annual project priority process.

POLICY ISSUES

A review of potential grade separations is consistent with the City’s current General Plan. Policy II-A-18 states that, “the City shall conduct a thorough feasibility study of grade separation projects included on the Measure A sales tax expenditure plan, including all impacts of such proposed projects and alternatives to the proposed projects, and shall support only those grade separations that provide sufficient traffic and rail service benefits to offset potential negative impacts to the community. The City shall evaluate all alternatives to any grade separations and shall attempt to gauge public opinion, possibly through an advisory election, before proceeding with a grade separation project. Any approval of a grade separation project shall include findings specifying why the alternatives are not suitable and the reasons for proceeding with the grade separation project.”

ENVIRONMENTAL REVIEW

As a feasibility study, review under the California Environmental Quality Act is not required at this time.

Kent Steffens
Director of Public Works

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ATTACHMENT:

- A. [Staff report 03-101 dated June 10, 2003 with Grade Separation Study Report](#)
- B. [Staff report 03-142 dated September 9, 2003](#)
- C. [Staff report 04-207 dated October 19, 2004 with Grade Separation Feasibility Study Supplement](#)



PUBLIC WORKS DEPARTMENT

Council Meeting Date: January 29, 2008
Staff Report #: 08-014

Agenda Item #: C1

STUDY SESSION: Discussion of Potential Caltrain Grade Separation Alternatives with the Town of Atherton

The purpose of the study session is discuss potential Caltrain grade separation alternatives with members of the Atherton City Council so that issues of common interest can be explored. No City Council action is required.

BACKGROUND

At the request of Council Members John Boyle and Heyward Robinson, the scope of a possible study session on Caltrain grade separations was placed on the City Council's October 16, 2007 meeting agenda for discussion. At that meeting, Council directed staff to conduct a study session to educate Council Members on prior studies conducted by Menlo Park and to invite representatives from Caltrain to present information on its more recent Grade Separation Footprint Study. The Council further directed staff to let Atherton know when the Menlo Park study session was scheduled so its council members and staff could attend if interested and to coordinate with the Town of Atherton to schedule a joint session on grade separations in January.

The Menlo Park study session on Caltrain grade separations was held on November 27, 2007. Staff Report 07-200 from that meeting is included as Attachment A (without the report attachments). It provides additional background on the prior grade separation study conducted by the City of Menlo Park and the alternatives that were considered.

ANALYSIS

The original goal of the City's grade-separation study was to evaluate alternatives and for the City Council to select a preferred method for grade separations in Menlo Park. With this information, the City could have actively pursued funding for grade-separation design and construction. Alternatively, the City Council could have determined from the study that the impacts of certain alternatives were too severe and therefore the City should take a position to oppose grade separations being constructed in Menlo Park. Another reason to choose a preferred alternative would have been to attempt to influence the State if the California High Speed Rail Project is approved by voters and grade separations are required in Menlo Park. The prior grade-separation study ultimately did not, however, result in the City selecting a preferred alternative, and the City has not taken a formal position on whether it should actively pursue grade separations.

Because of the close proximity of existing at-grade crossings in Menlo Park and the Town of Atherton, grade-separation alternatives that involve either raising or lowering the elevation of the railroad tracks will affect the elevation of the tracks in the adjacent jurisdiction as well. For example, if Menlo Park preferred raising the tracks to accomplish grade separations, the tracks would also have to be elevated through much of Atherton. This does not, however, appear to be the case in the jurisdictions north of Atherton and south of Menlo Park. Menlo Park could either raise or lower the tracks at Ravenswood Avenue and still meet the existing grade of the San Francisquito Creek rail crossing and, therefore, not affect Palo Alto. Atherton could either raise or lower the elevation at its Fair Oaks Lane crossing and still meet the elevation at the next crossing to the north — Fifth Avenue in unincorporated San Mateo County (which is already grade-separated). For alternatives that leave the railroad tracks at their current elevation, each crossing can be treated independently and even constructed at different times.

The purpose of this joint study session is to explore common interests between Menlo Park and the Town of Atherton as each jurisdiction evaluates the alternatives for railroad grade separations. Staff will present background on prior grade-separation studies and provide additional information on the following topics:

- railroad track elevations for a fully lowered-train alternative.
- cost considerations resulting from the impacts to adjacent properties.
- relationship of the California High Speed Train to local grade separations.
- currently planned Caltrain safety improvements.
- need for further grade-separation studies.

IMPACT ON CITY RESOURCES

The City's Fiscal Year 2007-08 adopted budget does not include funding for further studies of grade separations in Menlo Park. If the Council chooses to continue evaluating grade-separation alternatives or develop new policies around grade separations in 2007-08, staff resources would need to be shifted from other approved transportation division projects. Council could instead choose to consider additional work on grade separations in Fiscal Year 2008-09 as part of the annual project priority-setting process now getting underway.

Additional funding for further studies in Menlo Park may be available from the San Mateo County Transportation Authority. These sources would be reviewed if further studies are pursued following the joint meeting with Atherton.

