CITY OF MENLO PARK

REGULAR MEETING MINUTES

Date: 3/13/2019
Time: 7:00 p.m.
City Council Chambers
701 Laurel St., Menlo Park, CA 94025

A. Call to Order

Chair Kirsch called the meeting to order at 7:06 p.m.

B. Roll Call

Present: Behroozi, Goldin, Kirsch, Lee, Levin, Walser, Weiner
Absent: Mazzara, Meyer
Staff: Associate Civil Engineer Michael Fu, Associate Transportation Engineer Kevin Chen

Chair Kirsch announced the reordering of agenda, hearing Information Item F1 before the Regular Business items.

C. Reports and Announcements

Staff Chen announced upcoming City events and a summary of City Council actions on advisory commissions/committee organizational and transportation related items since the February 13 Commission meeting.

Commissioner Lee announced that Encinal Elementary School and the Town of Atherton are exploring safety improvements on Encinal Avenue within the Town of Atherton. Commissioner Levin summarized the City Council's objectives related to downtown parking and announced an upcoming Caltrain Vision 2040 community meeting in the City of Redwood City. Commissioner Behroozi suggested to the City Clerk's Office to reach out to past unselected applicants for the upcoming Commission vacancies.

D. Public Comment

- Ken Kershner asked the Commission to expand the Safe Routes to School Program to include a focus for work trips and to encourage private partnership for implementation.

F. Informational Items

F1. Receive a status update on the development of the City's Green Infrastructure Master Plan (Staff Report #19-002-CSC)

Staff Fu provided a presentation (Attachment).

Chair Kirsch led a discussion.

E. Regular Business

E1. Approve the Complete Streets Commission regular meeting minutes of February 13, 2019 (Attachment)

ACTION: Motion and second (Levin/Lee) to approve the Complete Streets Commission regular meeting minutes of February 13, 2019, passed (7-0-2, Mazzara and Meyer absent).

E2. Recommend to City Council to approve the Commission goals and priorities for 2019-2020

Chair Kirsch led a discussion.

ACTION: By acclamation, the Commission directed staff to refine the content based on Commission feedback.

F. Informational Items

F2. Update on major project status

Staff Chen provided updates on the Neighborhood Traffic Management Program projects, Transportation Master Plan, Middle Avenue pedestrian and bicycle rail crossing, Willow Road and U.S. Highway 101 interchange construction, Downtown to Bay Trail bicycle wayfinding signs, and the Safe Routes to School Program.

G. Committee/Subcommittee Reports

G1. Update from Active Transportation Network Subcommittee

Commissioner Weiner shared the Middle Avenue project on a page (PoP) and asked the Commission to provide feedback offline through staff (Attachment).

G2. Update from Downtown Access and Parking Subcommittee

Commissioner Levin reported that the City Council is exploring downtown parking and access strategies and will be evaluated in a future City Council meeting.

G3. Update from Multimodal Subcommittee

Commissioner Levin reported on the Caltrain Business Plan and received support from the Commission to bring it back in a future Complete Streets Commission meeting for further discussion (Attachment).

G4. Update from Safe Routes to School Program Subcommittee

Commissioner Lee reported the hiring of the new Safe Routes to School Coordinator, the releasing of the draft Safe Routes to School Strategy, and the soon-to-be released Safe Routes to School maps. Commissioner Behroozi expressed interest for the Commission to provide feedback on the maps at a future meeting.

G5. Update from Transportation Master Plan Subcommittee

Commissioners Behroozi and Levin reported on the Subcommittee's suggested mapping strategies for community feedback on projects proposed in the draft Transportation Master Plan Working Paper and asked the Commission to provide feedback offline through staff (Attachment).

G6. Update from Zero Emission Subcommittee

None.

H. Adjournment

Chair Kirsch adjourned the meeting at 9:37 p.m.

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REGULAR MEETING MINUTES

Date: **2/13/2019**
Time: **7:00 p.m.**
City Council Chambers
701 Laurel St., Menlo Park, CA 94025

A. Call to Order

Chair Kirsch called the meeting to order at 7:02 p.m.

B. Roll Call

Present: Behroozi (arrived at 8:22 p.m.), Goldin, Kirsch, Lee, Levin (arrived at 7:07 p.m.), Mazzara, Meyer, Walser, Weiner
Absent: None
Staff: Associate Transportation Engineer Kevin Chen, Junior Engineer Marlon Aumentado

Chair Kirsch welcomed the new Complete Streets Commissioner – Evan Goldin.

C. Reports and Announcements

Staff Chen announced upcoming City events and a summary of City Council actions on advisory commissions/committee organizational and transportation related items since the January 9, Commission meeting.

D. Public Comment

None.

E. Regular Business

E1. Approve the Complete Streets Commission regular meeting minutes of January 9, 2019 (Attachment)

ACTION: Motion and second (Lee/Walser) to approve the Complete Streets Commission regular meeting minutes of January 9, 2019, passed (7-0-1-1, Meyer abstained, Behroozi absent).

E2. Adopt a Resolution to install a passenger loading zone and red curb on Pine Street at Oak Grove Avenue (Staff Report #19-001-CSC)

Staff Aumentado provided a presentation (Attachment).

- Marie Moran requested that the project be postponed while the design feasibility of a vehicle cut-out on Oak Grove Avenue is being assessed.
- Bette Bohler spoke in opposition of the project. Bohler also requested that parking be removed on

one side of Pine Street to aid emergency vehicle access.
- Jen Wolosin spoke in support of the Oak Grove bike lanes and suggested working with the property owner to construct a new gate and pathway to allow building access from Pine Street.
- Phillip Bahr shared his email with the Commission, spoke in opposition of the project, and supported removing parking on one side of Pine Street (Attachment).

ACTION: Motion and second (Meyer/Mazzara) to adopt a resolution to install a 5-minute passenger loading zone and red curb on Pine Street at Oak Grove Avenue with an amendment to revert back if a vehicle cut-out on Oak Grove is feasible and constructed, passed (8-0-1; Behroozi absent).

E3. Discuss the Commission subcommittees

Chair Kirsch led a discussion and each subcommittee shared their goals and priorities.

ACTION: By acclamation, the Commission voted to:
- Select Commissioner Goldin to the Downtown Access and Parking Subcommittee
- Retitle Electric Vehicle Subcommittee to the Zero Emission Subcommittee
- Select Commissioner Goldin to the Zero Emission Subcommittee

E4. Discuss the Complete Streets Commission goals and priorities for 2019 - 2020

Chair Kirsch led a discussion.

- Jen Wolosin spoke in support of obtaining a civil engineer for the capital improvement division under public works, dedicated to safe routes to school transportation infrastructure projects.

ACTION: By acclamation, the Chair and Vice Chair will summarize the feedback and provide staff a list of Commission goals and priorities offline.

F. Informational Items

F1. Update on major project status

Staff Chen provided updates on the transportation master plan, Ravenswood Avenue railroad crossing project, Middle Avenue pedestrian and bicycle rail crossing, Willow Road and U.S. Highway 101 interchange construction, and a construction bid for rectangular rapid flashing beacons at five locations.

G. Committee/Subcommittee Reports

G1. Update from Active Transportation Network Subcommittee

None.

G2. Update from Electric Vehicle Subcommittee

None.

G3. Update from Downtown Access and Parking Subcommittee

None.

G4. Update from Multimodal Subcommittee

Commissioner Levin provided meeting summary from a Silicon Valley Regional Rail Committee meeting that she attended.

G5. Update from Safe Routes to School Program Subcommittee

None.

G6. Update from Transportation Master Plan Subcommittee

None.

H. Adjournment

Chair Kirsch adjourned the meeting at 9:28 p.m.

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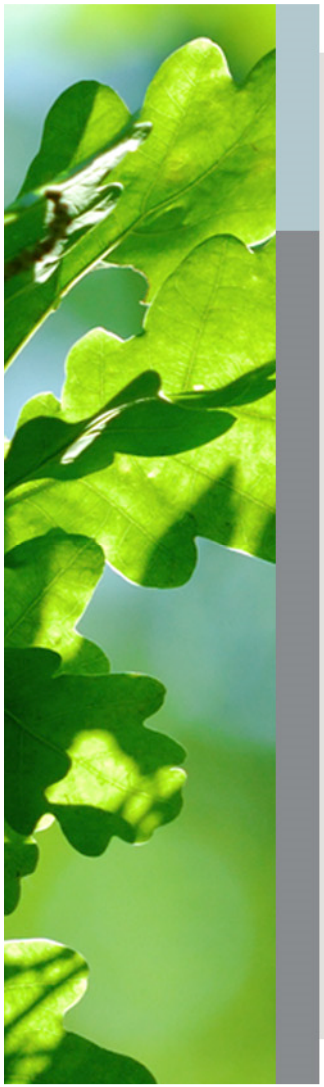
PINE STREET LOADING ZONE

Marlon Aumentado

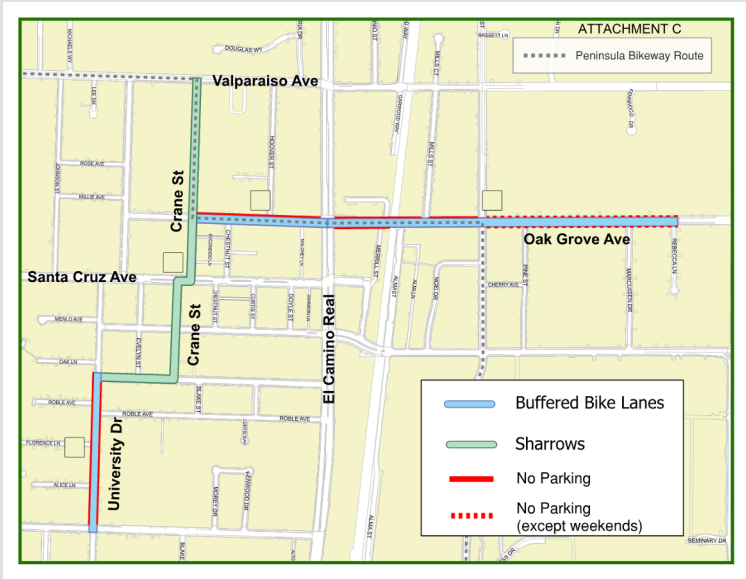
AGENDA

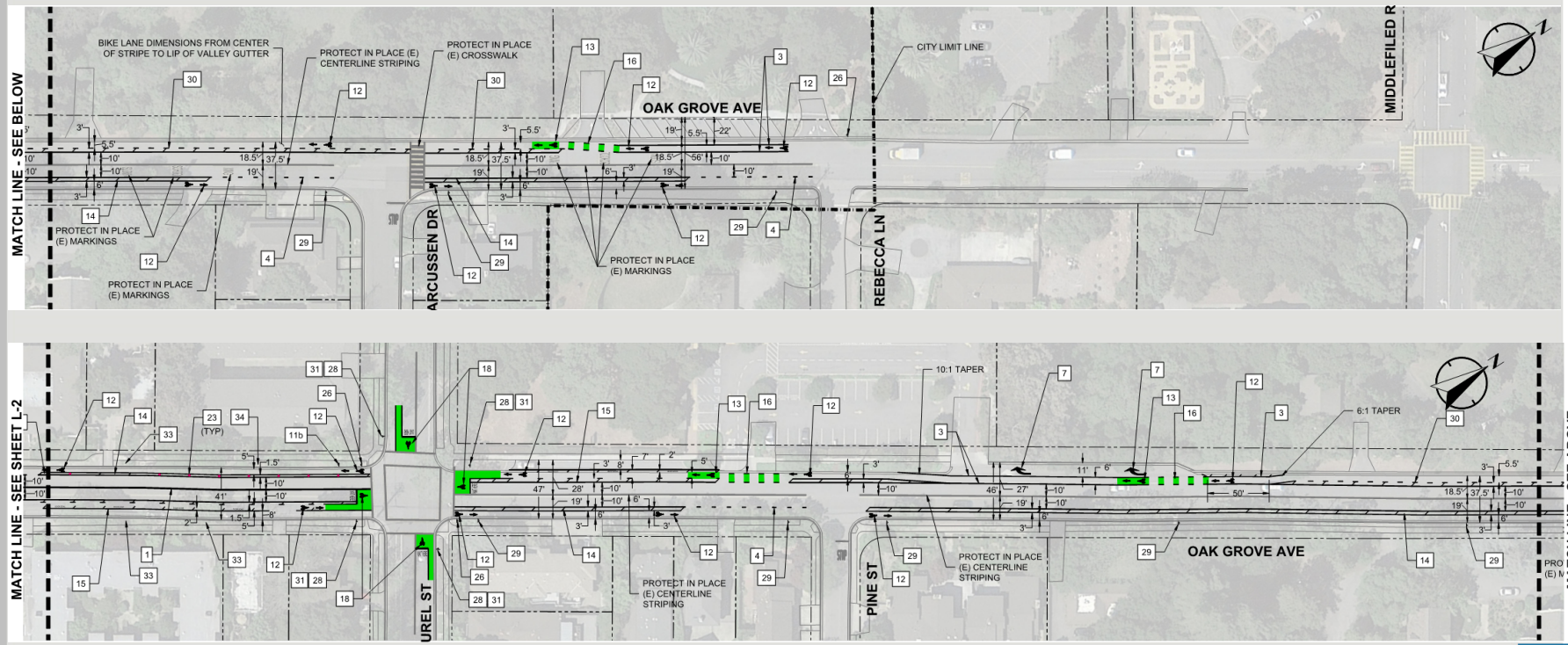
- Background Information
- Analysis
- Proposal



BACKGROUND INFORMATION

- Nov 13, 2018
  - City Council adopted resolution to approve the permanent installation of bicycle facilities and remove parking on Oak Grove Avenue
  - Council directed staff to move forward with implementation of a loading zone on Pine Street while the feasibility of a vehicle cut-out on Oak Grove is assessed

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BIKE LANE DIMENSIONS FROM CENTER OF STRIPE TO LIP OF VALLEY GUTTER
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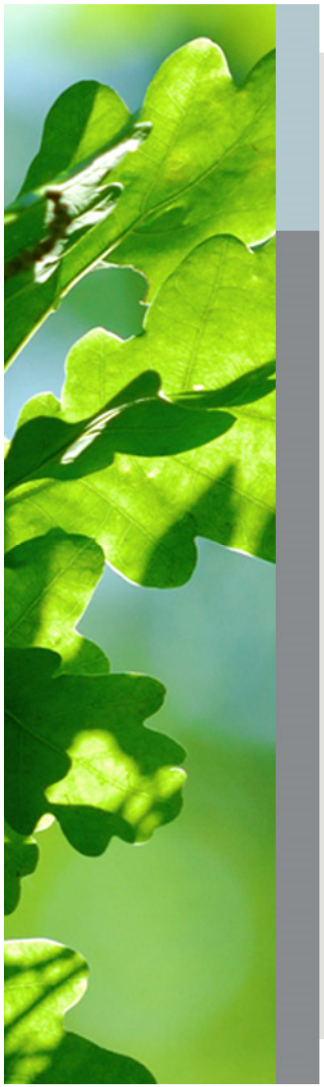
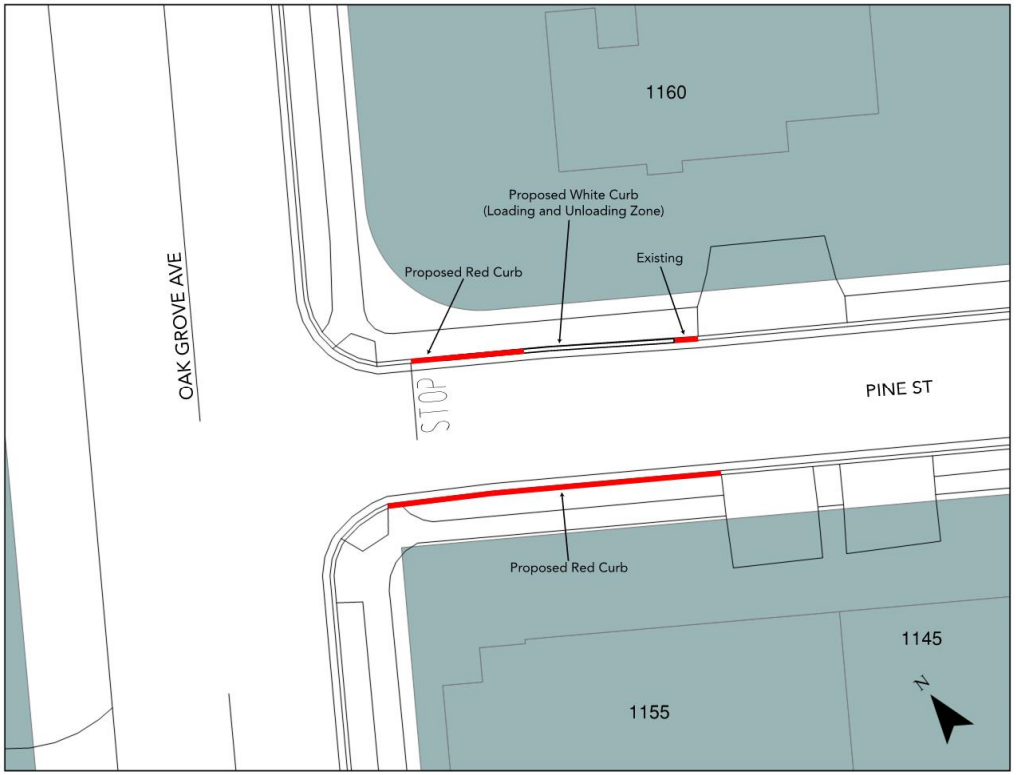
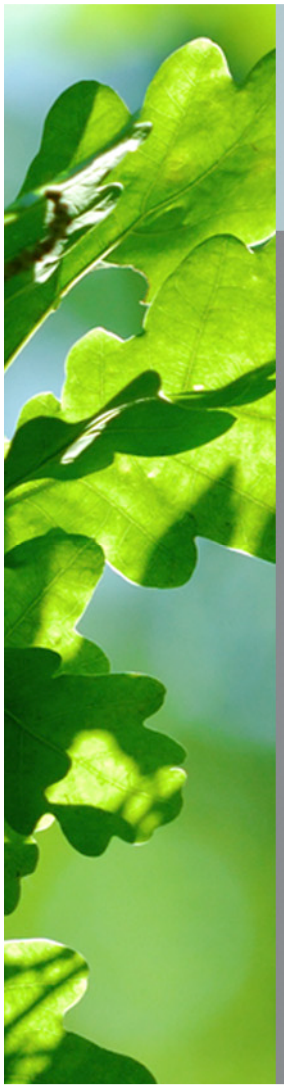
PINE STREET



PROPOSAL


1160
Proposed White Curb
(Loading and Unloading Zone)
Proposed Red Curb
Existing
OAK GROVE AVE
STOP
PINE ST
Proposed Red Curb
1145
1155
N



Staff recommends that the Complete Streets Commission adopt a resolution to install a 5-minue passenger loading zone (white curb and signage) and red curb (removing a total of three on-street parking spaces) on Pine Street at Oak Grove Avenue to provide a short-term loading area for adjacent residents

THANK YOU

From: Phillip Bahr <bahr5@outlook.com>
Sent: Wednesday, February 13, 2019 3:17 PM
To: transportation@menlopark.org
Cc: Phillip Bahr
Subject: "Potential White Curb Installation" (Pine Street, Transportation Meeting Agenda Item on 2/13/2019)

To Whom This Concerns:

I am in opposition to the proposal of the Potential White Curb Installation on Pine Street. The proposed Potential White (and Red) Curb Installation does not add parking, it removes parking.

REQUEST: I agree that we have a parking and access problem on Pine Street. What can I do to assist in a prompt resolution (say within the next thirty to ninety days)?

BACKGROUND: We have a bigger and yet connected problem on Pine Street. Safety and Accessibility. Pine Street is approximately twenty five feet in width. This width does not comply with current transportation standards. Cars and trucks oftentimes park illegally on our sidewalks and California Water Service meter covers. I've been told that the reason folks park on our sidewalk is to avoid getting their vehicles damaged. They've damaged our sidewalks, street tree planting areas and utility covers.

Vehicles also use our street as a short cut. I have witnessed cars darting across Ravenswood and Oak Grove onto Pine Street as they leave from a local business and school.

Of most concern, fire trucks and ambulances are unable to drive down our street in an emergency if cars are parked on both sides of the street. This is an unacceptable situation and the City was notified of this condition in 2017.

