



Rail Committee Staff Report

From: City Manager

Report Type: ACTION ITEM

Lead Department: Transportation

Meeting Date: March 19, 2024

Report #:2402-2675

TITLE

Review of the Grade Separation Alternatives for Churchill Avenue, Meadow Drive, and Charleston Road Crossings, including Consideration of Caltrain's Staff Comments; Provide Feedback and Direction to Staff; and Recommend that Council Advances (or Eliminates) Specific Alternative(s) for Preliminary Engineering and Environmental Documentation Phase.

RECOMMENDATION

Staff Recommends that the Rail Committee:

1. Review of the Grade Separation Alternatives for Churchill Avenue, Meadow Drive, and Charleston Road Crossings, including consideration of Caltrain's Staff comments;
2. Provide Feedback and Direction to Staff; and
3. Recommend that Council Advances (or Eliminates) Specific Alternative(s) for Preliminary Engineering and Environmental Documentation Phase

EXECUTIVE SUMMARY

City and Caltrain staff met to understand the potential impacts of addressing the Caltrain comments and adhering to Caltrain Standards on the conceptual design alternatives and to discern the high-level material changes required for the concepts. This agenda item aims to present key findings on the impacts to various alternatives and discuss the material changes necessary for these alternatives. Staff therefore seeks the Rail Committee review, feedback, and direction for advancing alternatives into the next phase.

City Council in 2021 selected the preferred alternative for Churchill Avenue crossing and narrowed the alternatives in consideration to three alternatives for Meadow and Charleston Road crossings for grade separation and directed to further refine underpass alternatives and conduct additional studies. Staff under the guidance and direction of the Rail Committee updated the underpass alternatives, conducted additional studies, and updated the Council Adopted Evaluation Criteria.

In addition, the City staff reached out to Caltrain in 2022 requesting the evaluation of the four-tracking segment needs and other concerns with the design criteria. To address these concerns Caltrain initiated the Caltrain Corridor Study and the City also entered into a service agreement with Caltrain in June 2023 outlining their role in providing support for early coordination, technical input, and expertise. In late 2023, Caltrain staff conducted their initial technical review, provided feedback to City Staff with technical comments, and also provided their initial analysis of the four tracking segment locations in Palo Alto.

Staff discussed the Caltrain comments at the January Rail Committee meeting and presented the details of major elements affecting various alternatives identifying initial impacts on alternatives for adherence to updated Caltrain Standards. At this meeting, the Rail committee directed staff to coordinate with Caltrain staff to determine the material changes needed for the alternative concepts to address updated standards guiding the substantial changes in the concepts of the alternatives.

BACKGROUND

Connecting Palo Alto is a project undertaken by the City of Palo Alto to implement grade separation at existing at-grade crossings along the Caltrain corridor. The concept designs for this Project were completed in 2020 and approved by the City Council in 2021. Since then, the Partial Underpass alternative for Churchill Avenue and Underpass alternatives for Meadow Drive and Charleston Road have been refined with input from various stakeholders (Staff Report 2302-0973¹). In addition, a subsurface exploration was completed, and a preliminary geotechnical report was prepared by the consultant for review of these alternatives (Staff Report 2307-1747²)

As a local agency project, the City is obligated to coordinate with Caltrain for several reasons including the project's involvement with and impact on the Caltrain Right of Way (ROW) and the need to verify compliance of conceptual design phase documentation with the Caltrain Engineering Standards (being revised through 2023). In addition, after the selection of Preferred Alternative(s) aka Local Preferred Alternative(s) (LPA) for each grade- separation, Caltrain will become the lead agency for designing and implementing the selected LPAs. As this project is currently in the conceptual design phase, addressing concerns related to Caltrain Engineering Standards is a key factor in demonstrating ROW, the feasibility of LPAs, and positioning the projects for successful implementation. The city staff has been reaching out to Caltrain staff for their review, however, asked formally in June 2022 requesting for evaluation of four tracking segment needs and other concerns with the design criteria.

As a result, Caltrain embarked upon the Caltrain Corridor Strategy Project to review the

¹ <https://cityofpaloalto.primegov.com/Portal/viewer?id=1717&type=0>

² <https://cityofpaloalto.primegov.com/Portal/viewer?id=2688&type=0>

concerns of various local agencies with projects along the corridor including an analysis of four-tracking needs, and in early 2023, the City and Caltrain (PCJPB) entered into a service agreement outlining Caltrain's role in providing support for early coordination, technical input, and expertise. Caltrain's support and input are crucial as the City evaluates conceptual alternatives, aiming to select and recommend a viable locally preferred alternative (LPA) for grade separation at these crossings. The Service Agreement (June 8, 2023) also provides the contracting vehicle for Caltrain to support the integration of its comments into the City's conceptual alternatives, upon discussion and approval by the parties.