POLICY ISSUES

A review of potential grade separations is consistent with the City's current General Plan. Policy II-A-18 states that, "the City shall conduct a thorough feasibility study of grade separation projects included on the Measure A sales tax expenditure plan, including all impacts of such proposed projects and alternatives to the proposed

projects, and shall support only those grade separations that provide sufficient traffic and rail service benefits to offset potential negative impacts to the community. The City shall evaluate all alternatives to any grade separations and shall attempt to gauge public opinion, possibly through an advisory election, before proceeding with a grade separation project. Any approval of a grade separation project shall include findings specifying why the alternatives are not suitable and the reasons for proceeding with the grade separation project.”

ENVIRONMENTAL REVIEW

A review under the California Environmental Quality Act is not required at this time.

Kent Steffens
Director of Public Works

PUBLIC NOTICE: Public Notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting.

ATTACHMENT: A. [Staff Report 07-200, dated November 27, 2007, without attachments. \(All attachments are available on the City website.\)](#)

RESOLUTION NO. 6167**RESOLUTION OF THE CITY OF MENLO PARK SUPPORTING THE RAVENSWOOD AVENUE GRADE SEPARATION ANALYSIS PROJECT AND SUBMITTING AN APPLICATION FOR MEASURE A GRADE SEPARATION PROGRAM FUNDING**

WHEREAS, the City of Menlo Park (City) is seeking funding to complete the Planning Phase for a cost range of approximately \$500,000 to \$750,000 in Measure A Grade Separation Program funds to complete the planning phase for the Ravenswood Avenue Grade Separation Project (Project); and

WHEREAS, The Ravenswood Avenue grade crossing is one of the most critical rail crossings in the Menlo Park corridor. Ravenswood Avenue has an average daily traffic (ADT) volume of 24,100 vehicles per day (vpd). It is classified as an arterial roadway and is a vital link east and west through Menlo Park. The intersection of Alma Avenue is immediately adjacent to the rail crossing and has a high pedestrian volume, especially for pedestrians walking to and from the rail station on the northwest corner of the intersection, and

WHEREAS, the additional study would provide Menlo Park the opportunity to evaluate alternatives for grade separation of this rail crossing. Some of the following issues would be included in the analysis 1) cost difference between grade separation alternatives; 2) better understanding of traffic, pedestrian, and bicycle patterns for the various alternatives; 3) potential impacts associated with the various alternatives such as noise, aesthetics, and station configuration; 4) evaluation of alternatives not included in the prior studies –a fully depressed train (trench); and 5) complete the planning phase for the Project selected alternative; and

WHEREAS, the City wishes to sponsor the implementation of the environmental phase for the Project, and

WHEREAS, on June 7, 1988, the voters of San Mateo County approved a ballot measure to allow the collection and distribution by the San Mateo County Transportation Authority (TA) of a half-cent transactions and use tax in San Mateo County for 25 years, with the tax revenues to be used for highway and transit improvements pursuant to the Transportation Expenditure Plan presented to the voters (Original Measure A); and

WHEREAS, on November 2, 2004, the voters of San Mateo County approved the continuation of the collection and distribution by the TA the half-cent transactions and use tax for an additional 25 years to implement the 2004 Transportation Expenditure Plan beginning January 1, 2009 (New Measure A); and

WHEREAS, on November 13, 2012, the City Council authorized staff to submit a letter of interest to the San Mateo County Transportation Authority for the Measure A eligible grade separation project in Menlo Park; and

WHEREAS, TA issued a Solicitation for Projects for the Measure A Grade Separation Program on August 5, 2013; and

WHEREAS, TA requires a governing board resolution from the City committing the City to the completion of the Ravenswood Avenue Grade Separation Project planning phase for the Project and the City's application for \$500,000 to \$750,000 in San Mateo County Measure A Grade Separation Program funds for completing the planning phase for the Ravenswood Avenue Grade Separation Project; and

NOW THEREFORE, BE IT RESOLVED AND IS HEREBY FOUND, DETERMINED, AND ORDERED AS FOLLOWS:

1. Directs staff to submit an application for San Mateo County Measure A Grade Separation Program funds for an amount ranging from \$500,000 to \$750,000 for the planning phase for the Ravenswood Avenue Grade Separation Project.
2. Authorizes the City Manager to execute all funding agreements with the San Mateo County Transportation Authority to encumber any Measure A Grade Separation Program funds awarded for this phase of the project.
3. Let it be known the City of Menlo Park commits to the completion of the Ravenswood Avenue Grade Separation Analysis Project if awarded the requested San Mateo County Measure A Grade Separation Program funds

I, Pamela Aguilar, Acting City Clerk of Menlo Park, do hereby certify that the above and foregoing Council Resolution was duly and regularly passed and adopted at a meeting by said Council on the twenty-seventh day of August, 2013, by the following votes:

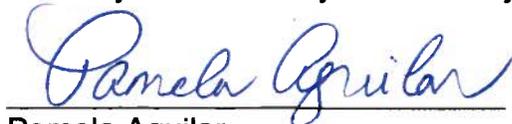
AYES: Carlton, Cline, Keith, Ohtaki, Mueller

NOES: None

ABSENT: None

ABSTAIN: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Official Seal of said City on this twenty-seventh day of August, 2013.