Kind Regards,

Phillip Bahr
1119 Pine Street, B
Menlo Park, CA 94025

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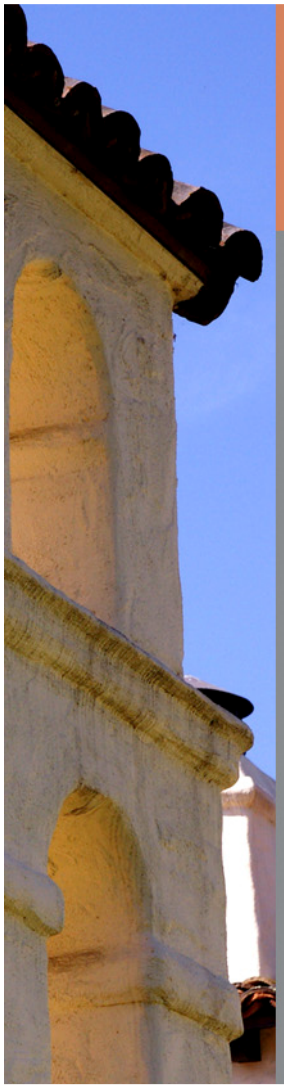
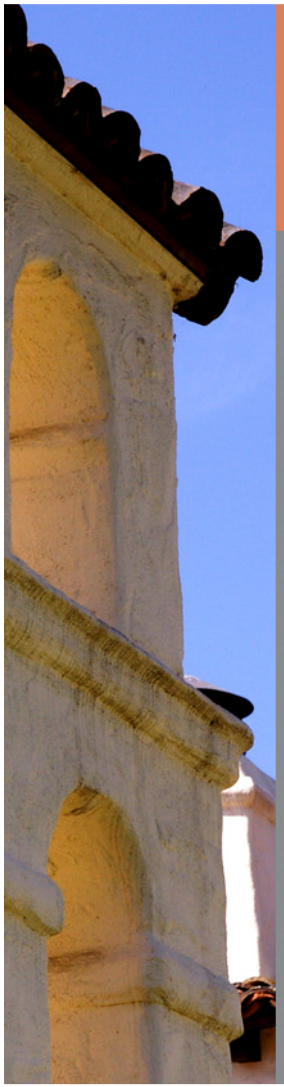
GREEN INFRASTRUCTURE (GI)

THE PLAN FOR A SUSTAINABLE FUTURE



INTRODUCTION

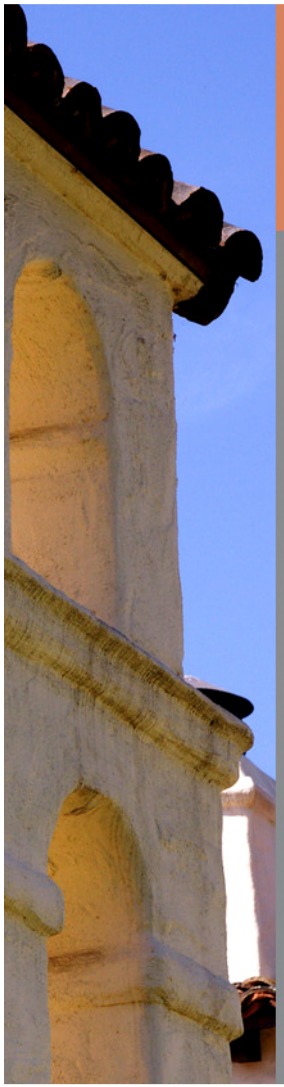
- The City is developing a Green Infrastructure (GI) Plan
- This plan addresses environmental and transportation concerns
- Staff welcomes the Commission's role in promoting GI



PRESENTATION NARRATIVE

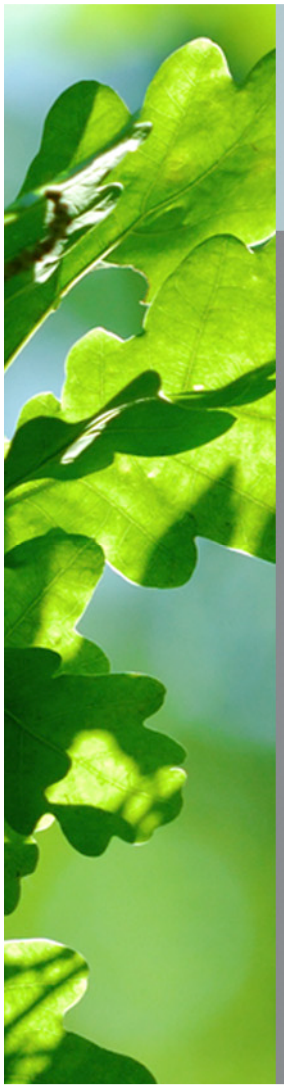
- A Pressing Concern
- The Solution
- Our GI Plan

A PRESSING CONCERN



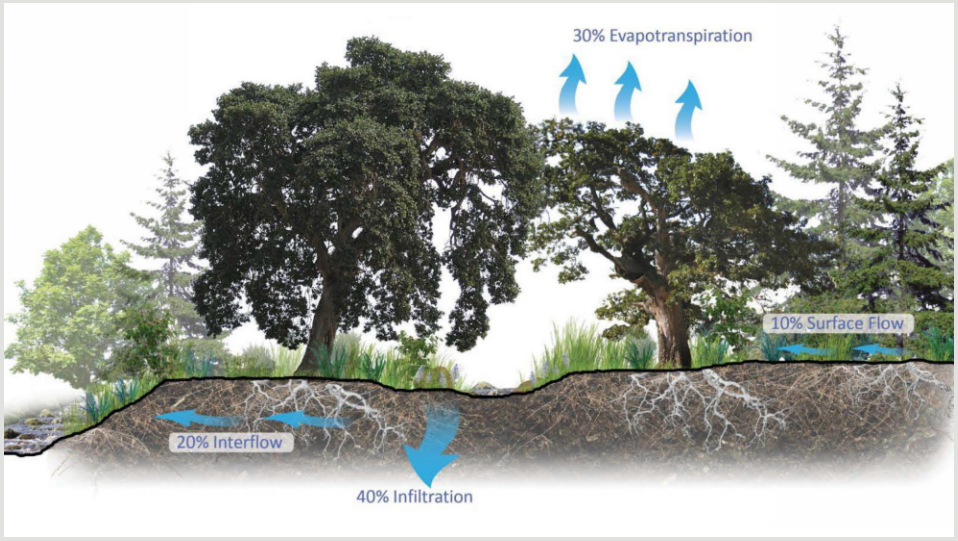
THE PROBLEM

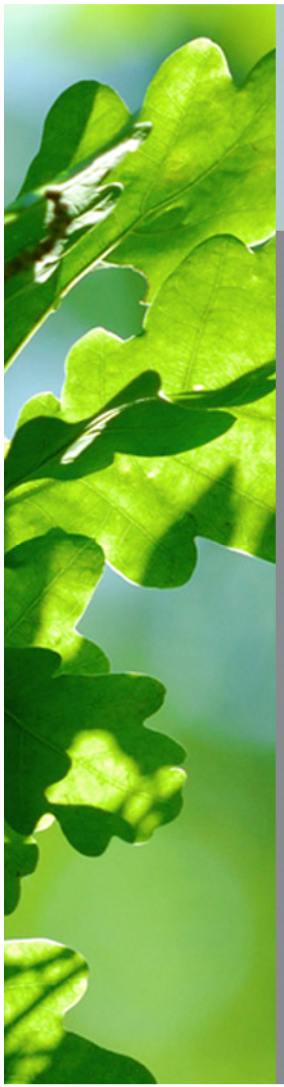
- Untreated runoff is polluting the environment and Bay…



PRE-DEVELOPMENT

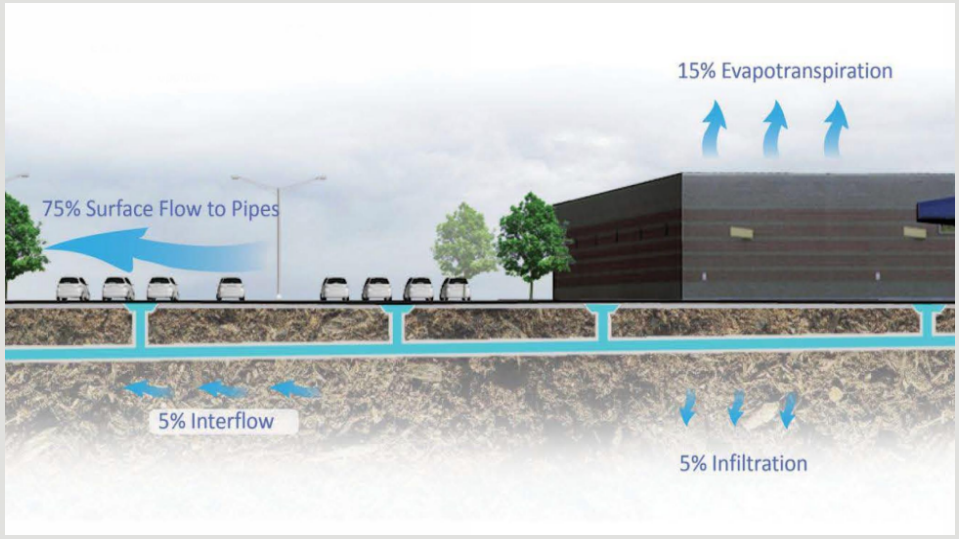
- Runoff is filtered by landscape and absorbed through native soil

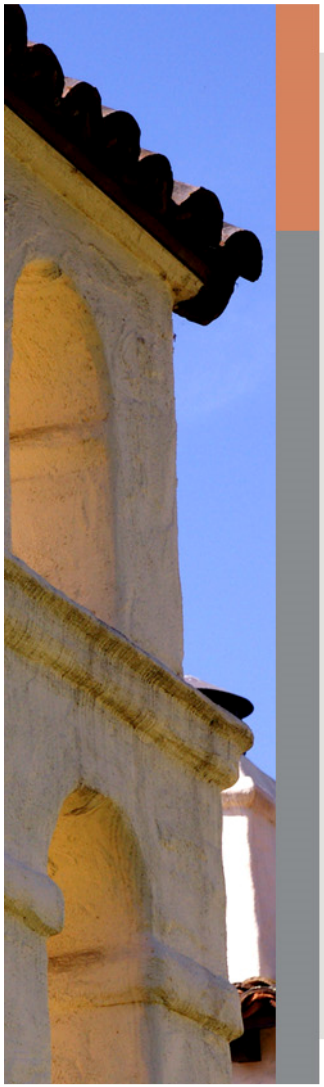




POST-DEVELOPMENT

- Impervious area hinders infiltration and increases pollutant loads

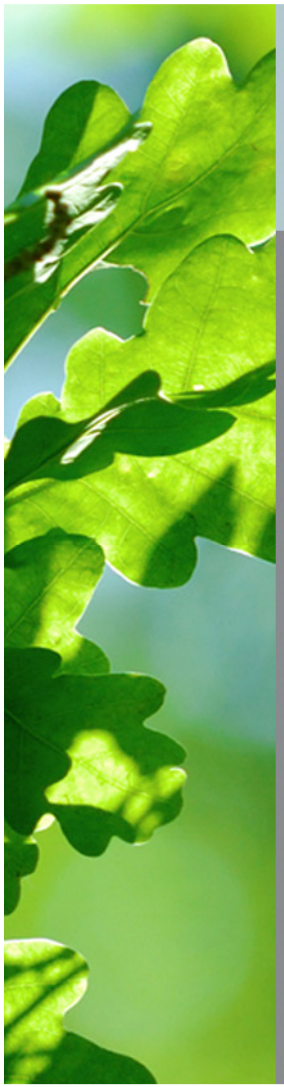




HOW ARE WE IMPACTED

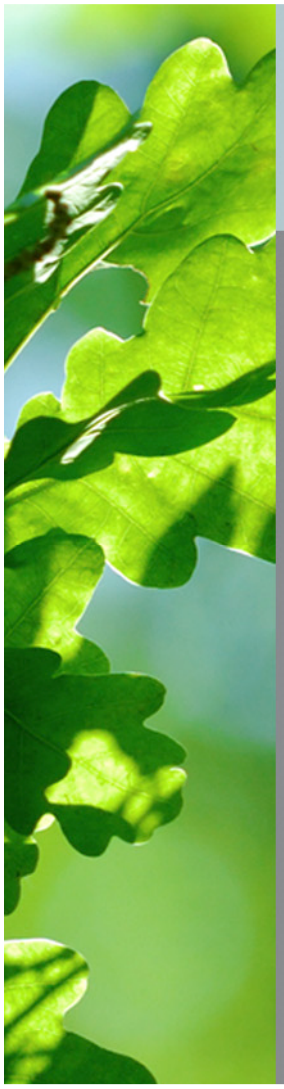
- Untreated runoff exacerbates pollution and erosion to the Bay
- Pollutants such as PCBs and mercury contaminate wildlife
- Cities are mandated to take action to address the concern

THE SOLUTION



GREEN INFRASTRUCTURE (GI)

- Our plan for a eco-friendly, sustainable City



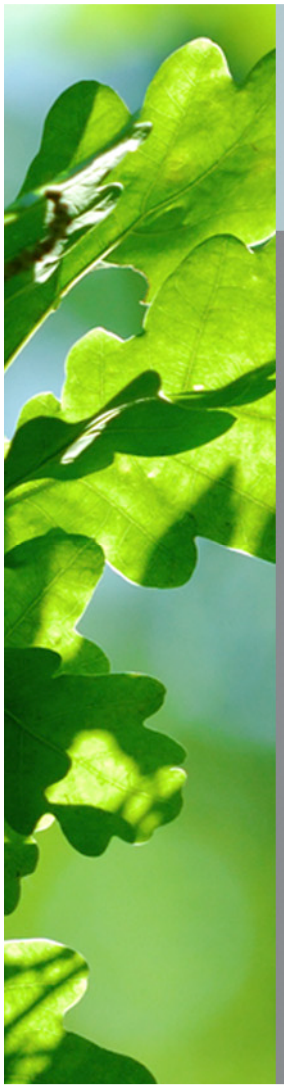
WHAT IS GREEN INFRASTRUCTURE (GI)?

- Storm water treatment features that use vegetation and natural processes to mimic Pre-Development conditions.

Example 1: GI planter strip

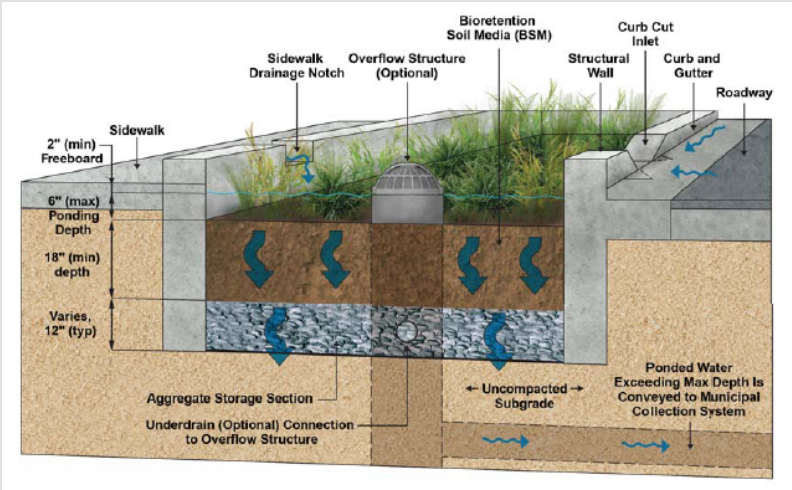
Example 2: Permeable paver w/ swale

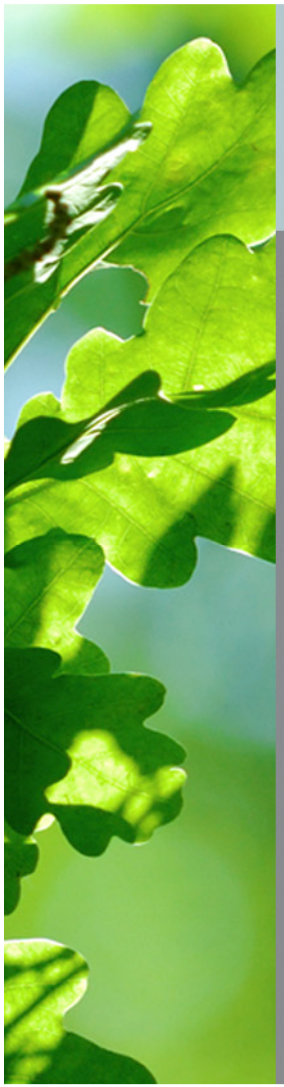
Example 3: Bioretention Area



HOW DOES GI WORK?

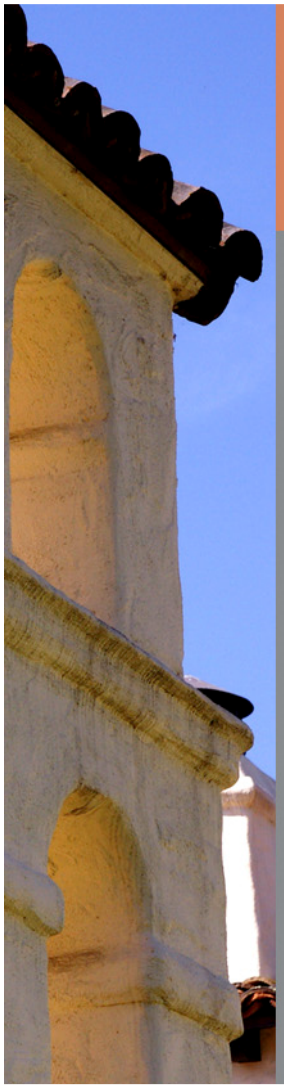
- Vegetation and special soils treat raw storm water
- Designed to retain storm water and slow runoff





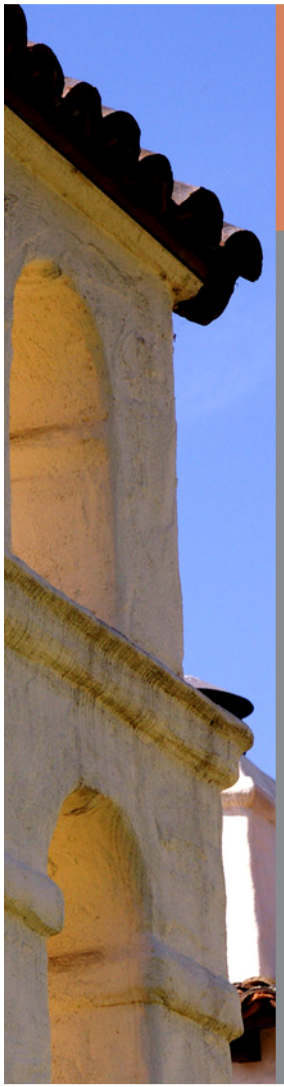
BENEFITS OF GREEN INFRASTRUCTURE

- Promotes groundwater recharge
- Treats pollutants from runoff
- Enhances urban greening
- Mitigates flooding and erosion
- Correlated with traffic safety



GREEN INFRASTRUCTURE (GI)

- So we can transition from this…



GREEN INFRASTRUCTURE (GI)

- To a more sustainable future!

