Memorandum

Date: February 9, 2024

Project: SMX900-2

To: Vanessa Castro,
County of San Mateo; and
Hugh Louch, City of Menlo Park

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Subject: Coleman and Ringwood Avenues Transportation Study – Suggested Draft Design Alternatives

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The following memorandum summarizes the suggested initial draft alternatives for the Coleman and Ringwood Avenues Transportation Study to be presented to the community for input. These initial concepts were developed considering priorities identified to date through several stakeholder and community engagement events, a community survey, feedback from the project's Community Advisory Committee (CAC) and Technical Advisory Committee (TAC), and conditions and constraints present on each corridor including available public-right-of way.

Study Goal

The overarching goal of the study, established at the beginning of the study and confirmed through the first phase of community engagement, is to improve mobility for active modes of transportation and safety for all users of Coleman and Ringwood Avenues. This goal was confirmed during the first phase of engagement which consisted of multiple "pop-up" and "pop-in" events, the first of two online surveys, and two walking tours. These engagement activities identified that there is overwhelming support from residents and stakeholders for improved bicycle and pedestrian infrastructure. The provision of comfortable and dedicated places to walk and bike was the most important priority for the community on both corridors followed to a lesser extent by the preservation of trees and vegetation. The provision of street lighting and on-street parking were consistently ranked as lower priorities. The number one safety concern identified by the community for Coleman Avenue is not having enough space in the street to walk or bike, while dangerous driving behavior especially related to school circulation was identified as the number one safety concern for Ringwood Avenue. Speeding was identified as a concern on both corridors, though to a lesser extent for Coleman Avenue, and many residents requested improvements to calm traffic. Additionally, the need for numerous localized enhancements such as new pedestrian crossings and intersection improvements were also identified. As a result, the provision of new dedicated places to walk and bike was a key component of the suggested design alternatives.

Key Objectives

Based on the existing conditions assessment, feedback from the community, and discussions with the advisory committees, a series of key objectives were identified to guide the development of the design

alternatives and evaluation criteria. These objectives reflect the key takeaways from the community engagement efforts and are smaller more specific goals that outline the framework for achieving the overarching goal to improve mobility for active modes of transportation and safety for all roadway users.

- Improve safety by reducing the frequency and severity of collisions,
- Reduce vehicle travel speeds, especially where different user groups interact or share space,
- Create greater separation of physical space for pedestrians and bicyclists from motor vehicles,
- Improve the level of perceived comfort for pedestrians and bicyclists,
- Provide continuity for pedestrians and bicyclists from one side of the corridors to the other, and
- Preserve the character of the neighborhood including trees, greenery, neighborhood circulation patterns, and parking only within the City of Menlo Park segment of Coleman Avenue.

Traffic Calming Measures and Spot Improvements

A general desire for reduced travel speeds was expressed by the community for both corridors. As a result, it is suggested that traffic calming improvements such as those listed below be incorporated into each design alternative. While many of these measures are not yet depicted in the following cross section graphics, they will be evaluated further for feasibility during the 10 percent conceptual design stage for the alternatives that receive the most community support.

- Narrower travel lanes
- Speed tables
- Chicanes (City only)
- Curb Extensions (City only)
- Formalizing the traffic circles protecting trees
- Centerline and edge line striping
- Speed feedback signs
- Speed reduction markings
- Tighter turning radii
- Explore possibility of lowering the posted speed limit
- Enhanced crossings (flashing beacons or raised crossings)
- New pedestrian crossings
- Vegetation clearing and trimming
- New stop controls

Coleman Avenue (County of San Mateo)

The following initial design concepts were developed for the County segment of Coleman Avenue.

Alternative 1 – No Build, Retain Existing Conditions

Alternative 1 would maintain the existing roadway conditions along Coleman Avenue. These are illustrated in Plate 1 and summarized below.