Pamela Aguilar
Acting City Clerk

City of Menlo Park Statement of Principles for Rail

The City of Menlo Park Rail Council Subcommittee works to protect and enhance the character of Menlo Park and the community's economic vitality while supporting the conditions needed to maximize the local benefits and the long-term potential of rail.

- The character of Menlo Park includes:
 - Our connected, walkable, bikeable, safe and accessible neighborhoods, parks, commercial areas and civic center
 - Our vision and specific plan for the downtown and El Camino Real including improved east-west mobility for all modes of travel

- The community's economic vitality includes:
 - The continued success of our small and large businesses
 - The maintenance of our property values
 - Rail agencies responsibly mitigating impacts of rail, including but not limited to, HSR, Caltrain, and freight

- The conditions needed to maximize the long-term potential of the City's rail corridor include:
 - Improvements to east / west connectivity; rail unifies rather than divides
 - Improvements to local transit
 - The negative physical and social impacts of rail are minimized and the positive impacts are enhanced by using context sensitive design solutions
 - Consider all reasonable alternatives including those discussed previously by Menlo Park

Implied "decision criteria" from these principles might include:

- Does the alternative protect or enhance connectivity to additional modes of travel/ accessibility to city locations?
- Does the alternative protect or enhance walk-ability?
- Does the alternative protect or enhance bike-ability?
- Does the alternative protect or enhance the economic vitality of businesses?
- Does the alternative protect or enhance property values?
- Does the alternative align with / support the El Camino Real / Downtown Specific Plan?
- Does the alternative protect or enhance local transit opportunities?
- Does the alternative enhance the level of transit service?

**City of Menlo Park
Council Position Summary for Discussion**

The following bullet points are for discussion to clarify the Council's position on high speed rail on the Caltrain corridor through Menlo Park.

- The City opposes any elimination of any part of CEQA for the High Speed Rail Project environmental process.
- No aerial or elevated structures will be utilized on the Caltrain alignment between San Jose and San Francisco unless such an elevated structure is specifically requested by a local agency, for an area within their jurisdiction
- The high speed rail within Menlo Park should be either in a two-track envelope "at-grade" system, or in an open or closed trench or tunnel, and stay within the existing Caltrain right-of-way (with very minor exceptions, and in very limited locations)
- No Environmental Impact Report should go forward which increases it beyond two tracks in Menlo Park, unless underground in a closed trench or tunnel
- City is interested in positive train control and alternative propulsion systems as an early investment project to increase regional mobility and local train service. We are in favor of positive train control and electrification, provided they increase train service at or beyond 2005 levels at the Menlo Park Caltrain Station.
- The City approves of a blended system but opposes passing tracks located in Menlo Park
- The City is interested in quiet zones for the rail corridor in Menlo Park
- Our strategy is to work cooperatively with the blended system planning efforts while preventing an at-grade or elevated 4 track system through Menlo Park.