ADDITIONAL EXAMPLES

CURB EXTENSION

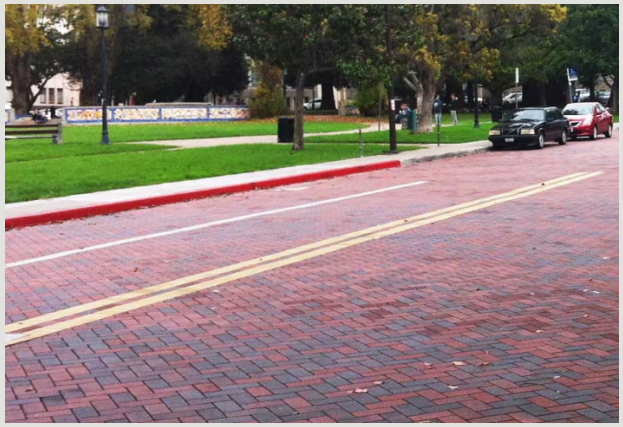
- Provides added buffer between vehicles and pedestrians
- Promotes safer pedestrian crossings and traffic calming

LANDSCAPE BARRIER

- Promotes safety between vehicles and bicycles
- Linear treatment ideal for lengthy street spans (Green Streets)

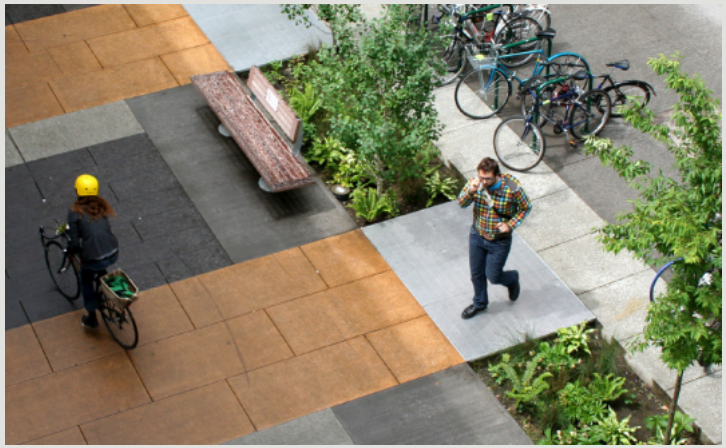
PERMEABLE PAVING

- Good option where space is constrained
- Utilized in parking lots and low density roads



STORM WATER TREATMENT PLANTERS

- Good option where space is limited (sidewalks, etc.)
- Enhances urban greenery and beautification



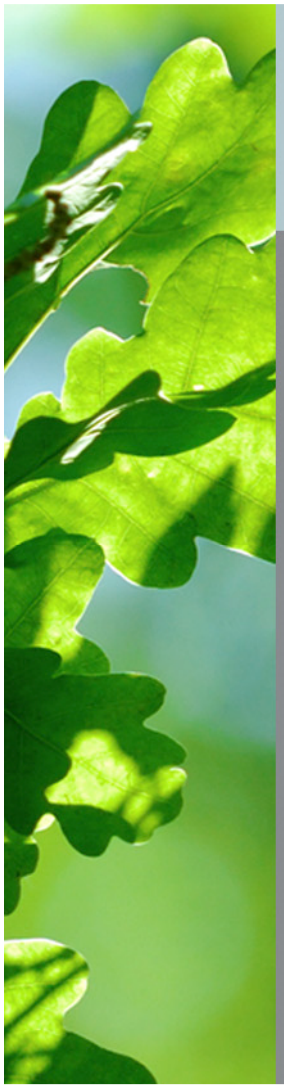
BIORETENTION AREA

- Can accommodate select trees to promote urban greenery
- Ideal for parking lots, parks, and wider streets

GREEN ROOF

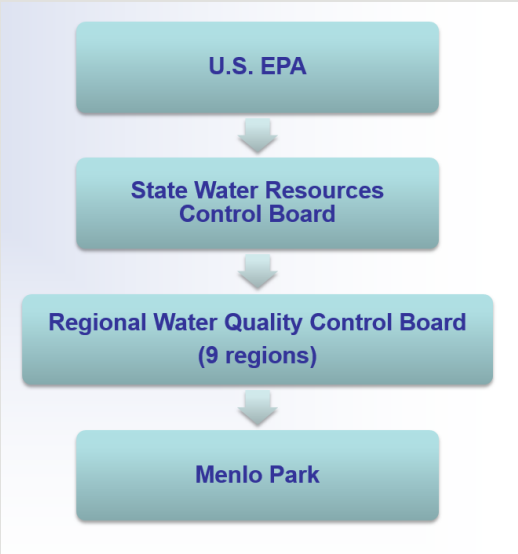
- Mitigates heat island effect and provides recreation
- Reduces energy usage to promote sustainability

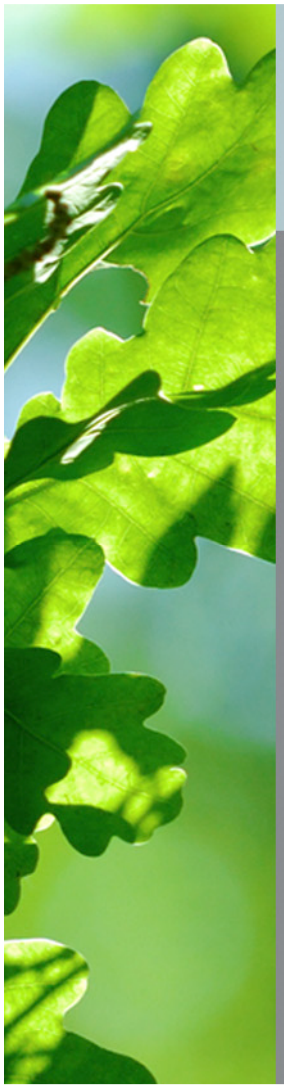
OUR GI PLAN



REGULATORY BACKGROUND

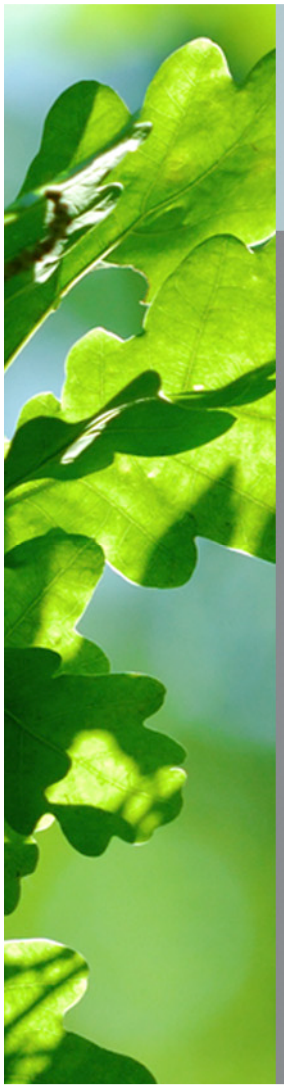
- The NPDES program is delegated to Regional Water Quality Control Boards
- Bay Area's Regional Board issues a Municipal Regional Permit (MRP) to regulate clean storm water
- The latest MRP requires Cities to prepare a master plan for storm water treatment by 9/30/19 (aka **GI Plan**)





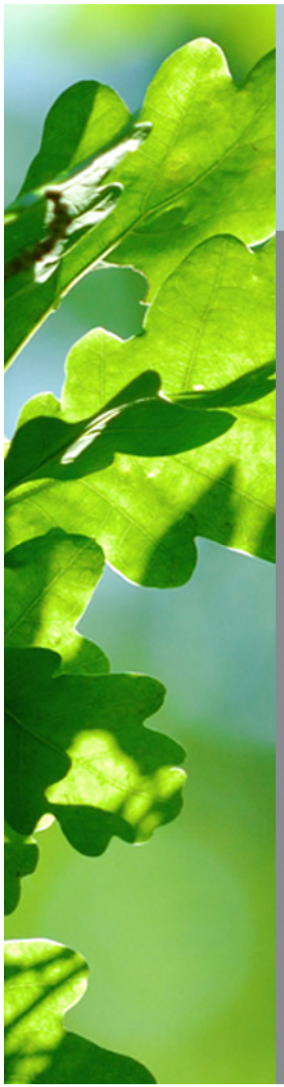
GI PLAN – OBJECTIVES

- For public parcels and ROW
- Update City policy
- Prioritize and track projects
- Establish design guidelines, outreach, and funding



GI PLAN – COMPLETED MILESTONES

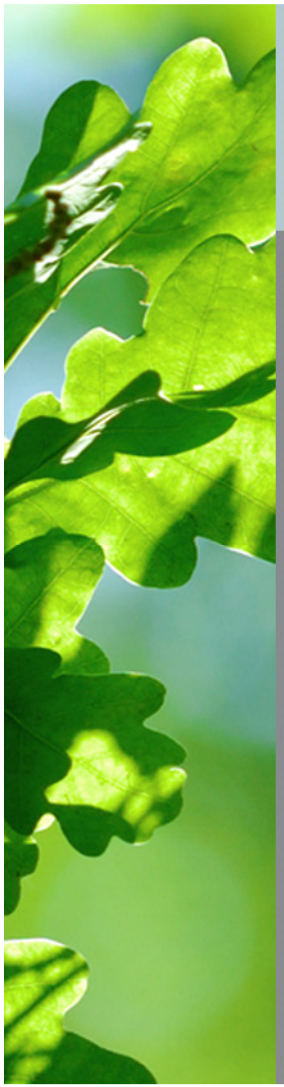
Council Actions	Adopted
Adopted Budgets(s) FY2016 - 2019	June 2015 – 2018
GI Workplan	May 23, 2017
RFP for GI Plan Consultant	July 3, 2017
Authorize Consultant Contract	August 6, 2018



GI PLAN – UPCOMING MILESTONES

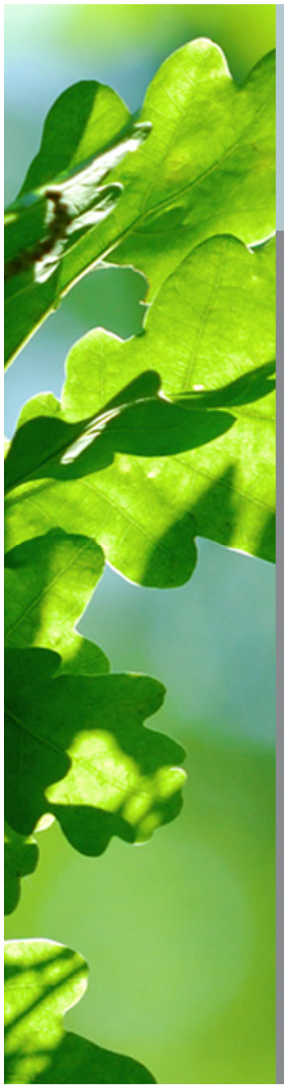
- We welcome your support moving forward!

Deliverable	Target Date
GI Plan – Final Draft	April 2019
Presentation to Council	May 21, 2019
Adoption by Council	July 16, 2019
Submittal to State	Sept 30, 2019



COMPLETE STREETS COMMISSION ROLE

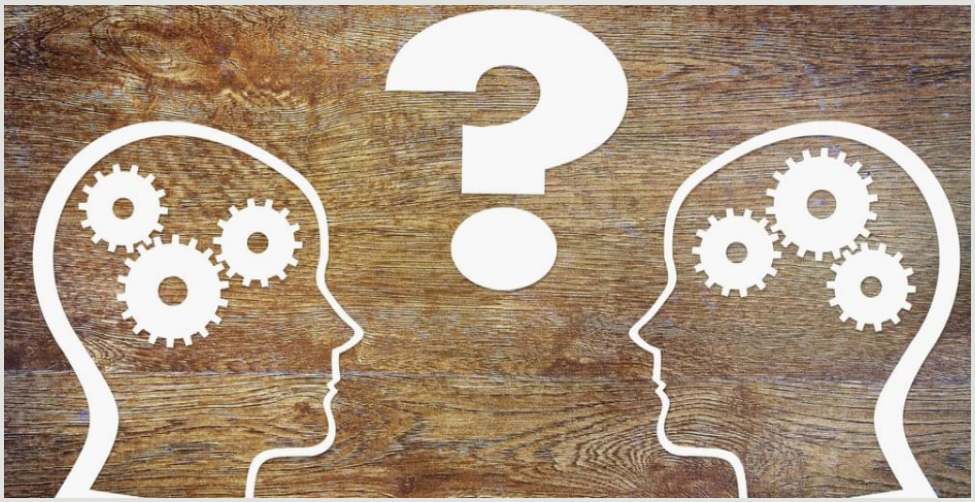
- Integrate GI as part of future Transportation initiatives
- Promote the concept of “no missed opportunities”
- Help promote GI outreach
- Review related GI guidelines and City policies on next slide



RELATED POLICIES & PLANS

- SMC's Sustainable Streets Guidelines: Link
- General Plan Update: Link
- Transportation Master Plan: Link
- Climate Action Plan: Link
- Parks and Recreation Facilities Plan: Link

QUESTIONS?



THANK YOU

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Active Transportation Network Subcommittee -
Middle Avenue Bike Lane Proposal

Scope Summary

Middle Ave is an important part of the transportation network as it fronts Safeway Plaza, Nealon and Lyle Parks, two senior centers, a preschool and other community amenities. Bicyclists use Middle Ave as a route to Hillview School and to the bike bridge at the south end of San Mateo Dr. The Stanford project at 500 El Camino Real, recent capital investments in both Nealon and Lyle Parks and the eventual construction of the Caltrain undercrossing will make Middle Ave even more critical to a well-functioning transportation system for the city. The Complete Streets Commission has prioritized a proposal which includes:

1. Improved access to Safeway Plaza for cyclists and pedestrians
2. Improved bike/ped crossings to Nealon Park at Blake and Roble entrances
3. Improved bike/ped crossing to Lyle Park at Arbor Rd
4. Improved bike/ped crossing to the San Mateo bike bridge at San Mateo Ave
5. Continuous standard, buffered or protected bike lanes along the entire length of Middle Ave, with at least one side of street parking to be removed
6. Continuous bike lanes along Olive St to Santa Cruz Ave and Hillview Middle School, with potential parking restriction or removal
7. Parking safety improvements along Nealon Park frontage
8. Improved El Camino Real crossing to Middle Plaza at 500 ECR
9. Sidewalk improvements along south side of Middle Ave

Key Project Activities and Timeline

1. Complete Streets Commission to evaluate and recommend preferred design alternative on Middle Ave from San Mateo to Olive in anticipation of the tentative 2020 repaving of the same street segment (Winter 2019)
2. Complete Streets Commission to support improvements related to the completion and occupancy of 500 ECR and ongoing study of the Middle Avenue Caltrain crossing (ongoing)
3. City Council to identify resources for evaluation, design, and implementation

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Middle Ave from University to ECR connects the busiest areas in Menlo Park which generate thousands of car trips per day.

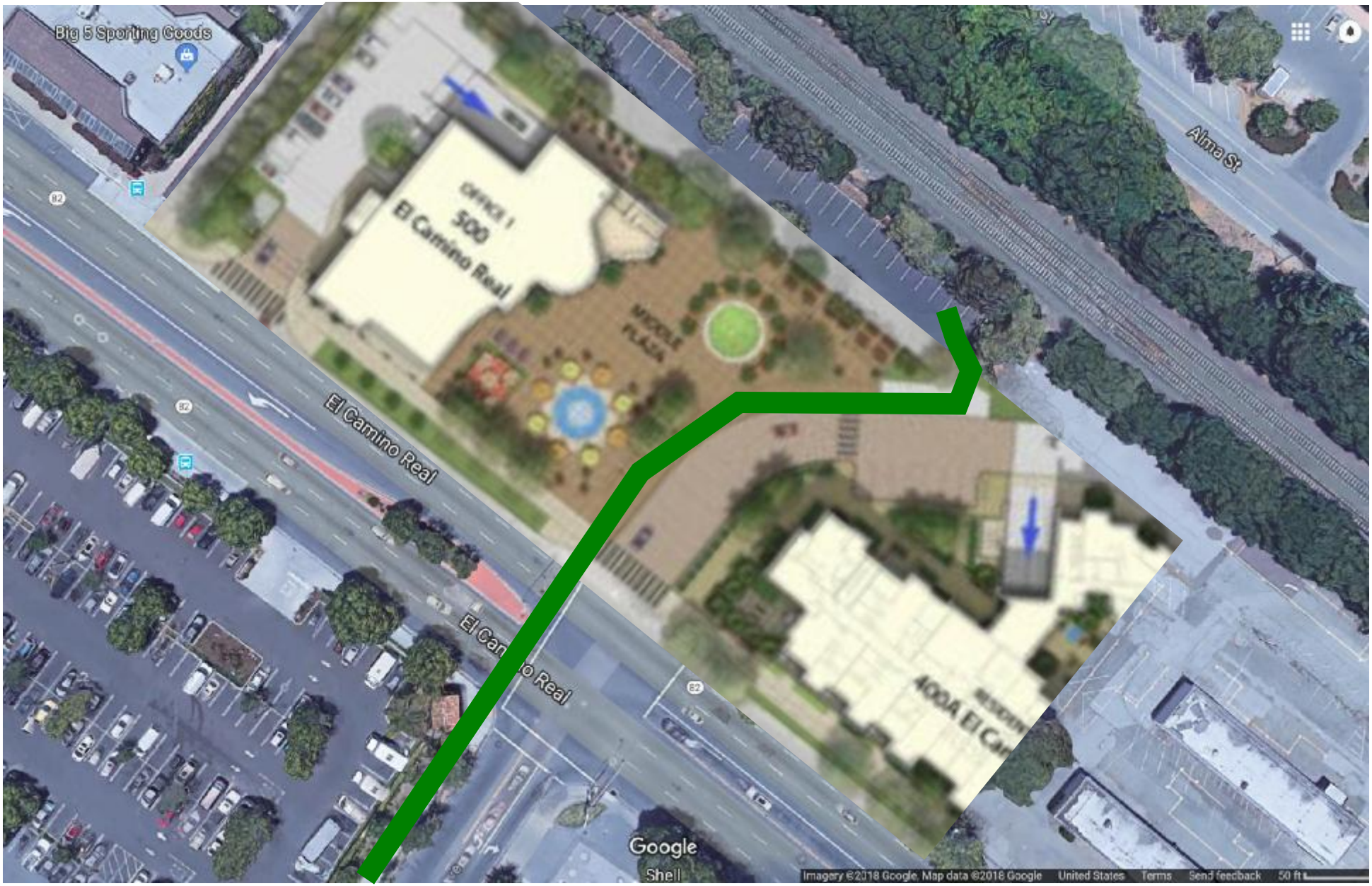
Middle Ave has no bike infrastructure. Walking and biking conditions around Nealon Park are unsafe and undignified. Safeway has limited bike accessibility.

Pedestrians forced to walk on uneven pavement between cars and hedges.

Nealon crosswalk at Blake requires walking through gutte


Middle Ave
Google

Widened sidewalk fronting Safeway on Middle becomes mixed use path across ECR to Middle Plaza, Big 5 and tunnel.



Detail view of Safeway separated sidewalk and bike lanes.
Separate Safeway bike entrance with bike parking.
Car entrance will require enhancements to increase visibility in both directions.
Exit to northbound ECR will use ECR exit and Uturn at Middle (yellow line)

Palo Alto Middlefield Rd two-way protected bike lane

"Ohtaki Left" - Northbound Safeway traffic uses ECR turn lane instead of Middle Ave. No right turns allowed into Safeway from Middle.

Two-way protected bike lane from Nealon Park to Safeway.

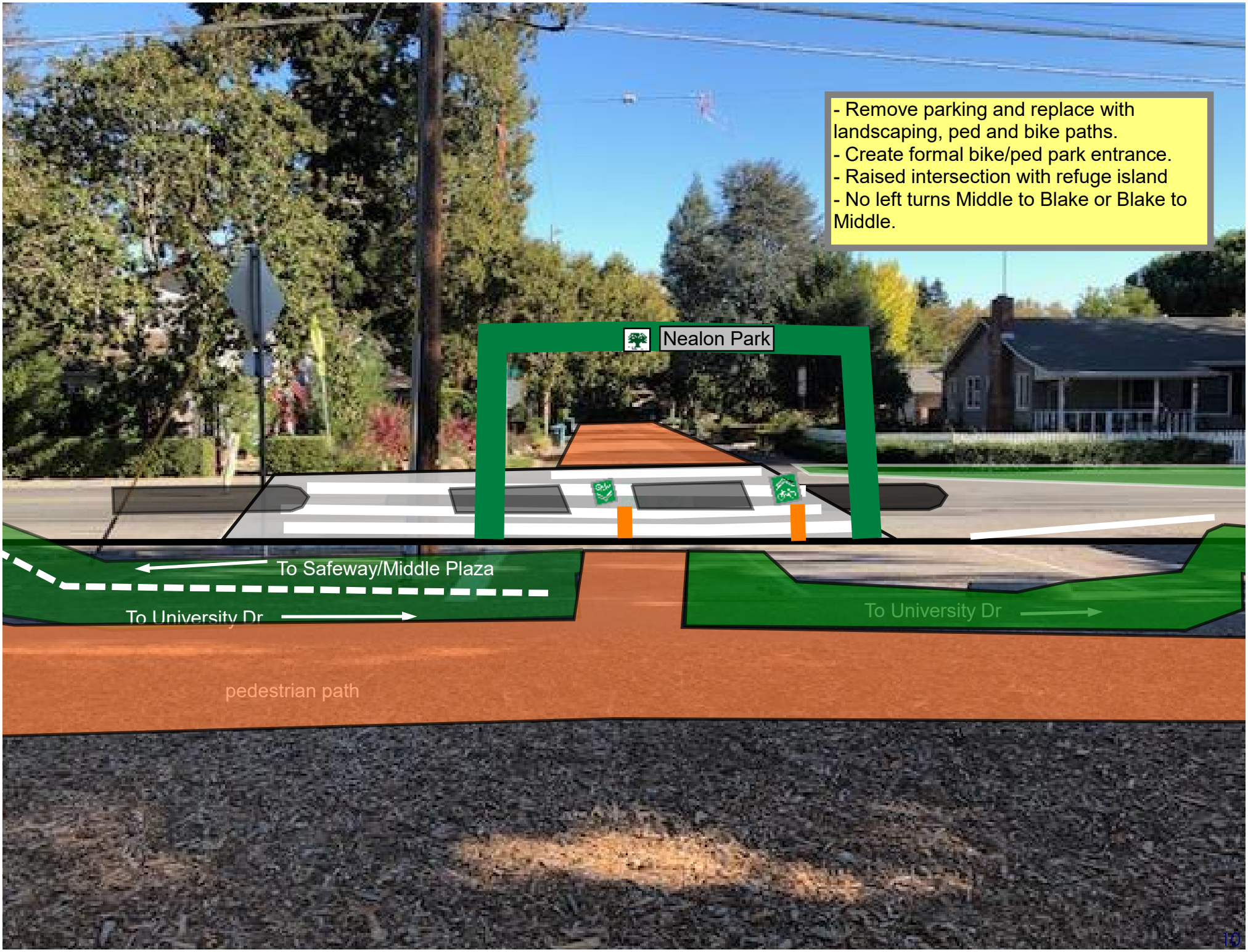
Becomes protected one-way bike lanes west of Blake.

