CITY COUNCIL RAIL COMMITTEE

Wednesday, October 19, 2022
Regular Meeting
Community Meeting Room
1:00 PM
Supplemental Report Added

Pursuant to AB 361 Palo Alto City Council and Committee meetings will be held as "hybrid" meetings with the option to attend by teleconference/video conference or in person. To maximize public safety while still maintaining transparency and public access, members of the public can choose to participate from home or attend in person. Information on how the public may observe and participate in the meeting is located at the end of the agenda.

HOW TO PARTICIPATE

VIRTUAL PARTICIPATION

CLICK HERE TO JOIN (https://cityofpaloalto.zoom.us/j/86388142528)
Meeting ID: 863 8814 2528 Phone:1(669)900-6833

The meeting will be broadcast on Cable TV Channel 26, live on YouTube at https://www.youtube.com/c/cityofpaloalto, and streamed to Midpen Media Center at https://midpenmedia.org.

PUBLIC COMMENTS

Public Comments will be accepted both in person and via Zoom meeting. All requests to speak will be taken until 5 minutes after the staff's presentation. Written public comments can be submitted in advance to city.council@cityofpaloalto.org and will be provided to the Committee and available for inspection on the City's website. Please clearly indicate which agenda item you are referencing in your email subject line.

Call to Order

Oral Communications

Members of the public may speak to any item NOT on the agenda.

Action Items

1. Verbal Update on Interagency Activities
   A. Caltrain
   B. VTA
   C. City Staff

Study Session

2. Study Session to review comments received from various stakeholders to refine conceptual plans for Partial Underpass Alternative at Churchill Avenue and Underpass Alternatives at Meadow Drive and Charleston Road. *Supplemental Report Added*

Presentation

Next Steps and Future Agendas

Adjournment

PUBLIC COMMENT INSTRUCTIONS

Members of the Public may provide public comments to hybrid meetings via email, in person, teleconference, or by phone.

1. **Written public comments** may be submitted by email to city.council@cityofpaloalto.org.

2. **In person public comments** please complete a speaker request card located on the table at the entrance to the Council Chambers, and deliver it to the City Clerk prior to discussion of the item.

3. **Spoken public comments using a computer or smart phone** will be accepted through the teleconference meeting. To address the Council, click on the link below to access a Zoom-based meeting. Please read the following instructions carefully.
   - You may download the Zoom client or connect to the meeting in- browser. If using your browser, make sure you are using a current, up-to-date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionality may be disabled in older browsers including Internet Explorer. Or download the Zoom application onto your phone from the Apple App Store or Google Play Store and enter the Meeting ID below
   - You may be asked to enter an email address and name. We request that you identify yourself by name as this will be visible online and will be used to notify you that it is your turn to speak.
   - When you wish to speak on an Agenda Item, click on "raise hand." The Clerk will activate and unmute speakers in turn. Speakers will be notified shortly before they are called to speak.
   - When called, please limit your remarks to the time limit allotted.
   - A timer will be shown on the computer to help keep track of your comments.

4. **Spoken public comments using a phone** use the telephone number listed below. When you wish to speak on an agenda item hit *9 on your phone so we know that you wish to speak. You will be asked to provide your first and last name before addressing the Council. You will be advised how long you have to speak. When called please limit your remarks to the agenda item and time limit allotted.

Click to Join **Zoom Meeting ID: 863 8814 2528 Phone: 1(669)900-6833**

City of Palo Alto (ID # 14813)

City Council Rail Committee Staff Report

Meeting Date: 10/19/2022 **Report Type: Next Steps and Future Agendas**

Title: Study Session to review comments received from various stakeholders to refine conceptual plans for Partial Underpass Alternative at Churchill Avenue and Underpass Alternatives at Meadow Drive and Charleston Road.

From: City Manager

Lead Department: Transportation Department

RECOMMENDATION

Study Session to review comments received from various stakeholders to refine conceptual plans for the Partial Underpass Alternative at Churchill Avenue and the Underpass Alternatives at Meadow Drive and Charleston Road.

EXECUTIVE SUMMARY

On May 23, 2022, City Council authorized City staff (staff) to seek additional feedback from the key stakeholders for the revisions of the partial underpass alternative at Churchill Avenue and underpass alternatives at Meadow Drive and Charleston Road. City Staff and the consultant reached out to the Pedestrian and Bike Advisory Committee (PABAC), Palo Alto Unified School District (PAUSD), Stanford, City School Transportation Safety Committee (CSTSC), and lead design engineers from the community who were involved in developing the conceptual design of these partial underpass alternatives for their feedback and comments for refinement to the conceptual plans.

Staff compiled all the comments received from these stakeholders and developed a master list of all comments. These comments were then categorized into elements of major facilities that is, Bicycle and Pedestrian, Roadway, Structures, and Rail. The review of the comments in the various elements of these categories are discussed in detail in this staff report to seek direction from the Rail Committee in addressing and incorporating these comments for the refinement of conceptual plans. Staff will return to the Rail Committee at a future date with staff recommendations as an action item.

BACKGROUND

After receiving the final report from the Expanded Community Advisory Panel (XCAP) on April 26, 2021 (CMR 12185), Staff presented a detailed review of Meadow Drive and Charleston Road

crossing alternatives on August 23, 2021 (CMR 13435) and presented details on Churchill Avenue crossing alternatives for grade separation on November 1 & 29, 2021 (CMR 13543) & (CMR 13746). At these meetings, the Council directed staff to perform additional studies. These studies included work to refine Underpass alternatives with input from PAUSD, PABAC, and Stanford to address current shortcomings and to conduct additional outreach. On May 23, 2022 (CMR 14341) the Council authorized an amendment with the consultant to perform these additional tasks.

Staff with the support of the City's consultant scheduled separate meetings with the stakeholders to seek their input and feedback on partial underpass alternatives. Staff and consultants attended several stakeholders' meetings and made presentations with a detailed review of the alternatives to seek feedback and comments from Stanford staff, PABAC, PAUSD staff, and CSTSC in July and August. Due to the summer recess break, the outreach was delayed. Staff also reached out to local design engineers and were able to consult with Mr. Michael Price and Ms. Elizabeth Alexis, who were involved in developing initial conceptual plans for these underpass alternatives to seek their input and comments.

DISCUSSION

City staff and the consultant presented the alternatives in consideration to PAUSD Staff, PABAC, CSTSC, and Stanford staff in seeking feedback and comments on the proposed conceptual alternatives. In addition, staff reached out to lead design engineers from the community who were involved in developing the conceptual design of these partial underpass alternatives for their feedback and comments for refinement to the conceptual plans. The compiled list of comments is provided in Attachment A, however, a summary of comments received from these stakeholders is as follows:

PAUSD: City staff and the consultant presented the alternatives in consideration to PAUSD staff in seeking feedback and comments on the proposed conceptual alternatives. The major concern of the PAUSD was to provide grade separation designs that can accommodate high volumes of bicycle and pedestrian traffic using these roadways. In addition, staff concerns included accommodation of the larger turning vehicles such as school buses and maintenance vehicles at these crossings. PAUSD sent a letter (See Attachment B) representing over 10,000 students, over 20,000 parents, and 2,000 employees reiterating concerns regarding the closure of Churchill Avenue. In addition, the concerns regarding the closing of Churchill and/or Meadow appear more damaging to the district. The PAUSD has concerns that "the potential closure would negatively impact daily operations in a way we cannot mitigate with our buses or fleet of maintenance vehicles".

PABAC: City staff received more than a hundred comments from PABAC members. Attachment A provides the list of all comments including comments received from PABAC members. Some of the major concerns of the committee members were to provide more direct continuity by providing bicycle and pedestrian facilities on both

sides of the roadway. The concerns of additional maneuvering/circuitous facilities that require additional crossings will cause additional delays, inconvenience, and therefore deteriorated service to such users. The recommendation is to design these facilities aligned with existing facilities and integrated with the roadway system. Also, the PABAC members stressed for needs of such continuity on other intersecting bicycle routes such as Park Blvd. Other comments include consideration of design to include measures to lower grade on bicycle and pedestrian ramps, provide greater design speeds for bicycles, and accommodate varying bicycle types through turning movements for such facilities. In addition, roadway crossings and intersections shall consider bicycle and pedestrian safety and provide adequate measures for safe crossings. Also, the roundabout on Charleston shall be designed to accommodate bicycle and pedestrian movements and may be reduced to one lane configuration. Finally, one of the major concerns was to accommodate bicycles and pedestrians during construction.

CSTSC: The CSTSC members provided feedback similar to PABAC concerning the accommodation of bicycles and pedestrian traffic and geometric consideration in these alternatives. The desire to provide higher priority to bicycle and pedestrian traffic and to improve service for such users. The comments included consideration of measures to improve safety at conflicting points of bicycle and pedestrian with vehicular traffic. The committee members also voiced concerns about the volume of bicycles and pedestrians along these corridors and asked for conducting a study for the level of service analysis for such needs. All comments received from CSTSC Committee are compiled in Attachment A.

Stanford: Stanford staff generally supported and recognized the challenges of various alternatives during the presentation delivering information and seeking feedback on the conceptual design plans for various alternatives. However, Stanford did not provide any formal feedback or comments to the City.

Lead design engineers from the community who were involved in developing conceptual plans: Staff met with lead design engineers from the community who were involved in developing the conceptual design of these partial underpass alternatives for their feedback and comments for refinement to the conceptual plans. The major comments were suggestions to reduce the project footprint by considering measures such as reduced bridge depth thickness, reducing vertical clearance, reducing bridge span by reducing lane and shoulder width, number of lanes, bridge support, and also by reviewing vertical grades, and other measures. In addition, they recommended providing enhancements to the aesthetics of bridge and roadway structures. The detailed comments from Mr. Michael Price are attached as Attachment C. In addition, concerns related to design aesthetics, construction timelines, traffic demand, and encroachment into Caltrain right-of-way were also included in the feedback. Ms. Elizabeth Alexis also had similar comments which are included in the compiled list of comments (Attachment A).

All comments received from the above stakeholders were compiled into a spreadsheet (Attachment A). City staff and the consultant reviewed all the comments and categorized these comments into various elements. These categories were identified into four major facilities, i.e. Bicycle and Pedestrian, Roadways, Structures, and Rail. The following discussion provides a summary of the various elements brought up in these comments.

Bicycle and Pedestrian Facilities: Several comments from the stakeholders were related to the design of the bicycle and pedestrian facilities. One of the major concerns was that such shall be designed to accommodate high volumes of pedestrians and bike demand along these corridors. Stakeholders requested for the City to conduct additional studies on bicycle and pedestrian demands and service levels of the proposed facilities. Major elements affecting these facilities are as follows:

Width & Pathway Configuration: Proposed width for ramps or pathways in the conceptual plans is 10-foot to 20-foot wide. 20-foot-wide ramps/pathways are only at a few places where feasible, such as along Meadow Drive, Charleston Road, and the tunnel at Churchill Avenue. The comments included concerns that even 20 feet may not be adequate width to accommodate pedestrian and bike volumes present on these corridors. The comments asked for additional studies on the Level of Service and Delay analysis to justify providing additional width for these pedestrian and bike facilities. Providing wider facilities will require additional right of way. An example would be to widen the pedestrian ramp on Kellogg Street which will encroach into the residential landscaping area or require additional right of way. In addition to width, comments also include a request for bicycle and pedestrian pathways to have separate facilities. While separating bicycles and pedestrian facilities may not be feasible, striping can provide for the delineation of bicycles and pedestrian facilities, and aligning the proposed facilities with existing facilities will be considered in detail during the design phase where feasible.

Grade/Slope: Proposed grade in the conceptual plans meets the minimum American Disability Act (ADA) requirement and provides an 8% grade with 5 foot landing every 35 feet. The feedback from stakeholder's requests to provide a maximum grade of 5% to meet recommended bicycle pathway guidelines. The flatter slope, if provided will require greater approaches and therefore will have a larger construction footprint, increased cost, and may also require additional right of way. Changing the slope from 8% to 5% will increase the ramp length by approx. 90 feet for an elevation change of 15 feet. Also, providing greater slope conflicts with some other comments to limit long isolated ramps and tunnels that may lead to personal safety concerns.

Maneuvering & Additional Crossings: Having the bicycle and pedestrian facility on one side of the roadway in underpass alternatives of Meadow Drive and Charleston and a detour to Kellogg Street for a partial underpass alternative at Churchill requires the bicyclists and pedestrians to cross the roadway. In addition, crossings on Meadow Drive and Charleston at Park Blvd and ramps from Alma Street to Meadow Drive or Charleston Road will have similar concerns. These additional maneuvers will cause increased travel times and inconvenience to bicyclists and pedestrians and may pose challenges for various populations to use the crossings. The comments included concerns regarding detours and maneuvers that require additional crossings and that such crossings shall be protected or provided with traffic control measures to provide for safe crossings. The project will include additional measures at these crossings during the detailed design with input from stakeholders.

Design Speed, Design Bicycle, Turning Radius, Sight Distance: The comments raised concerns about the design bicycle and design speed used in preparing the conceptual plans for these underpass alternatives. While there are tools available to review such designs for design vehicle and speed, the conceptual plans were prepared with consideration of the minimum design requirements for such facilities. These design considerations generally impact the turning radius. Staff believes that while some turning radius may be provided for ramps/tunnels without impacting right-of-way, however, will not be able to accommodate recommended 20 mph design speeds at these facilities. To accommodate the sight distance at these constrained turning locations, alternatives such as striping, lighting and other measures will be considered during the preparation of design plans.

Connectivity: There were few comments from stakeholders for the project to show the connectivity of the bicycle and pedestrian to the major destinations in the City. While the project is providing connectivity of pedestrians and bicycle network to the adjacent facilities, the Citywide network for such facilities is depicted in the Bicycle and Pedestrian Transportation Plan (BPTP).

Construction Impacts: Several comments also included concerns with provisions of bike and pedestrian crossing during construction at Meadow Drive and Charleston Road. The stakeholders asked to provide for phasing of construction to show for such provisions of the bicycle and pedestrian crossing during construction. The objective is to maintain bicycle and pedestrian crossing at least at one of these crossings, however, the detailed construction phasing for the project will be developed in subsequent phases of design.

Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative): Some stakeholders valued having bicycle and pedestrian facilities

on both sides of the roadway. While providing separated bicycle and pedestrian facilities along both sides may not be feasible on Meadow Drive, for Charleston Road it will require additional restrictions to movements at the intersection. In addition, a right-of-way needs evaluation will be required for developing this new concept plan.

Kellogg Ave vs Seale & Bike lane configuration on the pathway (Churchill Avenue): Stakeholders had varying views about the location of the Bicycle and Pedestrian Crossings. While the project conceptual plans show the crossings at Kellogg Avenue, the merits of the crossing at Kellogg vs Seale will be studied as part of the Bicycle and Pedestrian Transportation Plan Update as directed by Council. In addition, consideration of additional crossings across the Caltrain corridor will also be part of this BPTP update. With regards to the configuration of the bike lane markings on the bike path along the railroad track, it will be evaluated for sightline improvements and review of alignment with the Embarcadero bike path at its entry and exit.

Roadways: The comments from stakeholders concerning roadways reflected the desire to reduce the project footprint. The various elements involved are as follows:

Shoulder and Lane Widths: The comments included reducing the shoulder width and lane widths to reduce the project footprint. The conceptual plans indicated 10-12-foot-wide lanes with a shoulder width of up to 8 feet at places. The project will be able to reduce lane width to 11-foot to meet the required minimum standards. However, the shoulder width provides flexible space for larger turning vehicles and accommodates any disabled vehicle and emergency vehicle access and will be evaluated during a detailed design phase for any width reduction.