Figure H-1: ECR/Downtown Specific Plan Vehicular Circulation

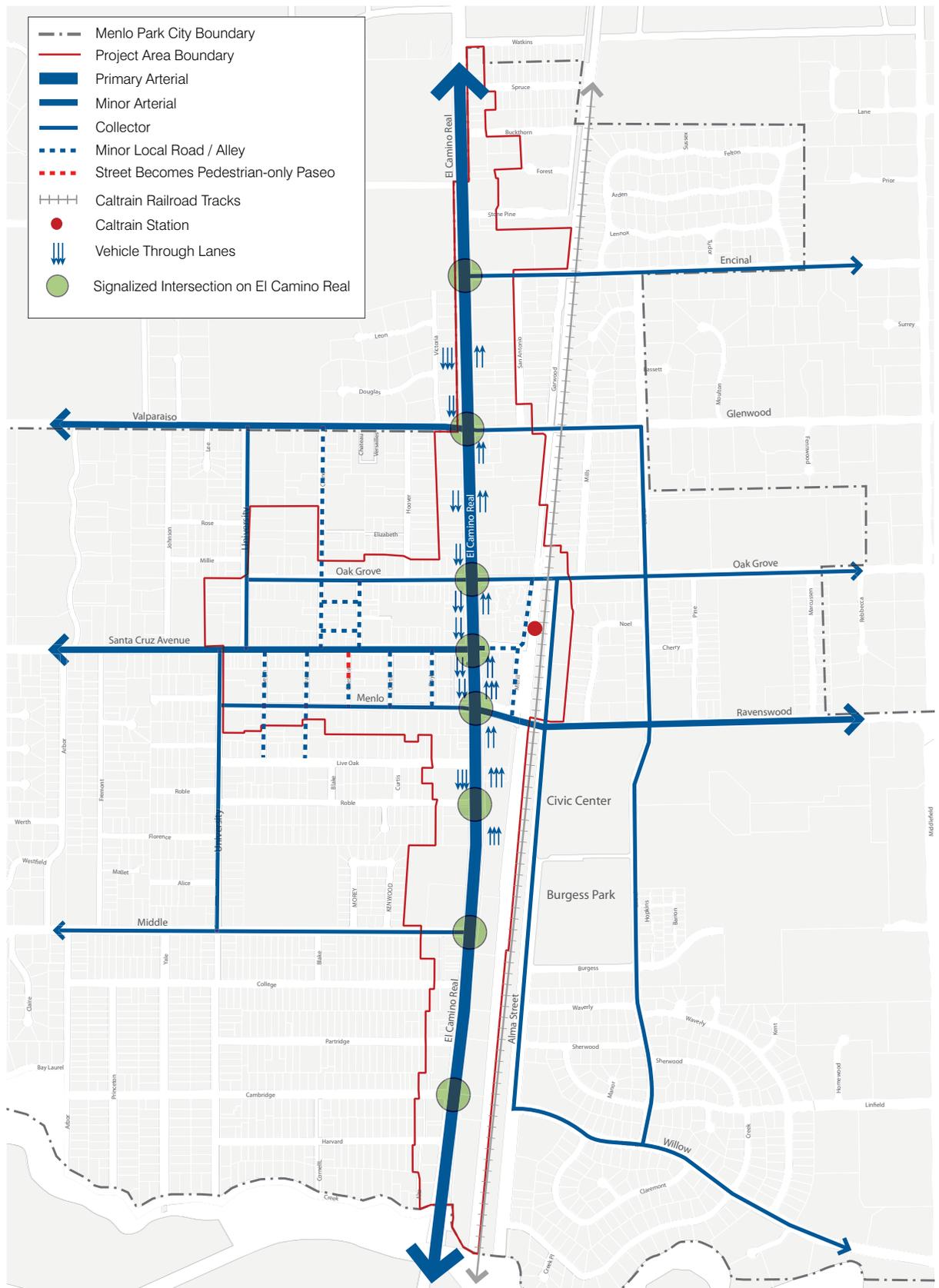


Figure F1. Vehicular Circulation

Figure H-2: ECR/Downtown Specific Plan Pedestrian Circulation

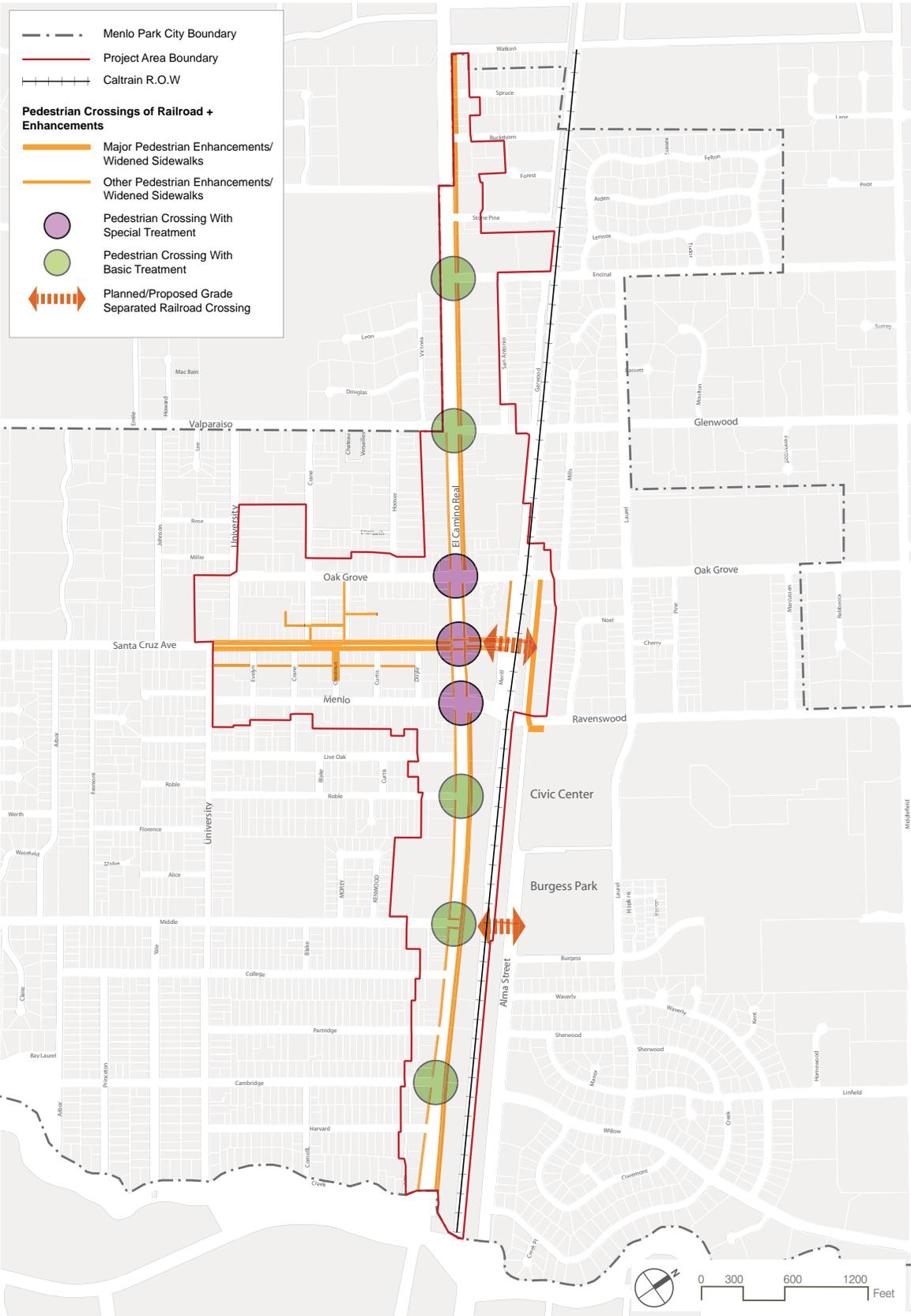


Figure F2. Pedestrian Improvements

Figure H-3: ECR/Downtown Specific Plan Bicycle Circulation

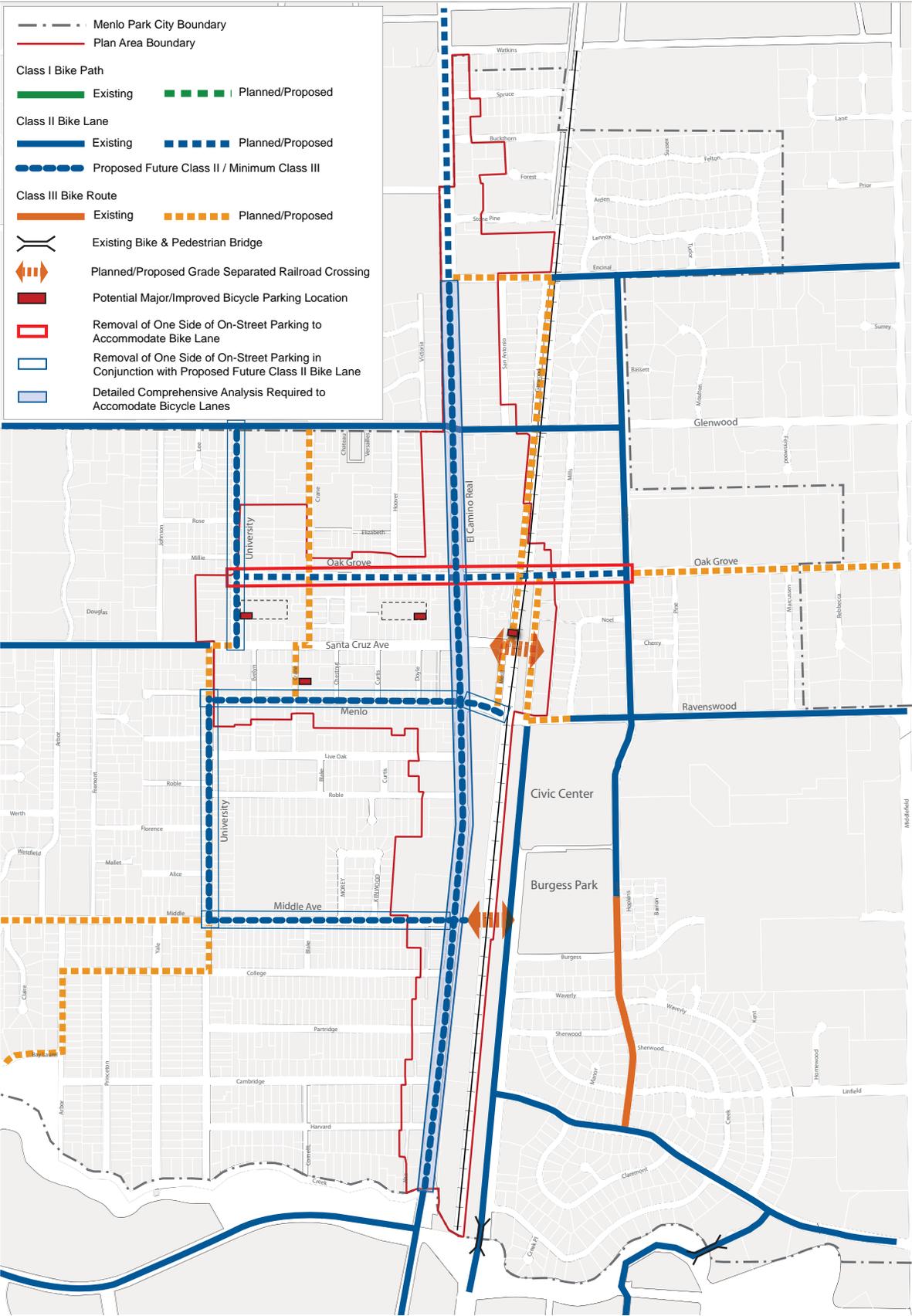


Figure F3. Bicycle Facilities

Figure H-4: ECR/Downtown Specific Plan Transit Services

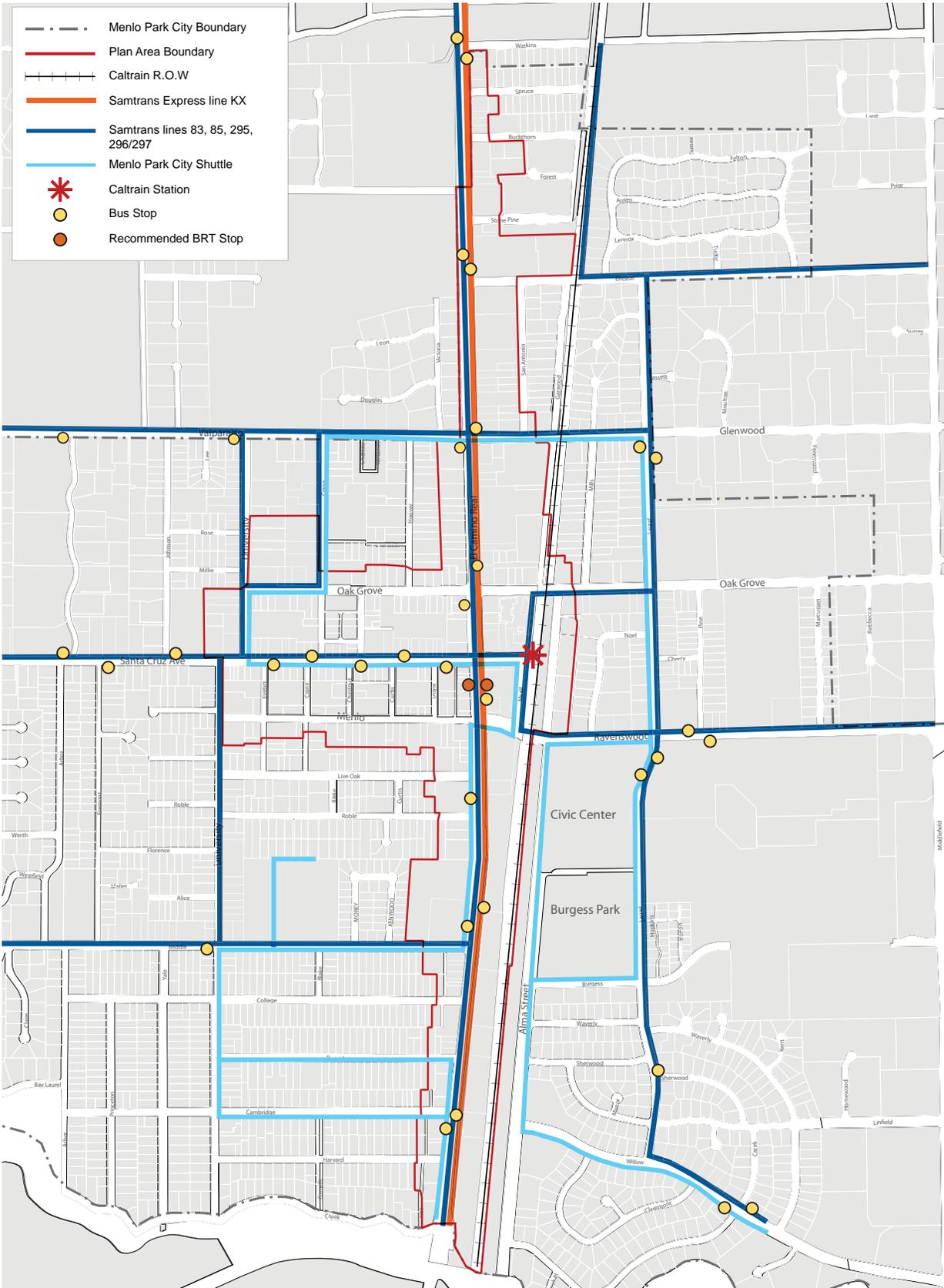


Figure F4. Transit Service

Figure H-5: ECR/Downtown Public Space Framework Connectivity

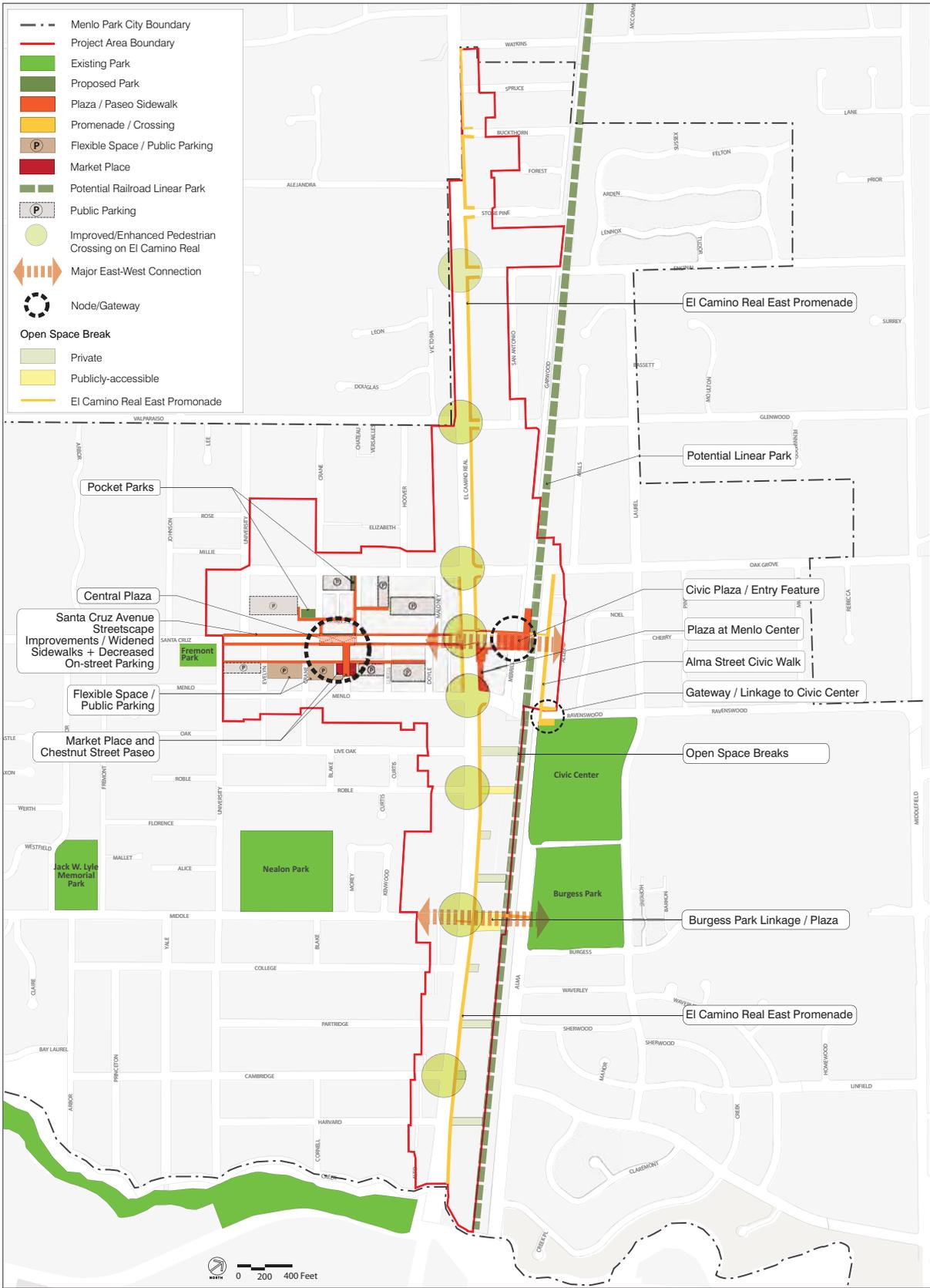


Figure D1. Public Space Framework

Figure H-6: ECR/Downtown Specific Plan

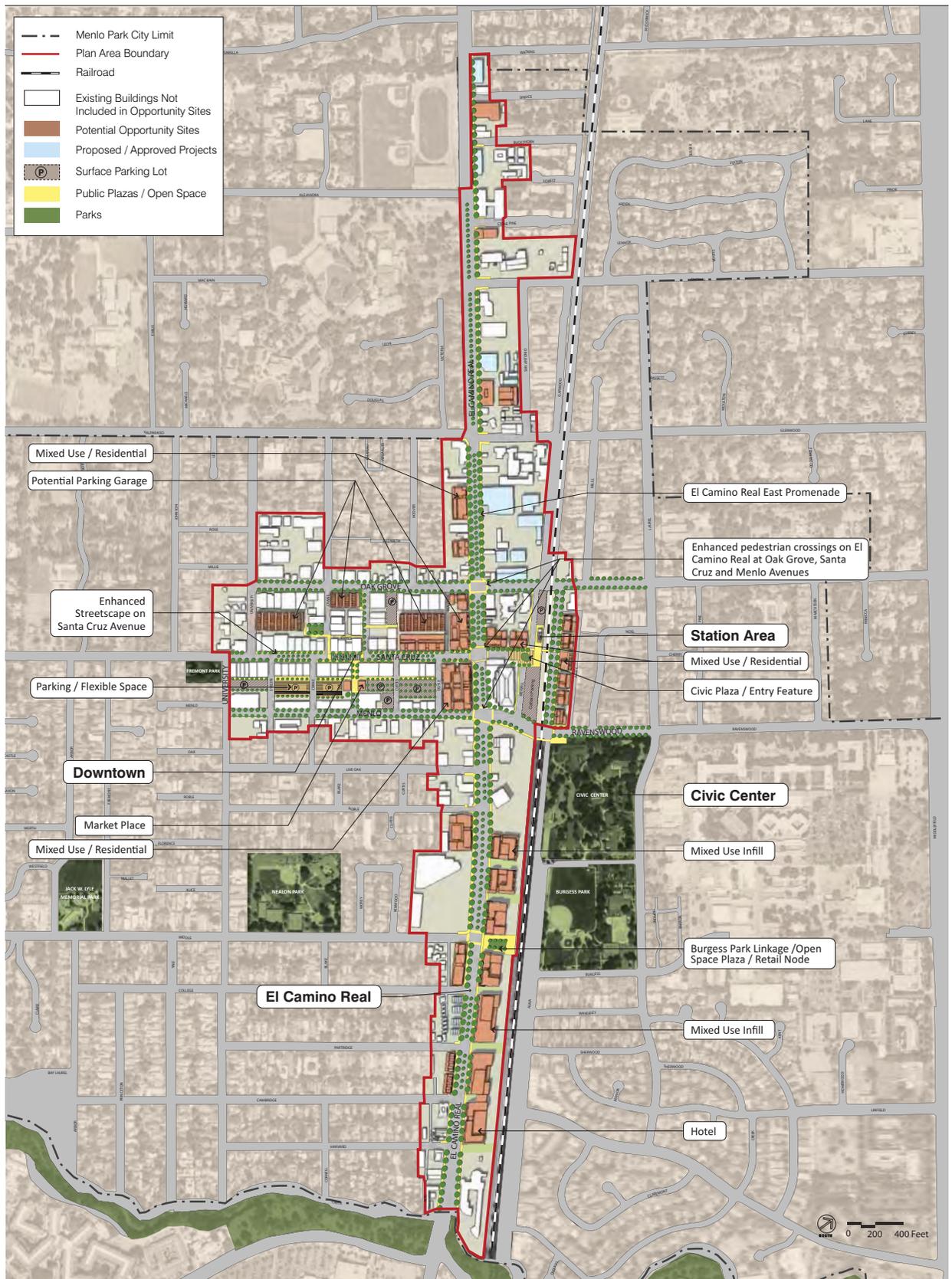


Figure A1. Illustrative Site Plan



REC'D SEP 11 2013

BOARD OF DIRECTORS 2013

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September 6, 2013

MICHAEL J. SCANLON
EXECUTIVE DIRECTOR