East of Blake parking remains on south side of Middle.

Ample parking available (subject to parking study) in the Nealon parking lot so parking is removed from park frontage on Middle. Space is reclaimed for landscaping and paths.

Raised crosswalk with pedestrian refuge prohibits left turns on to and out of Blake.

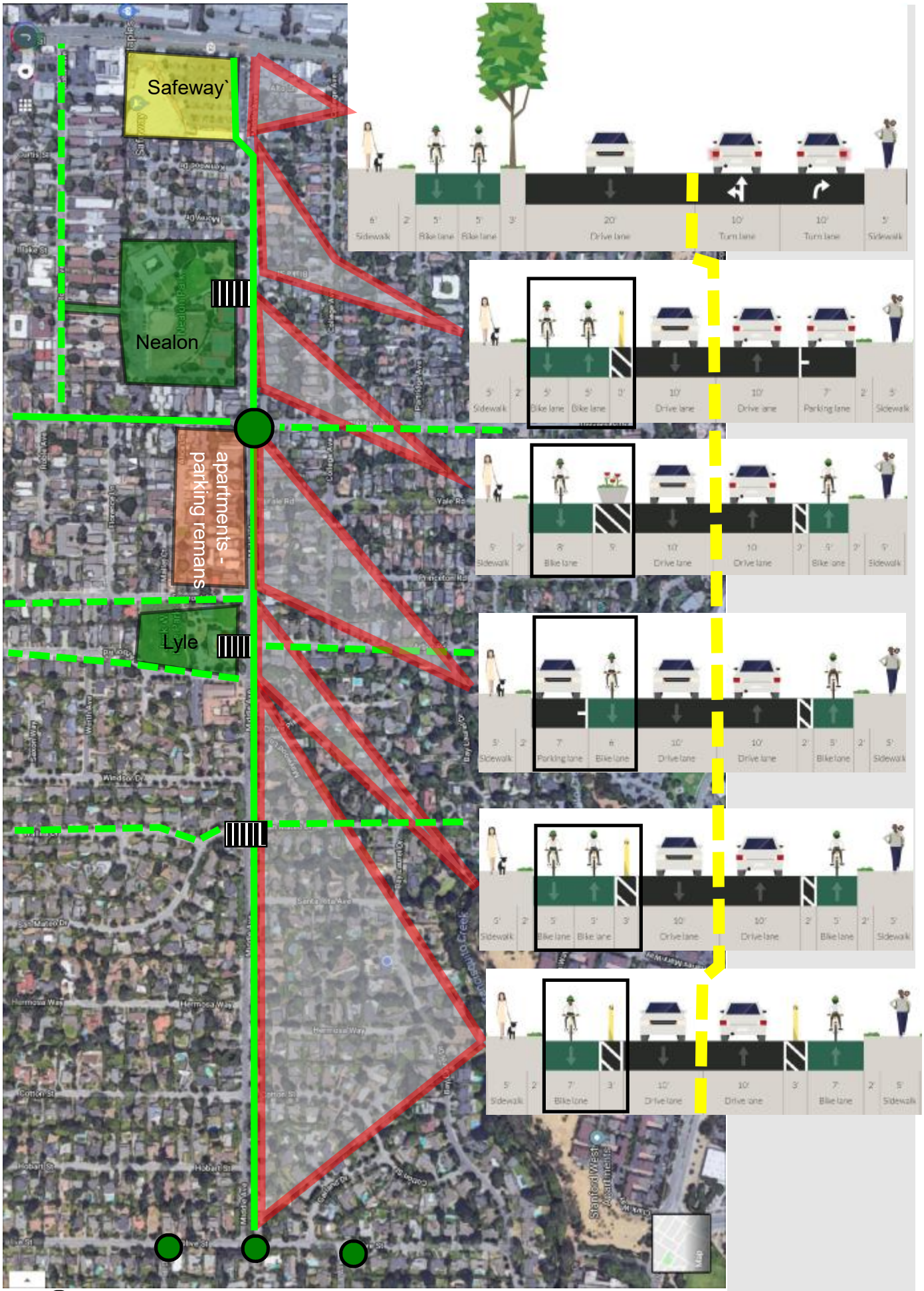

View from Nealon Park looking south toward Blake St.
Existing crosswalk at Blake has no sidewalk on one side and is between a sign and utility pole


- Remove parking and replace with landscaping, ped and bike paths.
- Create formal bike/ped park entrance.
- Raised intersection with refuge island
- No left turns Middle to Blake or Blake to Middle.
Nealon Park
To Safeway/Middle Plaza
To University Dr
To University Dr
pedestrian path


Existing Roble
entrance path


Improved lighting
Nealon Park
improved surface

Middle Ave proposal



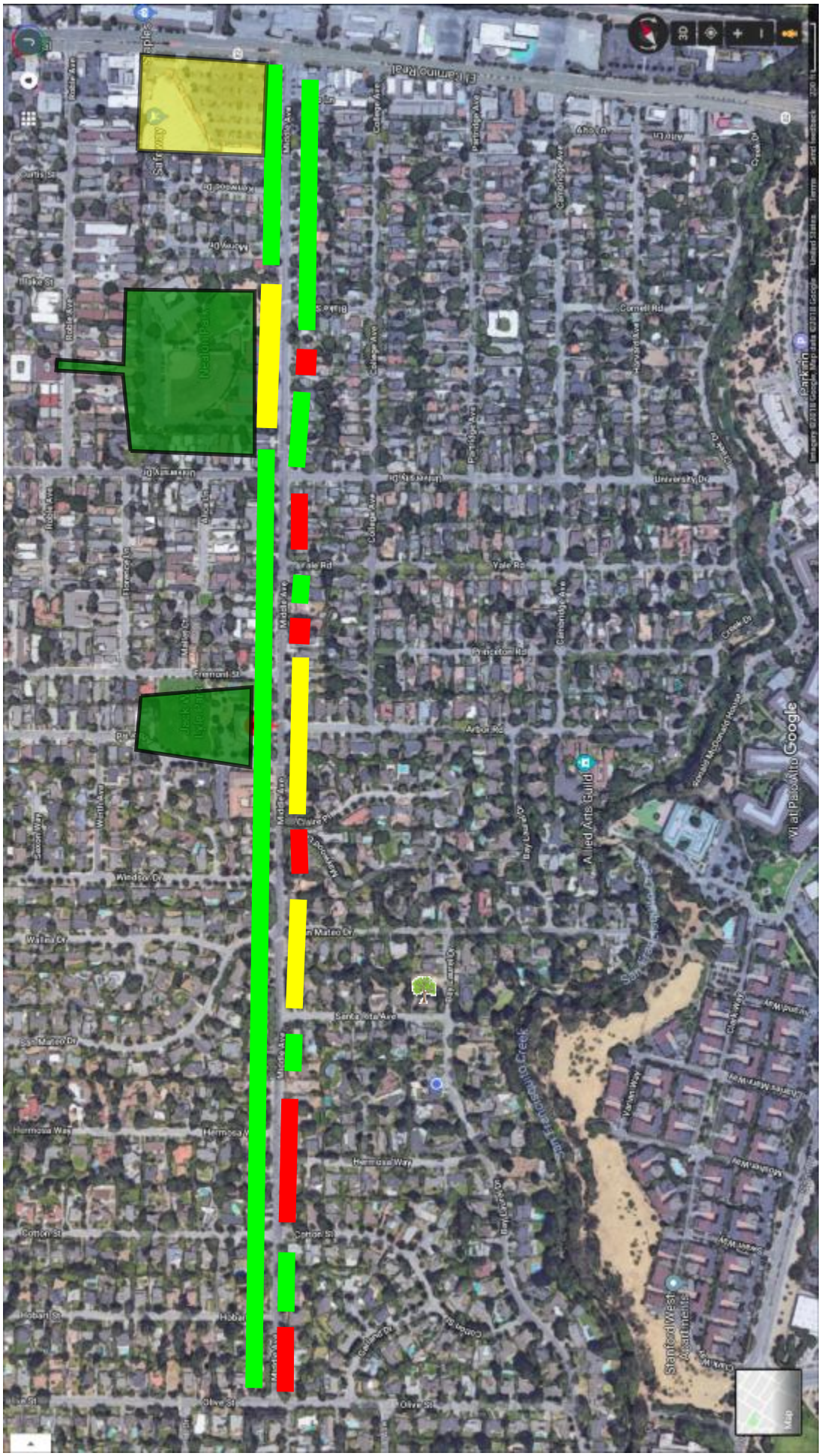
traffic circle

raised crosswalk

MIddle Ave continues westward via Oak and Oakdell which induces large numbers of turns between the segments. Traffic circles can be used to facilitate turning and to improve safety for all travel modes.

traffic circle

raised crosswalk



Middle Ave sidewalk conditions north and south sides

paved sidewalk

unpaved sidewalk

no sidewalk

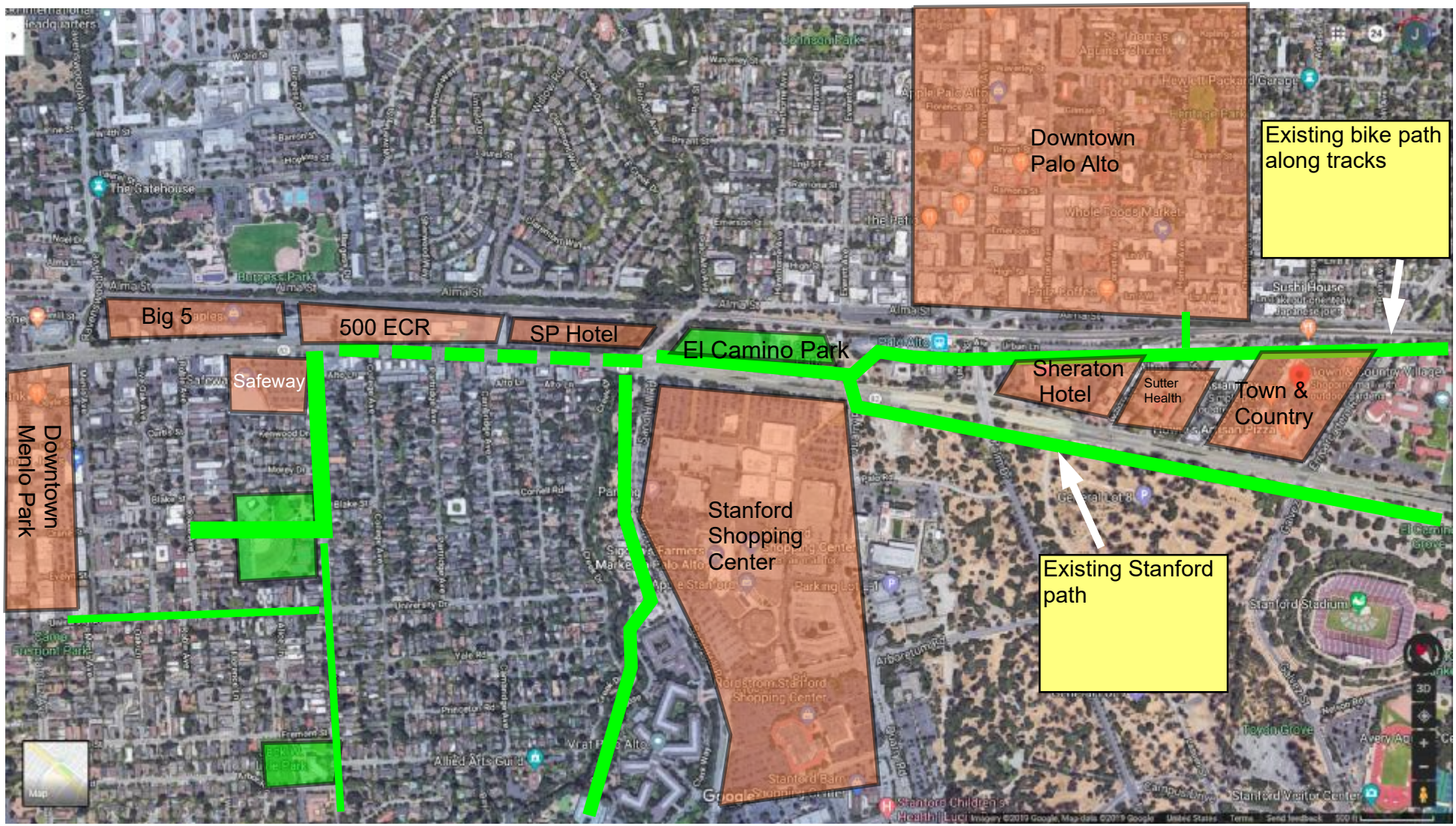
All intersections should have marked crosswalks.

Use bulbouts on corners to reduce crossing distances and slow turning cars.

Olive St proposal

Parking available whereever easement space is available. No parking on street.

Santa Cruz Ave & Olive: Raised intersection with RRFB.
Potential for moving playground equipment to existing grass area and creating new bike entrance to Hillview School with additional bike parking.



Missing Link: Extend El Camino Park path to Middle Ave to combine it with existing facilities: Stanford, Caltrain, Sutter Health, Town & Country, Sheraton Hotel, etc. Use ECR east side parking lane for two-way protected bike path, shown as dashed green line. Also expand adjacent sidewalk by replacing plantings with sidewalk.

Multi-year effort involving Palo Alto, Caltrans, Stanford, Managers Mobility Partnership.

ATTACHMENT G-3

Caltrain Business Plan

FEBRUARY 2019

LPMG

February 28, 2019

Caltrain

Caltrain Business Plan Project Update

What is the Caltrain Business Plan?

What Addresses the future potential of the railroad over the next 20-30 years. It will assess the benefits, impacts, and costs of different service visions, building the case for investment and a plan for implementation.

Why Allows the community and stakeholders to engage in developing a more certain, achievable, financially feasible future for the railroad based on local, regional, and statewide needs.

What Will the Business Plan Cover?

Technical Tracks

Service

- Number of trains
- Frequency of service
- Number of people riding the trains
- Infrastructure needs to support different service levels

Business Case

- Value from investments (past, present, and future)
- Infrastructure and operating costs
- Potential sources of revenue

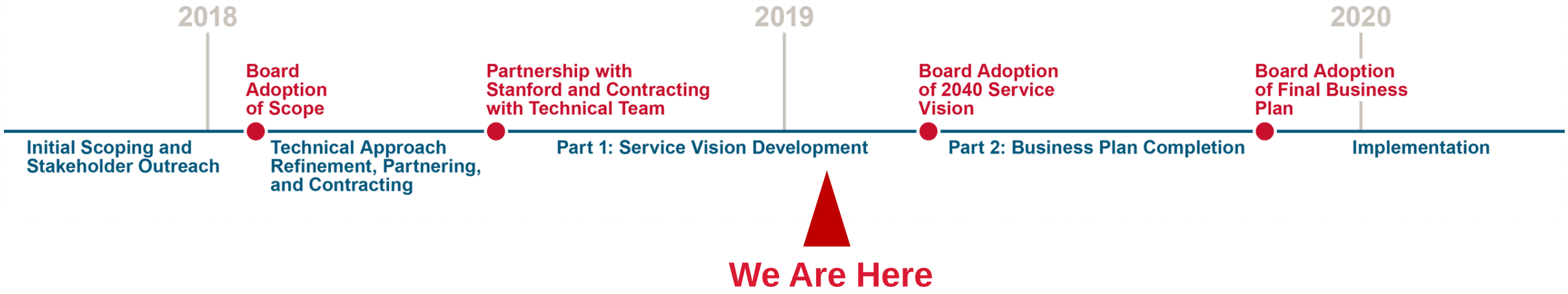
Community Interface

- Benefits and impacts to surrounding communities
- Corridor management strategies and consensus building
- Equity considerations

Organization

- Organizational structure of Caltrain including governance and delivery approaches
- Funding mechanisms to support future service

Where Are We in the Process?



