



Rail Program Management Services Review Grade Separation Recommended Ideas

Palo Alto Council Meeting

06.19.18

Rail Committee Recommended Ideas

Type of Separation (Alphabetical Order)	Citywide	Palo Alto 2017 ADT (vehicles/day) = 16,200 (+ 550 bikes)	Churchill 2017 ADT (vehicles/day) = 9,200 (+ 1,020 bikes)	Meadow 2017 ADT (vehicles/day) = 8,900 (+ 900 bikes)	Charleston 2017 ADT (vehicles/day) = 17,900 (+ 240 bikes)
Closure		 Palo Alto Ave Closed, Add Improvements (PCX)	 Churchill Ave Closed, Add Improvements (CAX)		
Hybrid (Road over Rail)			 Churchill Ave Reverse Hybrid (CAR)	 Meadow + Charleston Reverse Hybrid, Loma Verde Bike/Ped (MCR)	
Hybrid (Road under Rail)		 Palo Alto Ave Hybrid and/or Viaduct (PAH)	 Churchill Ave Hybrid (CAH)	 Meadow + Charleston Hybrid, Loma Verde Bike/Ped (MCL)	
No Build / Do Nothing					
Rail under Road (Trench)				 Meadow + Charleston Trench or Tunnel (MCT)	
Rail under Road (Tunnel)	 City-Wide Tunnel within Palo Alto (WBP)				
Rail over Road (Berm/Viaduct)				 Meadow + Charleston Viaduct (MCV)	
Road Over Rail					
Road under Rail					

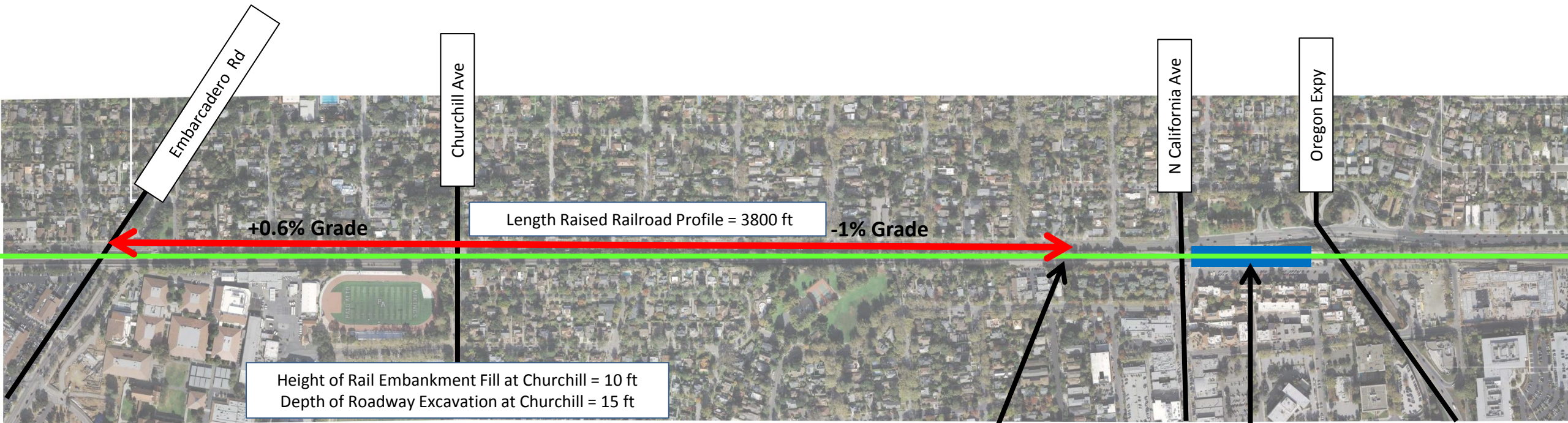
Ideas to Review

- Churchill Avenue Hybrid (CAH)
 - A "hybrid" option that would partially lower the road and partially elevate the tracks
- Churchill Avenue Reverse Hybrid (CAR)
 - The "reverse hybrid" option with a partially elevated road and partially lowered tracks
- Palo Alto Hybrid (PAH)
 - A "hybrid" option that would partially lower the road and partially elevate the tracks