Mr. Chip Taylor
Public Works Director
City of Menlo Park
701 Laurel Street
Menlo Park, CA 94025

Dear Mr. Taylor,

The Peninsula Corridor Joint Powers Board (JPB) is providing this letter of concurrence in accordance with the guidelines established by the San Mateo County Transportation Authority in its 2013 Measure A Grade Separation Program Call for Projects.

JPB Engineering and Construction staff concurs with the City of Menlo Park's proposal to undertake a Project Study Report (PSR) for a proposed grade separation project at Ravenswood Avenue based on the understanding that all designs will be developed in accordance with established JPB standards.

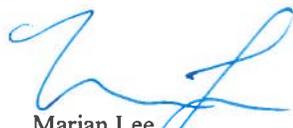
Additionally, JPB Caltrain Modernization Program staff concurs that, subject to review, the proposal to move forward with a PSR is consistent with and will not adversely impact the Blended System. This concurrence is based on the following understanding:

- The proposed grade separation is located within the limits of the Middle 3 Track Blended System Overtake option.
- Given the possible future selection and construction of this option, the City will include and study one or more design options that accommodate the overtake. In this context, "accommodate" is understood to have the following minimum threshold of meaning:
 - The grade separation design maximizes the preservation and configuration of existing ROW such that overtake tracks could be built at a later date with no or minimal new ROW acquisition.
 - The grade separation design does not include significant features or elements that would need to be demolished if overtake tracks were built
 - The grade separation design does not force future overtake tracks to be built in a way that substantially increases their cost and complexity.
- The City will engage JPB staff to assist in providing technical detail and establishing ongoing project concurrence with the Blended System.