Recap- Planning for Service in 2040

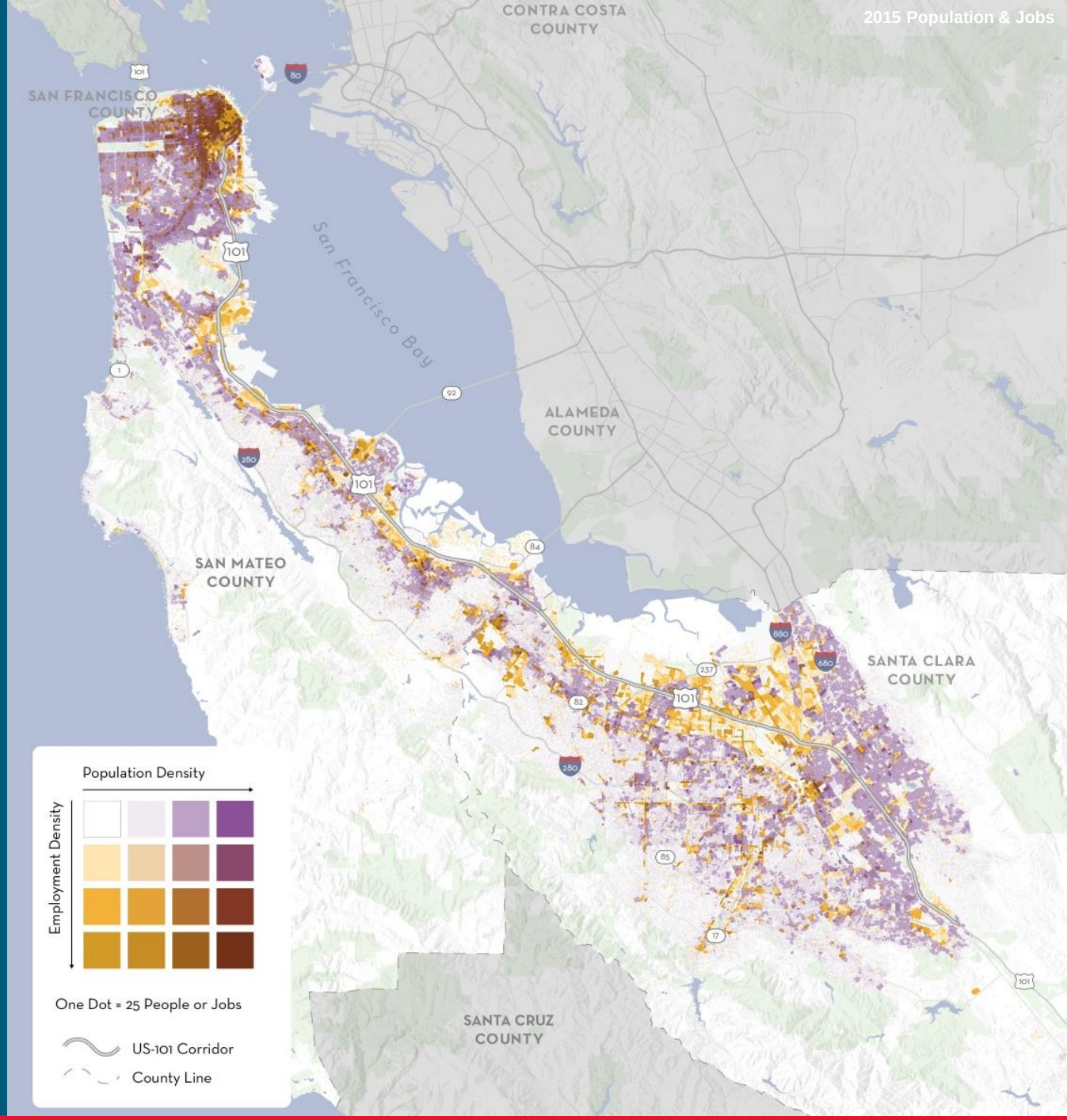
2040 Demand

The Caltrain corridor is growing

- Corridor expected to add 1.2 million people and jobs within 2 miles of Caltrain (+40%)[1]
- 80% of growth expected in San Francisco and Santa Clara Counties

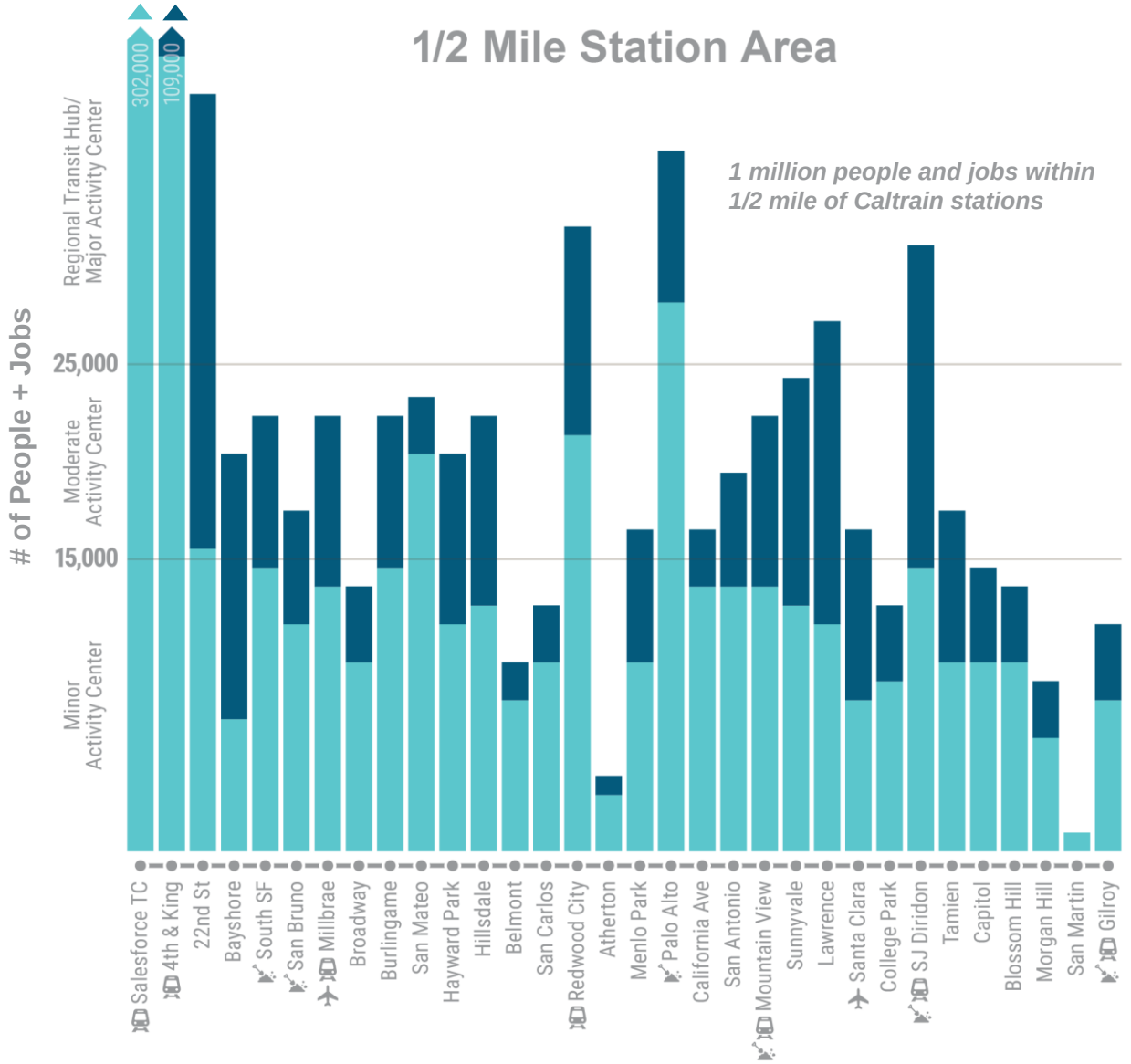
Major transit investments are opening new travel markets to Caltrain

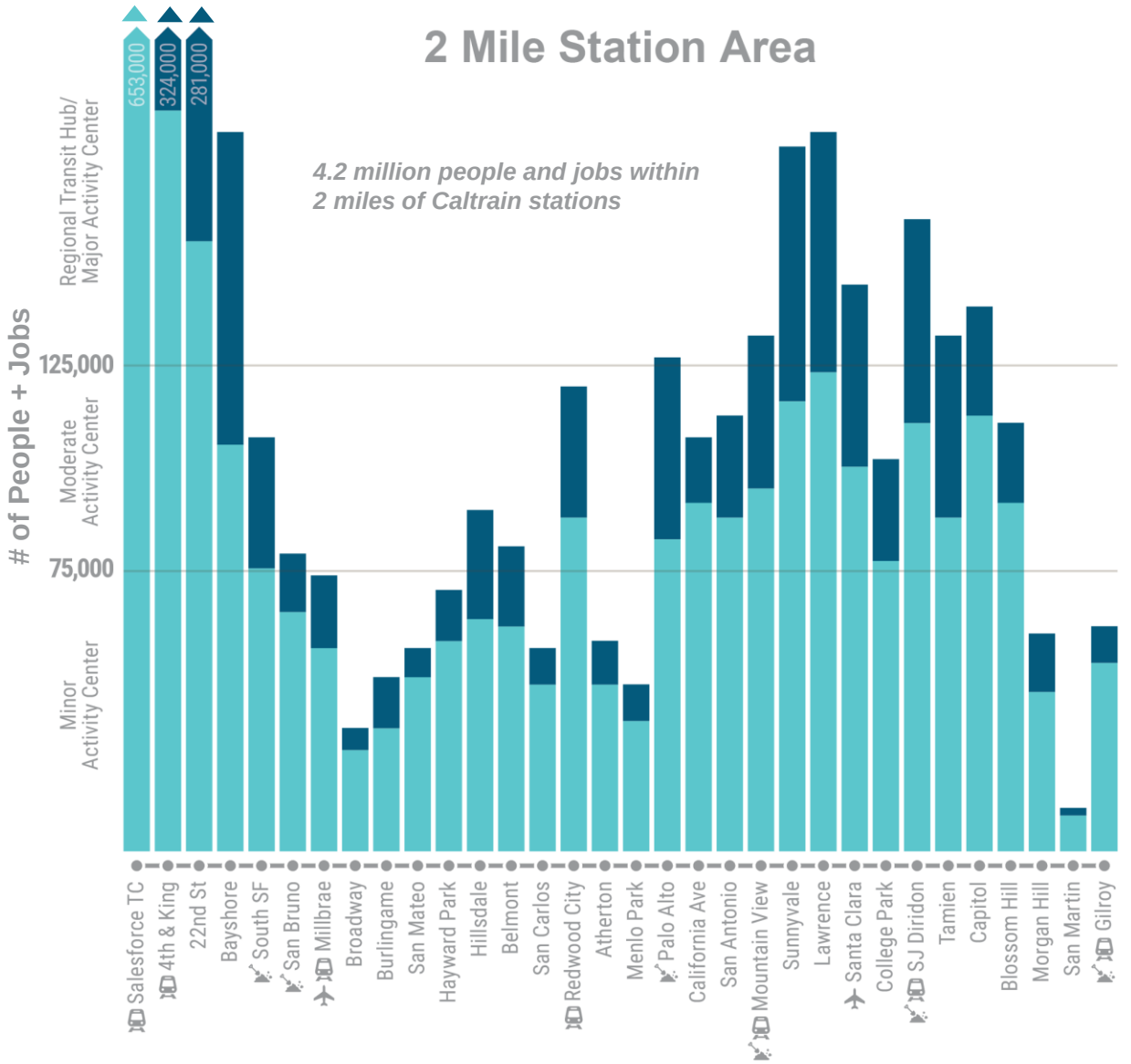
- Downtown Extension and Central Subway to provide more direct connections to downtown San Francisco
- Dumbarton Rail, BART to San Jose, and improvements to Capitol Corridor and ACE to strengthen connectivity with East Bay
- HSR and Salinas rail extensions to increase interregional travel demand



[1]Based on Plan Bay Area forecasts and approved projects by individual cities

2040 Land Use & Transportation Context

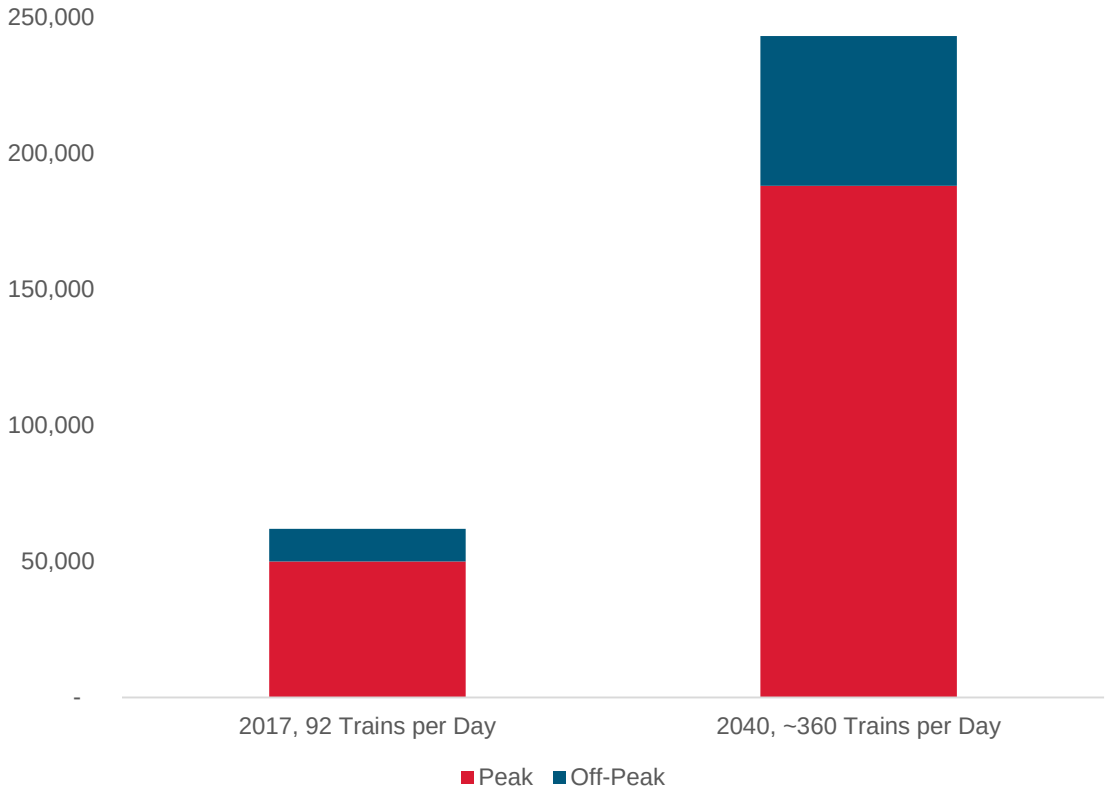




Indicates a station where substantial growth beyond Plan Bay Area forecasts is anticipated, but not yet approved

Exploring the Potential Long Term Demand for Caltrain Service

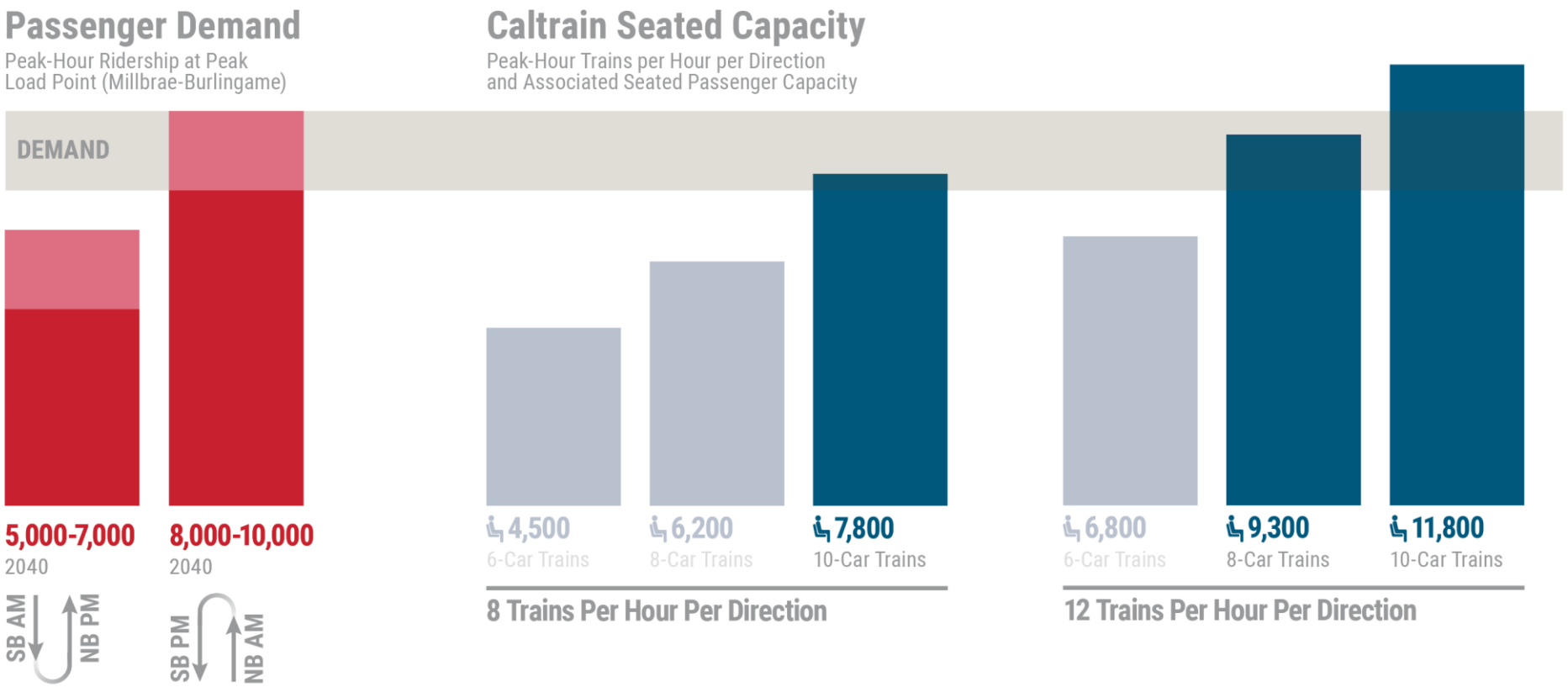
Using Plan Bay Area numbers for projected growth in jobs and housing, an unconstrained model run of high frequency, all-day BART-like service in the Caltrain corridor suggests that by 2040 there could be underlying demand for approximately 240,000 daily trips on the system



Description	2017: 92 Trains/Day	2040: ~360 Trains/Day
Daily	**62,000**	**240,000**
Peak	50,000	185,000
Off-Peak	12,000	55,000

Throughput Demand vs. Capacity

To comfortably serve the full potential market for rail in 2040, Caltrain would need to operate 8 trains per hour, per direction (TPHPD) with 10 car trains or 12 TPHPD with 8 or 10 car trains



Seated capacity based on Stadler EMU with different door and bike car configurations. Does not include consideration of potential HSR capacity to serve demand

Choosing a Vision: How Will the Railroad Grow?

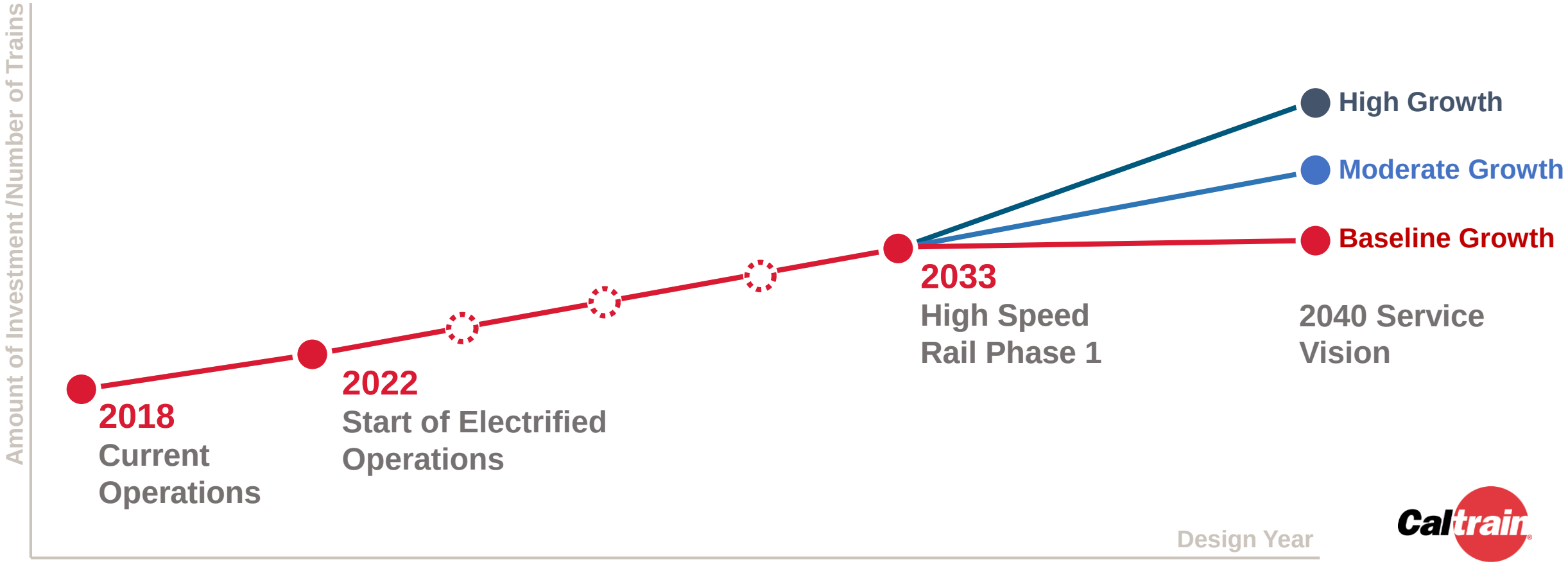
What

In the Spring of 2019 the team will present three growth scenarios to the Board. One “baseline” scenario will reflect past and ongoing Blended System planning efforts while two new scenarios will explore higher levels of growth. Each scenario will provide a detailed picture of how the railroad could grow over the next 20-30 years. The Board will be asked to choose one of these growth scenarios as the “Service Vision” for the corridor