Vehicular Lane reductions: In general, there is only one lane in each direction along these segments of Churchill Avenue, Meadow Drive, and Charleston Road. However, to accommodate traffic through intersections, generally, turning movement lanes are added. For example, on eastbound Churchill Avenue, the single lane splits into an eastbound left turn and an eastbound right turn lane. This will help in reducing backups in the eastbound direction. Eliminating this right turn lane will cause greater backups as the capacity at the intersection decreases.

Intersection, Turning Radius, School Bus Turning Radius: Some concerns related to a wider turning radius at various locations in the partial underpass alternatives. While the turning radius along with shoulder areas are designed to accommodate larger vehicles, the request is to consider measures to tighten these curves with some calming measures while accommodating larger vehicles. In addition, PAUSD raised concerns with respect to accommodating school buses

through all these turning movements. The turning radius will be evaluated further to ensure accommodation and address these issues.

Roadway Grade/Slope: Proposed grades in the conceptual plans range from 7% to 12%. Some stakeholders requested to see if the slopes can be increased to further reduce the footprint, however many stakeholder comments requested to flatten the slopes to 5% to accommodate bikes using the traveled lane. The flattening of the slopes will increase the project footprint and may also impact the right-of-way needs.

Signage: Few comments related to the development of signage to ensure that pedestrians and bike traffic is directed to appropriate facilities. In addition, the concern was to have adequate signage to ensure that bicyclists are advised of steep grades on Meadow, Charleston, and crossing limitations at Churchill Avenue. Signage plans will be developed during the detailed design development and these concerns will be addressed in implementing such signage.

Loss of landscaping strip on Alma: With Partial Underpass Alternatives, the concern of loss of landscaping strip along Alma Street will bring the bicycles and pedestrians using the sidewalk near the traveled way. Providing a landscaping strip will require additional right of way from the fronting residents.

Roundabout for Charleston Underpass Alternative only: Stakeholders were also concerned with the size of the roundabout. While the roundabout was designed with two lanes to accommodate existing and projected traffic, the concern was that the larger roundabout will be too complex to navigate for bicyclists. In addition, since the shared bike path terminates before the roundabout that will make it challenging for bicyclists and pedestrians to navigate around the roundabout. The consultant is reviewing the possibility to extend the bike path beyond the roundabout to accommodate this concern.

Bike Boulevard Continuity at intersections: Stakeholders also indicated concerns with maneuverability along the existing established bike routes such as Park Blvd through Meadow Drive and Charleston Road. While Bicycle and Pedestrian connectivity is provided through bridges and ramps, the most direct route was requested to be considered. The consideration of such routes was requested by providing greater grades than what is currently provided (10-12%) and possible realignment of intersections at Park Blvd. However, the initial review indicates that roadway grades were optimized to provide the smallest footprint, and realignment of intersections will require significant additional right of way.

Structures: The comments from stakeholders with respect to structures relate mainly to bridge structures. The following are the concerns brought up by the various stakeholders:

Bridge Deck Thickness: Various stakeholders brought up concerns about the bridge depth depicted in the plans. Depending upon the type of bridge (Pedestrian & Bicycle, Roadway, or Rail) the bridge depth thickness may vary. The consideration of 5 feet of the total bridge depth is assumed in conceptual plans from the soffit (bottom of the structure) to the top of the rail. However, few stakeholders feel that the width could be reduced further to improve the project footprint. The bridge depth thickness currently is estimated based on the general design guidelines. However, the actual design and value engineering will be performed in subsequent phases for the selection of the bridge type and design elements that will determine the required bridge deck thickness.

Vertical Clearance: Various stakeholders brought up concerns about the vertical clearance under the bridges. Currently, the minimum vertical clearance of 15'-6" is shown in accordance with minimum Caltrain requirements. For the bike bridges, where feasible, 10 feet of vertical clearance is provided and an exception is 8 feet under the railroad track on Meadow Drive.

Aesthetics: There were concerns from the stakeholders that the structures, roadways, and other areas where aesthetic enhancements could be provided shall be included in these revisions.

Rail: The comments from a stakeholder with respect to rail was limited to raising the rail described as follows:

Raise the Rail: With regards to rail, the comment was to consider raising the rail to lower the grade on the roadway. For the underpass design, one of the features was to keep the rail at the existing vertical elevation. Also, alternative construction technologies like Jack Box construction techniques could help reduce construction timeframes. Finally, raising the rail will also be similar to the hybrid alternative and therefore not considered with underpass alternatives.

In addition to these comments, it should be noted that these concept plans are prepared with 2-track options only.

Next Steps

- Following the Rail Committee's study session, staff will come back with proposed recommendations to be included in refining the Partial Underpass Alternative for Churchill Avenue and Underpass Alternatives at Meadow Drive and Charleston Road.

- Coordinate with PABAC Grade Separation subcommittee for review of comments and update other stakeholders on the proposed recommendations.
- Perform design refinements recommended by the Rail Committee and bring back the updated conceptual plans for Rail Committee approval.
- Provide an update to stakeholders and share revised concept plans for these alternatives.
- Seek City Council review and approval of the Rail Committee's recommendation for the selection of the preferred alternative(s).

The selection of preferred alternatives will therefore lead to the development of preliminary engineering and preparation of environmental documents including the associated Environmental Impact Report (EIR).

RESOURCE IMPACT

Revision to existing conceptual plans and cost estimates is within the approved scope of the consultant contract. In the event, the City requires the development of new alternatives or revisions beyond the refinement of current alternatives, additional services of the consultant will be needed.

ENVIRONMENTAL REVIEW

The proposed action is part of a planning study for a possible future action, which has not been approved, adopted, or funded and is therefore exempt from the California Environmental Quality Act (CEQA) in accordance with CEQA Guidelines Section 15262. The future decision to approve the construction of any one of the identified potential alternatives would be subject to CEQA and require the preparation of an environmental analysis. Environmental review and design for the grade separation project will be performed in the subsequent steps of the project development.

DOCUMENTS

Attachment A: Compiled list of comments
Attachment B: Letters received from PAUSD
Attachment C: Comments received from Mr. Michael Price

Other Project related documents
All of the project-related documents are posted on the project webpage here: https://connectingpaloalto.com/. Here are direct links for Rail Committee consideration for review of the alternatives as part of this staff report:

- Fact Sheets & Matrix
- Renderings & Animations

- XCAP Final Report

Part 1: Appendix A-1 thru A-2-1
Part 2: Appendix A-2-2 (01-04)
Part 3: Appendix A-2-2 (05-08)
Part 4: Appendix A-2-3 thru A-6
Part 5: Appendix B
Part 6: Appendix C

Attachments:

- Attachment A - Compiled List of Comments
- Attachment B - PAUSD Letters
- Attachment C - Comments from Mr. Price

Attachment A
Compiled List of Comments

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
1	Ken Joy	PABAC	7/20/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Kellogg Ave vs Seale & Bike lane configuration on the pathway (Churchill Avenue)	Seale Crossing is better than Kellog as it provides the direct connection without 90 degree bend. Prefer Seale to Kellogg.	Bike and Pedestrian Transportation Plan update plans to review merits of Seale Ave Vs Kellogg Ave. The project will accommodate crossing based on City Council Direction accordingly. Seale Ave may have some advantages as it could provide more design flexibility on the west side of the tracks.	Alternative Preference Noted
2	Ken Joy	PABAC	7/20/2022	Churchill	Partial Underpass	Roadways	Miscellaneous	Similar comments to Arnout on Meadow/Charleston. Also provided comments during the townhall and XCAP review	At the PABAC Meeting, staff requested to resend the comments for including into the spreadsheet for consideration and review	Direction Required
3	Arnout Boelens	CSTC	2/2/2022	Churchill	Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	At the Kellogg Ave Underpass there is a blind corner when it meets the Embarcadero Bike path. Bicyclists will be going at high speed at that point because of the downward slope of the bike path, so that is a dangerous situation. There have to be clear sight lines coming out of the tunnel.	Design potential to flare/taper the box structure to increase line of sight; however, due to the right of way constraints at this location, even a moderate speed for bicyclists (> 5-10 mph) cannot be accommodated. The geometry here will be very similar to the southwest corner of the Homer UC where bicyclists will need to slow down significantly (3-5 mph) or walk their bikes.	Comment will be addressed
4	Arnout Boelens	CSTC	2/2/2022	Churchill	Closure Option 1	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	At the Churchill pedestrian and bike bridge there is a very sharp corner. This is difficult to navigate on a bicycle by young riders, older riders, and people with cargo bikes and trailers. What kinds of bicycles are you designing this for and what speeds? Can the bike/pedestrian bridge be raised a bit so there is clearance for a more gentle curve?	There's the potential to taper the corner of the tunnel (similar to the Homer UC) to maximize the turning radii & design speed; however, due to constraints at this location, this turning movement will be designed for low speeds for bicyclists (< 10 mph). The geometry here will be very similar to the southwest corner of the Homer UC where bicyclists will need to slow down significantly (3-5 mph) or walk their bikes. This turning movement can be made by all bike types, except that larger bikes, such as tandem bikes, will require riders to dismount from their bikes.	Comment will be addressed
5	Arnout Boelens	CSTC	2/2/2022	Churchill	Closure Option 2	Roadways	Intersection, Turning Radius, School Bus Turning Radius	Option 2 is preferred because it eliminates the need to cross Alma and there are clear sightlines through the tunnel.	Comment noted for consideration. City Council has currently selected the Churchill Partial Underpass as the preferred alternative with the Churchill Closure as the backup alternative.	Alternative Preference Noted
6	Arnout Boelens	CSTC	2/2/2022	Meadow - Charleston	Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	There are a number of hairpin curves and 90 degree curves in the underpass design. These seem very difficult/impossible to navigate for young riders, older riders, and people with cargo bikes and trailers. These kinds of curves can also be found at the Stevens Creek Trail and are very poor bicycle design. Again, can the bike/pedestrian bridge be raised a bit so there is clearance for a more gentle curve? (Stevens Creek Design Link)https://www.google.com/maps/place/37%C2%B023'26.5%22N+122%C2%B004'09.8%22W/@37.3906944,-122.0693889,222m/data=!3m2!1e3!4b1!4m6!3m5!1s0x0:0x5a51f76f7579d52!7e2!8m2!3d37.390691!4d-122.0693817	Clarification on "raising the bridge" - we think shifting the bridge is meant, which would require additional property acquisitions. The 90-degree movements were used to minimize property impacts. Trying to design these movements for bike speeds more than 5-10 mph will require significant property acquisitions. These movements will be similar to the 90-degree bends at the Homer Ave UC where bikers will have to slow down or dismount from their bicycles.	Significant Revisior

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
7	Arnout Boelens	CSTC	2/2/2022	Meadow - Charleston	Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Walking along Alma and crossing the Charleston Rd ramp seems very hazardous for pedestrians. The turning radius for cars should be much smaller, so they are slowed down, and the lane should be more narrow, again to slow down drivers.	We will look into alternative measures to address these concerns, such as a mountable curb to reduce the length of pedestrian travel across the vehicle traveled way. However, the radius and pavement area was based on accommodating a right turn by emergency vehicles. There is an elevation difference & a wall/barrier that prevents motor vehicles from encroaching on an adjacent lane, thus requiring the inside of the curve to be relatively wide.	Direction Required
8	Arnout Boelens	CSTC	2/2/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Installing a bidirectional bicycle path means people have to cross the road to get there. The pedestrian/bicycle bridges are quite a detour so many riders will take the more direct route across the street. I would suggest installing speed tables on Meadow and Charleston so this can be done safely.	Agreed that some speed reduction measures can be taken. Please note that direct routes across the street will not be possible in many locations due to the elevation difference between the roadway and the ped/bike path.	Clarification Provided
9	Arnout Boelens	CSTC	2/2/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Connectivity	The bidirectional bicycle path stops before the roundabout. How can bicyclists get to the path safely?	A wider path around the outside of the roundabout (on the north side of Charleston) will be considered by the City, to provide safer connectivity to the Mumford Pl intersection.	Comment will be addressed
10	Arnout Boelens	CSTC	2/2/2022	Meadow-Charleston	Hybrid	Bicycle & Pedestrian Facilities	Connectivity	Meadow and Charleston are crossing Alma directly. This is a very busy road, so there should be protected bicycle infrastructure installed.	Improvements to pedestrian and bicycle safety at the signalized intersection with Alma St will be investigated in the next phase if the Hybrid alternative is chosen.	Significant Revisior
11	Arnout Boelens	CSTC	2/2/2022	Meadow-Charleston	Trench	Bicycle & Pedestrian Facilities	Connectivity	Meadow and Charleston are crossing Alma directly. This is a very busy road, so there should be protected bicycle infrastructure installed.	Improvements to pedestrian and bicycle safety at the signalized intersection with Alma St will be investigated in the next phase if the Trench alternative is chosen.	Significant Revisior
12	Nadia Naik	XCAP	6/18/2022	Meadow-Charleston	Underpass	Structures	Vertical Clearence	The vertical clearance shall be kept to minimum. The AASHTO minimum 14 feet, CA HDM min 15 Feet for local/conventional Highway	Caltrain's current minimum standard is 15'-6". The current conceptual plans are in compliance with such requirements.	Significant Revisior
13	Arnout Boelens	CSTC	6/21/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	What "design vehicles" are all the pedestrian and bicycle ramps and bridges designed for? Can they be navigated by people on a tandem bike, bikes with trailers, cargo bikes? I know from personal experience that, for example, the hairpin curves in the Stevens Creek Trail in Mountain View are nearly impossible to navigate on a cargo bike.	To reduce the impact of adjacent properties, the turning movements are relatively tight, and are similar to the 90-degree turns at the Homer UC. Riders on tandem bikes and large cargo bikes will likely need to dismount at these locations for their own safety and the safety of others. Accommodating long bikes will require larger radii, which would increase the extent of property acquisitions.	Significant Revisior
14	Arnout Boelens	CSTC	6/21/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Grade/Slope	The maximum grade of 8% seems quite steep, especially for older and younger riders. AASHTO recommends 5%	ADA requirements allow 8% for ped ramps if 5-foot landings are provided every 30 feet, however preference is noted. Flatter grade have benefits, but at the expense of a larger project footprint. The City will consider different grades in the next phase of the project.	Direction Required