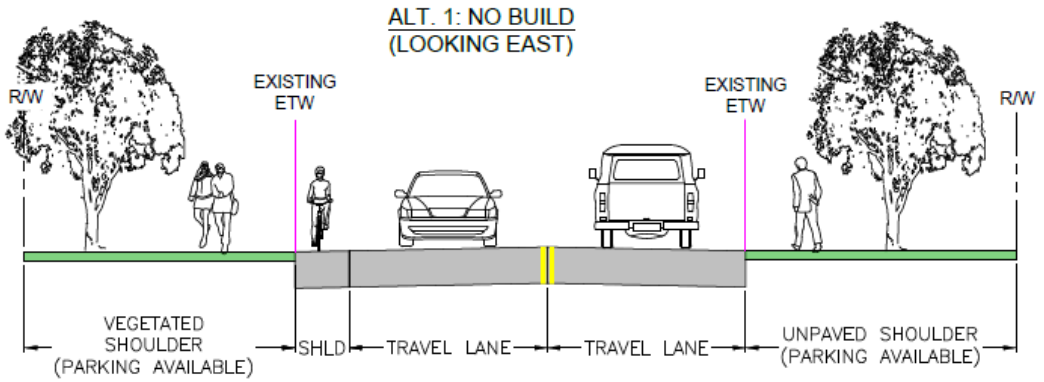

Plate 1 Coleman Avenue (County of San Mateo) Alternative 1

- 50-to-63-foot public right-of-way
- Two 11-foot travel lanes
- Striped shoulder on the north side of the street that varies in width between two and four feet
- Roadside gravel, dirt, and vegetation with numerous large mature oak trees and utility poles located within the public right-of-way
- Roadway alignment includes a series of slight horizontal curvature
- Traffic circles inscribing trees in the center of intersections
- Parking is provided on both sides of the street in select locations with time-of-day restrictions

Alternative 2 – Bicycle Boulevard with Pedestrian Pathway (San Mateo County ATP)

Under Alternative 2, the existing roadway width along Coleman Avenue would be retained and traffic calming elements introduced to slow speeds and discourage cut-through traffic. Signage and sharrow pavement markings signifying the roadway as a Class III bicycle facility would also be installed. To accommodate pedestrians, an off-street pathway would be constructed on the north side of the corridor, resulting in elimination of parking on this side of the street. The pathway would likely result in some tree and utility pole impacts, though it would be designed to meander around those obstacles as much as possible. The southern side of the street would be left undisturbed. This was the preferred alternative identified in the County's Active Transportation Plan, and is illustrated conceptually in Plate 2.

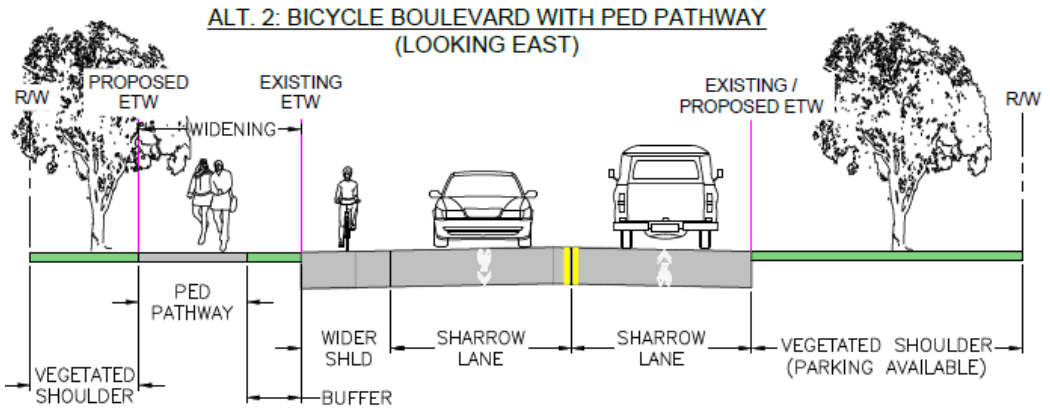

Plate 2 Coleman Avenue (County of San Mateo) Alternative 2

Alternative 3 – Multi-Use Pathway on North Side

Alternative 3 would include the construction of a multi-use pathway on the north side of Coleman Avenue. The existing roadway alignment would be retained, though the addition of the multi-use pathway on the north side would result in elimination of parking on this side of the street. The multi-use pathway would meander around trees and other objects as much as possible, though some tree and utility impacts would be expected. Sharrow pavement markings and traffic calming measures would be installed within the roadway to allow cyclists the option of riding on-street if they prefer. The southern side of Coleman Avenue would be left undisturbed. These potential improvements are denoted conceptually in Plate 3.

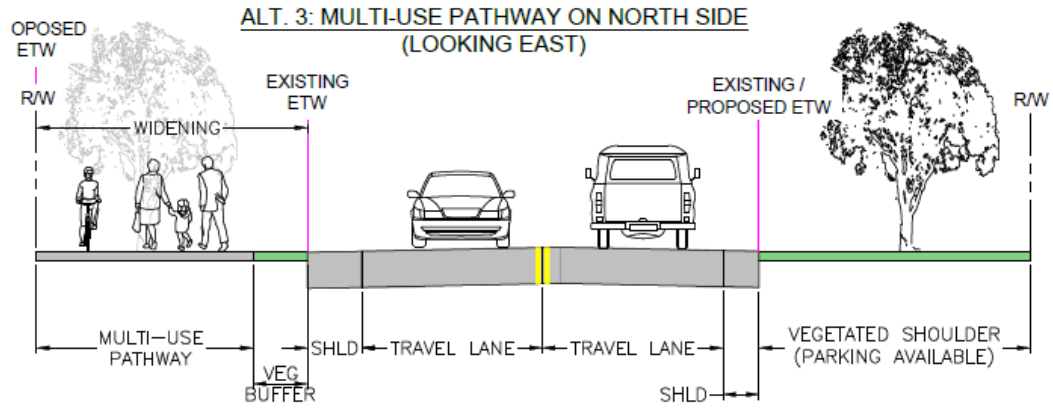

Plate 3 Coleman Avenue (County of San Mateo) Alternative 3

Alternative 4 – Class II Bike Lanes with Pedestrian Pathway on North Side

Alternative 4 is illustrated in Plate 4 and would include the construction of a Class II bicycle lane in each direction of Coleman Avenue. Roadway widening would be required for the bike lanes. A pathway would be constructed on the north side of the street to accommodate pedestrians, resulting in the removal of parking on the north side. The pathway would meander around trees and other objects as much as possible to limit the tree and utility impacts along the corridor. To separate the pathway from the adjacent bicycle

