



DATE: September 3, 2019

CATEGORY: New Business

DEPT.: Public Works

TITLE: **Shoreline Boulevard Transit Lane and Utility Improvements, Project 16-58 – Project Update and Related Items**

RECOMMENDATION

1. Approve the removal and mitigation for 16 Heritage trees and replacement at a ratio of 2:1 with 24" box trees.
2. Amend Mark Thomas & Company's professional services agreement in the amount of \$53,600 for designing the mitigation measure at the Moffett Boulevard/Route 85 on-ramp.

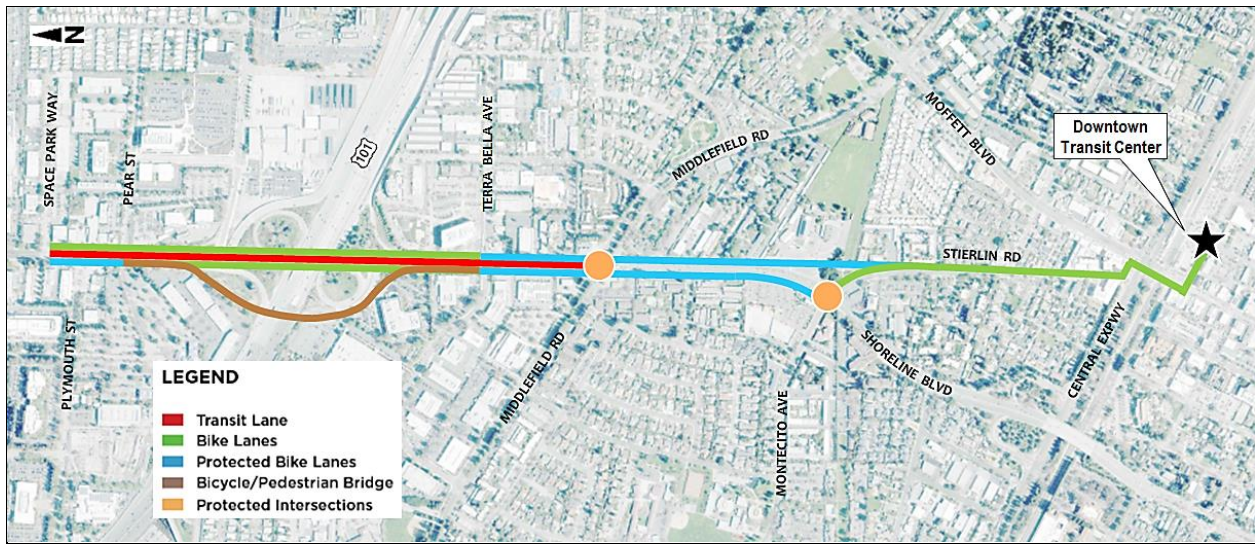
BACKGROUND

In anticipation of increased growth in the North Bayshore Area, two studies were completed to plan transportation improvements. In 2013, the "Shoreline Regional Community Transportation Study" recommended, and the Council approved, a mode-share target to reduce single-occupant vehicle (SOV) trips to 45 percent and increase the transit use to 35 percent for North Bayshore. In 2014, the "Shoreline Boulevard Transportation Corridor Study" (Corridor Study) evaluated transit, bicycle, and pedestrian strategies to address mobility issues on Shoreline Boulevard and provided a phased implementation program for transportation improvements. The Corridor Study identified a dedicated transit lane in the median on Shoreline Boulevard between Middlefield Road and Space Park Way as well as improvements to pedestrian and bicycle facilities to enhance the safety and mobility for all modes of travel within the Shoreline Boulevard corridor (see Figure 1).

The dedicated transit lane on Shoreline Boulevard will improve the "last-mile" connection for transit service between North Bayshore and the Downtown Transit Center by allowing transit vehicles to bypass northbound congestion in the morning and southbound congestion in the afternoon.

The bike lane improvements proposed in the Corridor Study include a new bicycle and pedestrian bridge crossing Highway 101, protected bike lanes between Terra Bella Avenue and Montecito Avenue, and new bike lanes on Stierlin Road. These bike lane improvements will connect with the existing bike lane at 100 Moffett Boulevard and a planned future undercrossing at Central Expressway to complete the bike lane network connecting North Bayshore and the Downtown Transit Center. The Highway 101 bridge and the Stierlin Road bike lane projects are currently in the preliminary design phase.