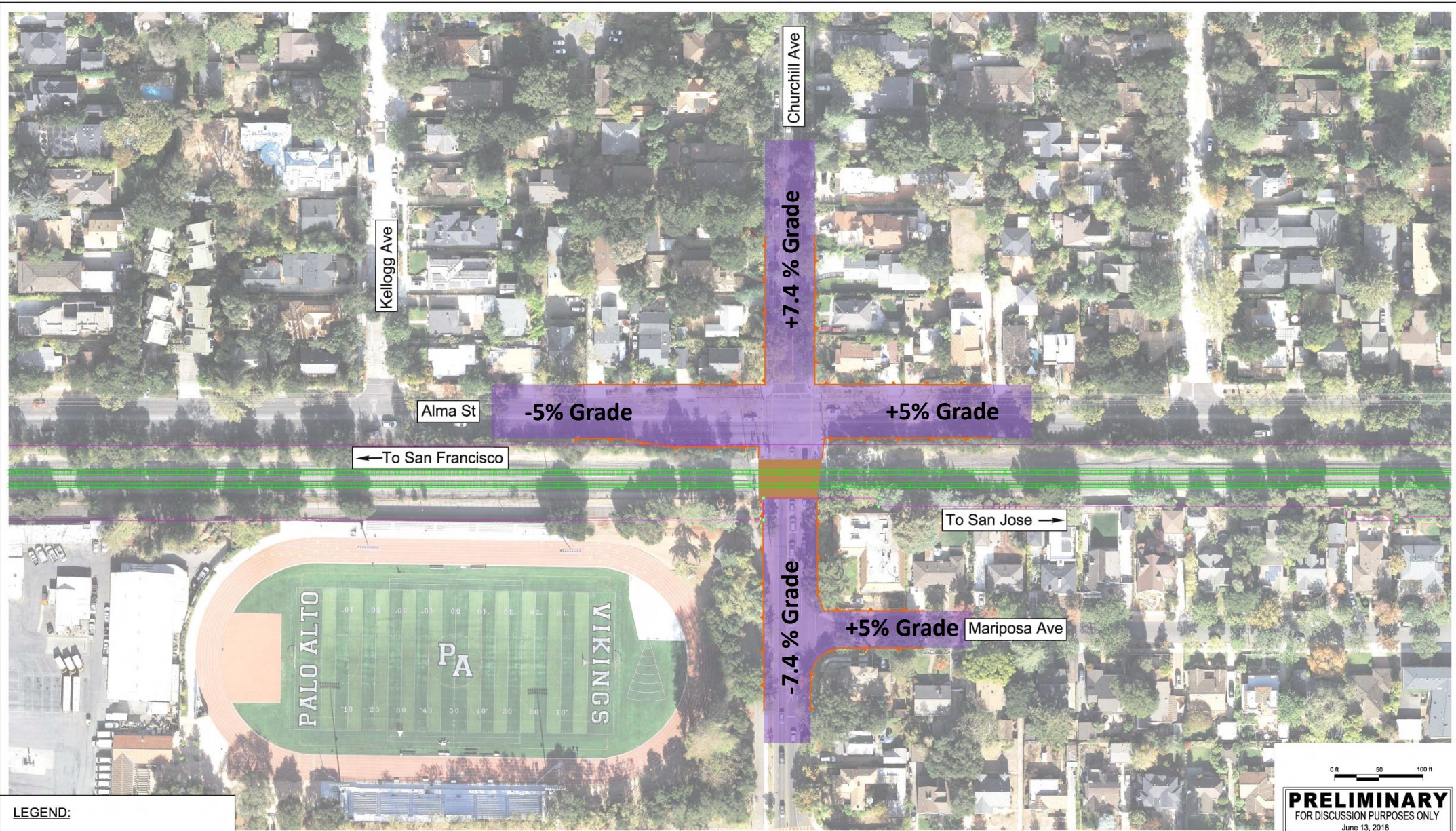


Churchill Avenue Hybrid (CAH)



Constraints:

- California Ave Caltrain Station Platform at south end
- Embarcadero Underpass at north end
- Maintaining Caltrain Operations During Construction
 - Operating Envelop for Construction Limits



LEGEND:

-  Track
-  Retaining Wall
-  Right-of-Way
-  Limits of Roadway Modifications
-  Structure

