

DATE: March 3, 2015

TO: Honorable Mayor and City Council

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VIA: Daniel H. Rich, City Manager

TITLE: **Transit Center and Caltrain Station Master
Plan**



PURPOSE

The purpose of this Study Session is to:

1. Present background information and discussion of planning elements related to the proposed Master Plan for the Downtown Transit Center and Caltrain Station.
2. Obtain Council input regarding the concepts/alternatives to be included in the Master Plan study.

BACKGROUND

The Mountain View Transit Center (Transit Center) is a key local and regional intermodal facility. The Transit Center serves Caltrain commuter rail, Valley Transportation Authority (VTA) light rail and buses, public and private shuttles, taxi service, bicycle parking, and a Bay Area Bike Share Station.

In recent years, the importance of the Transit Center has grown substantially. It is the third most utilized station in the Caltrain system, largely because it is the closest Baby Bullet station to many Silicon Valley employers, and has become a major and growing regional node for employer shuttles.

The Shoreline Regional Park Community Transportation Study completed in 2013, and the North Bayshore Precise Plan and the Shoreline Boulevard Corridor Transportation Study (Corridor Study), both completed in 2014, identified transportation improvement strategies to respond to anticipated increases in employment and development in North Bayshore. A key element of each of these studies/plans is the expected increase in usage of the Transit Center, including higher levels for Caltrain, light rail, and connecting shuttles. Other employment areas in the City identified in the 2030 General

Plan also envision a greater reliance on, and demand for, transit services at the Transit Center.

One of the Corridor Study recommendations, approved by the Council in November 2014, called for the development of a comprehensive Master Plan for the Caltrain Station and Transit Center. This Study Session will present background information and the proposed planning elements to be considered for development as part of the Master Plan study.

DISCUSSION

History

The current Transit Center and Caltrain Station were constructed in the late 1990s based on a concept developed for the 1994 Evelyn Avenue Corridor Precise Plan. The VTA light rail station opened in December 1999. The City developed Centennial Plaza a few years later, including a replica of the original station building that served Mountain View from 1888 to the 1950s.

VTA, Caltrain, and the City jointly developed the Transit Center plan, with the final design approved in 1997. The design of the platforms and pedestrian areas was based on ridership estimates for 2010. These estimates assumed approximately 1,000 riders in the morning three-hour peak period. Current morning ridership is more than three times higher than the estimate. Of particular note, the number of morning southbound arriving passengers today is five times higher than the earlier estimate.

Current/Future Conditions

The Transit Center facility is approximately 7.6 acres (Figure 1) and includes the following individual components:

- **Transit Facilities**—Caltrain and VTA light rail station platforms, tracks, and connecting pedestrian access.
- **Transit Loading Area for Buses and Shuttles**—Including the transit plaza, information kiosk, Bay Area Bike Share dock, and other provisions for bikes.
- **Centennial Plaza and Train Station Building**—Developed and maintained by the City.
- **Commuter and Taxi Parking**—A 3.2-acre facility providing 340 parking spaces.

Caltrain's operating agency, the Peninsula Corridor Joint Powers Board (JPB) owns most of the Transit Center and Caltrain Station areas, except for the Centennial Plaza portion of the Plaza area shown below, which is owned by the City.

The Transit Center currently serves nearly 4,300 weekday boarding Caltrain riders and an additional 1,300 VTA light rail riders. In addition, VTA buses, Caltrain shuttles, Transportation Management Association (TMA) shuttles, private employer shuttles, and the Mountain View Community Shuttle serve 1,000 daily riders. Although many of these passengers transfer between transportation modes, the total passenger activity at the Transit Center and Caltrain Station (arriving and departing) approaches 10,000 daily. Caltrain ridership count data shows that usage is equally distributed between riders traveling to destinations outside of Mountain View and riders arriving for local businesses.

The Caltrain station also serves a high number of bicycle riders who bring their bicycles on the train (more than 500 each day, the third highest station). Other Caltrain riders store bikes at the station. At least 10 percent of Transit Center users are bicyclists.