Figure 1: Corridor Study Recommended Transportation Improvements



On September 6, 2016, the Council approved the conceptual design for the Shoreline Boulevard Transit Lane and Utility Improvements. The conceptual design includes the dedicated transit lane on Shoreline Boulevard between Middlefield Road and Pear Avenue, protected bike lanes on Shoreline Boulevard between Middlefield Road and Terra Bella Avenue, protected Shoreline Boulevard/Middlefield Road intersection, and water and sewer utility improvements. Following the Council’s approval of the conceptual design, the professional services agreement with Mark Thomas & Company was amended to proceed with completing the final design.

ANALYSIS

The following are descriptions of the key design elements in the project:

Dedicated Reversible Bus Lane

A new 12' wide, single, dedicated transit lane with 2' wide, raised buffer will be constructed in the median on Shoreline Boulevard between Middlefield Road and Pear Avenue. The total length of the lane will be approximately two-thirds of a mile (see Figure 2). The new lane will replace the existing two-way left-turn lane or landscaped median and will not eliminate existing vehicle lanes. As a preliminary operation schedule, the reversible lane will serve the peak travel direction, operating northbound from 6:00 a.m. to 2:00 p.m. and southbound from 3:00 p.m. to 10:00 p.m. on weekdays. Once the lane is tested and in operation, the schedule may be adjusted.

Results from the traffic model indicated reduced travel time through the corridor for both transit and general-purpose lanes. The average time savings during the morning peak hour is about four and one-half minutes for the transit lane and about three minutes for the general-purpose lane. The average time savings during the evening peak hour is less than one minute for both lanes.

The transit lane to be constructed in this project is the first of two segments. A future lane extension from Pear Avenue to Space Park Way will be constructed with the Plymouth Street/Space Park Way realignment project.

Figure 2: Limits of Shoreline Boulevard Bus Lane

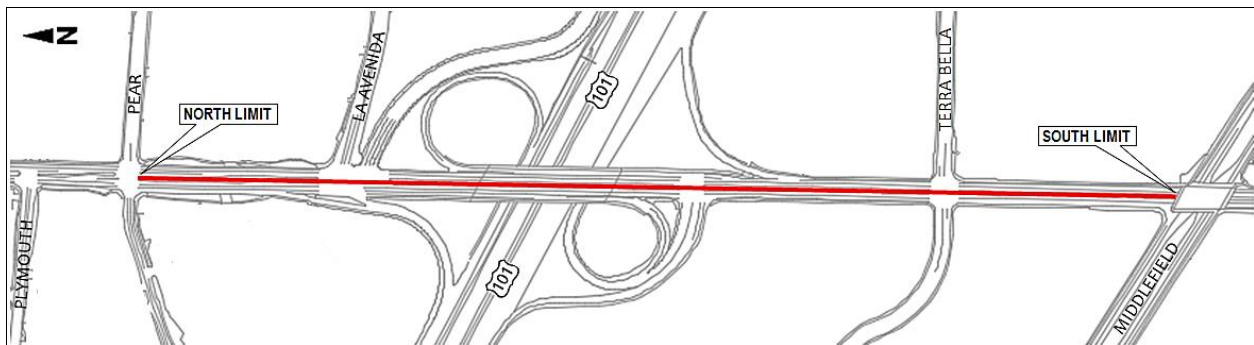


Figure 3 shows an example of a median dedicated transit lane. Buses that qualify to use the lane must have a minimum capacity of 10 passengers as defined by California Vehicle Code Section 233. New traffic signals at five intersections (Middlefield Road, Terra Bella Avenue, southbound Highway 101 off-ramp, northbound Highway 101 off-

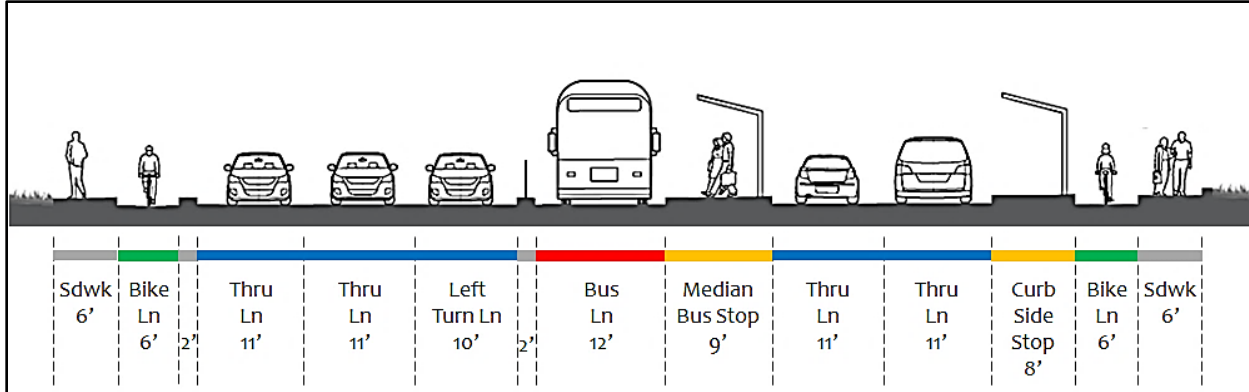
ramp/La Avenida, and Pear Avenue) along the transit lane corridor will also be installed. Buses may enter or exit the lane at either Middlefield Road or Pear Avenue where special traffic signals will be installed to direct them.