In November 2023, the Caltrain Staff provided an update on the four-tracking analysis at a Rail Committee Study Session (Caltrain Presentation³). In addition, the City also received technical review comments from Caltrain staff on the Partial Underpass and Closure with Mitigation Alternatives at Churchill Avenue and for Hybrid, Viaduct, and Underpass Alternatives at Meadow Drive and Charleston Road crossings. These comments were discussed in detail at the January 23, 2024 Rail Committee meeting (Staff Report 2311-2303⁴). At this meeting, the Rail committee directed staff to coordinate with Caltrain staff to determine the material changes needed for the alternative concepts to address updated standards guiding the substantial changes in the concepts of the alternatives.

ANALYSIS

Following the directions of the Rail Committee, City and Caltrain staff convened to discuss the potential impacts of addressing Caltrain comments and adhering to Caltrain Standards on the conceptual design alternatives, and to identify the high-level material changes required for the concepts. Based on discussions, it was determined that several changes to the alternatives will be required that will have major impacts on the various alternatives. The following summary provides the high-level changes to the alignments for various alternatives.

Churchill Avenue:

Underpass: The Underpass alternative is viable with changes to the bridge design, including increased width and length, with limited encroachment on the Caltrain ROW. However, there are concerns about the encroachment of pedestrian crossing on the west side railroad tracks for Kellogg Avenue bicycle and pedestrian crossing.

Closure with Mitigation Option 1: (Ramps parallel to railroad tracks at grade Alma crossing) This option will be viable, but it will require narrow widths for bicycle and pedestrian ramps and will necessitate aligning these ramps outside of the Caltrain right of way with minimum encroachments.

³ <https://cityofpaloalto.primegov.com/Portal/viewer?id=0&type=7&uid=d2057565-6b16-44eb-b5eb-2a021fad2f24>

⁴ <https://cityofpaloalto.primegov.com/Portal/viewer?id=0&type=7&uid=562ad105-2798-43bf-9d47-6947f2c40697>

Closure with Mitigation Option 2: (Ramps perpendicular to railroad tracks and crosses under Alma Street and railroad tracks) This option will be viable as presented.

Meadow Drive and Charleston Road

Trench Alternative: Further analysis of the trench alternative has been paused by the Rail Committee mainly due to its high cost and feasibility challenges in accommodating and addressing the four tracking needs of Caltrain and California High Speed Rail.

Hybrid Alternative: The existing alignment of rail in the hybrid alternative is proposed to be realigned, considering factors such as jog in the railroad right of way, future four tracking needs, shoofly placement, utilization of the railroad right of way, safety requirements, constructability, and Caltrain standards. This realignment will cause additional lane reductions during construction on Alma Street, Meadow Drive, and Charleston Road than previously considered. The proposed alignment is viable with refinements.

Viaduct Alternative: The existing alignment of the viaduct is proposed to be realigned, considering factors such as jog in the railroad right of way, future four tracking needs, shoofly placement, utilization of the railroad right of way, safety requirements, constructability, and Caltrain standards. This realignment will cause the need for additional encroachment on the City's right of way for permanent placement of the viaduct and approach structures resulting in a reduction of available traffic lanes on Alma Street. In addition, the additional lane reductions at Alma Street, Meadow Drive, and Charleston Road during construction will be more severe than previously considered. It is also noted that Caltrain would like to retain the existing at-grade tracks for railroad purposes.

Underpass Alternatives: The existing alignment of this rail alternative will, for the most part, remain at its existing location; however, adjustments will be needed for compliance with updated rail standards. Bridge widening is required to accommodate access to maintenance and emergency vehicles, resulting in a wider bridge. Additionally, the pedestrian bridge needs to be raised to comply with standards. The vertical clearance required for vehicular traffic can be accommodated with a sacrificial beam and agency agreements.

Staff therefore seeks the Rail Committee's review and feedback on the Grade Separation Alternatives for Churchill Avenue, Meadow Drive, and Charleston Road Crossings considering accommodation of Caltrain's Staff Comments and direction on the recommended preferred alternative(s) for advancement of the selected alternatives into the Preliminary Engineering and Environmental Documentation phase for Council consideration and direction.

FISCAL/RESOURCE IMPACT

Revisions to existing conceptual plans will require consultant support. The existing contract with AECOM expires on April 22, 2024. Therefore, an amendment to the Consultant contract will be needed to perform additional services.

STAKEHOLDER ENGAGEMENT

The Rail Committee meetings are open to the public and therefore provide the community with opportunities to provide comments to the Rail Committee and City.

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.

ATTACHMENTS

None

APPROVED BY:

Philip Kamhi, Chief Transportation Official