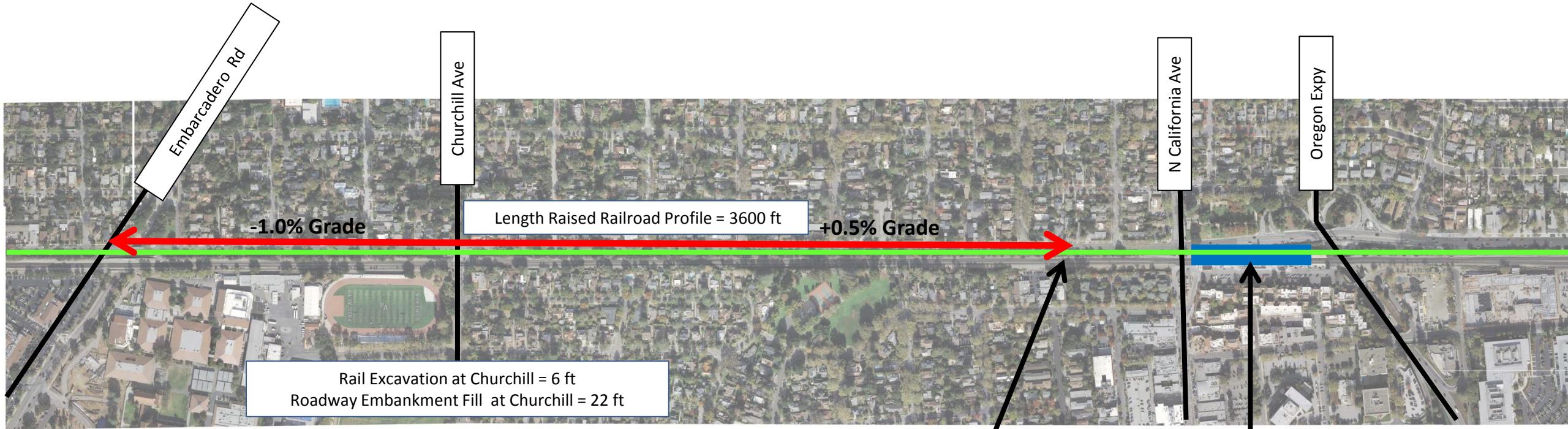
CAH - Churchill Ave Roadway under Railroad Hybrid



AECOM



Churchill Avenue Reverse Hybrid (CAR)