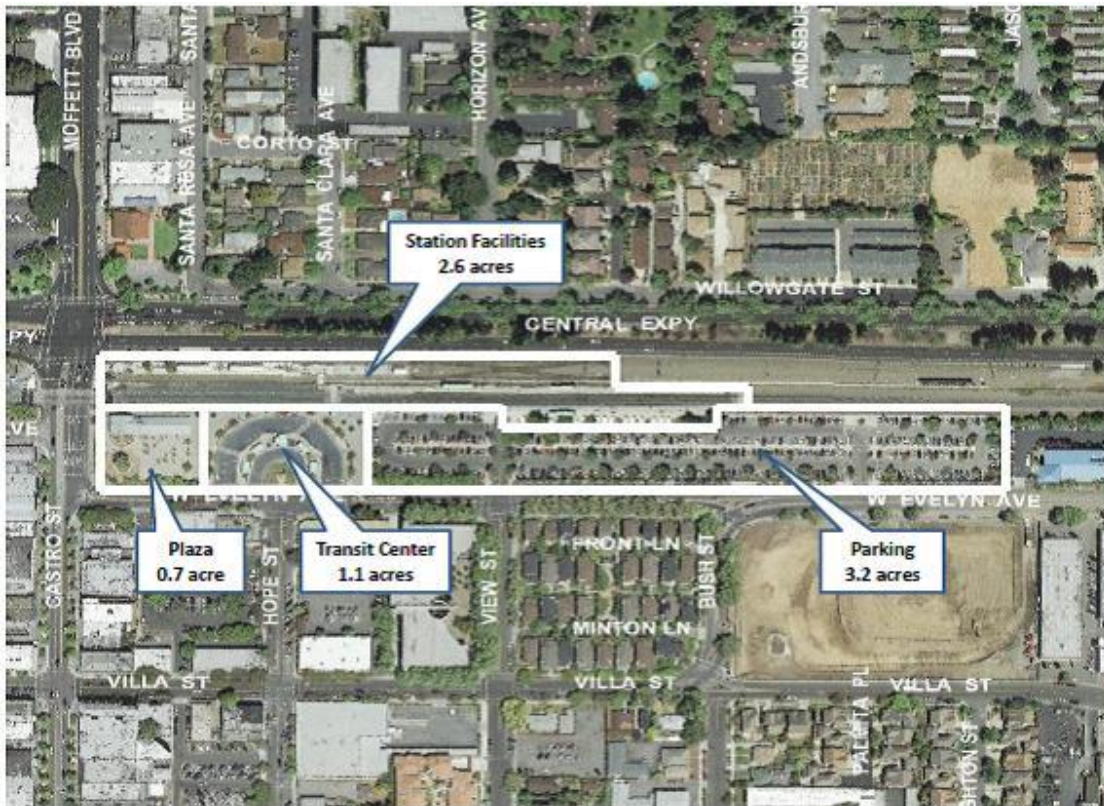


Figure 1 – Mountain View Transit Center and Caltrain Station

The need to develop a Master Plan for the Transit Center and Caltrain Station is particularly timely given a number of significant issues that will affect the operation of the Transit Center and Station in the near future. These include:

- Increased Rail and Transit Service

Caltrain service is expected to increase by 40 percent with the completion of its electrification project in 2020 which will increase the bidirectional frequency of rail service along the Peninsula rail corridor. Demand for VTA light rail service is also expected to double at the Transit Center once express service to BART at the new Milpitas Station is available in 2017. In the longer term, California High-Speed Rail (CHSR) service is also proposed to operate as many as eight trains per hour in the Peninsula rail corridor.

Key implications for the Transit Center include:

- Increases in gate down time, and subsequent delays at the Castro Street/Moffett Boulevard/Central Expressway intersection.
- Increases in passenger activity that will create greater potential for conflicts with rail and vehicles.
- The potential need for additional safety mitigations related to CHSR service.

