Rail Committee
Staff Report

From: Philip Kamhi, Chief Transportation Official

Meeting Date: March 29, 2023
Staff Report #: 2302-1010

TITLE
Review and Discuss the Grade Separation Evaluation Criteria and provide a recommendation to the City Council with any proposed amendments.

RECOMMENDATION

Review and Discuss the Grade Separation Evaluation Criteria and provide a recommendation to the City Council with any proposed amendments.

EXECUTIVE SUMMARY

On February 15, 2023, the Rail Committee directed the staff to bring forth an item for the committee's consideration to review and update the Council Adopted Evaluation criteria. These evaluation criteria are used for the evaluation of grade separation alternatives for the selection of the preferred alternative(s). This item supports the review and discussion of the current criteria for possible update and changes to the criteria and recommendation to the City Council for its approval.

BACKGROUND

In September 2017, the City Council adopted the criteria that included the following elements as guidelines in selecting a preferred solution (a preferred alternative for each crossing):

A. *East-West connectivity* – Facilitate movement across the corridor for all modes of transportation
B. *Traffic congestion* – Reduce delay and congestion for automobile traffic at rail crossings
C. *Pedestrian / bicycle circulation* – Provide clear and safe routes for pedestrians and bicyclists seeking to cross the rail corridor, separate from automobile traffic
D. *Rail operations* – Support continued rail operations and Caltrain service improvements
E. *Cost* – Finance the project with feasible funding sources.
F. *Cost* – Minimize right-of-way acquisition.
G. *Environmental impacts* – Reduce rail noise and vibration along the corridor.
H. *Local access* – maintain or improve access to neighborhoods, parks, schools and other destinations along the corridor while reducing regional traffic on neighborhood streets.

I. *Visual impacts* – Minimize visual changes along the rail corridor.
J. *Construction* – Minimize disruption and the duration of construction.

At the March 18, 2019 Committee of the Whole (COTW) meeting, the COTW recommended a set of actions relating to rail grade separation including direction to create a dynamic model that orders the alternatives based on the criteria. Therefore, in late 2019 Matrix was developed with a Summary of Evaluation based on Council Adopted Criteria. This matrix was used to review various elements for various alternatives. This matrix was further reviewed through Community Advisory Panel (CAP) and Extended Community Advisory Panel (XCAP) for review of the alternatives in consideration at Churchill Avenue, Meadow Drive, and Charleston Road crossings. This matrix assisted XCAP in making recommendations of preferred alternatives to the City Council. The current Matrix, Summary of Evaluation based on the Council Selected Criteria is attached as Attachment A

The current Matrix provides dynamic information on the level of impact and improvements on the scale with respect to each of the elements of the Council Adopted Evaluation Criteria. However, the XCAP Committee in its final report highlighted certain existing reports and policies for review and policies to inform future study and consideration of additional criteria. In addition, on February 15, 2023, the Rail Committee meeting indicated the need to reflect on the current understanding of the various elements for updating the criteria.

DISCUSSION

This item brings forth the "Council Adopted Criteria" used in the evaluation of Alternatives for the discussion of the rail committee for its review and discussion on whether to update. The Sustainability and Climate Action Plan (2022), the 2030 Comprehensive Plan (adopted Nov 2017), the City of Palo Alto Bicycle + Pedestrian Transportation Plan (2012), and the Rail Corridor Report (2013) all provide guiding principles and foundations which can be reviewed further to guide future work.

The excerpts from these policies that may aid this discussion for the review of the criteria are as follows.

The Sustainability And Climate Action Plan (2022)[1]

GOAL: Reduce GHG emissions 80% below 1990 levels by 2030

- Reduce transportation related GHG emissions at least 65% below 1990 levels (215,696 MT CO2e reduction)
- Reduce total vehicle miles traveled 12% by 2030, compared to a 2019 baseline, by reducing commute vehicle miles traveled 20%, visitor vehicles miles traveled 10%, and resident vehicle miles traveled 6%.
- Increase the mode share for active transportation (walking, biking) and transit from 19% to 40% of local work trips by 2030

    - M3. Update and implement the Bicycle and Pedestrian Transportation Plan to expand bicycle and pedestrian infrastructure and establish a Vision Zero data collection and analysis program to target safety improvements.