New bus stops within the transit lane are planned at Terra Bella Avenue (see Figure 4) and Pear Avenue. The existing curbside bus stops will remain in use for buses that choose not to use the transit lane or for buses traveling in the off-peak direction.

Figure 3: Example of Dedicated Transit Lane



Figure 4: Median and Curbside Bus Stop at Terra Bella Avenue

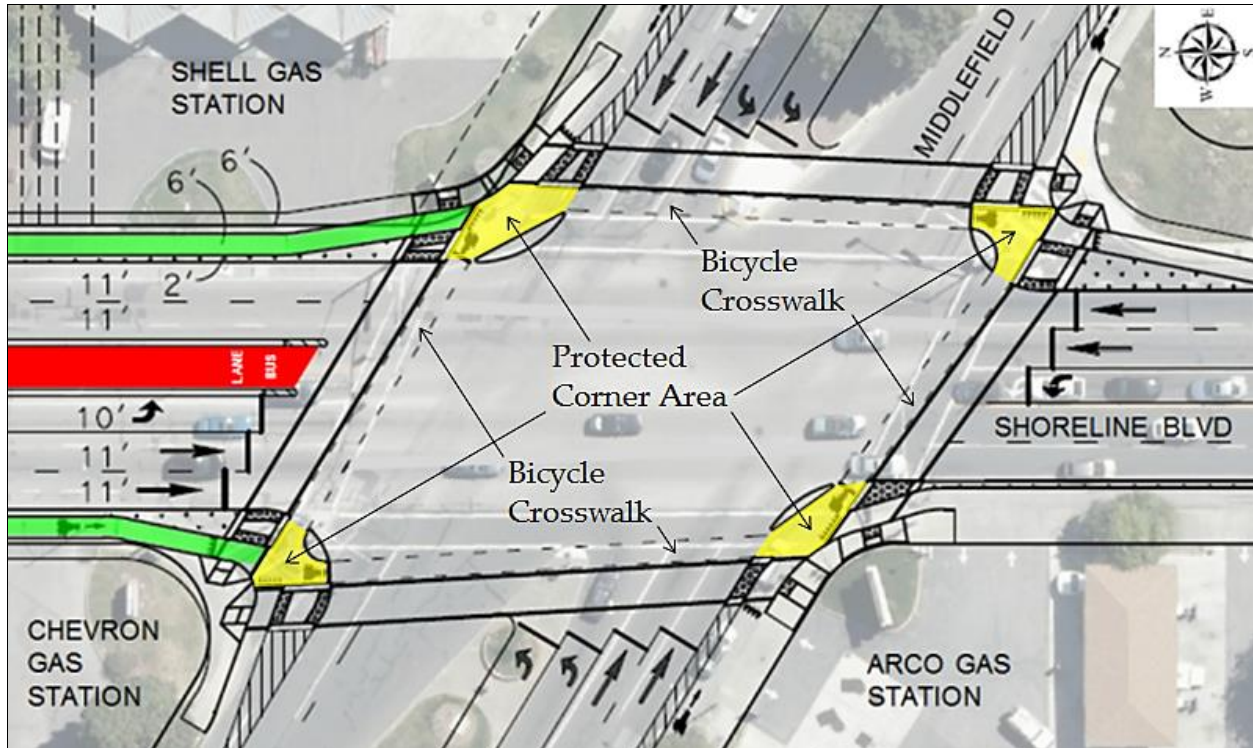


Bike Lane Improvements

The current bike lanes on Shoreline Boulevard north of Middlefield Road are 5’ wide and do not include a buffer. The proposed project includes protected bike lanes with 2’ wide raised buffer on Shoreline Boulevard between Middlefield Road and Terra Bella Avenue. The new protected bike lanes will have a physical barrier to protect bicyclists from vehicles. The existing curb will need to be moved and the street widened to accommodate this work. Bike lanes between Terra Bella Avenue and Pear Avenue will be widened to 6’ and enhanced with high-visibility green bike lane marking at several locations. The project also includes a protected intersection at Middlefield Road that will provide physical barriers to protect both bicyclists and pedestrians waiting to cross the street (see Figure 5).