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
15	Arnout Boelens	CSTC	6/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Taking the bridges over Meadow and Charleston to reach the bi-directional underpass is quite a detour, so I expect many bicyclists/pedestrians will cross the road instead. How can this be accommodated so it happens safely?	There will be an elevation difference between the ped/bike path and the road, which will naturally prevent shortcuts from being taken. In addition, a barrier and fence will physically prevent road crossings at these locations.	
16	Arnout Boelens	CSTC	6/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Connectivity	How will the underpasses be connected to the bicycle lanes on Meadow and Charleston? Will there be green pavement to indicate the bike route?	Bike lane marking details will be investigated further by the City in the next phase.	Significant Revisior
17	Arnout Boelens	CSTC	6/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	With 12' travel lanes and 8' shoulders, Charleston and Meadow will be quite wide, which will encourage drivers to speed. How will your road design encourage safe behavior from drivers? This is especially important at locations where pedestrians/bicyclists have to cross the road or where bicyclists are merging back on the road into the bike lanes.	Flashing beacons, signage, speed bumps - several mitigation measures will be analyzed in the next phase. Travelled lanes will be reduced to 11-foot lanes.	Significant Revisior
18	Arnout Boelens	CSTC	6/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	What "design vehicles" are all the pedestrian and bicycle ramps and bridges designed for? Can they be navigated by people on a tandem bike, bikes with trailers, cargo bikes? I know from personal experience that, for example, the hairpin curves in the Stevens Creek Trail in Mountain View are nearly impossible to navigate on a cargo bike.	To reduce the impact of adjacent properties, the turning movements are relatively tight, and are similar to the 90-degree turns at the Homer UC. Riders on tandem bikes and large cargo bikes will likely need to dismount at these locations for their own safety and the safety of others. Accommodating long bikes will require larger radii, which would increase the extent of property acquisitions.	Clarification Provided
19	Arnout Boelens	CSTC	6/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Grade/Slope	The maximum grade of 8% seems quite steep, especially for older and younger riders. AASHTO recommends 5%	ADA requirements allow 8% for ped ramps if 5-foot landings are provided every 30 feet, however preference is noted. Flatter grade have benefits, but at the expense of a larger project footprint. The City will consider different grades in the next phase of the project.	Clarification Provided
20	Arnout Boelens/CSTC Members	CSTC	6/21/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Kellogg Ave vs Seale & Bike lane configuration on the pathway (Churchill Avenue)	Kellogg is the next best option after Churchill. This is a much more direct route than Seale, and walking and biking along Embarcadero is hazardous.	Noted - A ped/bike tunnel at Seale Ave is also being considered. Decision on location of undercrossing is pending.	Alternative Preference Noted
21	Arnout Boelens/CSTC Members	CSTC	6/21/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Kellogg Ave vs Seale & Bike lane configuration on the pathway (Churchill Avenue)	Have residents at Kellogg Ave been fully informed that there will be a bicycle and pedestrian tunnel on their street?	Public information is available on the project website (https://aecomvr.com/paloalto/), however the decision on a final location is still pending. Outreach will be done during the next phase of the project (the environmental phase).	Clarification Provided
22	Arnout Boelens/CSTC Members	CSTC	6/21/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Connectivity	What will be done to prevent pedestrians and bicyclists inadvertently ending up at the crossing of Churchill and Alma	Signage will be provided to direct peds/bikes away from the underpass that will be geared mostly for motor vehicles. Details will be provided in later phases of the project (during final design).	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
23	Elizabeth Alexis	Design Community	7/21/2022	Churchill	Partial Underpass	Structures	Bridge Deck Thickness	Bridge Thickness shall be minimized. This will allow for less approach transition distance.	A 6-12" difference in the structure depth won't make a large difference to the design (and project footprint), but comment noted, and this will be evaluated more closely during the preliminary engineering/environmental phase when rail and road surveys are completed.	Clarification Provided
24	Elizabeth Alexis	Design Community	7/21/2022	Churchill	Partial Underpass	Roadways	Roadway Grade/Slope	What are the maximum design slopes for the vehicular traffic/roadway provided? Can greater slope be provided that reduced the approach transition distance?	Local agencies typically don't like to exceed 10-12% slopes on roadways, but exceptions are sometimes made in constrained conditions. Based on the design speeds (25 mph on Churchill, and 35 mph on Alma), the grades shown (12% maximum) are close to optimal (they minimize the limits of roadway reconstruction). Steeper grades could be used on the underpass alternatives, but this would reduce the road's design speed, which is not desirable.	Clarification Provided
25	Elizabeth Alexis	Design Community	7/21/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Show the radius/curves at the bike turns rather than 90 degrees angles at these turns	We can include turning radii, but note that relatively large radii to accommodate bike speeds > 10 mph will require significant right-of-way.	Comment will be addressed
26	Elizabeth Alexis	Design Community	7/21/2022	Churchill	Partial Underpass	Structures	Vertical Clearence	Minimize the slope of the bike facility by reducing the bridge deck thickness, vertical clearance etc.	Comment noted, structure depths and slopes of ped/bike ramps will be evaluated more closely during the preliminary engineering/environmental phase.	Clarification Provided
27	Elizabeth Alexis	Design Community	7/21/2022	Churchill	Partial Underpass	Roadways	Miscellaneous	Make it with less concrete by reducing/minimizing the project footprint	One opportunity to reduce the footprint is if the City (and the traffic analysis) permits one lane on NB Alma (versus the two that is currently shown)... this would avoid removal of the landscape strip on Alma St. Shoulder widths are highly desirable in select locations to allow room for disabled vehicles. In addition, some pavement widths may seem excessive, but they're needed to accommodate turning movements of emergency vehicles (fire trucks) and school buses.	Clarification Provided
28	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Structures	Bridge Deck Thickness	Bridge Thickness shall be minimized. This will allow for less approach transition distance and therefore could reduce project footprint.	Comment noted, structure/bridge depths will be evaluated more closely during the preliminary engineering/environmental phase.	Clarification Provided
29	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Roadways	Roadway Grade/Slope	What effects the vertical transition required on approaches of Meadow Drive and Charleston Road? Design Speed, Vertical clearance, etc.	The road profiles are based on a 25 mph design speed and a 15'-6" vertical clearance. Sag curve lengths are designed for passenger comfort, and crest curve lengths are designed for sight distance.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
30	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Roadways	Roadway Grade/Slope	What is the maximum design slope for the vehicular traffic provided? Can greater slope be provided that reduced the approach transitions.	Local agencies typically don't like to exceed 10-12% slopes on roadways, but exceptions are sometimes made in constrained conditions. Based on the design speeds (25 mph on Churchill, and 35 mph on Alma), the grades shown (12% maximum) are close to optimal (they minimize the limits of roadway reconstruction). Steeper grades could be used on the underpass alternatives, but this would reduce the road's design speed, which is not desirable.	Clarification Provided
31	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Roadways	Roundabout for Charleston Underpass Alternative Only	Traffic circle shall be minimized or eliminated. Consider providing "U" turn movement on Churchill Avenue instead of traffic circle	There are several issues with a U-turn. 1. The relatively heavy volumes would require a traffic signal and a U-turn pocket (2nd lane). 2. The queues at a signal for a relatively high volume would create a long queue. 3. This would introduce a weaving/safety issue for traffic coming from NB Alma (via the frontage road).	Clarification Provided
32	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	May not need to provide a separate two-way separated pedestrian walkway on a ped bike path for Meadow and Charleston. Possibly something like 5-foot-wide pedestrian and 2-way bike pathway on this facility may be adequate	We recommend maintaining at least 20 feet for safe, 2-way passage of peds/bikes. Configuration shown is similar to the Homer UC.	Clarification Provided
33	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Structures	Vertical Clearence	Minimize the slope of the bike facility by reducing the bridge deck thickness, vertical clearance etc.	Comment noted, structure depths and slopes of ped/bike ramps will be evaluated more closely during the preliminary engineering/environmental phase.	Clarification Provided
34	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Possibly review the configuration of Park Blvd at Meadow Drive; Property acquisition may transition the Park Blvd to a distance west and that provides for the bikes transition from Park Blvd. to the east/ped bike ped pathway without using the pedestrian/bike bridge	Reconfiguring the alignment/profile of Park Blvd will likely require significant impacts and/or acquisitions of private properties.	Clarification Provided
35	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Roadways		Make it with less concrete by reducing/minimizing the project footprint	We're hearing from many to increase the footprint (increase radii at 90-deg turns, increase the width of the ped/bike bridge, etc. Also note that a 20-foot wide, 2-way path with retaining walls on both sides is not excessive (the Homer tunnel is about 19 feet wide)... the foot or two next to the wall is not usable.	Clarification Provided
36	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Provide the radius at the bike turns rather than 90 degrees angles at these turns	We can include turning radii, but note that relatively large radii to accommodate bike speeds > 10 mph will require significant right-of-way.	Comment will be addressed
37	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	May provide less width for pedestrian and bike facility; however, provide additional crossings.	A 20-foot wide, 2-way path with retaining walls on both sides is an appropriate width for this type of facility (the Homer tunnel is about 19 feet wide). Note that some stakeholders prefer a width more than 20 feet.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
38	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Connectivity	Show the bike path connectivity to the major city facilities and how the priority bike movements work.	The corridor wide connectivity will be coordinated with the City's Bike and Pedestrian Transportation Plan. The project will ensure that it maintains such connections.	Comment will be addressed
39	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Eliminate vehicular movement at Wright Place on Charleston Road and make it dedicate bike and pedestrian movements only.	That is the current plan... motor vehicles are prohibited on Wright Place (for peds/bike only).	Clarification Provided
40	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Bicycle & Pedestrian Facilities	Connectivity	At Meadow Drive possibly connect with bike path from the cul-de-sac at Emerson Street to Alma Street internally thereby limiting or providing alternative for such movements	It appears that the existing ped/bike path connects some homes to Alma Village, but not to Emerson (fence/gate prohibits access to Emerson). The City can investigate if allowing access to/from Emerson is feasible (if directed by Rail Committee and/or Council).	Direction Required
41	Elizabeth Alexis	Design Community	7/21/2022	Meadow-Charleston	Underpass	Roadways	Roadway Grade/Slope	Is it possible to increase vertical roadway grades to reduce the footprint on Meadow Drive to ensure that Emerson and Park Blvd are not impacted and kept at similar grades.	The impacts to Emerson are minimal. Steeper grades to reduce the project footprint is physically possible, but that would result in a design speed of 20 mph or less on Meadow, which is not desirable.	Clarification Provided
42	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Structures	Aesthetics	Lack of Attention to design aesthetics	Open to suggestions, but hardscape and landscape design details should not be a factor in choosing an alternative. These details will be discussed and provided out during the subsequent phases of design.	Clarification Provided
43	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Construction Impacts	High Disruption and lengthy construction	We might be able to find an answer to that after doing a geotechnical investigation. City is in discussion with Caltrain with regards to alternative technologies that can help in reduced construction timelines.	Clarification Provided
44	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Roadways	Miscellaneous	No suitable location for a dewatering pump station	This will be explored further in the next phase of the project.	Clarification Provided
45	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Roadways		Incremental encroachment on the Caltrain Right of way	Yes, this alternative as currently designed, requires some encroachment in Caltrain's R/W, and would have to be reviewed/approved by them.	Clarification Provided
46	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Structures	Bridge Deck Thickness	The deck thickness of the bridge is the parameter upon which the overall design is most sensitive, since the thickness is driven by so many other design decisions	Comment noted, structure/bridge depths will be evaluated more closely during the preliminary engineering/environmental phase.	Clarification Provided
47	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Structures	Bridge Deck Thickness	The depth of the thickness is reduced which leads to lower grade and reduction the apparent scale of the project	Comment noted, structure depths and slopes of the roads, and ped/bike ramps will be evaluated more closely during the preliminary engineering/environmental phase.	Clarification Provided
48	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Structures	Bridge Deck Thickness	The deck thickness depends upon the bridge material and the design constraints that presents as well the bridge span	Comment noted, structural details will be hashed out during the preliminary engineering/environmental phase.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
49	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Structures	Bridge Deck Thickness	How do we get the thinner bridge deck; Use steel rather than concrete for the bridge	A steel through girder bridge (like the bridge over Jerrold Ave in SF) would likely reduce the 'top of rail to soffit (bottom of structure)' dimension. This could be explored further during the next phase if this alternative is selected.	Clarification Provided
50	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Roadways	Shoulder and Lane Width	Narrow span through reduce shoulder width, reduce number of lanes (possibly right turn lane, and remove central bridge support	Shoulder widths are needed to accommodate turning movements of emergency vehicles and school buses. Two turn lanes are needed to avoid peak hour queues from spilling back towards Paly/Castilleja and beyond. In addition, shoulder also provide for flexible space for disabled vehicles.	Clarification Provided
51	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Roadways	Vehicular Lane Reductions	Remove proposed eastbound right turn lane; as the pocket is too small, the space currently occupied by turn lane can be used for dewatering station, and the lane reduction helps in reducing induced traffic and capacity of the Churchill Avenue	The right turn lane provides traffic benefits, such as providing storage and avoiding queues from spilling back to adjacent intersections (Paly/Castilleja).	Clarification Provided
52	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Roadways	Shoulder and Lane Width	Reduce shoulder widths; Shoulder width is safety issue but these widths can be optimized, Enough space is needed to allow turning of large vehicles. This can be accomplished by larger radii at the corners; Reducing width can reduce encroachment on Caltrain ROW	Larger radii helps with turning movements, but at this location, it would require moving the bridge abutments out (further north/south), thus introducing a longer span, which defeats the purpose of reducing shoulder widths.	Clarification Provided
53	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Rail	Raise the Rail	Elevate the tracks a little (3-5 feet)	Certainly possible... this could be investigated further if this alternative is selected.	Significant Revisior
54	Michael Price	Design Community	7/27/2022	Churchill	Partial Underpass	Structures	Vertical Clearence	Optimize the vertical clearance under the rail bridge	Comment noted... the engineers strive to optimize the roadway and bridge geometry. The 15'-6" vertical clearances are based on the minimum Caltrain requirements.	Clarification Provided
55	Gregory Brail	CSTSC	7/30/2022	Churchill & Alma	Partial underpass	Roadways	Signage	As currently proposed with the partial underpass, there will be no safe way for a pedestrian, or anyone but an experienced cyclist, to navigate the Churchill / Alma intersection at Churchill itself. There are no sidewalks, so any pedestrian who unwisely decides to navigate the intersection on foot will be in a dangerous position. A good cyclist could certainly manage, but would be faced with a 7% grade to climb with a traffic light at the bottom, no shoulder, and no bike lane. Therefore, I think that the final design for this intersection should at least include some elements (I don't know what, fences, signs?) that would discourage pedestrians and cyclists from even trying.	Agreed, signage would certainly be warranted to deter peds/bike from using the roadway pavement, only an experienced/fit bicyclist would be comfortable using the Alma/Churchill intersection.	Clarification Provided
56	Gregory Brail	CSTSC	7/30/2022	Kellogg & Alma	Partial underpass	Roadways	Signage	In addition to discouraging pedestrians and bicyclists from entering Churchill, they should be encouraged to take Kellogg by making this underpass as attractive as possible.	Agreed, comment noted. Signage and other guidance will be considered in subsequent phases of the project.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
57	Arnout Boelens	CSTSC	7/30/2022	All	All underpass alternatives	Roadways	Intersection, Turning Radius, School Bus Turning Radius	Policy T-6.1 states: “Continue to make safety the first priority of citywide transportation planning. Prioritize pedestrian, bicycle and automobile safety over motor vehicle level of service at intersections and motor vehicle parking.”. The fact that all the underpass designs were optimized for Level Of Service first and that pedestrians and bicycle infrastructure are only addressed now, shows that the City is not taking road safety for all road users seriously	The two are not mutually exclusive... we can design an alternative that reduces delays (and emissions) of motor vehicles and also provides an improved/safer route for peds/bikes.	Clarification Provided
58	Arnout Boelens	CSTSC	7/30/2022	All	All	Roadways		When can CSTSC and PABAC members expect a response to their comments?	Staff will update CSTSC and PABAC through Committee liaisons. Staff will seek direction from Rail Committee in addressing these comments and will revise conceptual plans accordingly.	Clarification Provided
59	Arnout Boelens	CSTSC	7/30/2022	Kellogg/Embarcadero path	Churchill partial underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	There is a very sharp corner coming out of the Kellogg underpass onto the ramp towards the Embarcadero Bike Path. Could the whole Embarcadero Bike Path be lowered locally, so the corner is not so sharp?	This has some pros and cons... it would increase the cost of the project, and introduce a 'down, then back up' north/south movement, but it would allow for better visibility and a larger radius at this T-intersection. Note that even in this configuration, bikes would have to slow down considerably to make safe turning movements.	Direction Required
60	Arnout Boelens	CSTSC	7/30/2022	Churchill/ Seale/ Loma Verde	Underpass	Bicycle & Pedestrian Facilities	Connectivity	Alma and the railroad tracks form a major barrier across the city for pedestrians and bicyclists alike. Assuming an ideal bicycle network size of 300-500m (CROW design manual for bicycle traffic), one would want underpasses at Kellogg/Churchill. Seale, and Loma Verde. Is it the understanding of staff that underpasses will be built at all these locations?	The City's Bicycle and Pedestrian Transporation Plan update will review and recommend additional crossings across the Caltrain Corridor. Based on the recommendation future projects will be undertaken for the additional crossings across the Caltrain corridor.	Clarification Provided
61	Arnout Boelens	CSTSC	7/30/2022	Charleston/ Alma	Partial underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	Walking as a pedestrian along the "east" side of alma and crossing the ramp to Meadow seems terrifying. There is a very wide turning radius and the lane is very wide. Drivers will take this turn way too fast, which is very dangerous for pedestrians.	For the crosswalk at Charleston, the pavement is wide to accommodate the turning movement of an emergency vehicle. We could look into mitigation measures to make this safer for pedestrians.	Direction Required
62	Arnout Boelens	CSTSC	7/30/2022	Kellogg/ Churchill/ Coleridge & Alma	Partial underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	Please reduce the lane width of the side streets of Alma at these crossings. Install bulb-outs with a small turning radius to reduce crossing distance for pedestrians and to slow down drivers.	Not sure of the exact location that's being referred to, but bulb outs at some locations may be possible.	Direction Required
63	Arnout Boelens	CSTSC	7/30/2022	Meadow & Charleston	Partial underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Taking the bridges over Meadow and Charleston to reach the bi-directional underpass is quite a detour, so I expect many bicyclists/pedestrians will cross the road instead. How can this be accommodated so it happens safely? Speed tables could be installed to slow down drivers and make them more likely to yield to pedestrians/bicyclists	Note that shortcuts across Meadow or Charleston (at Park Blvd) would not be possible due to the elevation difference between the road and ped/bike path.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
64	Arnout Boelens	CSTSC	7/30/2022	Meadow & Charleston	Partial underpass	Roadways	Signage	How will the underpasses be connected to the bicycle lanes on Meadow and Charleston? Will there be green pavement to indicate the bike route? right now there are only pedestrian crossings and no bicycle crossings on the roads	Bike lane marking details will be investigated further by the City in the subsequent phases.	Clarification Provided
65	Arnout Boelens	CSTSC	7/30/2022	Meadow & Charleston	Partial underpass	Roadways	Shoulder and Lane Width	With 12' travel lanes and 8' shields Charleston and Meadow will be quite wide, which will encourage drivers to speed. How will your road design encourage safe behavior from drivers? This is especially important at locations where pedestrians/bicyclists have to cross the road or where bicyclists are merging back on the road into the bike lanes.	Flashing beacons, signage, speed bumps - several mitigation measures will be analyzed in the subsequent phases.	Clarification Provided
66	Arnout Boelens	CSTSC	7/30/2022	All	Partial underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	What "design vehicles" are all the pedestrian and bicycle ramps and bridges designed for? Can they be navigated by people on a tandem bike, bikes with trailers, cargo bikes? I know from personal experience that, for example, the hairpin curves in the Stevens Creek Trail in Mountain View are nearly impossible to navigate on a cargo bike. Meadow, Charleston, Churchill, and Park are all major cycling routes that need to remain open for all kinds of bikes.	The layouts are based on other designs in the City, such as the Homer UC. An average-sized bicycle can make the 90-degree turns at low speeds (< 5 mph). Riders on larger bikes, such as tandem bikes, would likely have to dismount from the bike when making these maneuvers.	Clarification Provided
67	Arnout Boelens	CSTSC	7/30/2022	Kellogg & Embarcadero bike path	Partial underpass	Roadways	Roadway Grade/Slope	The maximum grade of 8% seems quite steep, especially for older and younger riders. AASHTO recommends a maximum grade of 5%.	ADA requirements allow 8% for ped ramps if 5-foot landings are provided every 30 feet, however preference is noted. Flatter grade have benefits, but at the expense of a larger project footprint. City will consider grades in the next phase of the project.	Clarification Provided
68	Jess McClellan	CSTSC	7/30/2022	Meadow/ Train tracks & Charleston/ Train tracks	Partial underpass	Bicycle & Pedestrian Facilities	Construction Impacts	For Meadow and Charleston, what is the detour plan for ped/bike to maintain their safety for the duration of the project? Rerouting to the Oregon pedestrian crossing near Cal Ave is very much out of the way for folks in the area.	This level of detail will be reviewed in subsequent phases of the project since many factors go into this evaluation. One option is to construct one of the underpasses first while the other remains as-is to allow for safe passage of ped/bike across the tracks during construction.	Clarification Provided
69	Jess McClellan	CSTSC	7/30/2022	Kellogg & Alma	Partial underpass	Bicycle & Pedestrian Facilities	Connectivity	As the ped/bike crossing is moving down a street, I think some signs indicating as such would be helpful.	Absolutely, signage will be important.	Clarification Provided
70	Jess McClellan	CSTSC	7/30/2022	Meadow & Charleston	Partial underpass	Bicycle & Pedestrian Facilities	Connectivity	Would be ideal to have pedestrian crossing paint on the road and flashing crossing lights where pedestrians and bicyclists cross the road to access their underpass on Meadow and Charleston. Since the stop lights are gone, drivers may speed through here and this would be dangerous for those crossing	Agreed... additional safety measures would be beneficial at the crosswalks.	Clarification Provided
71	Jess McClellan	CSTSC	7/30/2022	Charleston	Partial underpass	Bicycle & Pedestrian Facilities	Connectivity	Pedestrians will likely run across the 4 lane section of Charleston. Would need some way to prevent that (barrier, etc.)	Most of the 4-lane section on Charleston cannot be crossed by pedestrians due to the elevation difference. And where there are elevation differences, there are retaining walls and railings to prevent those crossover movements.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
72	Liz Gardner	CSTSC	7/30/2022	All	All underpasses	Structures	Aesthetics	Under passes need to be well lit/bright. Emergency call box. Mirrors on each end of the tunnel would also be great for safety! 11 weeks in winter months kids ride in darkness from school sports activities. This is going to be challenging with reroutes.	Agreed, and these are design details that will be hashed out and discussed with the public if this alternative is chosen.	Clarification Provided
73	Liz Gardner/Arnout Boelens	CSTSC	7/30/2022	All	All	Structures	Vertical Clearence	Lots and lots of concrete. Some artwork to improve attractiveness would be nice.	Hardscape design details will be hashed out during final design.	Clarification Provided
74	Rose Mesterhazy	CSTSC	7/30/2022	Meadow & Charleston	Partial underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	Given the construction, I'm concerned traffic congestion on the slip lane from E. Meadow to Alma will increase the potential for drivers to attempt right turns without checking for crossing bicyclists/pedestrians. Consider creating a speed table, adding crosswalk striping, further tightening the turn radius and/or removing shrubbery blocking sight lines on the northeast corner of the street.	From WB Meadow to NB Alma, in the permanent improvements, pedestrians will not be allowed here and bicyclists should be visible to approaching drivers. In the proposed condition, a separate ped/bike path will be provided. Striping revisions will be evaluated.	Comment will be addressed
75	Rose Mesterhazy	CSTSC	7/30/2022	Meadow & Charleston	Partial underpass	Bicycle & Pedestrian Facilities	Construction Impacts	Will the timing be set up to ensure a crossing is available at either E. Meadow or E. Charleston for pedestrians and bicyclists? Confirming Loma Verde is no longer being considered for temporary or permanent passage?	The schedule can be strategically planned such that construction takes place at least at one of one street (Meadow or Charleston) at a time to allow for safe passage at (at least) one location at all times. The Bicycle and Pedestrian Update will review and recommend for additional crossings across the Caltrain Corridor. At this time, no additional crossing is planned as part of Grade Separation at Meadow Drive and Charleston Road.	Clarification Provided
76	Cedric de La Beaujardiere	PABAC	8/2/2022	Meadow & Charleston	Hybrid	Roadways	Miscellaneous	The Meadow & Charleston Hybrid with elevated tracks and slightly lowered roads is the best of the remaining options under consideration. It has the least impacts and the most natural and efficient movements	Comment noted.	Alternative Preference Noted
77	Cedric de La Beaujardiere	PABAC	8/2/2022	Charleston	Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	westbound on Charleston, turning onto Alma, diagrams show only one lane and this intersection will have capacity issues and delays for right-turning vehicles as everyone will be stuck waiting at the light and for left-turners to clear through. It will take a long time to clear all the turners and I bet that not everyone will be able to get through a single light cycle. There will be pressure to have a shorter light so that Alma traffic is not adversely affected, and this will adversely affect Charleston traffic...	Comment noted... we will evaluate if a right-turn lane is needed on WB Charleston at Alma.	Direction Required
78	Cedric de La Beaujardiere	PABAC	8/2/2022	Churchill	Closure w/ opts 1	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Option 1 has terrible sightlines: people won't be able to see oncoming traffic and there will be bike/bike and bike/ped collisions.	Although sight lines could be improved slightly by flaring out the ends of the tunnel, bicyclists will have to slow down or walk their bikes, similar to what is done today at the Homer UC.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
79	Cedric de La Beaujardiere	PABAC	8/2/2022	Churchill	Closure w/ Opt 1	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Option 1's turns are too tight and will be difficult for longer or bulkier bikes	Bicyclists will have to slow down or walk their bikes, similar to what is done today at the Homer UC.	Clarification Provided
80	Cedric de La Beaujardiere	PABAC	8/2/2022	Churchill	Closure w/ Opt 1	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Option 1 prevents people from looking ahead to see any sketchy characters hanging out in the underpass, and women, especially, will be afraid to go through the tunnel.	Thank you for your feedback providing support for Closure with Mitigation Option 1. At this time, the preferred alternative selected for Churchill Avenue is Partial Underpass Alternative.	Alternative Preference Noted
81	Cedric de La Beaujardiere	PABAC	8/2/2022	Churchill	Closure w/ Opt 2	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Option 2 has the best sightlines and easiest movements	Comment noted.	Alternative Preference Noted
82	Cedric de La Beaujardiere	PABAC	8/2/2022	Churchill	Closure w/ Opt 2	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	As someone noted in the meeting, this crossing gets a very high volume of bike and ped traffic during school commute hours, so the tunnel could be wider to accommodate this flow.	A wider tunnel is possible, but would require removal of the landscape strip on each side of the street (Churchill in this case), just east of Alma.	Direction Required
83	Cedric de La Beaujardiere	PABAC	8/2/2022	Churchill	Closure w/ Opt 2	Roadways		As someone noted in the meeting, and I agree, we should make Churchill be a dead-end for cars at Alma and prevent turns from Alma into Churchill and from Churchill out to Alma. This will increase the safety of bikes and peds entering and exiting the underpass ramp as well as support widening the tunnel.	This is possible and can be explored further. A wider tunnel is possible, but would require removal of the landscape strip on each side of the street (Churchill in this case), just east of Alma.	Direction Required
84	Cedric de La Beaujardiere	PABAC	8/2/2022	Meadow & Charleston	Trench	Roadways	Miscellaneous	The Trench option continues to have major creek impacts, requiring lift stations or pumps, which any fish will not be able to pass through and survive. Council is working to naturalize a stretch of Matadero Creek, and it is my hope, as well as, I understand, the desire of the Water District, to naturalize all the creeks. Once naturalized we could have fish swimming up and down the creeks from the bay to the hills, but these lift stations or pumps will again harm the ecology of the creek. If the Trench is pursued, and I sincerely hope it is not, then instead of pumps and lift stations, we should divert the creeks far enough to avoid the trench and just flow naturally around and under the tracks.	Comment noted.	Comment Noted
85	Carolyn Chow	PAUSD	8/4/2022	Meadow	Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	Provide the ability for School bus to make U-turns at Alma Village north of Meadow Drive	We will take a look at this... some encroachment of the Caltrain R/W might be necessary.	Comment will be addressed
86	Carolyn Chow	PAUSD	8/4/2022	Charleston	Underpass	Bicycle & Pedestrian Facilities	Connectivity	Ensure that there is connectivity for bike and pedestrian movement across Charleston Road at Park Blvd.	This movement can be accommodated via the bridge (over Charleston) just west of the tracks. Direct north/south movement across Charleston (at Park Blvd) is not possible due to the elevation difference between the road and the ped/bike path.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
87	Carolyn Chow	PAUSD	8/4/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	The School Bike and Pedestrian traffic often use alternative ways/maneuvers. The underpass alternatives may encourage bicycle traffic to use other means. The Hybrid Alternative provides for the most direct movements and thus Hybrid Alternative for Charleston and Meadow seems much more accommodative to bikes and pedestrians for school traffic and is likely preferred by PAUSD.	Comment noted.	Alternative Preference Noted
88	Carolyn Chow	PAUSD	8/4/2022	Churchill	Partial underpass	Roadways		Was the Hybrid Alternative considered at Churchill Avenue? If so, why was it eliminated?	A hybrid alternative at Churchill was evaluated early on (2018) and eliminated from further consideration due to impacts and/or acquisitions of residential properties.	Clarification Provided
89	Carolyn Chow	PAUSD	8/4/2022	Churchill	Partial underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	There are several buses that go onto Churchill Avenue and From Churchill Avenue to Alma Street. The project should review these movements and provide for adequate turning for school buses in the Partial Underpass Alternative	Turning movements for buses (and fire trucks) can be accommodated at the new Churchill/Alma intersection.	Clarification Provided
90	Eric Holm	PAUSD	8/4/2022	All	Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	The proposed layout should also be reviewed by Safe Route to School Committee/Staff.	City took the item to City School Traffic Safety Committee at its August 25, 2022 meeting for seeking their feedback. Comments received from CSTSC are included in this report.	Clarification Provided
91	Eric Holm	PAUSD	8/4/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	Recommend increasing the width of the bike/ped movement at Churchill due to high volumes of the pedestrians/bike.	A slight increase of the path width (from 10 feet to 12 feet) is possible on the west side of the tracks without impacting the school's bleachers. This is also possible on the east side of the tracks (along Kellogg).	Comment will be addressed
92	Eric Holm	PAUSD	8/4/2022	Churchill	Partial Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	For the Closure Alternative, during the PM commute from 3:00 PM to 4:00 PM, it takes a long time to clear the traffic. The impacts on School buses, Employees, and school Students will create significant detours/congestions. This should be considered in decision-making for the selection of the alternative.	Comment noted.	Comment Noted
93	Eric Holm & Brent Kline	PAUSD	8/4/2022	All	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	70% of the students use a bike for school commute to JLS. Of the 1000 students, 700 students ride or walk to school. The width of the bike/ped facility does not appear to be adequate and thus recommend increasing the width of the Bike/Pedestrian facility at Meadow and Charleston. Possibly provide 20 feet for bike/ped to handle the high volume of school bicycle traffic during peak hours	This is possible, but will require more right of way.	Direction Required