- Increased Transit Ridership and Activity

With additional transit capacity and service, combined with the City's goals for mode shifts to non-single occupancy vehicle (SOV) travel, an increase in transit ridership is expected. According to Caltrain ridership data, ridership to and from Mountain View could increase from approximately 4,300 average weekday passengers in 2014 to more than 10,000 by 2030. Similarly, average weekday ridership on the VTA light rail system through the Mountain View Station could increase to 3,000 during that same time period.

Key implications for the Transit Center include:

- The need for Caltrain platform expansion to accommodate demand.
- Increased numbers of bicyclists/pedestrians crossing the tracks and adjacent intersections.

- Greater demand for last-mile transit, bicycle, and other services.
- Increased parking demand at the Transit Center/Caltrain Station and the potential for spillover into neighborhoods.
- Increased Last-Mile Shuttle Services

Increased development and stricter regulations in Mountain View and other nearby cities requiring employers to provide private shuttles as part of their transportation demand management (TDM) requirements will continue to impact circulation at and near the Transit Center/Caltrain Station.

Key implications of this trend include the need for:

- Additional shuttle loading areas at the Transit Center.
- Better management of loading activity.
- Enhanced coordination or consolidation of services and possible limits to the number of shuttles in the area through a permit or other management system.
- Increased Bicycle Demand and Activity

According to the 2030 General Plan and the Bicycle Transportation Plan, the City of Mountain View is planning for enhanced bicycle mobility throughout the City, including a key role in providing enhanced first-/last-mile connections.

Key implications for the Transit Center include the need for:

- Additional space for bicycle parking/storage at the Transit Center, including possible expansion of bike-share facilities.
- Improved bicycle accommodation across Central Expressway.
- Additional high-quality, protected bicycle lanes to/from the Transit Center/Caltrain Station along key bicycle routes.
- Increased Traffic Volumes

Planning efforts by both the City of Mountain View and Santa Clara County anticipate ongoing increases in traffic volumes along roadways in the vicinity of

the Transit Center. These increases reflect ongoing development and employment expansion within Mountain View, as well as the Silicon Valley region.

Key potential implications of the growth in traffic volumes include:

- Increased traffic volumes at the Central Expressway/Moffett Boulevard/Castro Street intersection.
 - The potential for increased traffic conflicts with pedestrians and bicycles.
 - The need for more efficient shuttle routing around the Transit Center and Caltrain Station.
- Increase in Demand for Housing, Employment, and Services Near Station

Ongoing employment growth throughout the Bay Area, as well as regional funding requirements that prioritize development near transit nodes, will only increase the demand for development near the Transit Center.

The implications of this increased demand may include:

- The potential for locating a higher-density, mixed-use development on the existing Caltrain Station parking lot and/or other parcels near the Transit Center.
- The potential for building a new parking structure on existing station lot.
- The need for enhanced parking management around the Transit Center to reduce the potential for spillover impacts into neighborhoods.

Development of the Master Plan

Although the specific scope for the Transit Center Master Plan still needs to be discussed and finalized, staff estimates the development of the Plan could be completed in approximately 18 months. This planning effort will require a significant amount of coordination by and between the City, VTA, Santa Clara County, Caltrain, CHSR Authority, and other stakeholders. Development of a Master Plan in that time frame would be particularly timely in terms of upcoming funding programs such as Caltrain and CHSR capital improvements, funding from the State's Cap-and-Trade Program to reduce greenhouse gas emissions, and a possible 2016 Santa Clara County transportation sales tax measure.

Key products of the proposed master planning effort would include a site Master Plan for the Transit Center and larger Caltrain Station area and:

- Evaluation and recommendations regarding Castro Street and/or Central Expressway grade-separation options to address traffic, property, and business impacts.
- A preferred plan for improved transit facilities, including platform expansion, bus and shuttle loading areas, pedestrian and bicycle access, bicycle storage, and other facilities.
- Evaluation and recommendations regarding parking structure options and potential redevelopment of the Caltrain parking lot.
- Land use and potential development plans.
- Identification of capital costs, funding strategy, phasing, and implementation plan.