Please note that this letter of concurrence is based on the above stipulations and applies only to the PSR phase of the project for which funding is currently being sought. JPB staff looks forward to working with the City on this important project.

Sincerely,


Liria Larano
Director
Engineering & Construction


Marian Lee
Executive Officer
Caltrain Modernization Program

PENINSULA CORRIDOR JOINT POWERS BOARD
1250 San Carlos Ave.- P.O. Box 3006
San Carlos, CA 94070-1306 650.508.6269

**San Mateo County Transportation Authority
Fiscal Year 2014 Measure A Grade Separation Program Solicitation**

Non-Supplantation of Funds Certification

This certification, which is a required component of the project initiator's grant application, affirms that San Mateo County Transportation Authority (TA) Measure Grade Separation Program funds will be used to **supplement** (add to) existing funds, and will not **supplant** (replace) existing funds that have been appropriated for the same purpose. Potential supplantation will be examined in the application review as well as in the pre-award review and post award monitoring.

Funding may be suspended or terminated for filing a false certification in this application or other reports or documents as part of this program.

Certification Statement:

I certify that any funds awarded under the FY 2014 TA Measure A Grade Separation Program will be used to supplement existing funds for program activities, and will not replace (supplant) existing funds or resources.

Project Name: Ravenswood Avenue Grade Separation Project Study Report

Project Applicant: City of Menlo Park

Alex D. McIntyre
PRINT NAME

[Signature]
SIGNATURE

City Manager
TITLE*

SEPT. 12, 2013
DATE

* This certification shall be signed by the Executive Director, Chief Executive Officer, President or other such top-ranking official of the Project Applicant's organization.