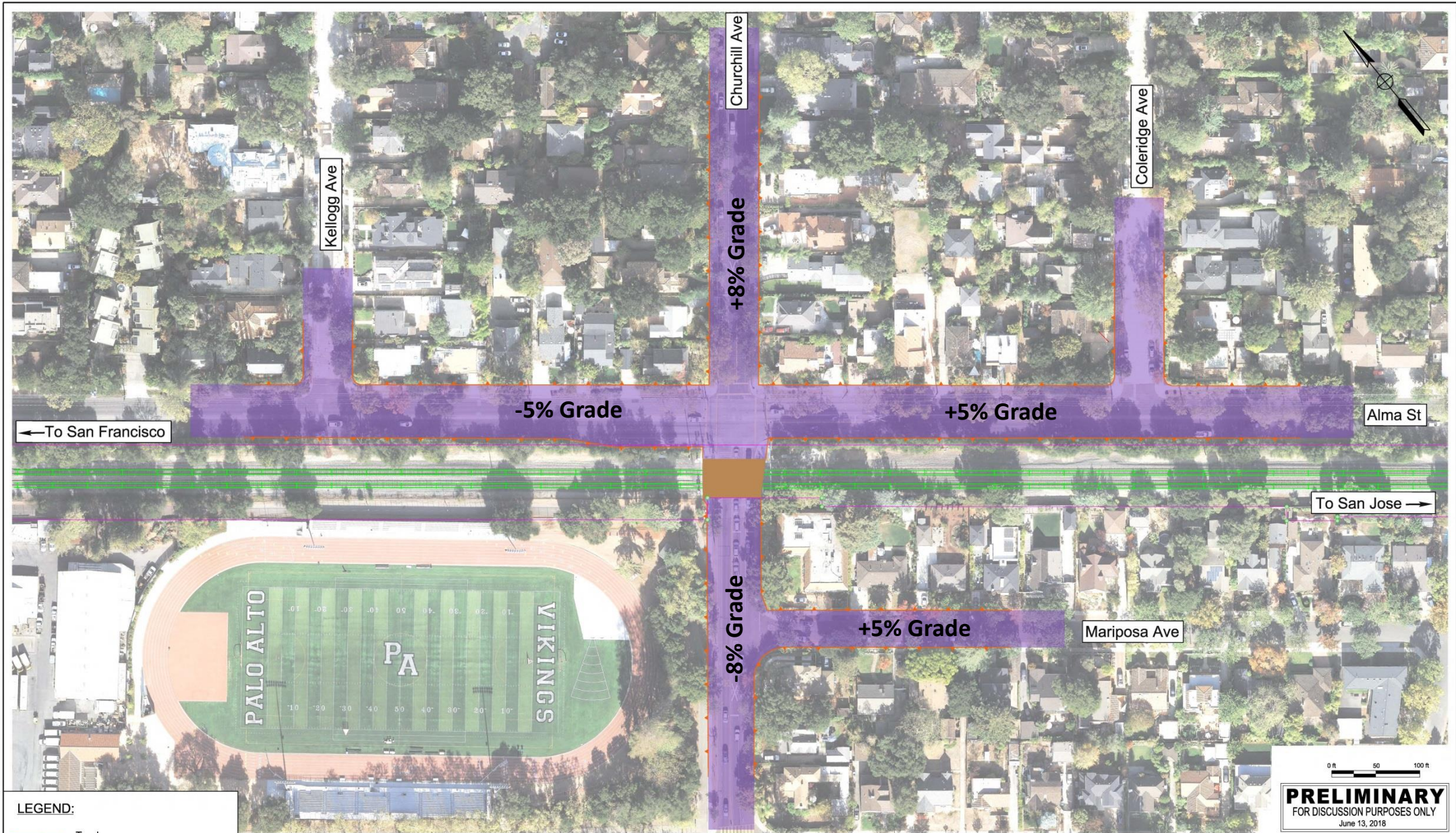


Constraints:

- California Ave Caltrain Station Platform
- Embarcadero Underpass at north end
- Maintaining Caltrain Operations During Construction
 - Operating Envelop for Construction Limits

Construction Limits based on
Caltrain Operating Envelop

No Impact to California Ave
Caltrain Station Platform



LEGEND:

-  Track
-  Retaining Wall
-  Right-of-Way
-  Limits of Roadway Modifications
-  Structure