Potential Improvements

A variety of interrelated alternatives for improving station capacity, station access, parking and vehicle operations, and other issues will need to be evaluated comprehensively to determine the best plan. Concepts for the Station and Transit Center that could be addressed in a comprehensive Master Plan include the following:

1. **Grade separation of Castro Street at the Caltrain tracks and/or Central Expressway**, with a separate crossing for bicycles and pedestrians. Potential grade-separation alternatives include:
 - Lowering Castro Street under both the railroad and Central Expressway, resulting in the elimination of some traffic movements from Castro Street/Moffett Boulevard to Central Expressway.
 - Depressing Castro Street under the railroad tracks to meet a depressed Central Expressway at a full intersection with Central Expressway.
 - Partial elevation of the rail tracks to reduce the depth of the undercrossing in order to minimize impacts to the downtown commercial area.

- Closure of the Castro Street crossing at the railroad tracks, with redirected traffic on West Evelyn Avenue connecting to Shoreline Boulevard via new access/connection improvements.
- A separate or integrated pedestrian and bicycle grade separation that could extend under the railroad and either under Central Expressway or provide for at-grade crossing of Central Expressway. An elevated pedestrian and bicycle overcrossing could also be an option.

Key issues that should be addressed in the Master Plan study include traffic circulation, impacts on downtown businesses and residents, pedestrian access, and noise/visual impacts. The study would develop appropriate design renderings and other graphics to illustrate the various alternatives.

2. Caltrain Station Improvements

As noted previously, activity at the Transit Center already significantly exceeds the planned usage and substantial additional growth is expected. Potential station improvements would include higher-capacity boarding platforms, better pedestrian and bicycle access to the platforms, and additional passenger amenities.

Improvements to the Caltrain platforms could include longer platforms to serve longer trains (potentially as many as eight train cars versus the current limit of five cars), wider platforms to accommodate an increased number of passengers, level boarding facilities (raised platforms) to serve high platform rail cars and speed up boarding, and upgraded shelters and customer information. Wider platforms similar to those at the Palo Alto Station (Figure 2) could create clearances from the future CHSR service and other express trains. The Master Plan study could also consider the merits of a single, center boarding platform rather than the two outside platforms currently used. If feasible, a center platform could provide more space for passengers and consolidate points of access.

With the increased number of trains and passengers, it would also be desirable to grade separate pedestrian/bicycle movements (over/under) between the Caltrain platforms, light rail platforms, and Transit Center, and potentially across Central Expressway. Many Caltrain stations have already constructed pedestrian underpasses, such as the example at the San Jose Station (Figure 3). If possible, ramps would be used for Americans with Disabilities Act (ADA) access, but elevators may need to be considered to conserve space.



Figure 2 – Palo Alto Caltrain Station

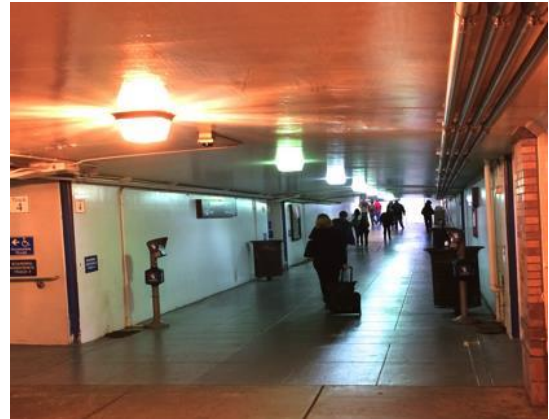


Figure 3 – San Jose Undercrossing

The VTA light rail station, as currently constructed, meets VTA standards and should be able to adequately address future needs. However, it is possible that a shift in the light rail station location within the Transit Center/Caltrain Station envelope might support other station concepts that are identified in the Master Plan evaluation and better integrate with the Caltrain platforms.

Other issues to address in the Master Plan, in addition to station capacity, include coordination with future CHSR operating needs (renewed planning work for the CHSR project will begin this year), efficient passenger movement between the station elements (including surge demands from train arrivals), integration of the platforms with Centennial Plaza, and design features to sustain the Station's role as a gateway to downtown Mountain View.