lane, vegetated buffers or vertical elements, such as an asphalt dike, would be constructed. Traffic calming measures would also be installed within the roadway to slow speeds and discourage cut-through traffic.

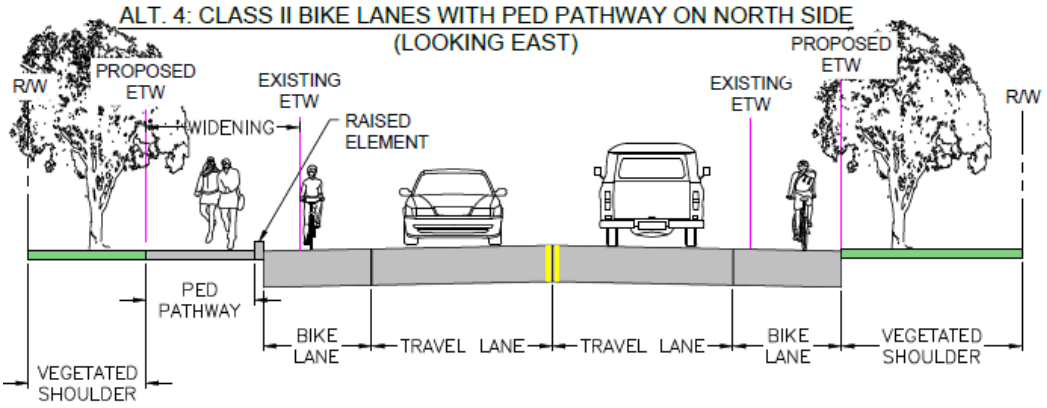

Plate 4 Coleman Avenue (County of San Mateo) Alternative 4

Alternative 5 – One-way Street

Alternative 5 is illustrated in Plate 5 and would reconfigure the circulation pattern in the area by converting Coleman Avenue to one-way operation westbound toward Ringwood Avenue. The street would be closed at the Ringwood Avenue/Coleman Avenue intersection to eastbound motorists. The existing pavement space would be retained and reconfigured to provide one westbound travel lane and two on-street bicycle lanes. A buffer would be included between the eastbound bicycle lane and the adjacent westbound travel lane. To accommodate pedestrians, an off-street pathway would be constructed on the north side of the street, resulting in parking removal on tis side of the corridor. The pathway is anticipated to result in some tree and utility pole impacts, though it would be designed to meander around those obstacles as much as possible. To separate the pathway from the adjacent bicycle lane, vegetated buffers or vertical elements, such as an asphalt dike, would be constructed. Traffic calming measures would also be installed within the roadway to slow vehicle speeds.

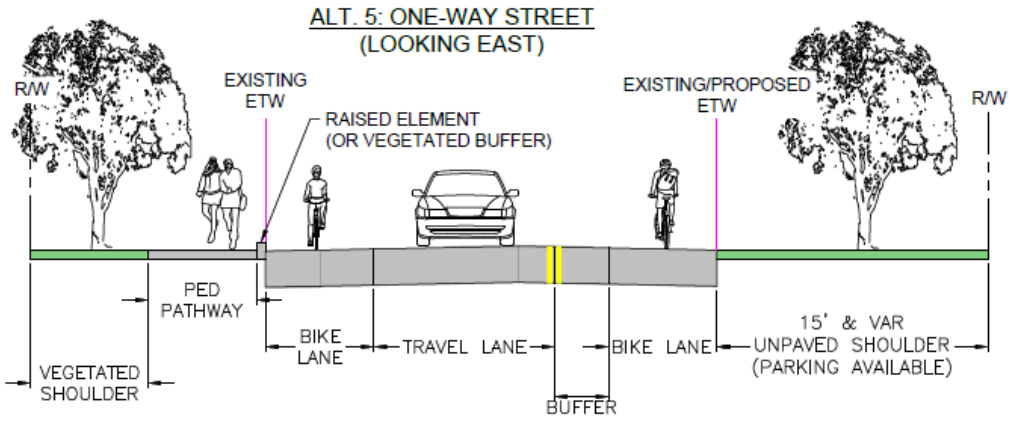

Plate 5 Coleman Avenue (County of San Mateo) Alternative 5

Alternative 5b – Diverter with Pedestrian, Bicycle, and Emergency Vehicle Pass Through

Alternative 5b would build on one of the other alternatives by reconfiguring circulation in the area but would be unlikely to stand on its own as no new facilities for pedestrians and cyclists would be provided. Coleman Avenue would be closed near the County/City boundary to all except for pedestrians, cyclists, emergency vehicles, and potentially transit vehicles. Diverters would be constructed such that passenger vehicles would be forced to divert to surrounding streets. The diverters would be mountable for emergency vehicles to pass through. Coordination with SamTrans and the Fire Department would be critical for the advancement of this alternative.