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
94	Richard Swent	PABAC	8/8/2022	Churchill	Partial Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	This is not a great solution for bicyclists and pedestrians. It takes them out of their way significantly. Underpasses like this have problems with sight lines and blind corners and are awkward to share safely between bikes and pedestrians. Entry/Exit in the middle of Kellogg is awkward, undesirable and unsafe. Closing Kellogg at Alma would reduce vehicle volumes on that block and make it safer for bikes and peds to do the weird movements needed to get to and from the ramp.	Closure of Kellogg at Alma is possible and can be explored further. A wider tunnel (> 12 feet) is possible, but would require removal of the landscape strip on each side of the street (Kellogg in this case), just east of Alma.	Direction Required
95	Richard Swent	PABAC	8/8/2022	Churchill	Closure with Mitigations Option 1	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	This is far better than the underpass option, although there are still potential problems with the blind turns at the bottom of the underpass. It is not as much of a detour and it keeps people on Churchill.	Comment noted, some improvement to the line of sight is possible, but bicyclists will have to slow down or walk their bikes similar to what is done at the Homer UC today.	Clarification Provided
96	Richard Swent	PABAC	8/8/2022	Churchill	Closure with Mitigations Option 2	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	This the most direct and simplest option, if access issues at each end of the underpass ramps can be solved. On the side closest to Bryant safety could be improved by closing access to Alma at that end of Churchill. Eliminating through auto traffic on that block would reduce volumes and make it safer for bikes and peds to do the weird movements needed to get on and off the ramps.	Closure of Churchill at Alma is possible and can be explored further. A wider tunnel (> 12 feet) is possible, but would require removal of the landscape strip on each side of the street (Churchill in this case), just east of Alma.	Clarification Provided
97	Richard Swent	PABAC	8/8/2022	Meadow	Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	This looks terrible for bikes and peds. Two-way paths on one side of a road are always inconvenient and require two crossings for one direction, which can be slow and dangerous. Forcing bicyclists to cross a busy road twice at uncontrolled crosswalks is totally unacceptable. A bike path on each side of the road would be much safer. The crossing on Park is awkward. It means going well out of the way, with sharp turns that could be problems for long bikes. It would be better if there was a bike/ped overpass that went straight across from Park to Park. Since Meadow is already lowered a bit there the underpass would not have to be very high above the grade on Park.	Comment noted. A bridge straight across Park Blvd is not possible because Meadow is not low enough at this location (not enough vertical clearance could be provided unless Park Blvd was raised).	Clarification Provided
98	Richard Swent	PABAC	8/8/2022	Meadow	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	Southbound bicyclists on the bike/ped ramp at Park would be going from the ramp into the road on Meadow at Park. This is always a safety problem when bicyclists, out of sight and out of mind for drivers, need to re-enter the road. Doing so at an intersection where drivers can turn across the path of a bicyclist without seeing them is a very bad idea. The intent may be to divert bicyclists partway down Park to have them cross at the crosswalk, but most will not want to go that far out of their way and will go straight across at Park. Pedestrians will probably go straight across, too.	Direct north/south movement across Meadow (at Park Blvd) is not possible due to the elevation difference between the road and the ped/bike path.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
99	Richard Swent	PABAC	8/8/2022	Charleston	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	This is the craziest idea of all of them. For southbound bicyclists and peds it works OK except at the Park intersection, which has some of the problems listed above for Meadow. Bicyclists and pedestrians wanting to go across on Park are seriously inconvenienced, but not as much as those going northbound on Charleston. Dumping the bicyclists at a crosswalk at the entrance to the circle is totally unacceptable. The crossing of Charleston on Park has the same problems as the underpass option for Meadow. A straight overpass for bikes and peds would be much simpler and more efficient and would avoid all the problems with sharp turns and sight lines.	Comment noted. A bridge straight across Park Blvd is not possible because Charleston is not low enough at this location (not enough vertical clearance could be provided unless Park Blvd was raised).	Clarification Provided
100	Richard Swent	PABAC	8/8/2022	Charleston & Meadow	Trench	Bicycle & Pedestrian Facilities	Miscellaneous	This is clearly the best for bicyclist and pedestrians. Straight and flat, with no detours. Wide open with good sight lines. Those on Park crossing Charleston and Meadow are not affected, but as traffic volumes increase that crossing will get more difficult. An overpass or a set of lights to get a break in traffic would help.	A ped/bike overpass would require property acquisitions.	Clarification Provided
101	Richard Swent	PABAC	8/8/2022	Charleston & Meadow	Hybrid	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Although there are very few details in the documents, this looks almost as good as the trench. It is straight and simple, with only a small grade to go down and up. Good sight lines. Those crossing on Park are not affected, but as traffic volumes increase that crossing will get more difficult. An overpass or a set of lights to get a break in traffic would help.	A ped/bike overpass would require property acquisitions.	Clarification Provided
102	Richard Swent	PABAC	8/8/2022	All	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	All of the underpass designs are very problematical for pedestrians and bicyclists. When PABAC had a rep from XCAP at a previous meeting (1-2 years ago) I commented that it appeared that these had been designed for cars first, and after the design was settled they tried to figure out how to fit in bicyclists and pedestrians. The XCAP rep acknowledged that the process had, in fact, worked that way. It shows. I am sure that we could do a much better job of accommodating bicyclists and pedestrians if they had been included as equals from the start of the design process.	All modes (peds, bikes, and motor vehicles) were considered from the start. Given the right of way constraints at all locations, each alternative lack the ability to address all the concerns.	Clarification Provided
103	Stephen Rock	PABAC	8/8/2022	All	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Park Blvd is supposed to be a Bike Blvd. There is a long section of Park between California Ave and Meadow with no connection to East of the tracks. The connection between the proposed bike path West bound on Meadow and park looks quite hairy, crossing two way traffic coming uphill with no space to make the turn. There should be someplace cyclists can make the turn, stopping if necessary without blocking through traffic. It will probably be recommended to go to	Direct north/south movement across Meadow (at Park Blvd) is not possible due to the elevation difference between the road and the ped/bike path. That's correct ped/bike traffic (westbound) will have to cross at 2nd St. Safety mitigation measures can be investigated further during the next phase of the project.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
104	Art Liberman	PABAC	8/11/2022	Churchill	Churchill Partial Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	The ramps should be at least 10' wide to accommodate pedestrians and bicyclists. This is very long tunnel and so width should be at least 15', with a separate path for pedestrians.	Increase in the width of ramps will require additional right of way; however an increase of the ramp width to 12 feet is being reviewed. The tunnel is proposed to be 20 feet wide under the tracks and Alma St.	Clarification Provided
105	Art Liberman	PABAC	8/11/2022	Churchill	Closure & Partial Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Because of the safety concerns for all users traversing a long tunnel, especially women and older people, the tunnel should have 24 hour lighting and be equipped with video cameras that are monitored by the PAPD.	Provisions for such recommended measures will be taken into consideration and added into the project plans as the detailed project plans are prepared.	Clarification Provided
106	Art Liberman	PABAC	8/11/2022	Churchill	Closure & Partial Underpass	Bicycle & Pedestrian Facilities	Grade/Slope	What is the grade of the ramp? There should be speed bumps on the ramp to control the speed of cyclists(important for high school age students), and a flat section at the bottom. How do the ramps compare in slope and in length to the ramps at the Caltrain underpass at the Crossings in Mountain View?	The grade of the ramps will either be 8% with 5-ft landings every 30 feet or a constant grade of 5% or less. This is similar to the ramps at the San Antonio Station in Mt View. Agreed, a flat section (landing) would be provided at the bottom. Mitigation measures for slowing bike down can be investigated during the next phase of the project.	Clarification Provided
107	Art Liberman	PABAC	8/11/2022	Churchill	Closure & Partial Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	The rush of students in the morning at after school who will use the tunnel could lead to an unsafe condition. This is partly due to the 90 degree bend at the tunnel entrance/exit. The solution is to widen the exit entrance into a Y shape that would soften the 90 degree turns somewhat and provide needed additional space	Agreed, a wider entrance to the tunnel would be better, but would require additional impact to the school.	Significant Revisior
108	Art Liberman	PABAC	8/11/2022	Churchill	Churchill Partial Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	Instead of the tunnel from Kellogg, construct a tunnel from Seale into Peers Park with an exit path from the park to Castilleja Ave This would provide an easy and safe route to school for Palo students. Issues of tunnel width and safety are the same as mentioned above for the Kellogg tunnel.	Comment noted about a tunnel at Seale. Seale/Kellogg will be studied as part of BPTP update. The tunnel is proposed to be 20 feet wide under the tracks and Alma St.	Clarification Provided
109	Art Liberman	PABAC	8/11/2022	Meadow & Charleston	Meadow and Charleston Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Having a 2 way cycle track on one side of the road with no easy /safe way to cross at either end is a critical defect	Comment noted. Providing bike and pedestrian facility as a separated facility has other significant challenges. Review and direction of such alternative by the Rail Committee/ City Council will be required.	Direction Required
110	Art Liberman	PABAC	8/11/2022	Meadow & Charleston	Bike and Ped Crossing	Structures	Miscellaneous	Video animation says both intersections (Meadow/Alma and Charleston/Alma)would be closed at the same time, probably for years, during construction. This would make it impossible for the many students who live south of Alma to bike to Fletcher and Gunn. What is necessary is another crossings of Alma and Caltrain (the crossing of Alma could be surface street crossing). There has been a need for additional bike/ped crossings of Caltrain in south Palo Alto for years, as noted by support for new crossings in previous bicycle and pedestrian transportation plans.	The schedule can be strategically arranged such that construction takes place at one street (Meadow or Charleston) at a time to allow for safe passage at (at least) one location at all times. The Bicycle and Pedestrian Update will also review and recommend for additional crossings across the Caltrain Corridor. At this time, no additional crossing is planned as part of the Grade Separation Project at Meadow Drive and Charleston Road.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
111	Art Liberman	PABAC	8/11/2022	Meadow & Charleston	An Alternative to the Meadow Charleston plan	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Rather than have underpass under train and Alma, have underpass only under the train - lower both Meadow & Alma, and Charleston and Alma, (Alma lowered between Meadow and Charleston) keeping intersections as they presently are. Instead of two way cycle tracks, this would maintain bicycle lanes on either side of the roadway.	Comment noted. This would be similar to the hybrid alternatives.	Clarification Provided
112	Art Liberman	PABAC	8/11/2022	Meadow & Charleston	Bike & Ped During Construction	Roadways	Miscellaneous	The Underpass Option animation by AECOM mentions that both Meadow and Charleston would be closed during the construction, and they (one or both?) would be closed during the construction of the Trench Option. The Hybrid Option animation does say that road way access would be maintained (one lane of traffic, but nothing about bike and ped connection and it doesn't look possible- and certainly not safe if were possible - on the video). We have kind of heard it alluded to but I'm not clear on is. There was a statement that of course we intend to continue to have bike and ped access during the construction of the vehicular crossings, and I've never seen the design to show how that would be."	Details of the construction staging have not been determined at this time, but it's likely that ped/bikes would have to be reviewed to accommodate such facilities during construction in subsequent phases of the project.	Clarification Provided
113	Bill Zaumen	PABAC	8/22/2022	Churchill, Meadow, Charleston	Closure, Underpass and Partial Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	Some areas with very sharp bends: a very sharp turn at low speeds is difficult enough to do that one will either have to get off the bicycle to turn it or accept a higher than typical risk of a fall.	To reduce the impact of adjacent properties, the turning movements are relatively tight, and are similar to the 90-degree turns at the Homer UC.	Clarification Provided
114	Don Austin/Carolyn Chow	PAUSD	8/18/2022	Churchill Avenue	Partial underpass	Roadways	Vehicular Lane Reductions	School requires that the selected alternative at Alma Street shall accommodate turning movements of School buses. Ensure that schools busses do not have to overcorrect by using the adjacent lanes of traffic for such movements.	All turning movements at Churchill Avenue, SBR & NBL from Alma to Churchill, and EBL & EBR from Churchill to Alma can accommodate a 40-foot bus. The school District will be contacted to verify school bus data/turning template information.	Clarification Provided
115	Bill Zaumen	PABAC	8/22/2022	Churchill, Meadow, Charleston	Closure, Underpass and Partial Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Two way traffic along school commute routes can be problematic: children tend to take up all the available space and this can create a difficult situation for adult commuters riding in the opposite direction.	Comment noted, the City will balance ped/bike path width and property impacts/acquisitions. Centerline striping may be provided to help provide guidance.	Clarification Provided
116	Bill Zaumen	PABAC	8/22/2022	Churchill, Meadow, Charleston	Closure, Underpass and Partial Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	The intersections of the bike paths with the roads should be closer to what would be done when two roads intersect rather than the boundary between a road and a sidewalk.	Intersection details will be provided during the next phase of the project, and include consideration of safety mitigation measures.	Clarification Provided
117	Bill Zaumen	PABAC	8/22/2022	Churchill Avenue	Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	(See Email for clarification) For Churchill in particular, the tunnels have T intersections, and it is important to have adequate sight lines. The outlet from the tunnel to the bike path parallel to the railroad tracks, as shown in some illustrations, is simply dangerous: it requires traffic to merge by crossing a lane of traffic moving in the opposite direction.	The T-intersection of the tunnel with the bike path will be similar to the west side of the Homer Ave UC. Sight lines will be restricted due to right of way constraints, and the City will consider mitigations to make it as safe as feasible.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
118	Bruce Arthur	PABAC	8/22/2022	Castilleja and Churchill	Churchill Partial Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	I am concerned that cars will drive too fast through the underpass and not slow or stop for peds and bikes at Castilleja and Churchill. Can we get a light or HAWK light at that intersection?	The City will consider these during the next phase of the project. Rapid flashing beacons are a good way to alert approaching vehicles of peds and bikes crossing a street.	Clarification Provided
119	Bruce Arthur	PABAC	8/22/2022	Kellogg Underpass	Churchill Partial Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	I fear that the Kellogg bike crossing will need a very sharp turn with bad visibility. This seems really bad. Can we open that up so the visibility is good and the turn is gradual	Sharp turns are needed in many locations, such as this one, to avoid significant property impacts; however, minor improvement can be made, such as flaring out the end of the tunnel.	Clarification Provided
120	Bruce Arthur	PABAC	8/22/2022	Kellogg Underpass	Churchill Partial Underpass	Structures	Vertical Clearence	Riders just moving parallel to the tracks will tend to go accelerate on the downhill in order to gain momentum for the uphill that is coming up. Sadly, they will now be going much too fast when they reach the bottom of the grade and may be surprised by riders coming in from the Kellogg underpass.	There are stairs proposed on the north side of the tunnel, so there is no other ramp to climb. The tunnel at the bottom of the ramp is similar to the layout of the Homer Ave UC. Bikes will need to slow down for this 90-degree movement.	Clarification Provided
121	Bruce Arthur	PABAC	8/22/2022	Kellogg Underpass	Churchill Partial Underpass	Roadways		I think the best solution would be take more space and have a through route that remains flat and have a separate path that descends for the connection with the Kellogg tunnel.	This description is what is being proposed... not sure why "more space" is needed.	Comment Noted
122	Bruce Arthur	PABAC	8/22/2022	Kellogg Underpass	Churchill Partial Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	The intersection of the existing bike path and the Kellogg tunnel does not have enough visibility for it to me safe. The tunnel needs to be considerably wider so pedestrians and cyclists will have sufficient time to see each other before moving into a possible conflict space. Additionally, we have more cargo bikes and bikes with trailers now, and they need larger radius turns.	The tunnel's geometry at the bottom of the ramp is similar to the layout of the Homer Ave UC. Bikers will need to slow down or dismount from their bike to safely maneuver this 90-degree turn.	Clarification Provided
123	Bruce Arthur	PABAC	8/22/2022	Kellogg and Alma	Churchill Partial Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Bicycles and pedestrians entering the tunnel on Kellogg will have to carefully navigate from the sides of the road into the tunnel. It would be much better to close the intersection of Kellogg and Alma to reduce vehicles traffic there and make the movement easier and safer.	Closure of Kellogg at Alma is possible and can be explored further. A wider tunnel (> 12 feet) is possible, but would require removal of the landscape strip on each side of the street (Kellogg in this case), just east of Alma.	Direction Required
124	Bruce Arthur	PABAC	8/22/2022	Alma and Churchill	Churchill Partial Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	I believe this was covered as “Option 2”. Having an underpass just for bikes and pedestrians would be much, much better. And please consider closing the intersection of Churchill and Alma to reduce the vehicle traffic to make the tunnel ingress and egress safer.	Closure of Churchill at Alma is possible and can be explored further. A wider tunnel (> 12 feet) is possible, but would require removal of the landscape strip on each side of the street (Kellogg in this case), just east of Alma.	Direction Required
125	Bruce Arthur	PABAC	8/22/2022	Meadow and Alma	Meadow - Charleston Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Creating pedestrian and bike paths on only one side of the street and requiring users to cross a busy street to use it is terrible. Most cyclists will just ride in the road, or possible ride the wrong way on the road on ingress or egress. This is an astonishingly bad design.	Comment noted.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
126	Bruce Arthur	PABAC	8/22/2022	Meadow and Alma	Meadow - Charleston Underpass	Roadways	Roundabout for Charleston Underpass Alternative Only	Why on earth would we have a roundabout on a road not at an intersection? This is expensive and nuts. The nominal reason is to allow drivers moving North on Alma to have a way to get to Charleston moving West. This could be done with a simple turn lane, but in order to maximize car through put we have added a very large and very expensive round about two blocks away. I anticipate that drivers, pedestrians, and cyclist will all hate this. Also, a roundabout two lanes wide is much more dangerous to pedestrians, cyclists, and cars. If you really want this roundabout, please make it only one lane. And I suspect that acquiring the land to do this will be very expensive. What a waste.	The roundabout is proposed because this alternative requires a large volume of U-turn movements. The roundabout accomplishes this more efficiently.	Clarification Provided
127	Bruce Arthur	PABAC	8/22/2022	Meadow and Alma	Meadow - Charleston Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Just add a side walk and a standard bike lane to the underpass. This would be much simpler for everyone and much less expensive. Another option would be to have 1 10 foot pedestrian and bike path on each side of Charleston. This would look something like the Embarcadero underpass near Paly	Modification of the alternative is possible, but would result in the loss of some turning movements (EB Charleston to SB Alma, for example), and require an essentially new alternative be developed.	Direction Required
128	Bruce Arthur	PABAC	8/22/2022	Meadow and Alma	Meadow - Charleston Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	This space is not large enough for bicycles and pedestrians or people in wheel chairs to navigate safely. I am not sure why we need it, but if we do, it needs to have substantially more space to execute 180 degree turns.	Comment noted, we will evaluate this more closely to determine how much, if any, additional space is needed for this 180-degree movement.	Comment will be addressed
129	Bruce Arthur	PABAC	8/22/2022	Park and Charleston	Meadow - Charleston Underpass	Roadways	Intersection, Turning Radius, School Bus Turning Radius	The large radius turn is going to encourage vehicles to take this corner fast. I see that the cross walk has been moved back a bit, but that seems like the wrong solution. It would be much better to keep that turn a tight turn to force driers to slow down before turning.	We will look into alternative measures to address these concerns, such as a mountable curb to reduce the length of pedestrian travel across the vehicle traveled way. However, the radius and pavement area was based on accommodating a right turn by emergency vehicles. There is an elevation difference & a wall/barrier that prevents motor vehicles from encroaching on an adjacent lane, thus requiring the inside of the curve to be relatively wide.	Direction Required
130	Bruce Arthur	PABAC	8/22/2022	Roundabout	Meadow - Charleston Underpass	Bicycle & Pedestrian Facilities	Connectivity	There are cross walks for pedestrians tome across Charleston, but I fear that drivers will fail to yield, particularly those moving East. Adding pedestrian activated lights would make this much safer. And please add pedestrian lights at any location where you expect pedestrians and cyclists to cross Meadow or Charleston to use those separate bike paths.	Comment noted... we will consider mitigations to reduce motor vehicle speeds during the next phase of the project.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
131	Robert Neff	PABAC	8/22/2022	Churchill	Underpass	Bicycle & Pedestrian Facilities	Connectivity	The underpass alternative looks very expensive, yet serves relatively few compared to the Embarcadero underpass. If Churchill were not upgraded, and this much investment were made to improve Embarcadero, or even Embarcadero underpass plus Embarcadero / El Camino Real, what would be possible? 4 lanes and better sidewalks at Embarcadero? Embarcadero lanes under ECR?	The Chruchill Avenue Closure with Mitigations is the backup alternative. This alternative provides for improvements on Embarcadero and other routes to accommodate diverted traffic. Any additional measure recommended in this suggestion will require significant modifications.	Significant Revisior
132	Robert Neff	PABAC	44795	Churchill	Underpass	Roadways	Shoulder and Lane Width	This plan removes some of the existing setback from the East side of Alma street, to make way for its improvements. This will make the sidewalk less acceptable for walking and bicycling. A planting strip between the street and the sidewalk, or better, an 8' space, should be retained, or its removal made apparent on the plans.	Agree... removal of the planting strip is not desirable, but required to maintain two NB lanes on Alma. Note that the removal of the planting strip can be seen clearly on the photo simulation.	Clarification Provided
133	Robert Neff	PABAC	8/22/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	In much the same as at Alma, the plans show removal of the planting strip and space that makes the sidewalk attractive for cyclists and pedestrians on the East side of Alma. Sacrifice of this strip is a significant negative.	The City concurs that removal of the planting strip is not desirable, but is required for this alternative. Note that a similar situation occurs on the south side of Charleston (removal of the landscape strip).	Clarification Provided
134	Robert Neff	PABAC	8/22/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Construction Impacts	The construction planning showed up to 2 years of complete closure of Charleston and Meadow to all modes. (bicycle, pedestrian, and auto.) This makes the project very difficult to accept. Alternative routes are too distant for such a long closure.	Construction could be staged to allow for bike/peds to cross safely at one street (say, Meadow) while the other (Charleston) is constructed. However, this will lengthen the duration of construction.	Clarification Provided
135	Robert Neff	PABAC	8/22/2022	Meadow & Charleston	Hybrid	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	The current intersections of Alma/Charleston and Alma/Meadow are old, out of date designs that need improvement to make them safer for bicyclists crossing Alma in the bike lane. In particular, there are dangerous right-hook conflicts going West on Charleston and East on Meadow now, and with the Hybrid changes, going East on Charleston will have a similar conflict. Redesign this intersection to avoid this conflict, as we have, for example, going East on Charleston at Middlefield with a right turn lane to the right of the bike lane, or consider a protected lane and bicycle signal phases as Cupertino has at Wolfe / Stevens Creek. Incorporate a safer intersection design for bicyclists and pedestrians into the plan, and perhaps require some land acquisition (a few feet, or an encroachment towards the sidewalks?) to improve this alternative. Creating a better, state of the art intersection design for active transportation makes this a fairer comparison to the underpass alternative. Such an improvement could be done now, without grade separation.	Improvements to these intersections will be investigated further in subsequent phases of the project if the Hybrid Alternative is selected as the preferred alternative.	Significant Revisior