3. Bus and Shuttle Loading Area

The existing bus and shuttle area at the Transit Center (Figure 4) has two loading sections—the outer loop, used by VTA buses, Caltrain public shuttles, and (since January) the Mountain View Community Shuttle and TMA shuttles (three routes). The inner loop is used by smaller private company shuttles. The outer loop has five loading bays, three used by VTA (one shared with the Community Shuttle) and two used for Caltrain and TMA shuttles. VTA operates five routes and there are currently four Caltrain/TMA shuttles, although plans call for significant expansion in conjunction with employment growth in North Bayshore and elsewhere in the City.

The inner loop currently serves 10 to 15 different private shuttles (more than 25 in total per hour) and is significantly congested (Figure 5) in the morning peak as

shuttles wait for arriving trains. Additional private shuttles (another 10 to 15) wait and load on adjacent City streets.

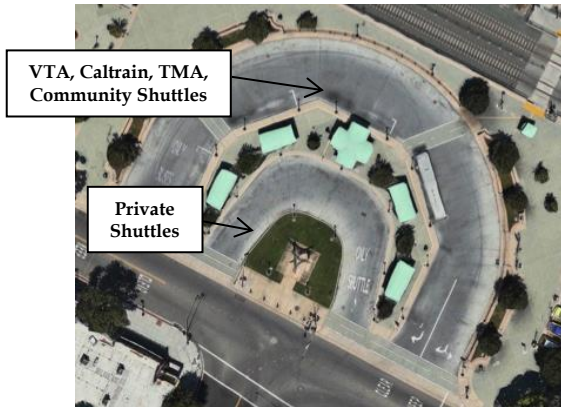


Figure 4 – Bus and Shuttle Area



Figure 5 – Morning Shuttle Loading

The Master Plan should address expansion or reconstruction of the Transit Center to handle increases in shuttle and transit service. Given the current design, it is likely that a full redesign may be needed to expand capacity. Possible design options include a stand-alone facility, such as the Palo Alto Caltrain Station facility (Figure 6), an integrated facility with a possible parking structure (e.g., San Bruno BART Station), or an underground bus facility as developed at the Denver Union Station (Figure 7). The Master Plan study would evaluate the size of the facility, access and circulation, and integration with other Transit Center elements.



Figure 6 – Palo Alto Caltrain Station



Figure 7 – Denver Bus Facility

4. **Bicycle and Pedestrian Access**

With the expected growth in Transit Center usage, there will be a corresponding increase in the number of pedestrians and bicyclists using the facility, both to connect between transit services and to access adjacent neighborhoods and

businesses. The Master Plan study would evaluate options for efficient passenger flow and sufficient capacity to meet peak demand.

Improved facilities could include either an underground concourse or an elevated facility. Two examples, which illustrate the concept but may provide more capacity than will likely be needed, are the underground concourse at the Los Angeles Union Station (Figure 8) and the overhead concourse at the Millbrae BART station (Figure 9). Underground connections are generally preferred since overhead clearances are much greater. A related design issue is the use of stairs and ramps versus elevators and escalators, which can conserve space but are more costly to construct and maintain. Ramps are usually only feasible with underground connections.

Walk and bike connections to the adjacent streets, business district, and neighborhoods should be smoothly integrated with the station pathways and plazas, including the potential grade separation of Castro Street, providing access across Central Expressway. In general, walkways can serve both bikes and pedestrians, although some special features for bikes may be needed. An example would be bicycle guide rails on stairways.



Figure 8 – Los Angeles Union Station



Figure 9 – Millbrae BART Stations

Planning for bicycle access should also address provisions for bike parking and bike sharing. The Master Plan study could evaluate options for added bicycle facilities, including bike share pods, lockers, bike racks, and a potential bike station. Bike stations, which have been developed at high-volume Caltrain and BART stations (Figure 10), can include bike storage, rentals, and other services. A bike station could be stand-alone or integrated into other facilities, such as a parking structure.