Coleman Avenue (City of Menlo Park)

The following initial design concepts were developed for the City segment of Coleman Avenue.

Alternative 1 – No Build, Retain Existing Conditions

Alternative 1 would maintain the existing roadway conditions along Coleman Avenue in the City of Menlo Park. These are illustrated in Plate 6 and summarized below.

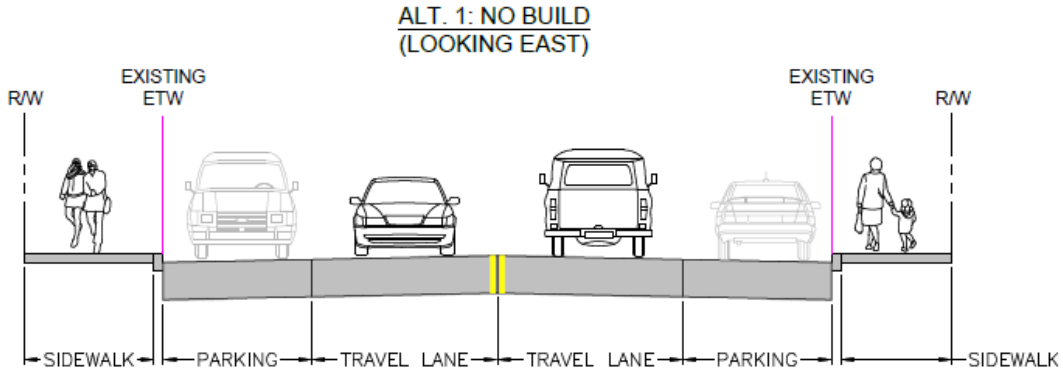

Plate 6 Coleman Avenue (City of Menlo Park) Alternative 1

- 50-foot public right-of-way
- Two 10-foot travel lanes and two 8-foot parking lanes
- Curb-to-curb width of 36 feet
- Sidewalks on both sides of the street

Alternative 2 – Bicycle Boulevard

Alternative 2 would include the installation of bicycle boulevard signage and pavement legends to formalize Coleman Avenue into a Class III bicycle boulevard. Speed reduction measures, such as speed humps, would be installed to slow vehicular speeds and discourage cut-through traffic. Under this alternative, the existing curb lines and sidewalk along both sides of Coleman Avenue would be retained. These improvements are illustrated in Plate 7.

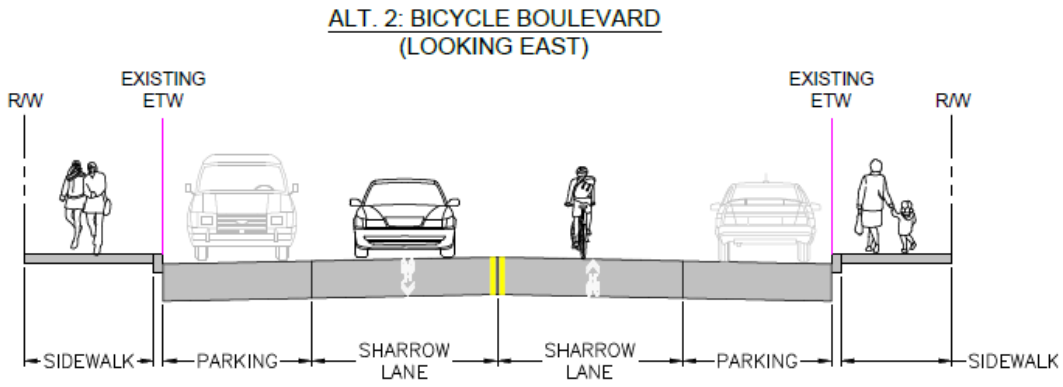

Plate 7 Coleman Avenue (City of Menlo Park) Alternative 2

Alternative 3 – Multi-use Pathway with Parking on One Side

Alternative 3 would include the removal of parking on one side of the street to make room for the provision of a multi-use pathway on the north side of Coleman Avenue. The existing roadway alignment of Coleman Avenue would be shifted to accommodate the pathway. The curb, gutter, and sidewalk on the pathway side of Coleman Avenue would be reconstructed while the side opposite the path would remain undisturbed. Shared lane pavement markings could be installed within the roadway to provide cyclists the option of riding in-street or on the pathway. While parking is currently shown as being retained on the south side of the street, parking could instead be retained on the north side to act as a buffer between the pathway and travel lanes. These improvements are depicted conceptually in Plate 8.