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
136	Robert Neff	PABAC	8/22/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Observation: Going East on Meadow, or West on Charleston, is reasonably nice in this plan at the train tracks, (Though the Charleston traffic circle seems like a huge, out-of-place suburban amenity.) The opposite direction requires crossing the road twice (Meadow), or a slow, circuitous loopback followed by an awkward entry around a busy traffic circle (Charleston).	Comment noted.	Comment Noted
137	Robert Neff	PABAC	8/22/2022	Meadow & Charleston	Underpass	Roadways	Roundabout for Charleston Underpass Alternative Only	The Bike/Ped crossing of the 2 entry and 2 exit lanes from the traffic circle should include a signal that actually stops traffic for vulnerable users crossing 2 lanes of otherwise free-flowing traffic. I do not think a ladder crosswalk, or simple flashing lights would not insure a safe crossing.	Crosswalks are common just beyond the outside diameter of roundabouts where motor vehicle speeds are expected to be relatively low; however, we will consider additional safety mitigation measures during the next phase of the project.	Significant Revisior
138	Penny Ellson	PABAC	8/23/2022	Meadow & Charleston	Underpass	Structures	Vertical Clearence	I appreciate that this alternative tries to minimize grade change for bikes/peds. (Important on school routes for littler, less powerful legs.) Could the grade change be made better by reducing clearance? 10' clearance seems like a lot for a bike/ped facility. Is that a requirement? Whose? Also, it looks like part of the bike/ped underpass may be more than 10' clearance. Could this be adjusted to reduce grade change?	Per the Caltrans Highway Design Manual, 10 feet is the desirable vertical clearance; 8 feet is the minimum. The clearance could be re-evaluated during the next phase (preliminary design) of the project.	Clarification Provided
139	Penny Ellson	PABAC	8/23/2022	E. Meadow - Charleston and Possible Additional SoPA Grade Sep for Construction Detours	All Alternatives, but especially Underpass	Roadways	Roadway Grade/Slope	There are 5 existing grade separations north of Oregon Expwy and zero existing grade separations south of Oregon Expwy. This disparity is an existing problem and will be a much bigger problem during construction for every Charleston & Meadow alternative, but especially for the underpass. If both south PA crossings are closed simultaneously, a bike/ped crossing in the vicinity of Matadero Creek as recommended in the 2012 BPTP will be insufficient to accommodate bike commuters who live south of E. Meadow. Matadero would be an onerous bike/ped detour through the construction period for many. For instance, it would lengthen a school commute from my neighborhood, Green Meadow, to Gunn from 17 minutes to 30 minutes or more. We need a bike/ped grade sep plan that serves all of south Palo Alto through and after construction of grade separations. Construction detours for south PA should be part of the planning process now for every alternative in south PA because there are no existing grade seps and there are so few location options for new rail crossings. Please begin to explore south PA construction detour options now.	Construction could be staged to allow for bike/peds to cross safely at one street (say, Meadow) while the other (Charleston) is constructed. However, this will lengthen the duration of construction.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
140	Penny Ellson	PABAC	8/23/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Miscellaneous	Circuitous bike/ped facilities via the roundabout and bike/ped bridges on both Meadow and Charleston appear less direct than existing routes. This may or may not make this convenient for bike/peds. Long breaks in E/W auto traffic platoons caused by train preemption today will go away when grade seps are in place. This change, coupled with projected induced auto demand after grade seps are in place, might make it much harder to cross East Meadow at Park BB at-grade, for instance, in the future--possibly affecting bike/ped travel times with the hybrid or trench alternatives. **Please analyze bike/ped LOS for bike network cross streets with each alternative and compare to existing conditions so we can understand the effects of each alternative on bike/ped travel times**. Staff has studied automobile LOS for these alternatives. Doing comparative bike/ped travel time analysis would be consistent with Comp Plan Policy T-2.4 *"Consistent with the principles of Complete Streets adopted by the City, work to achieve and maintain acceptable levels of service for transit vehicles, bicyclists, pedestrians and automobiles on roads in Palo Alto, while maintaining the ability to customize to the Palo Alto context."*	Additional study for bicycle and pedestrian evaluation will require Rail Committee and City Council Direction.	Significant Revisior
141	Penny Ellson	PABAC	8/23/2022	E. Meadow Charleston	Underpass	Rail	Raise the Rail	This alternative keeps the train at grade which will minimize impacts on nearby Eichler homes. I'm not personally affected by this, but I know it is important to many people whose homes and privacy will be affected. What I do not see is any suggestion in renderings of how sight lines and privacy of homes might be protected. Has anyone raised a story pole and taken photos to show how views of the hills might be affected? Will trees on a berm be an option? Are there ways to protect glass-walled Eichler homes from prying eyes of	Visual impacts are typically evaluated during the environmental phase of the project. Elevation of tracks are proposed to remain at existing elevation with the underpass alternatives. We are open to suggestions on how to make the drawings easier to understand for lay people. Staff will meet with PABAC Grade Separation Subcommittee and seek additional information.	Significant Revisior
142	Penny Ellson	PABAC	8/23/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Connectivity	Peds/bikes won't have to wait for breaks in auto traffic to cross Meadow or Charleston via Park as they do today with this design. Crossing Charleston at Park safely and conveniently is difficult right now at some times of day. Question: How many people turn left or cross Charleston from any direction at Charleston/Park today? I ask because I live in Green Meadow and I usually avoid crossing Charleston and making left turns at Charleston/Park. I do this by turning left on Meadow from SB Park and using the Circles to get to a signalized intersection where I can safely and easily turn left at Carlson/Charleston. From EB Charleston, I turn at the Wilkie signalized intersection to go to Meadow and then north on Park.	Comment noted... bike counts could be determined in the next phase to evaluate this more closely.	Significant Revisior