GOAL: Zero Waste is a holistic approach to managing materials in a closed loop system (circular economy), where all discarded materials are designed to become resources

- Divert 95% of waste from landfills by 2030, leading to zero waste
- Implement short- and medium-term initiatives identified in the 2018 Zero Waste Plan

The 2030 Comprehensive Plan (2017)[2]

GOAL T-1 Create a sustainable transportation system, complemented by a mix of land uses, that emphasizes walking, bicycling, use of public transportation and other methods to reduce GHG emissions and the use of single-occupancy motor vehicles.

- Policy T1-10: Support Caltrain modernization and electrification, capacity and service enhancements and extension to Downtown San Francisco.
- Policy T1-19: Provide Facilites that encourage and support bicycling and Walkin
    - Program T1.19.2: Prioritize investments for enhanced pedestrian access and bicycle use within Palo Alto and to/from surrounding communities, including by incorporating improvements from related City plans, for example the 2012 Palo Alto Bicycle + Pedestrian Transportation Plan and the Parks, Trails & Open Space Master Plan, as amended, into the Capital Improvements Program.
    - Program T1.19.3: Increase the number of east-west pedestrian and bicycle crossings across Alma Street and the Caltrain corridor, particularly south of Oregon Expressway
    - Program T1.26.1: In collaboration with regional agencies and neighboring jurisdictions, identify and pursue funding for rail corridor improvements and grade separation.

GOAL T-3 Maintain an efficient roadway network for all users.

- Policy T-3.2 Enhance connections to, from and between parks, community centers, recreation facilities, libraries and schools for all users.
- Policy T-3.3 Avoid major increases in single-occupant vehicle capacity when constructing or modifying roadways unless needed to remedy severe congestion or critical neighborhood traffic problems. Where capacity is increased, balance the needs of motor vehicles with those of pedestrians and bicyclists.
- Policy T3.15: Pursue grade Separation of rail crossings along the rail corridor as a City priority.

    - Program T3.15.1 separation of Caltrain to become a “shovel ready” project and strongly advocate for adequate State, regional and federal funding for design and construction of railroad grade separations.
    - Program T3.15.2 Conduct a study to evaluate the implications of grade separation on bicycle and pedestrian circulation.
- Policy T-3.16: Keep existing at-grade rail crossings open to motor vehicles, pedestrians and bicyclists, consistent with results of a focused circulation study and a context sensitive alternatives analysis.
- Policy T-3.17 Until grade separation is completed, improve existing at-grade rail crossings to ensure the highest feasible level of safety along the corridor and provide additional safe, convenient crossings.
    - Program T3.17.1 Complete a Palo Alto Avenue crossing study to identify potential near-term safety and accessibility improvements.
    - Program T3.17.2 Work with Caltrain to ensure that the rail tracks are safe and secure with adequate fencing and barriers.
- Policy T-3.18 Improve safety and minimize adverse noise, vibrations and visual impacts of operations in the Caltrain rail corridor on adjoining districts, public facilities, schools and neighborhoods with or without the addition of High Speed Rail.
- Policy T-3.19 Coordinate proactively with the California High Speed Rail Authority and Caltrain to minimize negative impacts and maximize benefits to Palo Alto from any future high speed rail service through Palo Alto.

GOAL T-8 Influence the shape and implementation of regional transportation policies and technologies to reduce traffic congestion and GHG emissions.

- Policy T-8.8 Support regional bicycle and pedestrian plans including development of the Bay Trail, Bay-to-Ridge Trail and the Santa Clara County Countywide Bicycle System.
    - Program T8.8.1 Identify and improve bicycle connections to/from neighboring communities in Santa Clara and San Mateo counties to support local trips that cross city boundaries. Also advocate for reducing barriers to bicycling and walking at freeway interchanges, expressway intersections and railroad grad crossings.

GOAL N-1 Protect, conserve and enhance Palo Alto’s citywide system of open space, including connected and accessible natural and urban habitats, ecosystems and natural resources, providing a source of public health, natural beauty and enjoyment for Palo Alto residents.

- Policy N-1.11 Work with Stanford University, Santa Clara County, SCVWD and regional organizations to create multi-use trail connections between urban areas and open space, including creeks and rights-of-way, while ensuring that thenatural environment is protected.