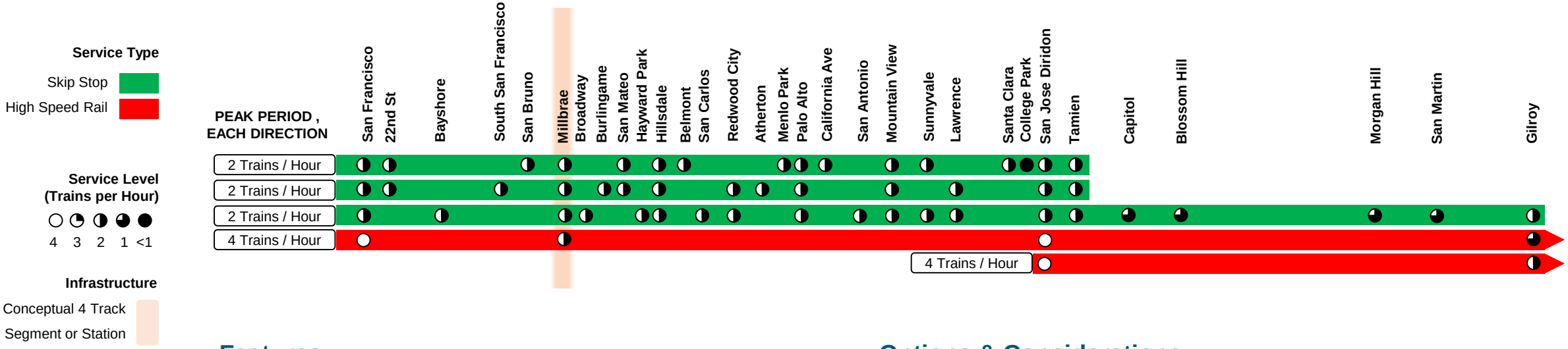
Why

In selecting a long range Service Vision the Board will answer the question “How should the railroad grow?” This will allow Caltrain to further optimize and refine the Vision while developing a Business Plan that builds towards the future in a consistent and efficient manner

2040 Service Scenarios



2040 Baseline Growth Scenario (6+4 Trains)



Features

- Blended service with up to 10 TPH north of Tamien (6 Caltrain + 4 HSR) and up to 10 TPH south of Tamien (2 Caltrain + 8 HSR)
- Three skip stop patterns with 2 TPH – most stations are served by 2 or 4 TPH, with a few receiving 6 TPH
- Some origin-destination pairs are not served at all

Passing Track Needs

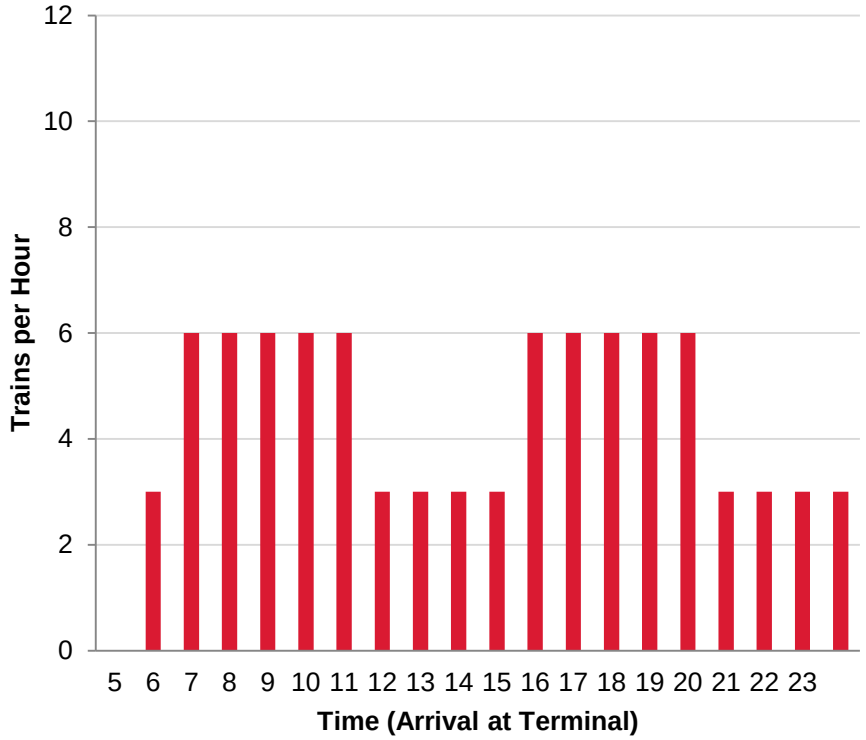
- Less than 1 mile of new passing tracks at Millbrae associated with HSR station plus use of existing passing tracks at Bayshore and Lawrence

Options & Considerations

- Service approach is consistent with PCEP and HSR EIRs
- Opportunity to consider alternative service approaches later in Business Plan process

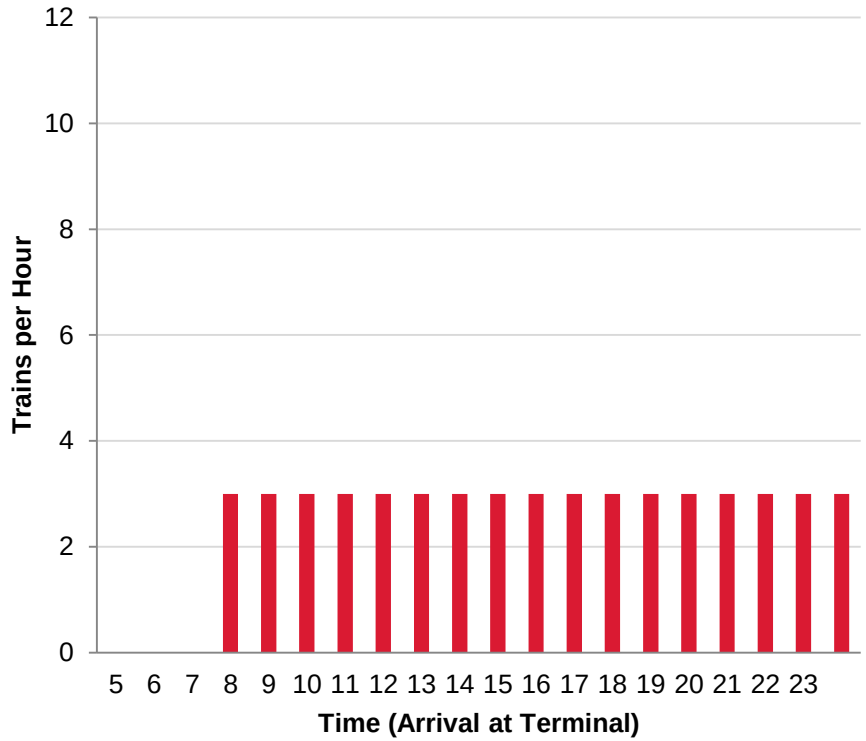
Baseline Growth Scenario – Full Day

Weekday Service



- 6 TPH during morning and evening peak periods (3 skip stop patterns at 2 TPH)
- 3 TPH during morning and evening off peak periods (3 skip stop patterns at 1 TPH)
- HSR operates 4 TPH during peak period and 3 TPH during off-peak periods

Weekend Service

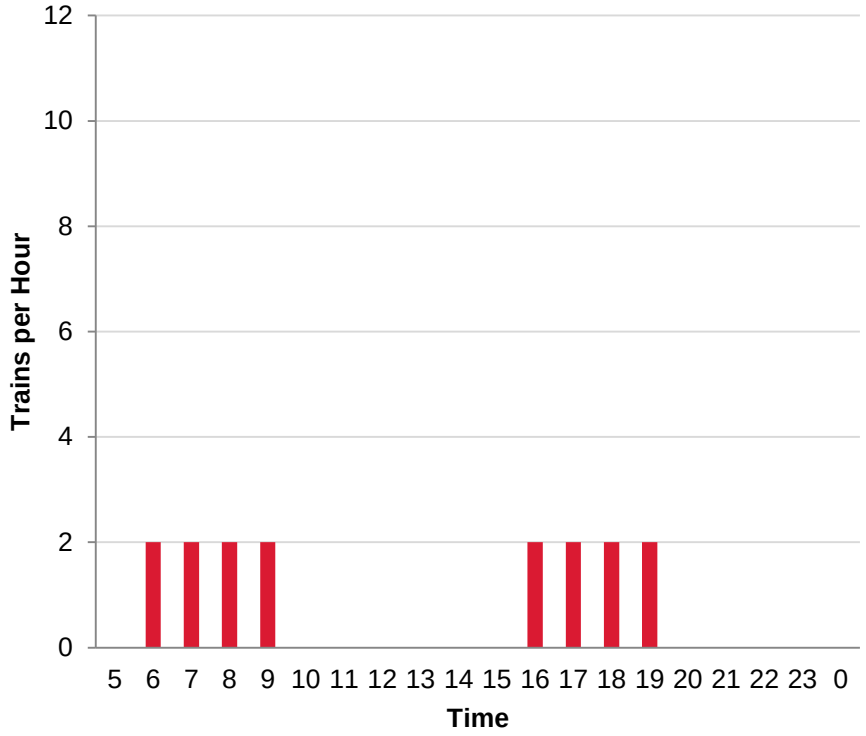


- 3 TPH during morning and evening peak periods (3 skip stop patterns at 1 TPH)
- HSR operates three trains per hour

Charts depict Caltrain arrivals only

Baseline Growth – South of Tamien

Weekday Service



- Caltrain: 2 TPH with skip stop service
- HSR: 8 TPH during peak periods and 4 TPH during off-peak periods

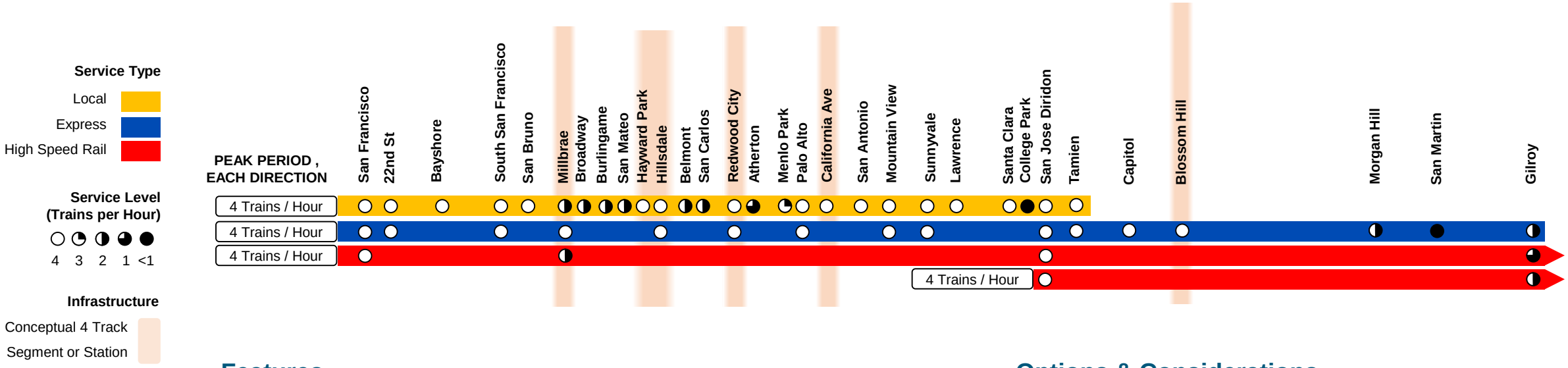
Weekend Service

NO WEEKEND CALTRAIN SERVICE

- HSR: 4 TPH throughout the day

Charts depict Caltrain arrivals only

Moderate Growth Scenario (8+4 Trains)



Features

- A majority of stations served by 4 TPH local stop line, but Mid-Peninsula stations are serviced with 2 TPH skip stop pattern
- Express line serving major markets – some stations receive 8 TPH
- Timed local/express transfer at Redwood City

Passing Track Needs

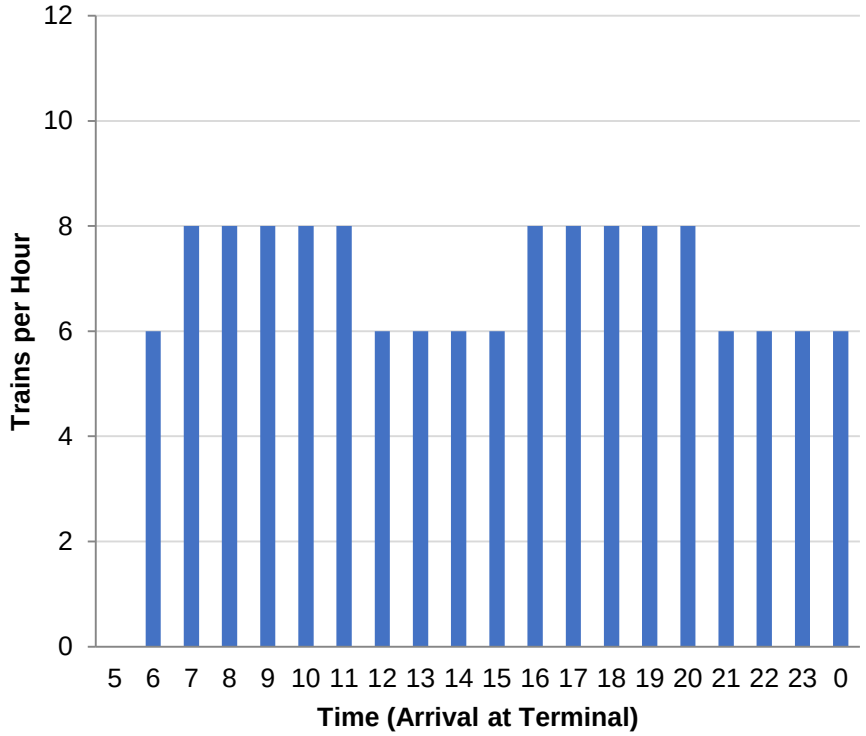
- Up to 4 miles of new 4-track segments and stations: Hayward Park to Hillsdale, at Redwood City, and a 4-track station in northern Santa Clara county (Palo Alto, California Ave, San Antonio or Mountain View. California Ave Shown)

Options & Considerations

- To minimize passing track requirements, each local pattern can only stop twice between San Bruno and Hillsdale - in particular, San Mateo is underserved and lacks direct connection to Millbrae
- Each local pattern can only stop once between Hillsdale and Redwood City
- Atherton, College Park, and San Martin served on an hourly or exception basis

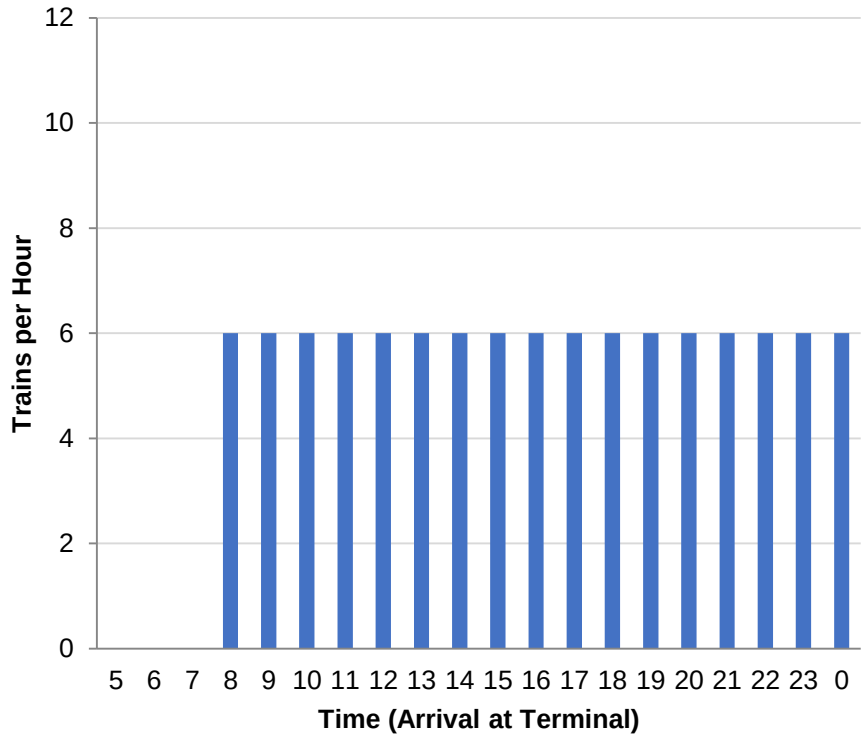
Moderate Growth Scenario – Full Day

Weekday Service



- 8 TPH during morning and evening peak periods (4 local and 4 express trains)
- 6 TPH during early AM, midday, and evenings (2 local and 4 express trains)
- HSR operates 4 TPH during peak period and 3 TPH during off-peak periods

Weekend Service

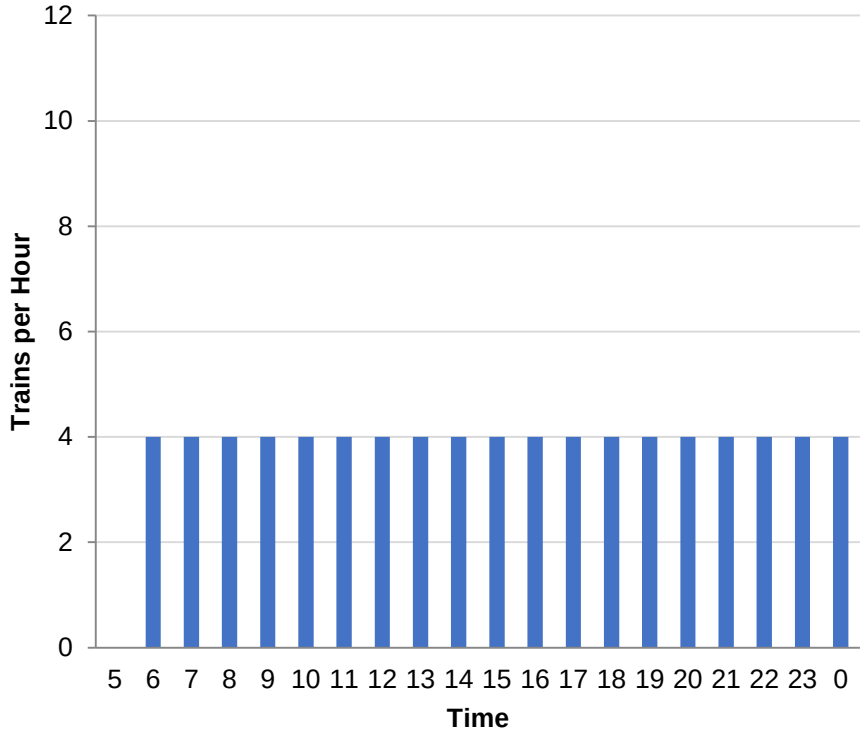


- 6 TPH during early AM, midday, and evenings (2 local and 4 express trains)
- HSR operates 3 TPH

Charts depict Caltrain arrivals only

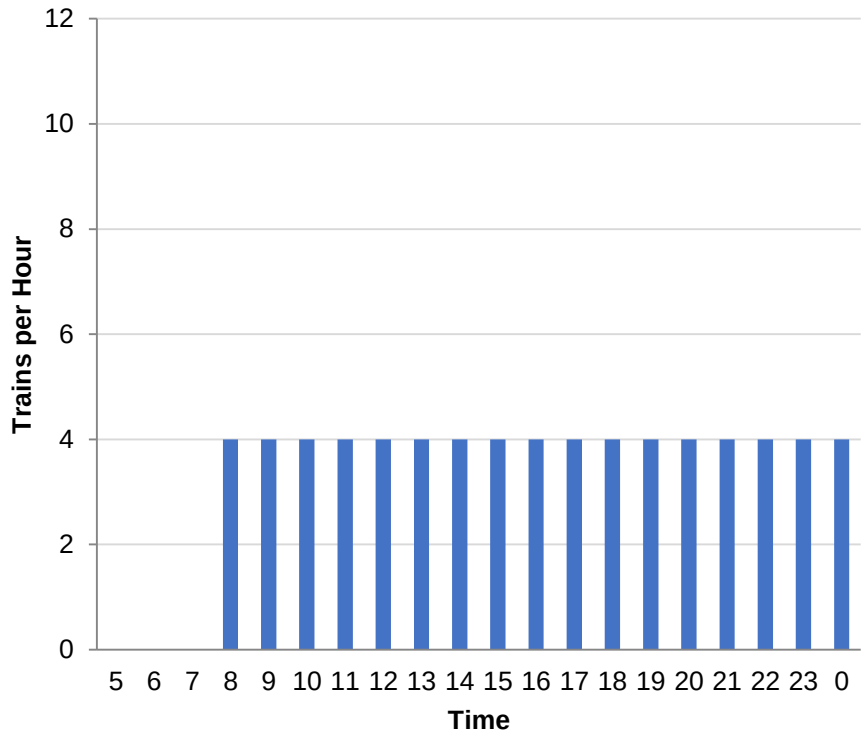
Moderate Growth – Capitol & Blossom Hill