When the bicycle and pedestrian bridge crossing Highway 101 is completed, the Terra Bella Avenue intersection will serve as the connection point to cross Highway 101 for bicyclists who wish to use an off-street bike path and the future bridge on the west side of Shoreline Boulevard.

Figure 5: Protected Intersection at Middlefield Road



Pedestrian Improvements

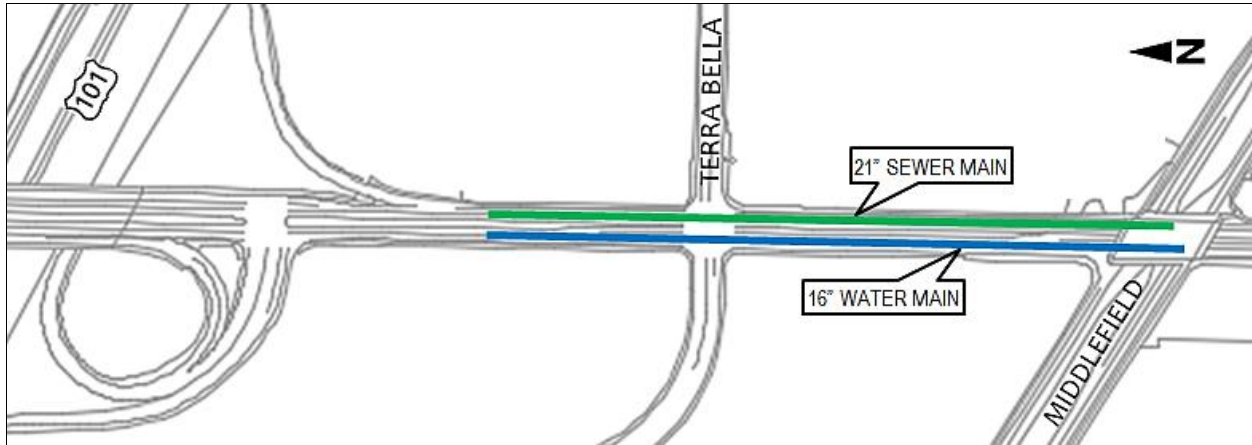
The project includes the protected intersection at Shoreline Boulevard and Middlefield Road as described above and the reconstruction of sidewalks and crosswalks along the corridor to meet Americans with Disabilities Act (ADA) standards. Crosswalks within the Highway 101 overpass will be enhanced to make pedestrians more visible to drivers.

Utility Improvements

As part of the scope of work in this project, approximately 5,000' of pipe will be installed, including a new 16" water transmission pipe and upsizing of the existing sewer pipe to 21" on Shoreline Boulevard between Middlefield Road and Highway 101 (see Figure 6). These utility improvements are intended to replace the current aging infrastructure and will be the initial work for a planned future project to install new and larger water and sewer pipes crossing under Highway 101 to provide increased service capacity for anticipated growth in the North Bayshore Area.

The utility work is included in this project to avoid future disruption on the transit lane and other improvements that would be newly constructed by this project.