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
143	Penny Ellson	PABAC	8/23/2022	Meadow & Charleston	Underpass	Roadways	Loss of Landscaping Strip on Alma	This alternative completely separates people who walk and bike from both high speed, multi-lane Alma Expressway and the train tracks. Thank you for exploring a school route alternative that tries this. While there are significant problems with this concept, I hope you won't give up. The Alma Xing on the school commute corridor is a major safety problem. Right hooks, in particular, need to be addressed for both EB and WB Charleston at the Alma intersection. **In addition, this alternative has a lot of potential to address the privacy concerns of homeowners while not inhibiting underground water flow as much as the trench would.**	Need clarification... Additional discussion with commentor will be needed to review this concern. Staff will meet with PABAC Grade Separation Subcommittee and seek additional information.	
144	Penny Ellson	PABAC	8/23/2022	Meadow & Charleston	Underpass	Roadways	Miscellaneous	According to the matrix, full bike/ped movement is maintained, but I cannot see that in the materials available. Please make that more clear in the renderings, plans and animations so the community can see and understand how it works. Overall, I found it was a lot of work to figure out from these plans, profiles, renderings and matrix how it is all supposed to work. The average citizen is not going to have the time or patience to do that much work and we are going to need their support of at least one alternative. The plans and related documents need to communicate more clearly and succinctly what will be built and how it will work. These plans are a long way from ready for prime time.	3D animations showing the ped/bike movements might be our best option to accomplish this.	Direction Required
145	Penny Ellson	PABAC	8/23/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Connectivity	This alternative may provide useful connectivity to the rest of the bike network, but the drawings don't make that clear, so I'm not sure. Please show how each alternative would connect to the rest of the network and nearby destinations that draw foot-powered people: schools, train station, super block, community centers, shops, playing fields, etc. so the public can understand.	Connectivity to the City's ped/bike network will be explored in the next phase of the project.	Significant Revisior
146	Penny Ellson	PABAC	8/23/2022	Charleston	Underpass	Roadways	Roundabout for Charleston Underpass Alternative Only	The two-lane roundabout on Charleston appears over-designed and dangerous for people on bikes and on foot. See file:///C:/Users/pells/Downloads/safety-07-00020%20(1).pdf . **Design for the speed you want in the school zone.** Entry speeds coming off Alma Expressway will probably exceed 35 mph. A one-lane roundabout would more effectively moderate auto speeds to 20mph as they enter the school zone. I would like to see the traffic study and data that supports this much capacity in the roundabout to understand why it is needed. I have asked the engineer about this twice and have not received a well-supported answer. I don't see data in the traffic studies to justify this capacity. Please show	A two lane roundabout is needed for two reasons: 1. A single lane roundabout will not operate well if the volume entering one leg exceeds ~1,000 vehicles per hour. 2. Two lanes are needed entering the roundabout from EB Charleston... one lane coming from El Camino, one lane from Alma St... there's not enough space to merge these two lanes into one lane before entering the roundabout. Keep in mind, these two lanes cannot begin merging until they're at the same elevation.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
147	Penny Ellson	PABAC	8/23/2022	Charleston	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	The crosswalk at the entry/exit of the two-lane roundabout on Charleston is not safe for people on foot and on bikes. It is necessitated by the two-way multi-use path. I can't think of a better solution for this design. Someone suggested a traffic signal, but I don't know if that will work with a roundabout. People don't expect a signal at a roundabout. In any case, make the right turn radius from NB Alma sharp to encourage drivers to moderate speed before entering Charleston and the roundabout.	Crosswalks are common just beyond the outside diameter of roundabouts where motor vehicle speeds are expected to be relatively low; however, we will consider additional safety mitigation measures during the next phase of the project. Agreed, a traffic signal at the crosswalk just beyond the roundabout is not recommended. The relatively wide pavement area from NB Alma to EB Charleston is based on accommodating the turning movement of emergency vehicles. There is an elevation difference & a wall/barrier that prevents motor vehicles from encroaching on an adjacent lane, thus requiring the inside of the curve to be relatively wide.	Clarification Provided
148	Penny Ellson	PABAC	8/23/2022	Charleston	All Alternatives	Roadways	Vehicular Lane Reductions	Is it possible to extend C-A Plan lane reduction further with grade separation? People who walk and bike to/from neighborhoods south of Charleston need a safe route. With grade separation, we will no longer need so much auto lane capacity to stack cars during train preemption. Can we capture that space to extend lane reduction and create wider bike lanes and sidewalks to and through the Alma-to-ECR Charleston segment as far as possible both directions?	Currently, the lanes will be reduced to 11-foot lanes with shoulders on both sides. Due to proposed grades for roadway in underpass alternatives, the bicycles and pedestrians pathway is provided, however, if one continues to use the road, the shoulder space can be flexibly used by bicycles.	Clarification Provided
149	Penny Ellson	PABAC	8/23/2022	All locations with tunnels	All Alternatives with tunnels	Bicycle & Pedestrian Facilities	Connectivity	Please minimize places where people may be isolated, like long tunnels. (As a person who has been the victim of attempted assault in a location like this, I generally avoid them.) Where you have to use these facilities, design for maximum personal safety: security cameras, emergency phones, excellent sight lines around corners, minimize any blind spots, excellent lighting, wide spaces to make escape possible. Bullying or much worse can happen in places where bad actors feel free of prying eyes. Keep our kids (and everyone) safe.	Comment noted... this is certainly a concern for pedestrian tunnels and will be evaluated further in the next phase of the project.	Clarification Provided
150	Penny Ellson	PABAC	8/23/2022	Meadow	Underpass	Structures	Miscellaneous	Slide 42--The midblock crosswalk on Park just north of the Meadow intersection is meant to get foot-powered folks on the right side of the road to access the proposed bike/ped Xing. Bikes don't use crosswalks. Also, this is too close to the intersection. Might a traffic circle or roundabout with ped crossing work better? If it is placed to do so, a roundabout could also connect the park pathways to the bike boulevard.	The midblock crosswalk is placed here (versus at the Park/Meadow intersection because the sidewalk is elevated above the roadway in the NE corner of the intersection... ped/bikes cannot cross Park Blvd at this location. Not sure how a roundabout would help, and would require additional property acquisition.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
151	Penny Ellson	PABAC	8/23/2022	Churchill Kellogg Seale Embarcadero	Selection of X-ing locations: Kellogg, Churchill, Embarcadero, Seale	Bicycle & Pedestrian Facilities	Connectivity	Seale probably would provide better connectivity for kids commuting to Hays ES and Greene MS from Southgate. In any case, it also provides a nice connection for Old Palo Alto to the park. I don't know what Seale vs. Kellogg means for Paly kids who are the largest group of school commuters in this area. For those coming from the northern part of the attendance boundary, Seale probably is worse. A big downside of Kellogg is the isolated circuitous tunnel. Have you thought about asking Paly students? Would they prefer a grade sep X-ing at Kellogg or Seale or Churchill? Having just read Robert Neff's comments on this, I wonder what improvements Paly students might want at Embarcadero if Churchill stayed at-grade and they got a Seale crossing? A well-written survey might yield a clear answer. A survey would also be a good opportunity to ask kids (and their parents) how they feel about walking and biking in a tunnel with limited sight lines like what is proposed at Kellogg.	Bike and Pedestrian Transportation Plan update plans to review merits of Seale Ave Vs Kellogg Ave. The project will accommodate crossing based on City Council Direction accordingly. Seale Ave may have some advantages as it could provide more design flexibility on the west side of the tracks.	Clarification Provided
152	Penny Ellson	PABAC	8/23/2022	Meadow & Charleston	All Alternatives	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	Whatever alternative you propose for Meadow and Charleston, I hope you will do everything you can to eliminate the risk of bike collisions at the Alma intersection. Multi-lane, high speed Alma is a problem. Fix the right hook problem on EB and WB Charleston at this intersection. Drivers are busy watching for safe breaks in oncoming high speed car/truck traffic. They don't even notice people on bikes and on foot.	The bicycle and pedestrians will have a dedicated and separated pathway for partial underpass alternatives. For the other bicyclists that prefer and continue to use the roadway traffic lanes, additional consideration can be reviewed.	Comment Noted
153	Penny Ellson	PABAC	8/23/2022	Charleston Meadow Kellogg	All Alternatives	Roadways	Intersection, Turning Radius, School Bus Turning Radius	I heard several members of PABAC comment on the sharp turns in the Kellogg, Meadow and Charleston plans. I understand that staff intends the final designs will have much wider turns with good sight lines. I can't think of a more diplomatic way to say this. If PABAC is having trouble understanding what you intend from these concept plans and renderings, then the public will have even more trouble.	Note that the project cannot accommodate larger/wider turning movements for bikes as this will result in significant property acquisitions. Regarding exhibits, the best way to improve the understanding of these relatively complex alternatives is through 3D renderings and/or animations.	Direction Required
154	Eric Holm	CSTSC	8/25/2022	Churchill Avenue	Underpass/Closure	Bicycle & Pedestrian Facilities	Connectivity	As someone who uses the homer Ave underpass, it is fantastic for low volumes but would not accommodate the high numbers of Paly students.	Increase in the width of ramps will require additional right of way; however, an increase of the ramp width to 12 feet is being reviewed. The tunnel is proposed to be 20 feet wide under the tracks and Alma St. Providing additional width will require Rail Committee and City Council direction as it will impact right of way significantly.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
155	Eric Holm	CSTSC	8/25/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Maneuvering & Additional Crossings	PAUSD worries the Charleston/meadow underpass solution will reduce bicycle ridership. The underpass solution creates complicated switchbacks that require cyclists to dismount and walk their bikes. We feel this will disrupt the excellent and safe North/south bike use on Park Blvd. and will reduce ridership to JLS due to the switchbacks to cross the tracks	Comment noted.	Comment Noted
156	Eric Holm	CSTSC	8/25/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Construction Impacts	The only east west connections in South Palo Alto for bicyclist and pedestrians are Meadow and Charleston. How is the city going to make sure that students will continue to be able to get to school walking and biking during construction? A detour is no problem for a driver, but can really affect the walking and bicycling mode share.	Construction could be staged to allow for bike/peds to cross safely at one street (say, Meadow) while the other (Charleston) is constructed. However, this will lengthen the duration of construction.	Clarification Provided
157	Matt O'Neal	CSTSC	8/25/2022	All		Bicycle & Pedestrian Facilities	Width & Pathway Configuration	right Eric this kind of situation sets up the kids on bikes to have conflicts with peds, no one walks bikes nor should they need to	Many of the turning movements were based on the layout of the Homer Ave UC and were used to avoid significant property impacts. In confined areas like this, bikers will have to travel slowly (< 5 mph)... trying to design the path for high bike speeds (> 10-15 mph) is not possible (economically feasible) without significant property acquisitions.	Clarification Provided
158	Eric Holm	CSTSC	8/25/2022	Churchill	ellog/Churchill/Sea	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	PAUSD also has concerns that this will significantly reduce the number of students that bike to Paly. The Kellogg underpass will only accommodate a couple riders at a time. We have several hundred cyclists that come at the same time.	Project designed based on the minimum requirement of the HDM. Traffic study is beyond the current scope at this time. Increase in the width of ramps will require additional right of way; however an increase of the ramp width to 12 feet is being reviewed. The tunnel is proposed to be 20 feet wide under the tracks and Alma St. Increased widths beyond these dimensions will require acquisitions.	Significant Revisior
159	Matt O'Neal	CSTSC	8/25/2022	All	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	Awesome to hear about plans for Alma/Churchill! Hard to tell from the plans but are these mixed paths or separated ped/bike? Would love to avoid walking bikes or conflict zone like Cal Ave underpass	It's understood that the geometry of the California Underpass in not desirable (relatively narrow, with steep grades). The layouts of the ped/bike paths were based on the Homer Ave UC. To avoid significant property impacts, some movements are tight and will require bikes to maneuver slowly (< 5 mph).	Clarification Provided
160	Jessica Asay	CSTSC	8/25/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Miscellaneous	Does anyone on the ECR side of the tracks go to JLS? I know we're fletcher in Ventura, but JLS is closer living at Park and Meadow. Both Charleston and Meadow will affect Gunn ridership	Will consult with Safe Route to School Staff and review measures if needed to address these concerns.	Clarification Provided
161	Rachael Pannizzo	CSTSC	8/25/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Agrees with comments with Nikita Kutselev and Eric Holm and has concerns about separating bikes and peds so they are separated.	Some improvements are being considered based on comments from others.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
162	Deborah Gronke Bennet		8/25/2022	Kellogg/Churchill/Seale	Partial Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	Requested to conduct a traffic study of student bicyclists along Churchill	Project designed based on the minimum requirement of the HDM. Traffic study is beyond the current scope at this time.	Clarification Provided
163	Eric Holm	CSTSC	8/25/2022	All	Bike & Ped	Bicycle & Pedestrian Facilities	Connectivity	Alternatives have not taken into account the stacking pace currently needed to accommodate cyclists and is concern students will not be able to make it through key intersections.	It's not realistic or economically justified to design a ped/bike path for high volumes of traffic for such a short duration of time (15-30 mins before/after school). During these times, bicyclists must travel slowly and may have to wait for more than one traffic signal if the volumes are high.	Clarification Provided
164	Eric Holm	CSTSC	8/25/2022	Kellogg/Churchill/Seale		Bicycle & Pedestrian Facilities	Connectivity	Concerned preferred alternative will force students to dismount, not confident a Homer-style underpass is the solution.	Comment noted... the layouts of the ped/bike paths were based on the Homer Ave UC to avoid significant property impacts. Some movements are tight and will require bikes to maneuver slowly (< 5 mph).	Clarification Provided
165	Rich Marty	CSTSC	8/25/2022	Kellogg/Churchill/Seale	Bike & Ped	Bicycle & Pedestrian Facilities		A bike volume study for the Churchill school day would be a key point to relay.	A traffic study is beyond the current scope at this time. Additional direction will be required to conduct such study.	Clarification Provided
166	Nikita Kutselev	CSTSC	8/25/2022	Kellogg/Churchill/Seale		Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	Preference for closure. Does not support partial alternative. Removes pedestrian crossing, traffic lines and increases speed and will increase collisions. Does not think enough is being spent on bicycle infrastructure for this and thinks closure is the preferred option because it closes the route for cars, which is easier for cars. Will see an increase in the number of cyclists if the closure option is chosen, will see an increase in driving if partial underpass is chosen.	Comment noted.	Alternative Preference Noted
167	Arnout Boelens	CSTSC	8/25/2022	All	Construction	Bicycle & Pedestrian Facilities	Construction Impacts	Concerned construction plans will not factor in bicycle/pedestrian throughput	Although construction staging details have not been hashed out yet, the project has the potential to be staged to allow for bike/peds to cross safely at one street (say, Meadow) while the other (Charleston) is constructed. However, this would lengthen the duration of construction.	Comment Noted
168	Eric Nordman	PABAC	8/3/2022	Churchill	Seale/Peers Park bike ped crossing	Roadways	Miscellaneous	Kellogg is close to Embarcadero. An undercrossing at Seale/Peers Park would space crossings better and avoids blind T intersection (likely conflict point). For the Kellogg design there is also a conflict point with the two way Embarcadero path but having two (N/S) ramps significantly reduces the danger.	Comment noted.	Alternative Preference Noted
169	Eric Nordman	PABAC	8/3/2022	Churchill	Option 2	Roadways		The Churchill closure with modification (Option 2, pg. 55) is a good option for bike/ped if they decide to close the road. Option 1 is clearly inferior.	Comment noted.	