Figure 10 – San Francisco Caltrain Bike Station

5. **Parking**

Caltrain commuter parking (340 surface spaces) is generally full throughout the day. In addition, an estimated 100 to 150 commuters park their vehicles on streets adjacent to the downtown, including on Willowgate Street across Central Expressway. Environmental review documents prepared for the Caltrain electrification project estimated that future parking demand could increase to 800 to 1,000 spaces as the result of the anticipated increase in Caltrain service that will result from the electrification project, although Caltrain policy is to encourage alternative access rather than additional parking capacity.

Previous Transit Center plans, including the 1994 Evelyn Avenue Corridor Precise Plan, identified the potential construction of a parking structure to accommodate increased parking demand and/or free up land for other uses (including commercial or residential development). The Master Plan study could identify the appropriate number of parking spaces, including the size of a potential structure, and how the remaining surface parking area might be used or developed. Consideration can also be given to the use of evening and weekend parking to support downtown needs, similar to the arrangement at the Sunnyvale Caltrain Station (Figure 11).



Figure 11 – Sunnyvale Caltrain Station Parking Structure

Other issues to consider in the master planning effort include the possible development of a car-sharing strategy to reduce parking demand and increase the efficiency of parking spaces at the station and the potential need to incorporate electric vehicle charging facilities.

6. Land Use Plan and Potential Development

The Transit Center was previously an element of the Evelyn Avenue Corridor Precise Plan. However, the land use components from that Plan have been largely completed, so future changes to the Transit Center may more likely be incorporated into a future revision to the Downtown Precise Plan.

If the Master Plan includes a parking structure, that structure might occupy about a third of the current surface lot, leaving possibly two acres that could be considered for alternative use. Partial site development could help fund the station improvements. A plan for Transit-Oriented Development (TOD), particularly higher-density housing, could also help enhance the potential for grant funding for station improvements because several potential funding sources (i.e., State Cap-and-Trade Program) are targeted to TOD sites.

Cost and Potential Funding

The Master Plan study is estimated to cost approximately \$1 million, depending on the final scope. The largest cost element will be the comprehensive evaluation of grade-separation alternatives. In addition to City funding through the Capital Improvement Program, it is expected that the VTA, Caltrain, CHSR, and Santa Clara County may be interested in providing funding and participating in the planning process. The specifics regarding funding and participation from these partner agencies will be determined following further discussions regarding the scope and timeline for the Master Plan.

RECOMMENDATION

Staff seeks input and direction from the City Council regarding the components and alternatives to be considered in the Master Plan study. As previously noted, the Master Plan will consider a number of interrelated elements that will need to be integrated into an effective approach for addressing future station capacity and access needs. These initial concepts, discussed above, will be further explored in terms of technical feasibility, pros and cons, costs, and other evaluation measures. At this time, City Council feedback is requested regarding:

- The general approach and timeline for the master planning effort.
- The range of improvements to be studied.
 - Grade separation alternatives.
 - Station improvements (e.g., platform dimensions, bicycle and pedestrian access to platforms, other passenger amenities).
 - Bus and loading area.
 - Bicycle and pedestrian access.
 - Parking.
 - Land use and potential development.
- Additional issues that should be considered.

NEXT STEPS

Based on Council comments and direction, and following discussions with potential partner agencies (e.g., VTA, Caltrain, CHSRA, County) regarding the scope and funding participation, staff will present a capital improvement project funding request to the Council, noting potential funding commitments from other agencies.

Once the project funding is approved, a Request for Proposals and selection of a consultant team process will begin. As mentioned earlier in the report, staff estimates the Master Plan development process could be completed in approximately 18 to 24 months.

PUBLIC NOTICING

In addition to the City's standard agenda posting requirement, notices were sent to the Shoreline Corridor Study notification list which included more than 100 individuals, including and/or representing persons/stakeholders requesting notification, residents, attendees at Corridor Study-related workshops/meetings, the Old Mountain View and other City neighborhood associations, transportation agencies, Central Business Association, Mountain View Chamber of Commerce, the Bicycle/Pedestrian Advisory Committee, and other interested parties.

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