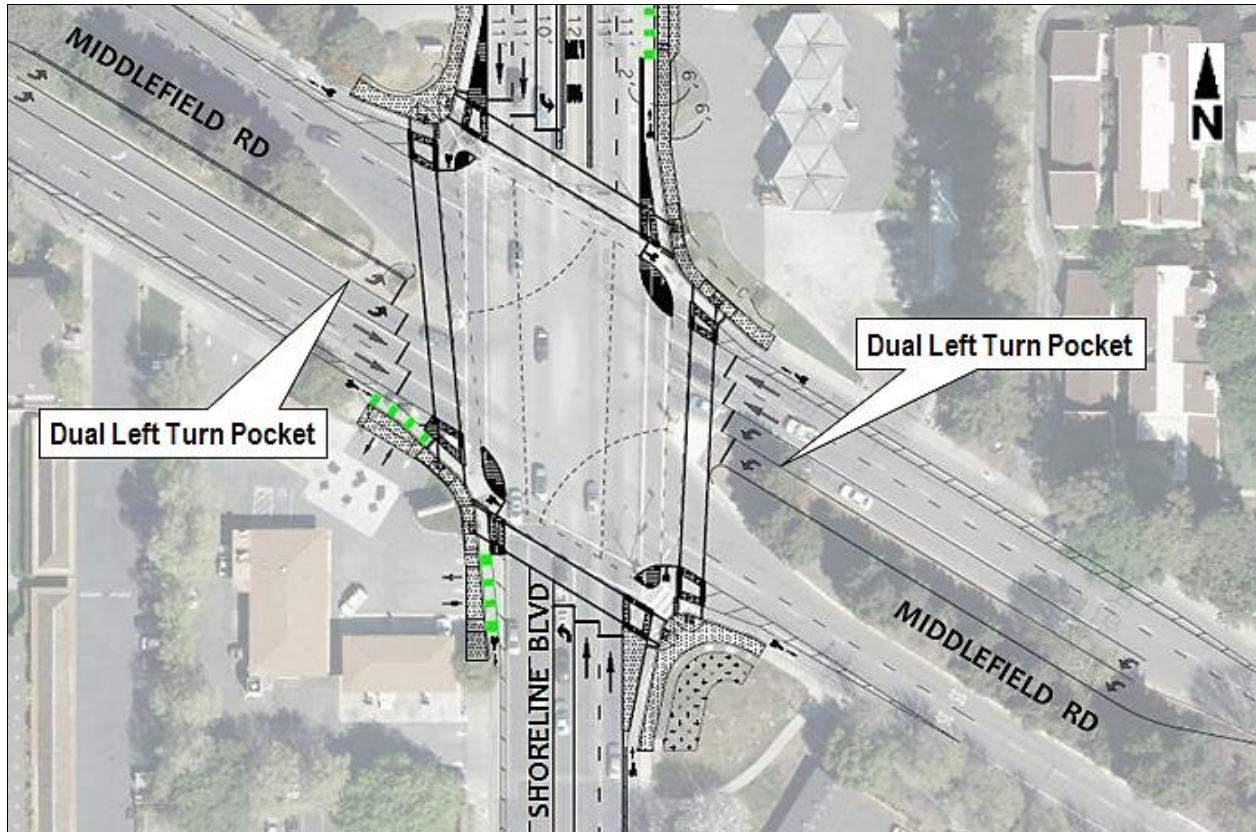
Figure 6: Utility Improvements on Shoreline Boulevard



Additional Left Turn Lanes on Middlefield Road

The project includes the construction of an additional left-turn lane on both approaches of Middlefield Road at Shoreline Boulevard. Portions of the Middlefield Road median will be demolished and replaced by the additional left-turn lane to provide a dual left-turn pocket in each direction from Middlefield Road to Shoreline Boulevard (see Figure 7). This work is a mitigation measure for the North Bayshore Precise Plan.