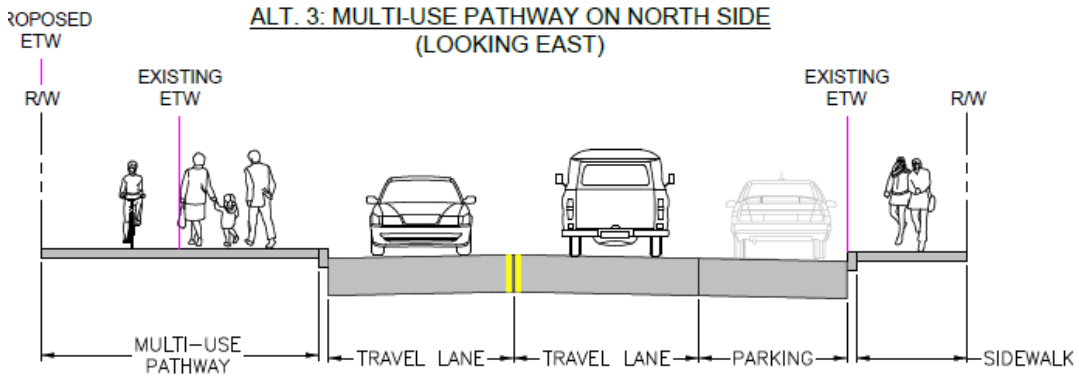

Plate 8 Coleman Avenue (City of Menlo Park) Alternative 3

Alternative 4 – Class II Bicycle Lanes with Parking on One Side (Menlo Park TMP)

Alternative 4 would include the provision of a narrow four and one-half-foot wide Class II bicycle lane in each direction of Coleman Avenue. To fit the bicycle lanes within the existing curb lines, parking would be removed on one side of the street and the opposite parking lane reduced to seven feet. Traffic calming measures would also be installed within the roadway to slow speeds and discourage cut-through traffic. The existing curbs, gutters, and sidewalks would be retained. These improvements are depicted

conceptually in Plate 9 and were identified as the preferred alternative in the City's *Transportation Master Plan*.

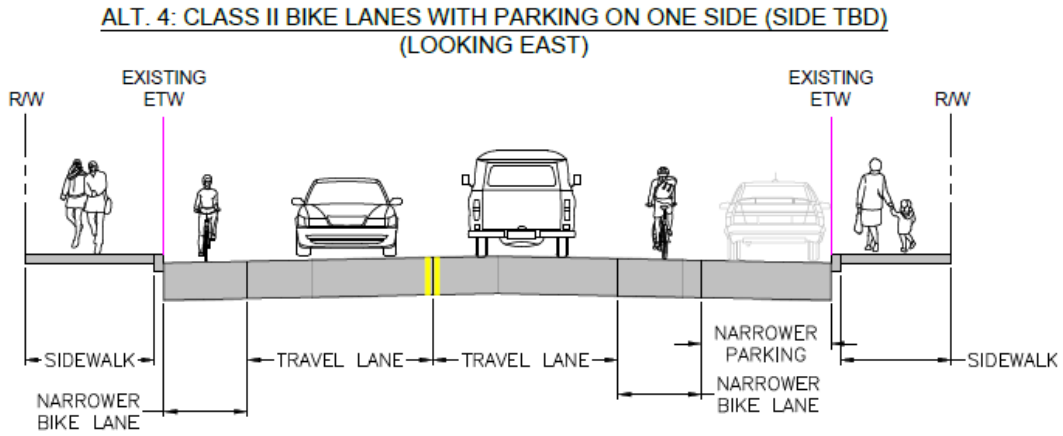

Plate 9 Coleman Avenue (City of Menlo Park) Alternative 4

Alternative 5 – Protected or Buffered Bicycle Lanes with No Parking

Under Alternative 5, parking would be removed on both sides of Coleman Avenue to accommodate a five and one-half-foot bike lane in each direction separated from the travel lanes by striped buffers. Raised separation devices such as flexible bollards could be placed within the buffers to further separate cyclists from vehicle traffic. The existing curbs, gutters, and sidewalks would be retained.