Weekday Service



- Caltrain: 4 TPH throughout the day
- HSR: 8 TPH during peak periods and 4 TPH during off-peak periods

Weekend Service



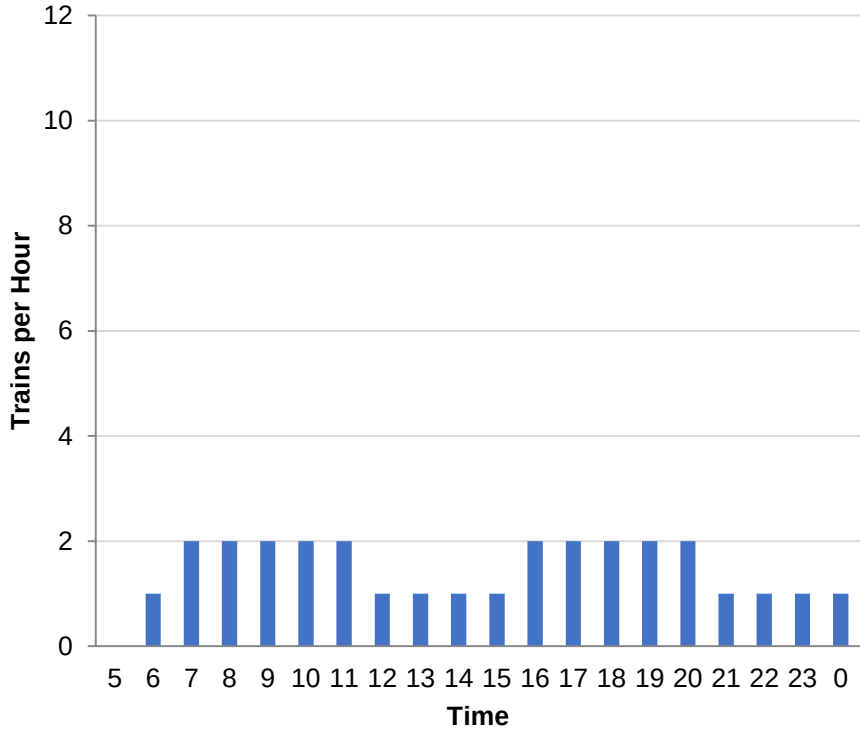
- Caltrain: 4 TPH throughout the day
- HSR: 4 TPH throughout the day

Assumes 4 track turnaround at Blossom Hill station

Charts depict Caltrain arrivals only

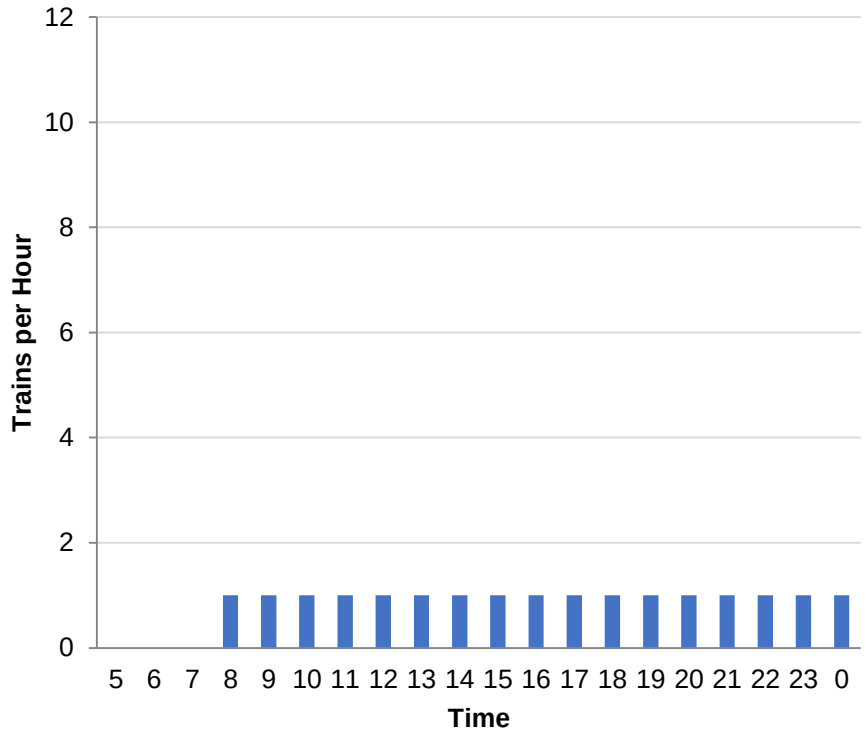
Moderate Growth – Morgan Hill & Gilroy

Weekday Service



- Caltrain: 2 TPH during peak periods and 1 TPH during off-peak periods
- HSR: 8 TPH during peak periods (3 stopping at Gilroy) and 4 TPH during off-peak periods (2 stopping at Gilroy)

Weekend Service

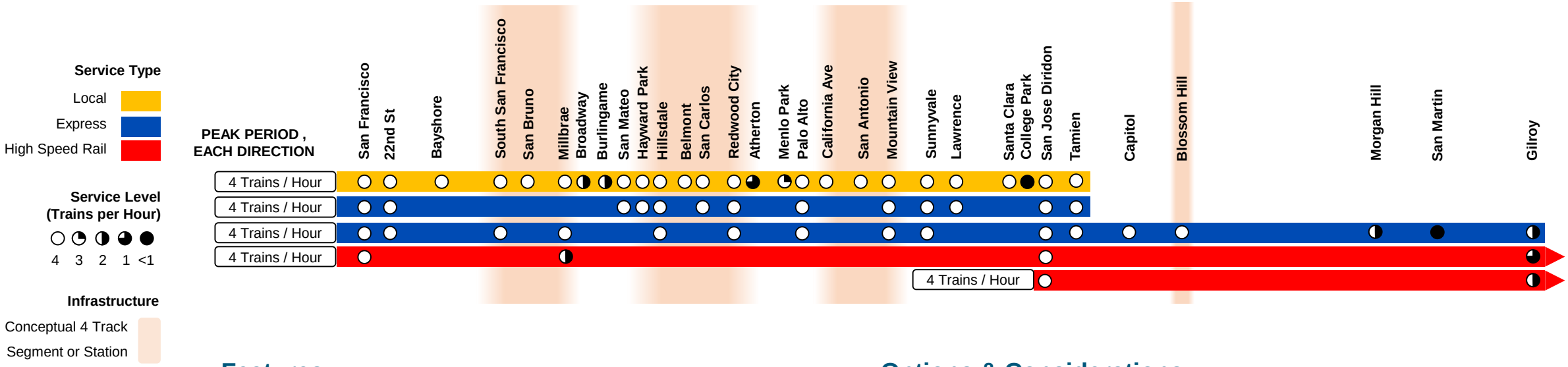


- Caltrain: 1 TPH throughout the day
- HSR: 4 TPH throughout the day (2 stopping at Gilroy)

Assumes 4 track turnaround at Blossom Hill station

Charts depict Caltrain arrivals only

High Growth Scenarios (12+4 Trains)



Features

- Nearly complete local stop service – almost all stations receiving at least 4 TPH
- Two express lines serving major markets – many stations receive 8 or 12 TPH

Passing Track Needs

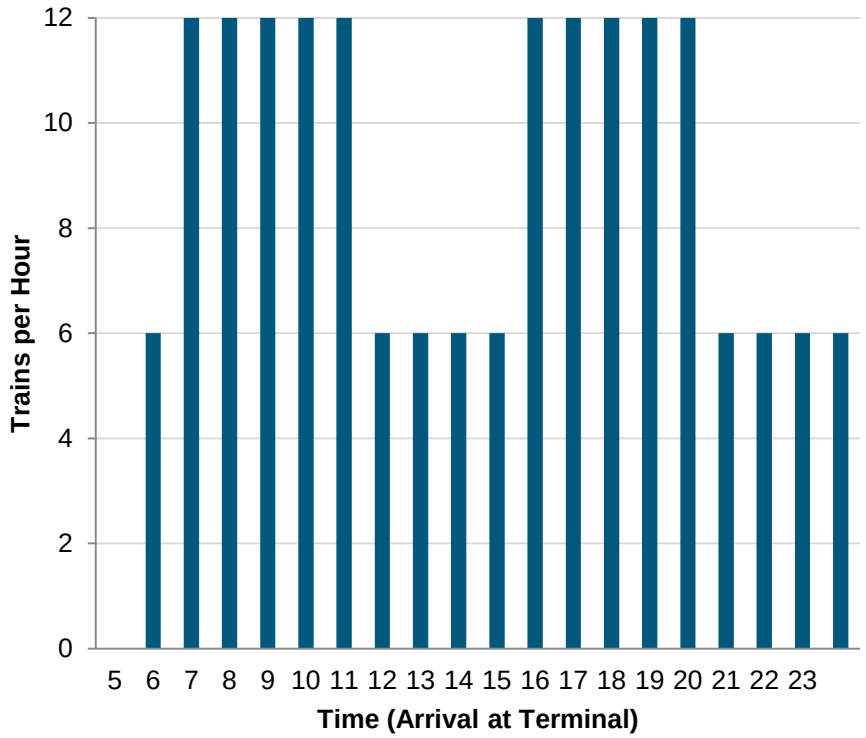
- Requires up to 15 miles of new 4 track segments: South San Francisco to Millbrae, Hayward Park to Redwood City, and northern Santa Clara County between Palo Alto and Mountain View stations (shown: California Avenue to north of Mountain View)

Options & Considerations

- SSF-Millbrae passing track enables second express line; this line cannot stop north of Burlingame
- Tradeoff between infrastructure and service along Mid-Peninsula - some flexibility in length of passing tracks versus number and location of stops
- Flexible 5 mile passing track segment somewhere between Palo Alto and Mountain View
- Atherton, College Park, and San Martin served on an hourly or exception basis

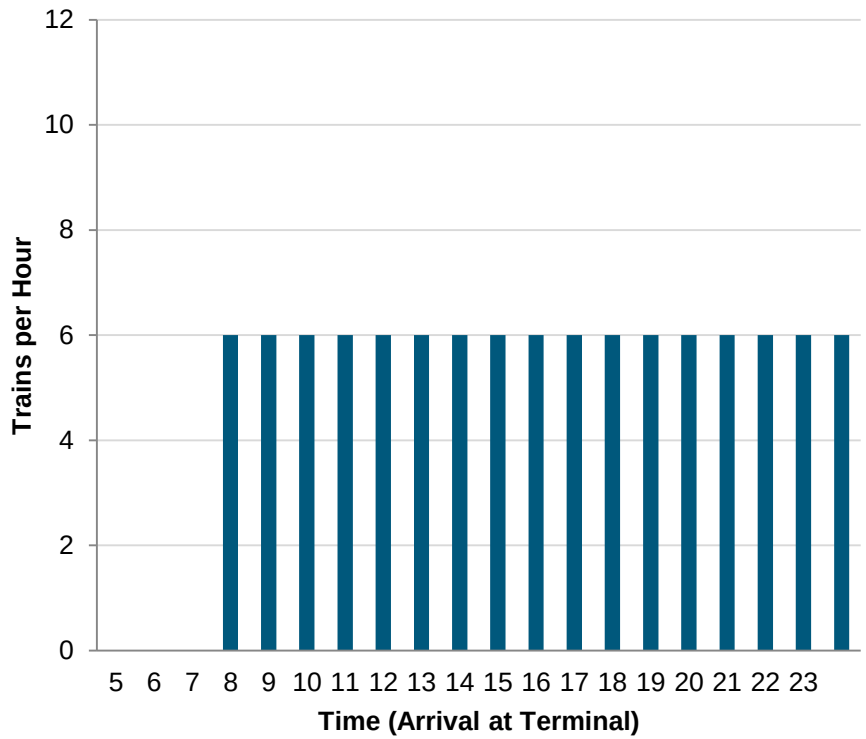
High Growth Scenario – Full Day

Weekday Service



- 12 TPH during morning and evening peak periods (4 local and 8 express trains)
- 6 TPH during early AM, midday, and evenings (2 local and 4 express trains)
- HSR operates 4 TPH during peak period and 3 TPH during off-peak periods

Weekend Service

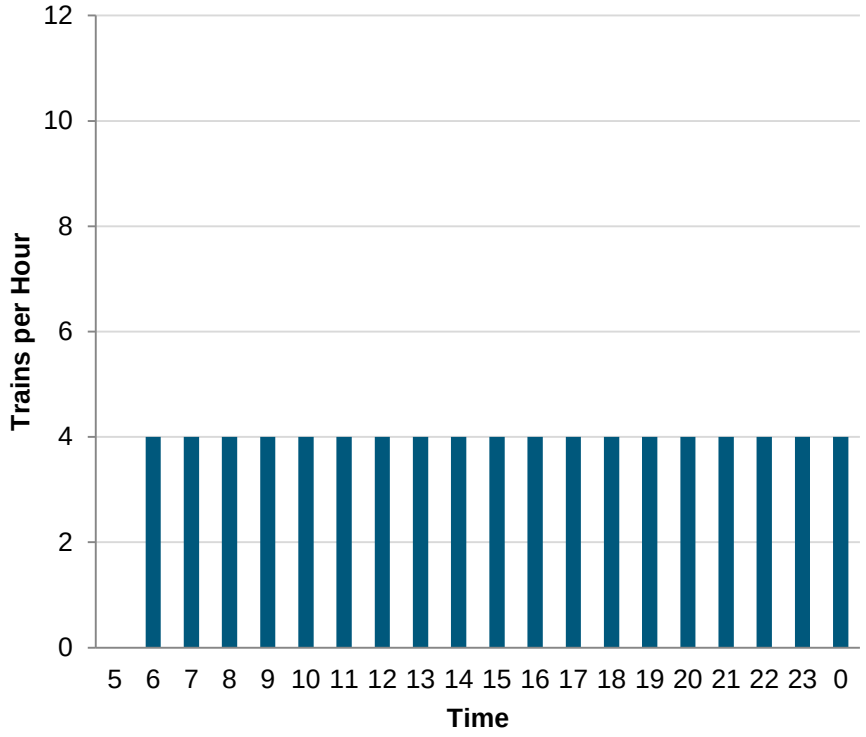


- 6 TPH during early AM, midday, and evenings (2 local and 4 express trains)
- HSR operates 3 TPH

Charts depict Caltrain arrivals only

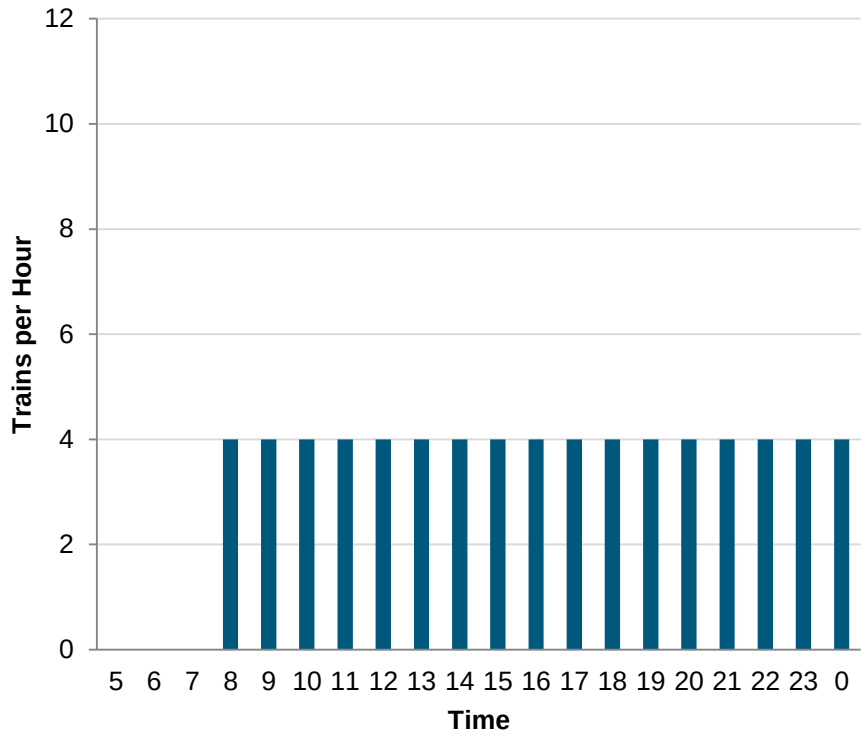
High Growth – Capitol & Blossom Hill

Weekday Service



- Caltrain: 4 TPH throughout the day
- HSR: 8 TPH during peak periods and 4 TPH during off-peak periods

Weekend Service



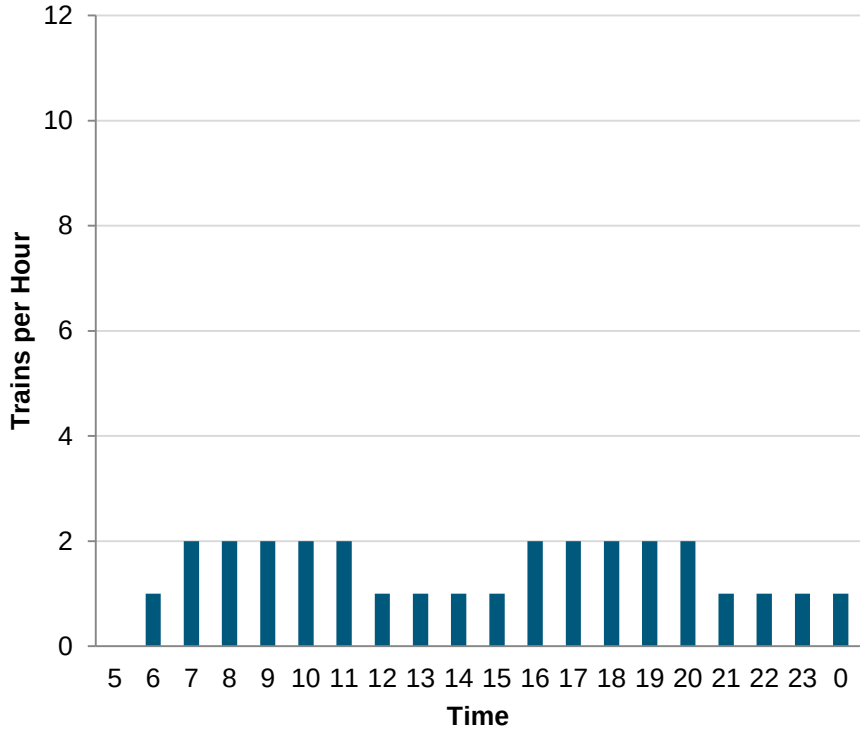
- Caltrain: 4 TPH throughout the day
- HSR: 4 TPH throughout the day

Assumes 4 track turnaround at Blossom Hill station

Charts depict Caltrain arrivals only

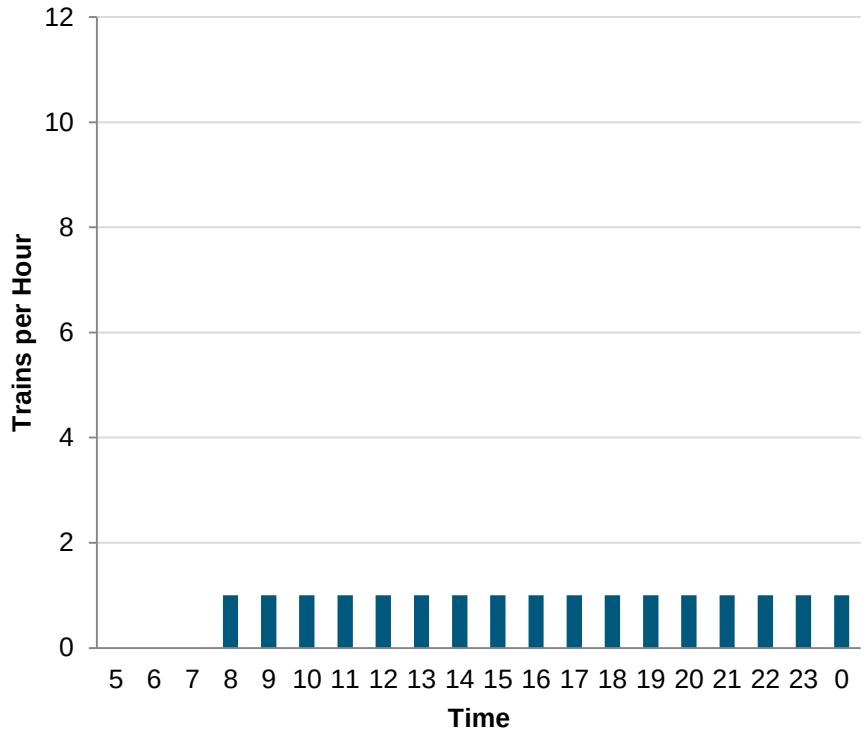
High Growth – Morgan Hill & Gilroy

Weekday Service



- Caltrain: 2 TPH during peak periods and 1 TPH during off-peak periods
- HSR: 8 TPH during peak periods (3 stopping at Gilroy) and 4 TPH during off-peak periods (2 stopping at Gilroy)