Figure 7: Dual Left-Turn Pockets from Middlefield Road to Shoreline Boulevard



Dedicated Right Turn Lane on Shoreline Boulevard to Pear Avenue

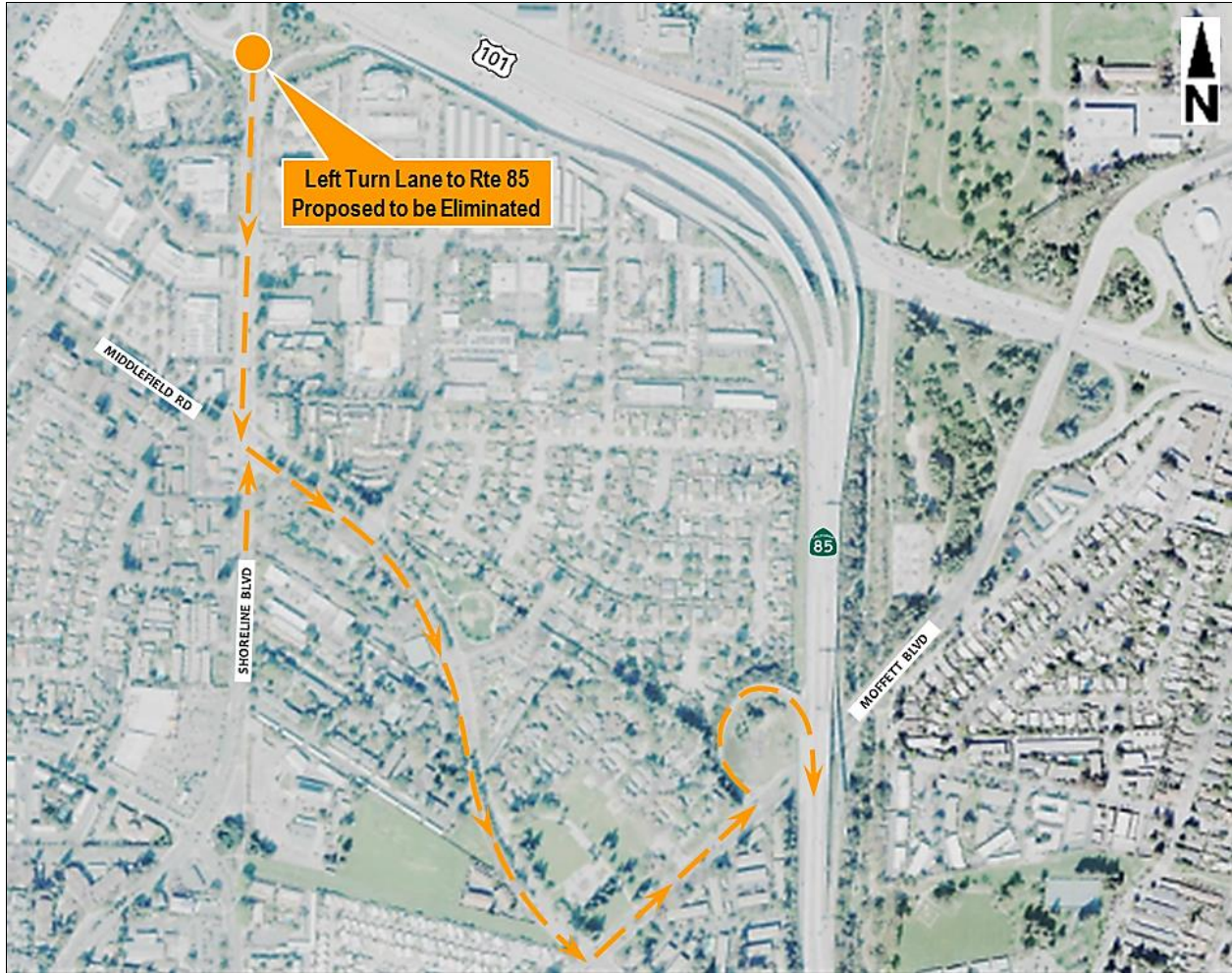
Currently, vehicles traveling on northbound Shoreline Boulevard often have to wait and queue behind the right-turning vehicles at Pear Avenue. The project will construct a dedicated right turn lane on northbound Shoreline Boulevard between La Avenida and Pear Avenue. This additional lane will provide capacity and remove the right-turning vehicles from the through lanes, thus helping to improve the overall traffic operation at the Pear Avenue intersection.

Route 85 Access from Shoreline Boulevard

As there is insufficient width on the Shoreline Boulevard/Highway 101 overpass to accommodate both the left-turn lane and the bus lane, the left-turn lane on northbound Shoreline Boulevard to southbound Route 85 will be eliminated and replaced by the median bus lane. Traffic data indicates the usage of this left-turn lane is relatively low (55 and 89 vehicles during the a.m. and p.m. peak hour, respectively). The alternate route for vehicles to access southbound Route 85 will be using eastbound Middlefield

Road to northbound Moffett Boulevard as shown in Figure 8. Access to Route 85 coming from southbound Shoreline Boulevard remains available at the Shoreline Boulevard/Highway 101 overpass.

Figure 8: Alternate Route to Southbound 85 from Shoreline Boulevard



A traffic analysis was conducted to assess the impact of routing vehicles from Shoreline Boulevard to Moffett Boulevard for southbound Route 85 access. The study indicated there is not enough vehicle storage capacity on the Moffett Boulevard/Route 85 on-ramp; vehicles waiting to get on the freeway behind the ramp metering stop will most likely spill over onto Moffett Boulevard. Caltrans is requiring the City to mitigate this impact by extending the left-turn pocket preceding the Route 85 on-ramp on Moffett Boulevard.