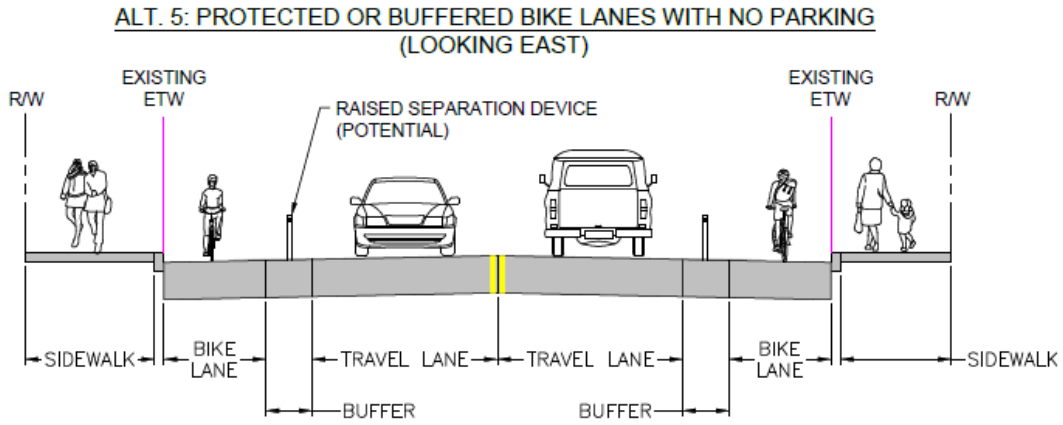

Plate 10 Coleman Avenue (City of Menlo Park) Alternative 5

Alternative 5b – Diverter with Pedestrian, Bicycle, and Emergency Vehicle Pass Through

Alternative 5b would build on one of the other alternatives by reconfiguring circulation in the area but would be unlikely to stand on its own as no new facilities for pedestrians and cyclists would be provided. Coleman Avenue would be closed near the County/City boundary to all except for pedestrians, cyclists, emergency vehicles, and potentially transit vehicles. Diverters would be constructed such that passenger vehicles would be forced to divert to surrounding streets. The diverters would be mountable for emergency

vehicles to pass through. Coordination with SamTrans and the Fire Department would be critical for the advancement of this alternative.

Ringwood Avenue

The following initial design concepts were developed for Ringwood Avenue. Given the substantial differences in roadway configuration along the corridor, typical cross section designs were prepared for two locations for each alternative to illustrate how the improvements would look near Menlo Atherton High School and near Laurel School Lower Campus.

Alternative 1 – No Build, Retain Existing Conditions

Alternative 1 would maintain the existing roadway conditions on Ringwood Avenue. These are illustrated in Plates 11 and 12.

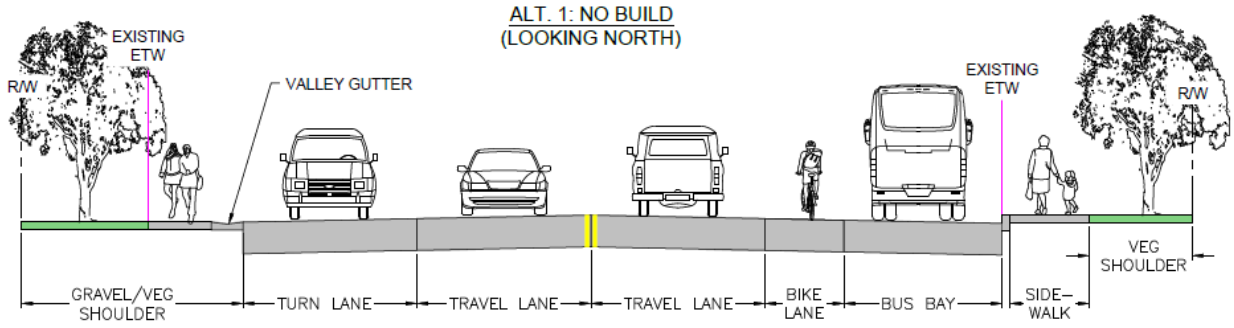

Plate 11 Ringwood Avenue Alternative 1 Near MAHS

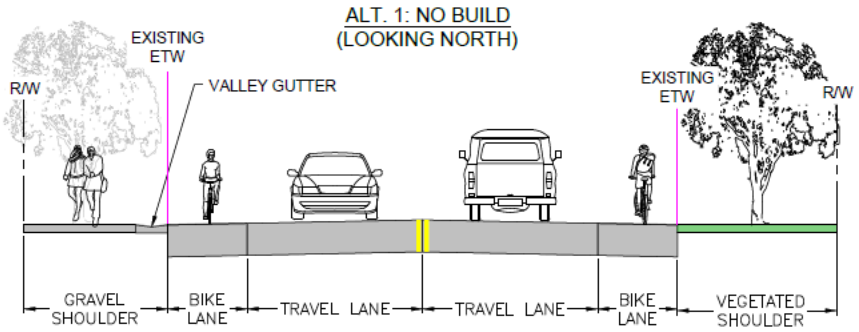

Plate 12 Ringwood Avenue Alternative 1 Near LSLC

Alternative 2 – Multi-Use Pathway on West (School) Side (San Mateo County ATP)

Under Alternative 2, the existing bicycle lane, valley gutter, and paved shoulder on the west side of Ringwood Avenue would be removed and replaced with a multi-use pathway. Vertical separation devices, such as asphalt dikes, or vegetated buffers would separate the pathway from the adjacent vehicle travel lanes. While the pathway would meander to avoid as many trees and utilities as possible, it would be

expected that some trees and utilities would be impacted. Some widening on the east side of the street would be required if the northbound bicycle lane is retained. Traffic calming measures would be installed within the roadway to slow speeds and discourage cut-through traffic. These improvements are illustrated in Plates 13 and 14.