GOAL N-6 An environment that minimizes the adverse impacts of noise.

- Policy N-6.13 Minimize noise spillover from rail related activities into adjacent residential or noise-sensitive areas.
    - Program N6.13.1 Encourage the Peninsula Corridors Joint Powers Board to pursue technologies and grade separations that would reduce or eliminate the need for train horns/whistles in communities served by rail service.
    - Program N6.13.2 Evaluate changing at-grade rail crossings so that they qualify as Quiet Zones based on Federal Railroad Administration (FRA) rules and guidelines in order to mitigate the effects of train horn noise without adversely affecting safety at railroad crossings.
    - Program N6.13.3 Participate in future environmental review of the California High-Speed Rail (HSR) Project, planned to utilize existing Caltrain

GOAL S-3 An environment free of the damaging effects of human-caused threats and hazardous materials.

- Policy S-3.1 Minimize the use of toxic and hazardous materials in Palo Alto. Promote the use of alternative materials and practices that are environmentally benign.
    - Program S3.1.4 Establish protocols to monitor the movement of hazardous materials on Palo Alto roadways and rail lines and respond effectively to spills via established truck and construction routes.
- Policy S-3.6 Work with the appropriate agencies, including Caltrain, to decrease the risks associated with rail infrastructure in Palo Alto, including the movement of hazardous materials through the city and the dangers of passenger trains in a fully-developed, populated environment.
    - Program S3.6.2 Work with Caltrain and the PAUSD to educate students and the public on the dangers of rail trespass and the benefits of suicide support services available in Palo Alto.

The Bicycle and Pedestrian Transportation Plan (2012) [3]

The 2012 Bike Plan discusses several projects that form part of the bike/pedestrian network across the Caltrain ROW, including suggested new bike/pedestrian-only crossings that have been recommended for study. The following excerpts from Bicycle and Pedestrian Transportation Plan may be reviewed further in updating the Council Evaluation Criteria.

- Program T-21: Study projects to depress bikeways and pedestrian walkways under Alma Street and the Caltrain tracks and implement if feasible.
    - The BPTP recommends improvements to existing plans for bicycle/pedestrian underpasses at Alma Street and identifies potential funding sources for implementation. The future Transportation Element should integrate

recommendations from this Plan with those from the Joint Rail Corridor Task Force effort taking place concurrent with this Plan.

- Policy T-17: Increase cooperation with surrounding communities and other agencies to establish and maintain off-road bicycle and pedestrian paths and trails utilizing creek, utility, and railroad rights-of-way.

5.1.4 Across Barrier Connections (ABC's): Palo Alto has multiple linear barriers that present challenges for bicycling and walking, including Highway 101, Caltrain/Alma Street, and several creek water bodies. These barriers require large, expensive construction projects such as bridges or tunnels

Matadero Creek Caltrain/Alma Barrier Connection

The 1.3-mile distance between the existing Caltrain undercrossing at California Avenue and the surface crossing at Meadow Drive represents the longest stretch of track barrier in Palo Alto. The lack of eastwest connectivity is a major issue for the Cal-Ventura area, a mixed-use neighborhood with potential for new residential and mixed-use development near the Fry's Electronics site and along El Camino Real. To the east of Caltrain lies the Matadero Creek maintenance road and proposed creek trail that extends through Midtown and eventually to the Baylands. This Plan recommends the City undertake a feasibility study to determine the specific alignment and phasing opportunities for the Matadero Creek Trail. The study's scope should include an alternatives analysis of the potential undercrossing options near the creek (or overcrossing compatibility pending Caltrain/High Speed Rail plans).

Peers Park Caltrain/Alma Street Barrier Connection at Seale Avenue

This Plan proposes a new Caltrain barrier connection concept at Peers Park between the Churchill Road surface crossing and California Avenue undercrossing. This connection would link the Serra Street/Park Boulevard and Stanford Avenue east-west bikeways (along with the north-south Castilleja-Park-Wilkie Bicycle Boulevard) across Caltrain to Seale Avenue, a low-volume residential street. With direct access across Middlefield Road to the Community Center and Jordan Middle School complexes, such a route would provide an inviting alternative to the Churchill/Coleridge Avenue corridor for school commutes and other trips, and if established should trigger the implementation (or further development) of Seale Avenue as a bicycle boulevard.