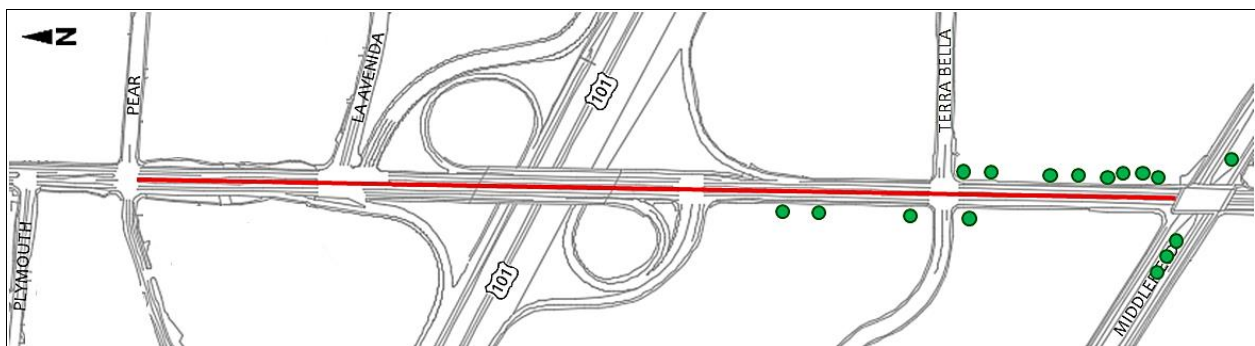
The engineering design and construction of extending this left-turn pocket on Moffett Boulevard were not included in the original scope of work for this project. Staff recommends amending Mark Thomas & Company’s professional services agreement for the engineering design. Construction of this mitigation work will be done by a separate project. Upon completion of the design, staff will assess whether additional funding is required for construction.

Heritage Tree Removal

The project requires the removal of 16 Heritage trees (see Figure 9). These Heritage trees are not in direct conflict with the median bus lane; their removal is necessitated by having to move the existing curb closer to the property line and widen the street. Staff presented the Heritage tree removal and the proposed mitigation to the Parks and Recreation Commission (PRC) on April 18, 2018 and December 12, 2018. The PRC recommended the Council to approve the removal and mitigation of these 16 Heritage trees at a 2:1 replacement ratio with 24” box trees. The replacement trees will be planted at various locations within the project limits.

The work to remove those 16 Heritage trees will be performed by a separate project in late fall 2019 or early 2020.

Figure 9: Location of Proposed Heritage Tree Removal

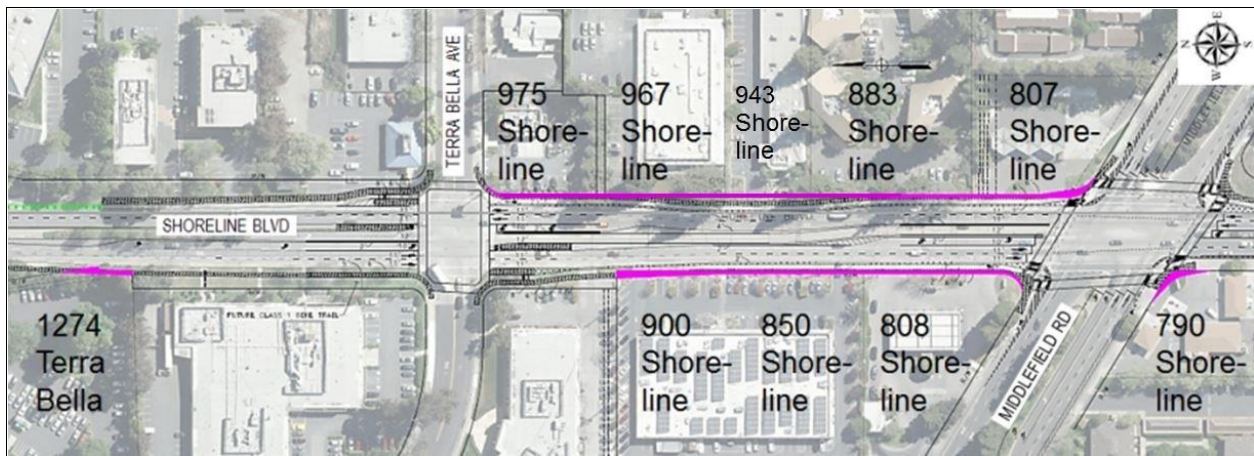


Right-of-Way Acquisition

The project requires the acquisition of up to 6’ of additional right-of-way along the property frontage on nine parcels on Shoreline Boulevard (see Figure 10). In Closed Sessions on October 17, 2017, and January 22, 2019, staff obtained Council authorization to negotiate with property owners. Staff has reached negotiated agreements with six of the nine property owners affected by the project. On May 23, 2019, the Council, acting in a public hearing, adopted Resolutions of Necessity for the acquisition by eminent

domain on portions of the remaining properties. Complaints in Condemnation and petitions for Orders of Possession were filed in the Superior Court in August 2019. Staff is continuing to attempt to reach agreement with the three property owners while legal proceedings continue. Staff anticipates obtaining court-ordered Orders of Possession by December 2019.