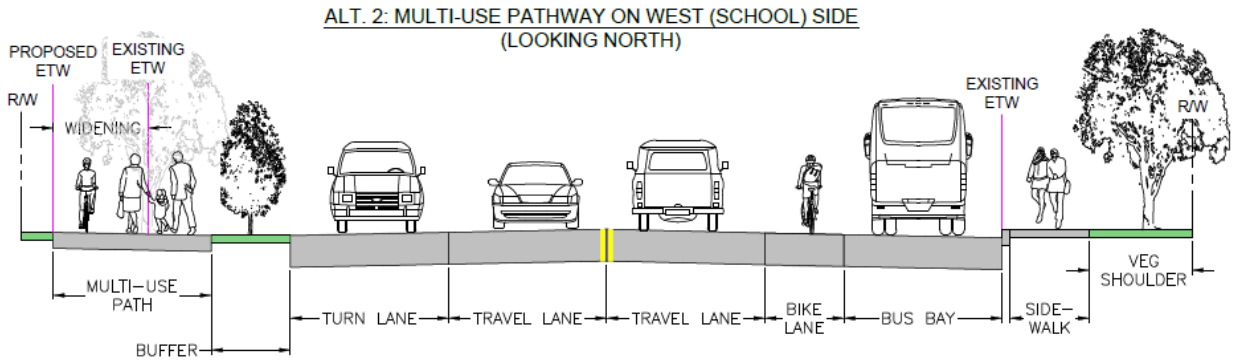

Plate 13 Ringwood Avenue Alternative 2 Near MAHS

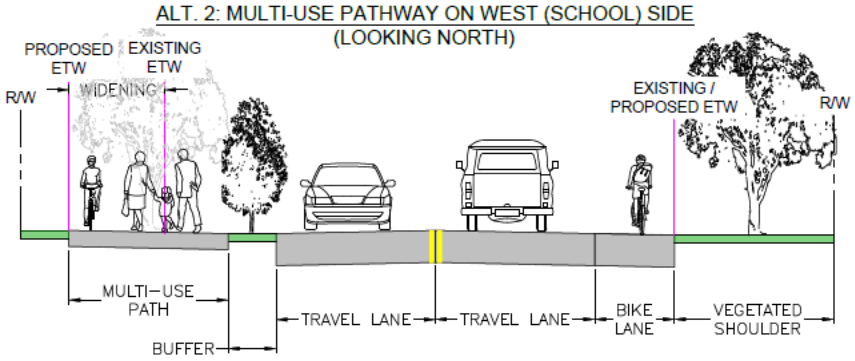

Plate 14 Ringwood Avenue Alternative 2 Near LSLC

Alternative 3 – Multi-Use Pathway on West (School) Side with Loading Zone

Alternative 3 would include the construction of a multi-use pathway and loading zone in place of the existing bicycle lane, valley gutter, and paved shoulder on the west side of Ringwood Avenue. A buffer zone would separate the loading zone from the adjacent multi-use pathway to provide space for car doors to open without infringing on the pathway. While the pathway would meander to avoid as many trees and utilities as possible, it would be expected that some trees and utilities would be impacted. The northbound bicycle lane would also be removed near LSLC to make room for the loading zone, though sharrow markings could be included within the roadway to accommodate experienced cyclists. Widening would be expected on the east side of the street to accommodate the eastern shift of the roadway alignment. Traffic calming measures would be installed within the roadway to slow speeds and discourage cut-through traffic. These improvements are illustrated in Plates 15 and 16.