University Avenue/Palo Alto Transit Center Undercrossings (Enhanced)

The 2008 Caltrain Comprehensive Access Plan includes a recommendation to widen the sidewalk along the north side of University Avenue under Caltrain, an existing undercrossing that experiences high volumes of pedestrians and bicyclists. A wider undercrossing with better lighting would allow for safer passage by bicycle and for transit patrons coming to and from the staircase directly underneath the station.

Despite a second non-motorized undercrossing approximately one block to the north within the transit center, improved University Avenue undercrossings (the other sidewalk undercrossing experiences similar demand) would yield a more visible and direct linkage for both transit and downtown-related trips. Likely competitive for federal and state funding, this medium-term improvement concept should be studied for its compatibility with the longer term vision of a completely reconfigured Palo Alto Intermodal Transit Center in coordination with Caltrans.

California Avenue Caltrain/Alma Undercrossing (Rebuild or Retrofit)

Reconstruction of the existing tunnel to be more accommodating is a long-term citywide priority due to its importance as a regional transit and business district connection and proximity to expected growth. The location of existing underground utilities, unfortunately, would force a much deeper and more expensive tunnel than similar proposed facilities. In the short-term, the City will be improving lighting, signage, and bicycle access to the west entrance of the undercrossing as part of the upcoming California Avenue streetscape improvement project.

El Camino Park Caltrain/Alma Barrier Connection at Everett Avenue

This undercrossing was proposed as part of the 2003 Bicycle Transportation Plan and potential (partial) funding for its construction was identified as part of the Stanford Medical Center expansion project. Further analysis through the 2012 BPTP has revealed significant utility conflicts and higher priority improvements to an adjacent facility (University Avenue undercrossing). Regardless, this connection would further reduce the barrier effect of the Caltrain corridor at a key location and should be considered a potential long-term ABC project.

5.3.5 Midblock and Un-signalized Crossings

Marked, unsignalized crosswalks on roadways with two or more travel lanes per direction are generally discouraged, and few exist in Palo Alto.

5.4.1 Engineering

- Develop a Complete Streets Checklist for all major capital and maintenance projects and a review/approval process that ensures early coordination between City departments and outside agencies.
- Evaluate the feasibility of a future potential trail connection between El Camino Park and Caltrain/Palo Alto High School through the Transit Center.

The Palo Alto Rail Corridor Study (2013)[4]

The 2013 Rail Corridor Study identified opportunities to create more East/West connectivity across the Caltrain corridor for cars, bikes and pedestrians. XCAP recommends the Council and

Staff consider the principles of that report when refining
design concepts for ALL the grade separation alternatives.

- Circulation and Connectivity
    - Improve east-west connectivity across the rail corridor, Alma Street and El Camino Real
    - Provide additional rail crossings in the southern section of the study area
    - Strengthen the pedestrian and bicycle circulation framework and make connections to citywide facilities and amenities
    - Create a walkable, pedestrian and bicycle-friendly community with convenient and safe access to goods and services
    - Implement a layered street framework
    - Ensure major vehicular corridors retain current traffic carrying capacity
- Public Facilities
    - Infrastructure should keep pace with development and should achieve a high-quality design

Based on the Rail Committee review and direction, the proposed changes and updates will be recommended to the Council. Any additional review will then be undertaken for further evaluation for the selection of preferred alternative(s).

RESOURCE IMPACT

Any consultant support requiring revision to the matrix and the evaluation of the grade separation alternatives based on the modified or updated criteria will require additional services of the consultant. The additional services therefore may require an amendment to the Consultant Contract.

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.

[1] https://www.cityofpaloalto.org/files/assets/public/sustainability/policies-and-plans/2022-scap-goals-and-key-actions.pdf

[2]https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/3.-comprehensive-plan/comprehensive-plan/full-comp-plan-2030_with-dec19_22-amendments.pdf

[3] https://www.cityofpaloalto.org/files/assets/public/transportation/projects/bicycle-pedestrian-transportation-plan_adopted-july-2012.pdf

[4] https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/new-development-projects/parc-130122-final-report.pdf

ATTACHMENTS

Attachment A: Matrix - Summaries of Evaluations with City Council Adopted Criteria

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