Figure 10: Right-of-Way Acquisitions



Public Outreach

Staff held a community meeting and a shuttle/transit operator meeting on July 26, 2016 and August 16, 2016, respectively. Input from these meetings was taken into consideration in the conceptual design approved by the Council on September 6, 2016. Another shuttle/transit operator meeting was held on May 14, 2019 to discuss the use and operation policy for the transit lane with shuttle and transit operators.

Numerous other meetings were also held with individuals and property owners to discuss with them the project, impacts, and its broader benefits.

Construction Impacts

The construction sequence of this project is being planned to minimize impacts to traffic and nearby residents and businesses. The first order of work will be the installation of the underground water and sewer pipes. This work will take place at night with one lane closed on Shoreline Boulevard. Once the underground utility work is completed, it will be followed by the median removal and street widening work. Part of the work to widen the street will involve relocating other utility companies' facilities (PG&E, AT&T, etc.) PG&E may need to temporarily shut down the power to relocate their facilities.

Staff will coordinate with the utility companies to ensure minimal impact and proper advance noticing to affected customers.

The median transit lane and the protected bike lanes will be constructed next. To minimize traffic impact, two lanes on Shoreline Boulevard will remain open and accessible to traffic in the peak direction. When the work requires closing lanes on Shoreline Boulevard, nighttime and weekend lane closures will be implemented when the traffic volumes are low. However, one lane will remain open in each direction during lane closures. Additionally, on days when there is a concert at Shoreline Amphitheatre, no lane closures will be allowed.

During the course of construction, a path of travel for pedestrians will be made available on one side of Shoreline Boulevard while the other side is being improved. Bike lanes on Shoreline Boulevard will be kept during construction for bicyclists' use. Driveway access on Shoreline Boulevard will also be maintained; staff will communicate and coordinate with business owners to minimize impacts when temporary driveway closures are unavoidable.

Project Schedule

Plans and specifications for the project are nearing completion. Staff is waiting for the Caltrans permit before the design plans can be finalized. Staff will seek Council's approval for the plans and specifications for the project at a future Council meeting in fall 2019 as a consent item, as all major project components are discussed in this report. Construction of this project is planned to start in early 2020 and finish by the end of 2021.

California Environmental Quality Act

In accordance with the requirements of the California Environmental Quality Act (CEQA), the North Bayshore Precise Plan (NBPP) Final Environmental Impact Report (FEIR) provided program-level review for the project. The project-level CEQA review was conducted, and the findings concluded that no new significant impacts or impacts of substantially greater severity would result from the project than were discussed in the FEIR. Pursuant to CEQA Guidelines Section 15164, an EIR Addendum was appropriately prepared. On March 21, 2017, the City Council adopted a resolution to certify the Addendum to the NBPP FEIR.

FISCAL IMPACT

The construction phase for the Shoreline Boulevard Transit Lane and Utility Improvements, Project 18-43, has a total funding of \$13,704,000. The funding sources include Shoreline Community Fund (including Shoreline Community Bond Funds), Water and Wastewater Funds (both capacity charges and North Bayshore development impact fee), CIP Reserve Fund, and contribution from a North Bayshore development. There is sufficient funding for the proposed project. Staff may need to seek additional construction funding for the mitigation work on Moffett Boulevard in the future.

CONCLUSION

Staff is seeking City Council approval for the removal and mitigation of 16 Heritage trees for the Shoreline Boulevard Transit Lane and Utility Improvements, Project 16-58. Staff is also seeking City Council approval to amend Mark Thomas & Company's professional services agreement in the amount of \$53,600 to design the mitigation measure at Moffett Boulevard/Route 85 on-ramp. Upon completion of the project design documents this fall, staff will seek Council approval of the project plans and specifications for advertising and bidding.

ALTERNATIVES

1. Do not approve the amendment to the professional services agreement.
2. Provide other direction.

PUBLIC NOTICING

In addition to the City’s standard agenda posting requirements, notices were distributed to residents and businesses within 1,000’ of the project site, properties along the Route 85 access detour on Shoreline Boulevard, Middlefield Road, and Moffett Boulevard, nearby City neighborhood associations, the more than 200 individuals on the City’s bicycle and pedestrian e-mailing list, the Bicycle/Pedestrian Advisory Committee, and attendees of the past public outreach meetings.

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943-09-03-19CR-4
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Attachment: 1. Mark Thomas & Company – Amendment to Scope of Services and Fee Schedule

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