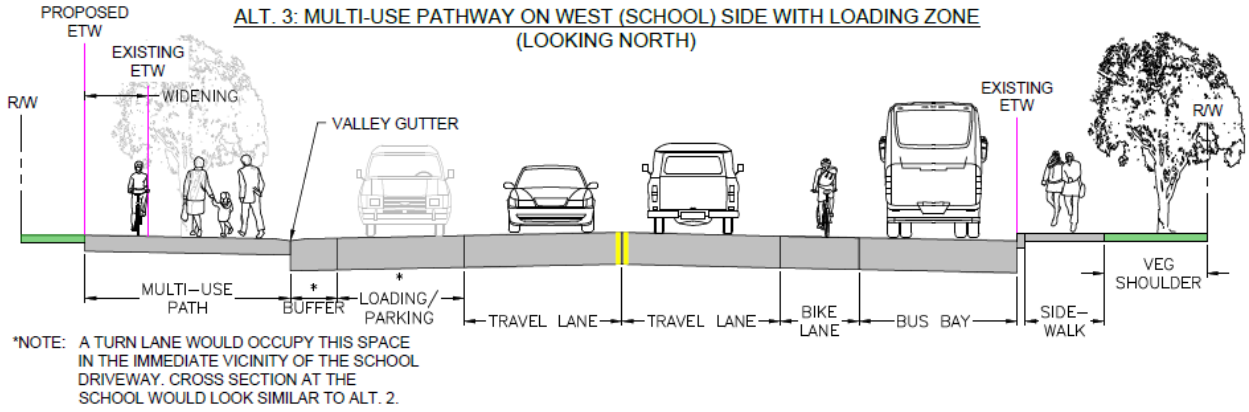

Plate 15 Ringwood Avenue Alternative 3 Near MAHS

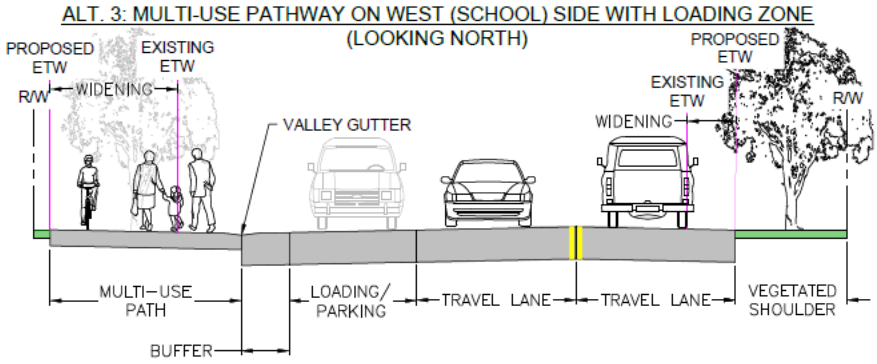

Plate 16 Ringwood Avenue Alternative 3 Near LSLC

Alternative 4 – Class II Bicycle Lanes with Pedestrian Pathways

Alternative 4 would include formalizing the existing paved shoulder on the west side of the street into a pedestrian pathway and constructing a continuous pedestrian pathway on the east side of the street. Both pathways would be designed to meander around adjacent trees and utilities as much as possible. The existing Class II bicycle lanes would be retained in both directions and traffic calming measures would be installed within the roadway to slow speeds and discourage cut-through traffic. These improvements are illustrated in Plates 17 and 18.

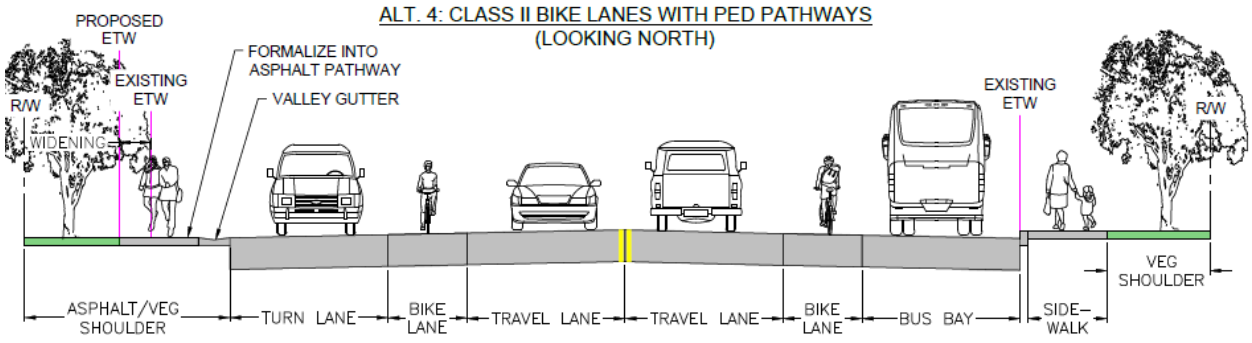

Plate 17 Ringwood Avenue Alternative 4 Near MAHS

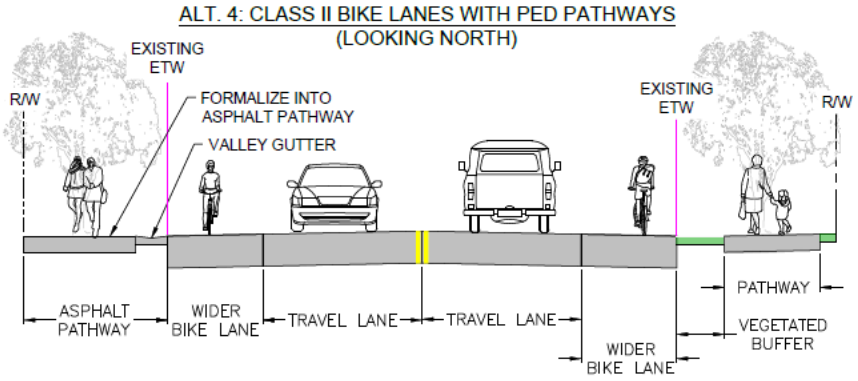

Plate 18 Ringwood Avenue Alternative 4 Near LSLC