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
170	Eric Nordman	PABAC	8/3/2022	E Meadow	Hybrid	Bicycle & Pedestrian Facilities	Connectivity	The two lane bike path works well in only one direction. The west bound direction is awkward and most commuters, high school students, etc. will probably just ride on 5' shoulder of E Meadow under the tracks. To allow this double crossing of the busy streets, signals would probably be required. The hybrid design approach avoids this and is much cheaper.	Comment noted... and agreed that the two-way bike bath works best in one direction over the other. Some safety mitigation measures will be explored in the next phase of the project if this alternative is chosen as the preferred alternative.	Comment Noted
171	Eric Nordman	PABAC	8/3/2022	Meadow		Bicycle & Pedestrian Facilities	Miscellaneous	Unclear meaning of circles on diagram. Add legend. Remove redundant (already on pg. 40) text. Title: Street level bike/ped paths.	We will revise exhibits for clarity.	Comment will be addressed
172	Eric Nordman	PABAC	8/3/2022	Meadow		Bicycle & Pedestrian Facilities	Miscellaneous	Redundant text. Title: Route for west bound bike/ped	Will revise.	Comment will be addressed
173	Eric Nordman	PABAC	8/3/2022	Meadow		Roadways	Miscellaneous	Acquisition of the two story apartment block sounds expensive.	Comment noted.	Comment Noted
174	Eric Nordman	PABAC	8/3/2022	Meadow		Roadways	Roadway Grade/Slope	Meadow drive profile doesn't show ped bridges.	It's possible that the reviewer was looking at an old exhibit. The current Meadow profile shows the pedestrian bridges.	Clarification Provided
175	Eric Nordman	PABAC	8/3/2022	Charleston		Roadways	Miscellaneous	Isn't there a partial acquisition required for north side of the roundabout.	We believe you are correct... if the private properties extend to the back of the existing sidewalk, there will be some partial acquisitions on the north side of Charleston.	Clarification Provided
176	Eric Nordman	PABAC	8/3/2022	Charleston	Hybrid	Bicycle & Pedestrian Facilities	Connectivity	The hybrid design avoids the awkward double road crossing for bike/peds. It also looks much cheaper.	Comment noted.	Alternative Preference Noted
177	Eric Nordman	PABAC	8/3/2022	Charleston	Hybrid	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	Consider adding an island so pedestrians can look for NB Alma traffic separate from left turn from SB Alma onto Charleston.	This is something that the City could possibly look into further... if not in this phase, then the next (Preliminary Engineering and Environmental) phase.	Direction Required
178	Eric Nordman	PABAC	8/3/2022	Charleston	Hybrid design or single lane roundabout	Roadways	Roundabout for Charleston Underpass Alternative Only	In a normal 2 lane roundabout you are expected to select the lane before the roundabout. Link: https://www.youtube.com/watch?v=CEhNboz5GPk This is not possible for the traffic exiting NB Alma wanting to turn left using the roundabout. They are positioned in the right lane but should be in the center lane. Similarly, traffic on EB Charleston should be in the right lane but they are in the center lane. These two parallel lanes need to cross each	Comment noted... a traffic analysis and geometric refinement of the roundabout might be required in the next phase. There are benefits to having both lanes merge before a single lane roundabout, but a two lane roundabout is needed because: 1. A single lane roundabout will not operate well if the volume entering one leg exceeds ~1,000 vehicles per hour.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
								other. One option is to have both lanes merge first and then have a one lane roundabout. The hybrid design avoids this issue.	2. Two lanes are needed entering the roundabout from EB Charleston... one lane coming from El Camino Real, one lane from Alma St... there's not enough space to merge these two lanes into one lane before entering the roundabout. Keep in mind, these two lanes cannot begin merging until they're at the same elevation.	
179	Eric Nordman	PABAC	8/3/2022	All	Many options	Rail	Raise the Rail	While more frequent trains will cause backups at Charleston and perhaps E Meadow, it seems prudent to maintain at grade crossings at Churchill and Palo Alto Avenue until construction is complete at the other crossings. High speed rail doesn't seem likely anytime soon.	Comment noted.	Comment Noted
180	Eric Nordman	PABAC	8/3/2022	Meadow & Charleston	Hybrid design	Bicycle & Pedestrian Facilities		Because of the creeks and high water table the trench design is likely to be very expensive. For bikes and pedestrians the hybrid solution is comparable and dramatically cheaper.	Comment noted.	Alternative Preference Noted
181	Paul B Goldstein	PABAC	8/3/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Palo Alto is a largely built-out city. Bicyclists use the streets to get around, we do not have the luxury of having our own dedicated travel routes. Because we ride on the streets, any facility for bikes needs to be integrated with the street network. Because they require some users to cross a (major) road twice, two-way facilities on only one side of a street are dangerous and problematic.	Comment noted.	Alternative Preference Noted
182	Paul B Goldstein	PABAC	8/3/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	Several of the alternatives provide for bicycle/pedestrian facilities on only one side of the street. Although I recognize that the City Council instructed that bike/ped facilities be separated from automobile traffic, these two-way facilities on only one side of the street are dangerous and inconvenient for bicyclists and pedestrians. They require users (in one direction) to cross the street twice: street crossings are far more dangerous than riding with traffic. To increase safety, the crossings should be signalized, but this will require additional wait time and inconvenience and will probably lead to even more dangerous behaviors (e.g. wrong-way riding). If we want to encourage more bicycle and pedestrian activity, we need to provide facilities on both sides of the street. The crossings at Meadow and Charleston are heavily used by bicycles and pedestrians and we should be encouraging more (and safer) use rather than discouraging this use and making it less safe.	A separate ped/bike path on each side of the street was originally considered for this alternative, but modified (to the north side of Charleston only). Modification of the alternative is possible, but would result in the loss of some turning movements (EB Charleston to SB Alma, for example), and require an essentially new alternative be developed.	Clarification Provided