CAR - Churchill Ave Roadway Overpass

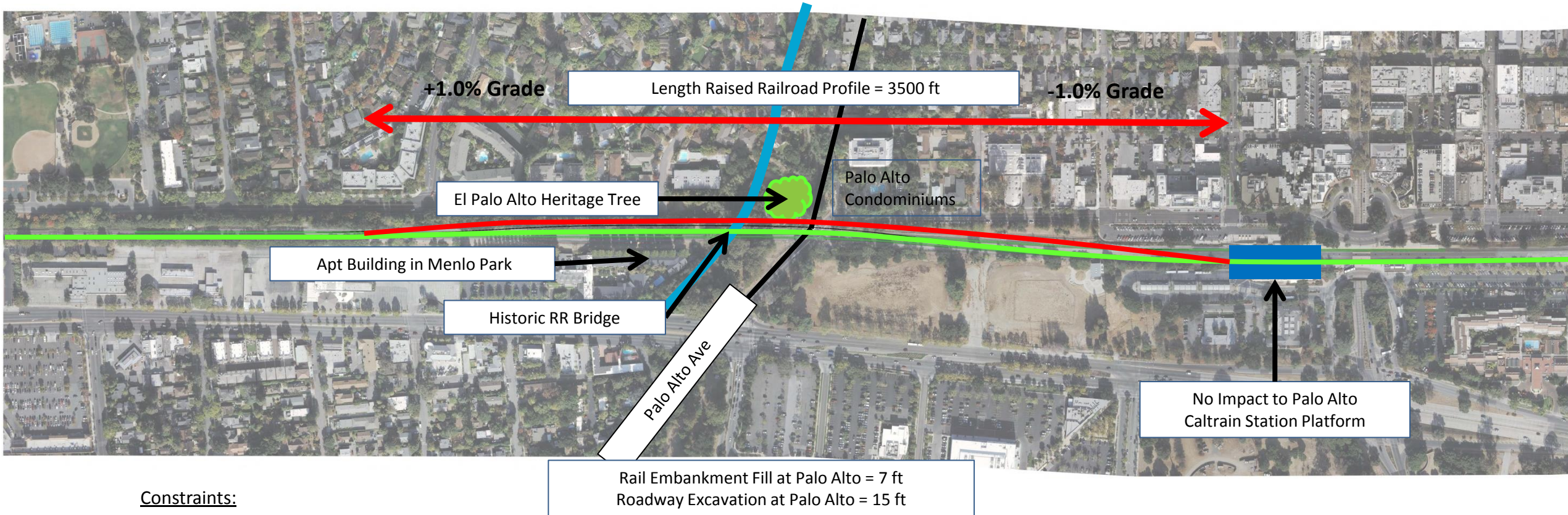


CITY OF
PALO
ALTO

AECOM

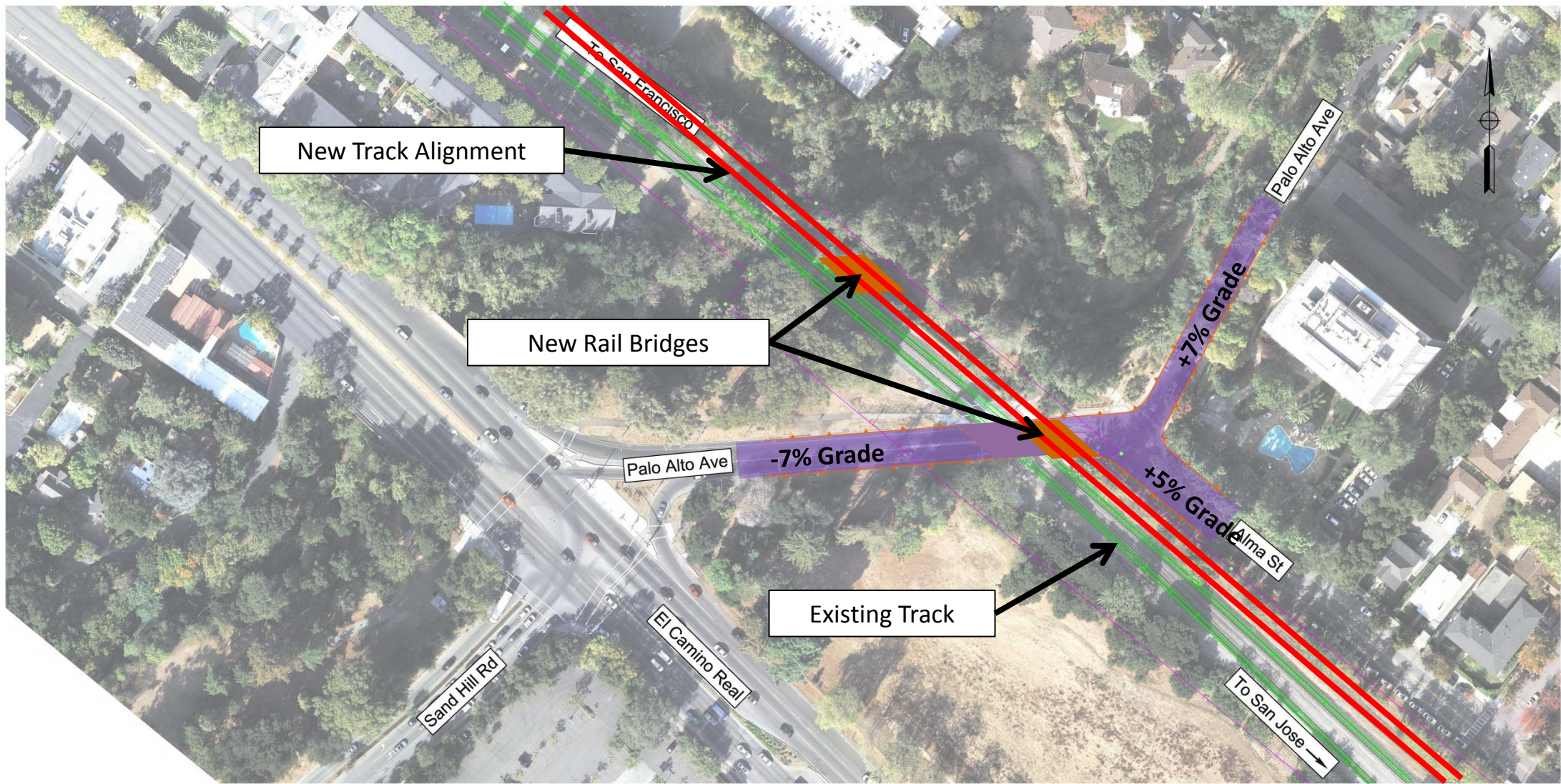


Palo Alto Hybrid (PAH)



Constraints:

- Palo Alto Caltrain Station Platform
- Historic Bridge over San Francisquito Creek
- El Palo Alto Heritage Tree in El Palo Alto Park
- Apt Building in Menlo Park on west side of track
- Maintaining Caltrain Operations During Construction
 - Operating Envelop for Construction Limits



New Track Alignment

New Rail Bridges

Palo Alto Ave

-7% Grade

+7% Grade

+5% Grade

Palo Alto Ave

Alma St

Sand Hill Rd

El Camino Real

To San Jose

Existing Track

0 ft 50 100 ft

PRELIMINARY
FOR DISCUSSION PURPOSES ONLY
June 13, 2018

LEGEND:

-  Track
-  Retaining Wall
-  Right-of-Way
-  Limits of Roadway Modifications
-  Structure

PAH - Railroad over Roadway Hybrid at Palo Alto Ave



AECOM

A green-tinted photograph of a railway track. In the foreground, a set of crossing rails is visible, leading to a set of main tracks that recede into the distance. The text "Questions?" is overlaid in the center in a white, bold, sans-serif font.

Questions?