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
183	Paul B Goldstein	PABAC	8/3/2022	Charleston	Underpass	Roadways	Roundabout for Charleston Underpass Alternative Only	The two-lane roundabout on Charleston is a disaster for bicyclists. One-lane roundabouts are very safe and convenient for cyclists, but two-lane roundabouts are more challenging and dangerous. Using the pedestrian features of the roundabout are ok for pedestrians, but bicyclists will be likely to ride through the crosswalks, creating conflict and danger. As stated above, bike/ped facilities should be provided on both sides of the street, eliminating the need for most cyclists to use the roundabout.	The City proposes to extend the 2-way ped/bike path around the north side of the roundabout and terminate it near Mumford Pl. A two lane roundabout is needed because: 1. A single lane roundabout will not operate well if the volume entering one leg exceeds ~1,000 vehicles per hour. 2. Two lanes are needed entering the roundabout from EB Charleston... one lane coming from El Camino Real, one lane from Alma St... there's not enough space to merge these two lanes into one lane before entering the roundabout. Keep in mind, these two lanes cannot begin merging until they're at the same elevation.	Clarification Provided
184	Art Liberman	PABAC	8/30/2022	Meadow & Charleston	Underpass	Roadways	Roadway Grade/Slope	Can we have the Meadow and Charleston Underpass design to provide 5% roadway grade?	This is possible; however, it would increase the project's footprint significantly and thus, increase property impacts and acquisitions.	Clarification Provided
185						Bicycle & Pedestrian Facilities	Width & Pathway Configuration	========== <---------- direction of travel tunnel --------- ----------> ========== <---------- path --------- ----------> ========== Instead, it should be more like the following: Path <----- ========== tunnel <> ========== Path ---> ==========	This is possible, and can be considered. The NB ped/bike traffic would be on the east side of the ped/bike ramp, and the SB ped/bike traffic would be on the west side of the ped/bike ramp, which would reduce conflicts with NB/SB ped/bike traffic. The tunnel would have to be slightly longer in this option. Caltrain input will also be needed.	Direction Required
186	Alan Wachtel	PABAC	8/23/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Bicycle Pedestrian Pathway on each side (Meadow and Charleston Underpass Alternative)	The two-way ped-bike path on the south side of Meadow east of the tracks simply terminates at a sidewalk continuation. This design is likely to produce mixed bicycle and pedestrian traffic on a narrow sidewalk, wrong-way westbound bicycle traffic on the street approaching the path, and unpredictable westbound bicyclist movements to cross from the right side of the street to the left side. Two one-way paths would be far better. The situation is similar for the two-way path on the north side of Charleston east of the tracks, where only an uncontrolled crosswalk is provided for crossing, and for both paths west of the tracks.	A separate ped/bike path on each side of the street was originally considered for this alternative, but modified (to the south side of Meadow only). Modification of the alternative is possible, but would result in the loss of some turning movements (SB EB Charleston to SB Alma, for example), and require an essentially new alternative be developed.	Alternative Preference Noted

No.	Name	Entity	Date Received	Location	Alternative	CATEGORY	Subcategory	Comment	Initial Review Response	Status
187	Alan Wachtel	PABAC	8/23/2022	Meadow & Charleston	Underpass	Bicycle & Pedestrian Facilities	Width & Pathway Configuration	Mixing bicyclists and pedestrians on a path may be hazardous to both, especially on the downgrade, where bicycle speeds will be high. Effective separation is a necessity.	We will look into this further, and possibly make a revisi	Comment will be addressed
188	Alan Wachtel	PABAC	8/23/2022	Meadow & Charleston	underpass	Roadways	Roadway Grade/Slope	Both Meadow and Charleston under the tracks appear to have 8-foot shoulders, which would be ample for bicyclists who prefer to use the roadway, who must be anticipated and designed for. The cross-section on these roads elsewhere, however, is unclear. In addition, the 10 and 12 percent grades through the underpasses make this option much more difficult.	That's correct, both have 8-foot shoulders to accommodate: - Disabled vehicles. - Bicyclists. - Drainage facilities. We will clarify road dimensions elsewhere, as needed.	Comment will be addressed
189	Alan Wachtel	PABAC	8/23/2022	Charleston	Underpass	Roadways	Roundabout for Charleston Underpass Alternative Only	The roundabout appears to be inaccessible to bicyclists on the side path. Bicyclists on the Charleston roadway will find using the roundabout to turn around challenging, since, in order to avoid traffic exiting the roundabout, they must either merge across two lanes of traffic to the left and then merge back again across two lanes to the right, or merge across one lane and ride between lanes of traffic.	We will extend the 2-way bike path along the north side of the roundabout and terminate it at Mumford Pl.	Clarification Provided
190	Alan Wachtel	PABAC	8/23/2022	Park Blvd	Underpass	Bicycle & Pedestrian Facilities	Design Speed, Design Bicycle, Turning Radii, Sight Distance	A number of locations on Park Boulevard, and also at the west end of the Kellogg underpass, appear to call for near right-angle turns by bicyclists. The HDM specifies a minimum design speed for bike paths of 20 miles per hour and a minimum radius of curvature for this speed as 90 feet. Can these standards be met?	Due to right-of-way constraints, a greater design speed is not economically feasible in some locations, and a layout similar to the Homer UC is proposed.	Clarification Provided
191	Alan Wachtel	PABAC	8/23/2022	All Locations	Underpass	Bicycle & Pedestrian Facilities	Construction Impacts	What are the plans for maintaining bicycle and pedestrian access across the tracks during construction without imposing lengthy detours?	Construction could be staged to allow for bike/peds to cross safely at one street (say, Meadow) while the other (Charleston) is constructed. However, this will lengthen the duration of construction.	Clarification Provided

PALO ALTO
UNIFIED SCHOOL DISTRICT

25 Churchill Avenue
Palo Alto, CA 94306

Office of the Superintendent

To: Ed Shikada, City Manager
From: Don Austin, Superintendent of Schools
Date: February 20, 2020
Subject: Potential Closing of Churchill Avenue

The Palo Alto Unified School District (PAUSD) has not taken an official position regarding proposed options to mitigate increased rail traffic. As the Superintendent of Schools, I want to provide some context about District use of Churchill Avenue (Churchill).

On any given day, Palo Alto High School (Paly) averages a little under 1,000 bicycles. The majority of bicycles enter from Churchill, although exact data is not easily obtainable. Clearly, student safety is the top concern of the District and a full closure of Churchill may negatively impact student safety related to bicycle commuters.

PAUSD deploys 22 busses each day to various parts of Palo Alto and East Palo Alto. Currently, our busses cross Alma Street at Churchill over 20 times per day as part of routine business. This does not include athletic or other extra-curricular trips. Our only entrance to our transportation yard is on Churchill. Practically speaking, a closure of Churchill would force every bus onto El Camino to make a right or left turn.

Our Maintenance and Operations fleet crosses Alma and Churchill approximately 175 times per day. This includes vans, trucks, and trailers. As described for our busses, the maintenance yard also depends upon a single entry/exit point on Churchill.

It is our understanding that proposals exist or may arise restricting large vehicle access to some mitigation options. PAUSD would contend that restrictions to large vehicles would negatively impact our busses and maintenance vehicles.

Finally, while traffic is the main focus of mitigation efforts, PAUSD would also like to raise the point that increased rail use negatively impacts the learning environment at Paly. Current rail use is already a major distraction for students in classes paralleling the rail line. The staff and students at Paly would benefit greatly by any mitigating efforts connected to sound barriers.

PAUSD is thankful for the efforts of our City leadership and the volunteers serving on the committee to propose solutions.

PALO ALTO
UNIFIED SCHOOL DISTRICT

OFFICE OF THE SUPERINTENDENT

25 Churchill Avenue
Palo Alto, CA 94306
(650)329-3737

www.pausd.org

August 5, 2022

Dear Mr. Shikada,

I am writing to reiterate concerns from the Palo Alto Unified School District regarding the possible closure of Churchill Avenue as part of the proposed rail project. My letter from February of 2020 is attached as a reference.

Our CBO, Carolyn Chow, attended a meeting regarding the rail project on August 4 with City staff. She reported that City staff stated that our letter was only one point of view and many residents have shared different viewpoints. I would respectfully disagree and believe our letter represented 10,500 students, over 20,000 parents, and 2,000 employees. We also contend that the significant operational challenges for the District should be weighted heavily when compared to aesthetic priorities.

City staff accurately stated that PAUSD forfeited our seat on the rail committee. There were many reasons for this decision. I hope this was not seen as a forfeiture of our voice. Closing Churchill and / or Meadow appears more damaging as each day of discussion passes. The potential closure would negatively impact daily operations in a way we cannot mitigate with our busses or fleet of maintenance vehicles.

I value our partnership with the City of Palo Alto and hope we can find a setting for a meaningful discussion about any closure of Churchill.

Sincerely,

Don Austin
Superintendent of Schools

Problems With the Current Churchill Partial-Underpass Design

1. Lack of attention to design aesthetics
2. High disruption and lengthy construction
3. No suitable location for a de-watering pump station
4. Incremental encroachment on the Caltrain right-of-way
5. Increased induced traffic

These problems are tightly coupled to one another. A dependency graph can help visualize the inter-connectedness of the design parameters.[1] Note from the graph how much the bridge design affects everything else.

Bridge Design

The deck thickness of the bridge is the parameter upon which the overall design is most sensitive, since the thickness is driven by so many other design decisions.

Reduction of the bridge deck leads to the following other changes:

1. The depth of the intersection is reduced, which leads to lower grade, and a reduction in the apparent scale of the project.
2. A thinner deck allows for a more aesthetic design.

The deck thickness depends on:

1. Bridge material and the design constraints that presents
2. Bridge span

How do we get a thinner bridge deck?

A. Use steel rather than concrete for the bridge.

B. Reduce the bridge span:
   1. Reduce shoulder width
   2. Reduce number of lanes
   3. Remove central bridge supports

C. Reduce the number of lanes by eliminating the right turn pocket on Churchill:
   1. The pocket is too small to have much impact on traffic flow.
   2. The space currently occupied by the pocket can be used for the de-watering station.
   3. Eliminating the pocket helps reduce induced traffic by reducing the capacity of Churchill.

D. Reduce shoulder widths
   1. Shoulder width is a safety issue, but the widths can be optimized.
   2. Enough space is needed to allow large vehicles to turn. This can be accomplished by larger turning radii at the corners.
   3. Reducing shoulder widths on Alma can reduce Caltrain encroachments.

E. Elevate the tracks a little (3-5 feet).

F. Optimize the vertical clearance under the rail bridge.

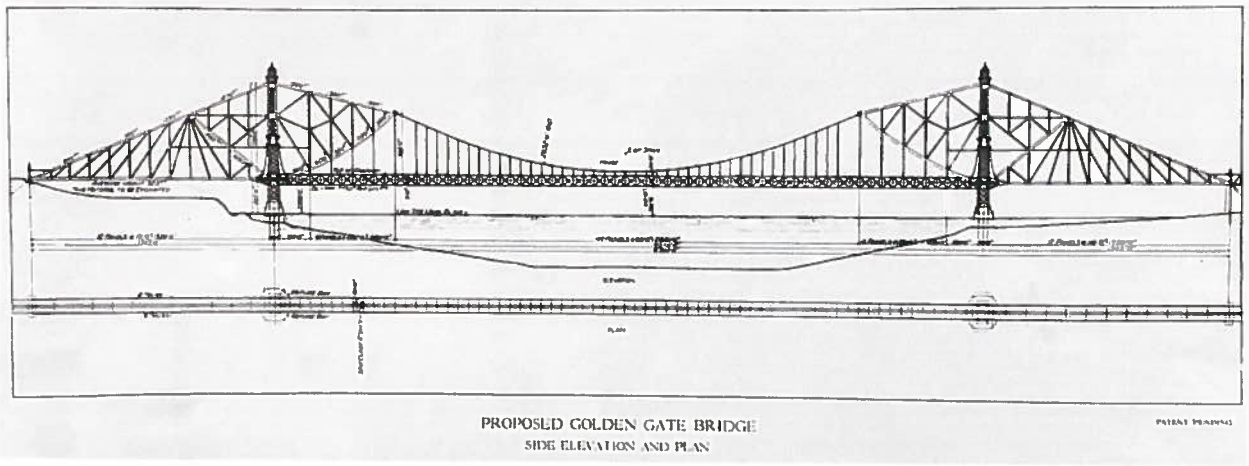
1 *Churchill Grade Crossing Dependency Graph*, Michael Price, 2022

Steel bridge design

Steel bridges up to 17 m spans can be constructed off-site, brought to the site and lowered into place with minimal disruption of rail operations[2].

This method of construction could greatly reduce construction cost, time, and disruption by eliminating the need for a shoofly.

There's a lot of difference between a functional design and an aesthetic one. Consider this original concept for the Golden Gate Bridge:



A steel truss bridge, like that over San Francisquito Creek, is perhaps the default choice, but there are alternatives:

There are also cable-stayed designs that are more attractive, but more expensive.

2 *Design Guide for Steel Railway Bridges*, ILES, D.C, The Steel Construction Institute, 2004

Churchill Grade Crossing Dependency Graph

The chart below is a first draft showing the dependencies between the various parameters of the project and how decisions cascade from one issue to the next. It can be expanded with more detail and altered to capture more issues, if people find this representation helpful.