Weekend Service



- Caltrain: 1 TPH throughout the day
- HSR: 4 TPH throughout the day (2 stopping at Gilroy)

Assumes 4 track turnaround at Blossom Hill station

Charts depict Caltrain arrivals only

Next Steps

Additional Service Planning

Additional Service Planning

Costing

Business Case Analysis

Community Interface & Outreach

Terminal Planning

Ongoing Work

- Detailed terminal planning working sessions underway in partnership with San Francisco and San Jose staff
- Key topics in San Jose
  - Platform configuration at Diridon and Tamien
  - Turnback opportunities at Blossom Hill
  - Interface with Capitol Corridor and ACE
- Key topics in San Francisco
  - Service levels to Salesforce Transit Center and 4th & Townsend
  - Ongoing needs at 4th & King
- Continued exploration of service variability and options at terminals within each “Growth Scenario”

Rail Simulation

1

Collect and Input Data into Model

- Infrastructure
- Rolling stock
- Timetable

2

Code Model for Future Scenarios

- Baseline Growth
- Moderate Growth
- High Growth

3

Conduct Model Simulation Runs

Determines how reliably service scenarios can be operated and iterate as needed

4

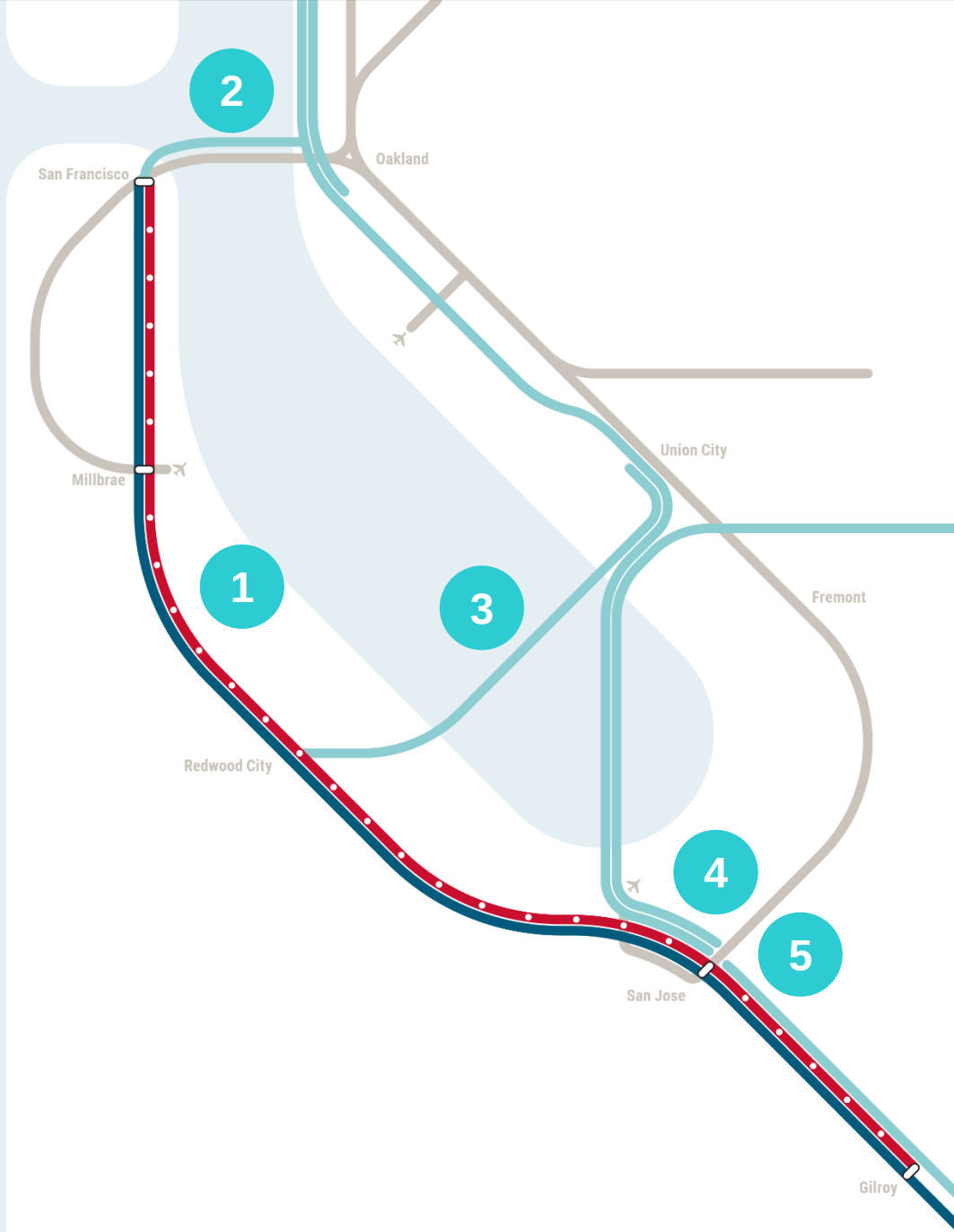
Present Model Results

Summarizes methodology, assumptions, and findings for each scenario and define next steps

Explorations

The project team is exploring options and variability within the service scenarios as well as how these scenarios might be further adapted to interface with planned and potential passenger rail investments throughout the region. **Examples-**

1. Further options and variations within growth scenarios
2. Potential Second Transbay Tube
3. Potential Dumbarton rail connection
4. ACE/Capitol Corridor connections
5. Monterey County connection / extension



Costing

Additional Service Planning

Costing

Business Case Analysis

Community Interface & Outreach

Capital Costs

1

Gathering Partner Costs

- Gather information on the cost estimates of partner and city projects (including grade seps) that touch the Caltrain corridor

2

Developing Capital Cost Estimates

- Develop capital cost estimates of additional infrastructure and fleet improvements needed to support service scenarios

3

Cost Allocation

- Assign infrastructure improvement costs in each of the growth scenarios

Business Case Analysis

Remaining Service Planning

Costing

Business Case Analysis

Community Interface & Outreach

Building the Business Case

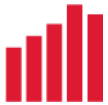
The business case will help the Board select a 2040 Service Vision with a fully informed understanding of what their choice means for the long-term costs and outcomes of the system and to the region as a whole. Once the Board has selected a long range Service Vision the business case can then be further optimized and detailed.

Examples of Major Inputs and Factors Considered within the Business Case Include

Infrastructure Investments and Renewals

Fleet Planning and Phasing

Current and Future Operations



Ridership and Travel Demand

Operating Costs and Revenues

Policy Assumptions

Direct & Indirect Jobs

User Benefits

Societal Benefits

Land Value

Community Interface & Outreach Update

Remaining Service Planning

Costing

Business Case Analysis

Community Interface & Outreach

Key Themes

Community Interface Meeting Results

Service Levels & Schedules

Travel demand and mode split goals in relation to existing and anticipated roadway congestion

Physical Corridor

Grade crossings, grade separations, and the stretches of fencing, walls, and vegetation in between

Land Development

Placemaking, jobs-housing balance, transit-oriented development, and zoning changes

Station Connectivity & Access

Local first/last mile solutions, multi-modal access, and equitable incentive programs

Upcoming Outreach & Community Interface Assessment Activities

Public Outreach

Project Stakeholders

Continued meetings and engagement

Public Forums

At SPUR and online (Reddit)

Community Meetings

Second round of public meetings

Online Open House

Hosted on project website

Community Interface

Jurisdiction Meetings

Second round of meetings with jurisdictions

Technical Documents

Definitions memo and Comparison Corridor Best Practices memo

Website: www.Caltrain2040.org

FOR MORE INFORMATION

WWW.CALTRAIN.COM

Hubs/Routes/Projects/Phases

DRAFT

Outline

Slide 1 - Goals
Slide 2 - Design Principles
Slide 3 - 34 Hubs Throughout City
Slide 4 - 7 Major Routes (Some with 2 Options) Connecting Hubs
Slide 5 - 2 Examples of Routes With Corresponding Necessary Projects
Slide 6 - 1 Example of Projects Within a Route Arranged Into Phases for Implementation
Slide 7 - Example of How to Audit Network to Ensure That Adjoining Hubs Connect

Note:This is a DRAFT and for illustration purposes only. There may be errors throughout.

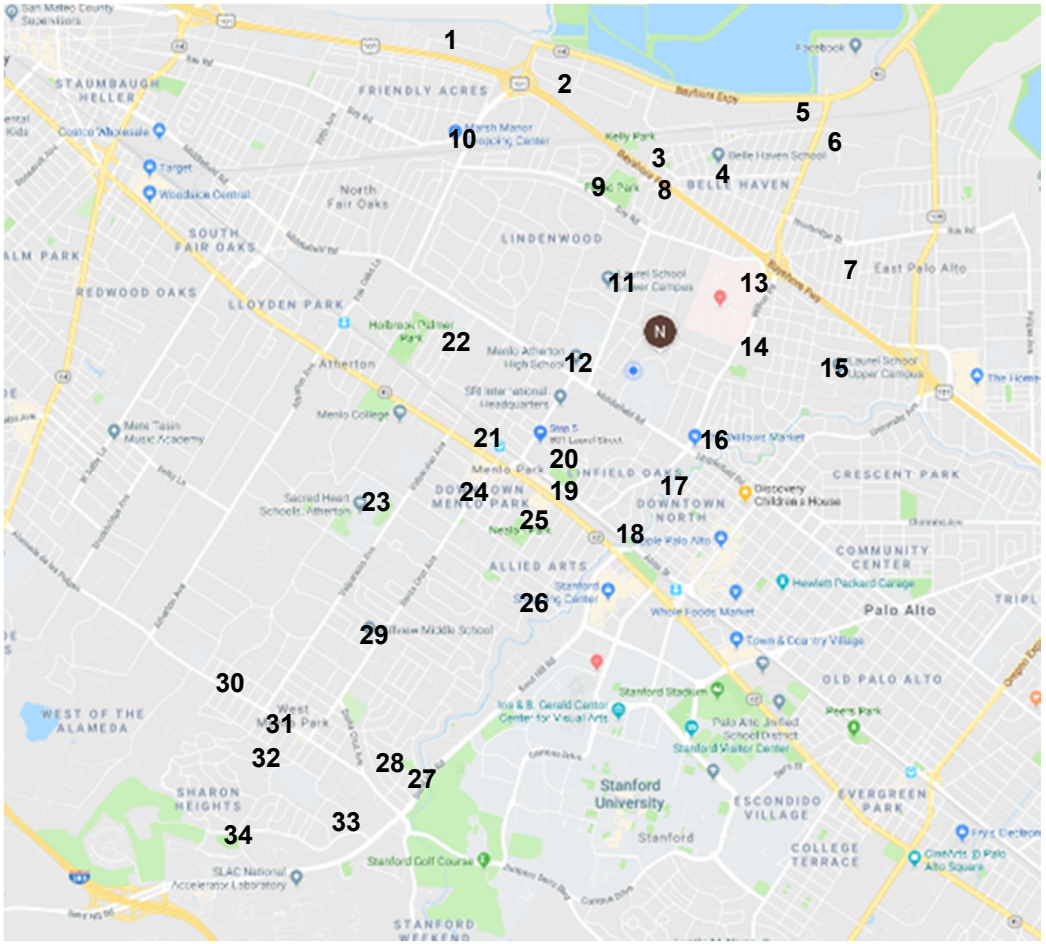
Slide 1 - Goals

1) Plan and communicate bike network as a set of complete routes that connect multiple key hubs in the city (such as schools, community centers, shopping, employment centers)
2) Community members can visualize the value that will be provided by the completion of these routes that provide safe access to key destinations
3) Community members can provide input on routes and project elements with outcomes in mind, contributing to constructive feedback
4) Community members can see when the full project will be completed (though it may take multiple phases)
5) Policymakers can make prioritization decisions

Slide 2 - Design Principles

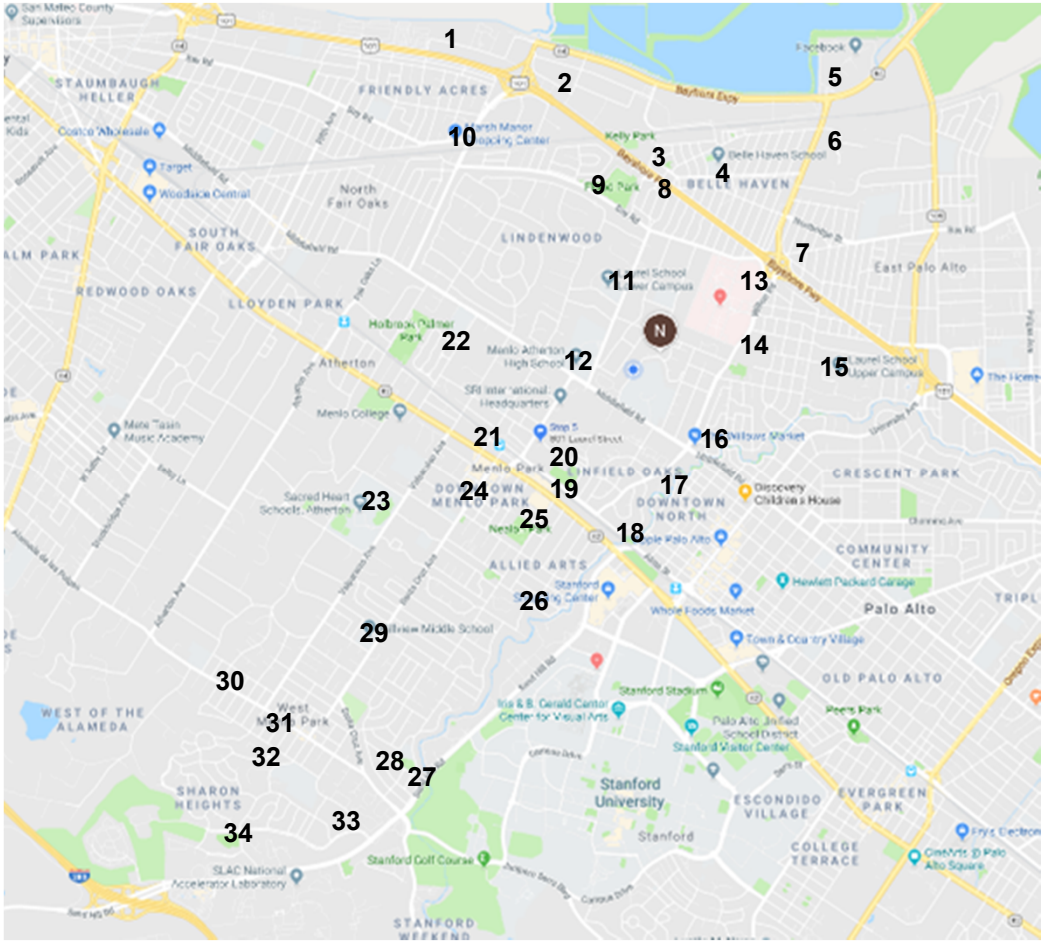
1) Protected bike lanes on major thoroughfares (places where people are likely to drive 30+ mph), e.g. Middlefield, Santa Cruz, Middle, Ravenswood, Valparaiso
2) Intersections on key routes with challenging streets should have first-class intersections following NACTO best practices.
3) “Bicycle boulevards” should follow NACTO best practices.
4) Design and commit to complete routes, even if they have to be implemented in two or more scheduled phases.
5) Design to create comfortable and inviting infrastructure for a target audience of “interested but concerned” who will bike if routes are safe and low-stress
6) Include interjurisdictional projects within routes, and plan phasing accordingly (e.g. projects are likely to take longer)
7) Use hubs to assess and improve pedestrian access - adapt “Safe Routes” planning to community centers, parks, shopping, etc.

Slide 3 - 34 Hubs Throughout City



1. Haven Street Apartments
2. TIDE Academy
3. Onetta Harris/Beechwood School
4. Belle Haven Elementary School
5. Facebook/Belle Haven Starbucks
6. Mid-Pen High School
7. East Palo Alto
8. Ringwood Bike Bridge/Boys and Girls Club
9. Flood Park
10. Marsh Manor
11. Lower Laurel Elementary School
12. Menlo-Atherton High School
13. VA
14. Willow Oaks School/Park
15. Upper Laurel School/Menalto Business District
16. The Willows Market
17. Linfield Oaks Bike Bridge
18. Alma Bike Bridge
19. Middle Avenue Undercrossing/500 El Camino
20. Burgess Park/Library/Pool/City Hall
21. Menlo Park Train Station/1300 El Camino
22. Encinal Elementary School
23. Menlo School/Sacred Heart
24. Downtown Menlo Park
25. Safeway/Nealon Park
26. San Mateo Bike Bridge
27. Sand Hill and Oak/Path to Stanford
28. Oak Knoll Elementary
29. Hillview Middle School
30. Las Lomitas Elementary School
31. Alameda Business District
32. La Entrada Middle School
33. Sharon Heights Safeway

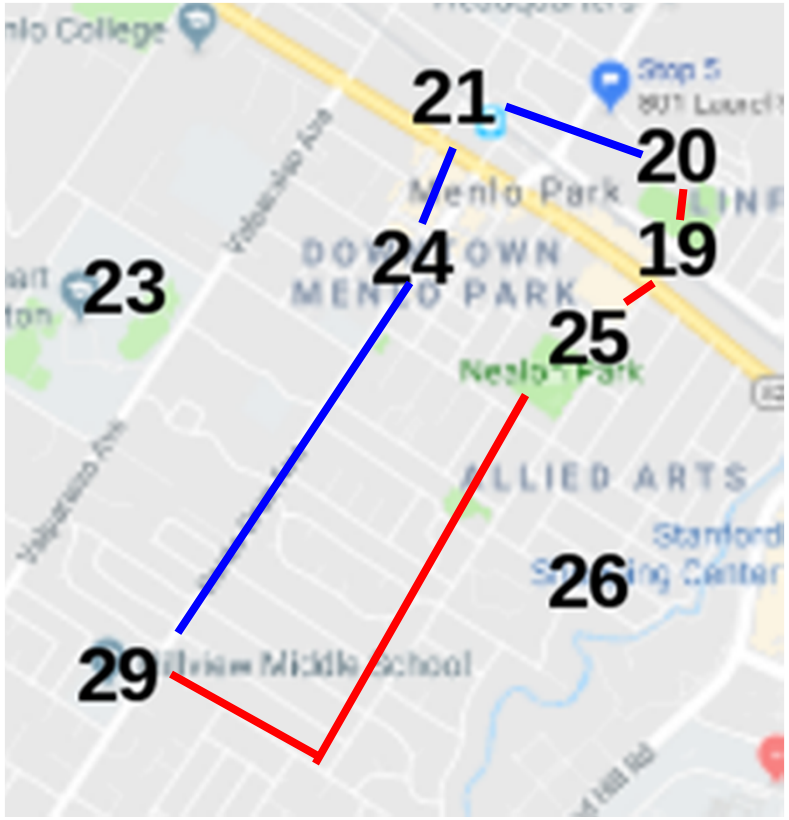
Slide 4 - 7 Major Routes (Some with 2 Options) Connecting Hubs



A. Haven Street Apartments to Menlo Park Train Station/1300 El Camino
   1-10-9-11-12-21
A. TIDE Academy to East Palo Alto
   2-3-4-7
A. Mid-Pen High School to Burgess Park
   a. 6-4-8-11-12-20
   b. 6-13-14-16-20
B. Upper Laurel/Menalto Business District to Nealon Park
   15-14-16-17-19-25
A. Burgess to Hillview
   a. 20-19-25-29
   b. 20-21-24-29
B. Menlo School/Sacred Heart to Sharon Park
   23-31-32-34
A. Oak Knoll to Sharon Heights Safeway
   a. 28-32-33
   b. 28-27-33

Yet to be incorporated into routes: 5,18, 22,26,30

Slide 5 - 2 Examples of Routes With Corresponding Necessary Projects



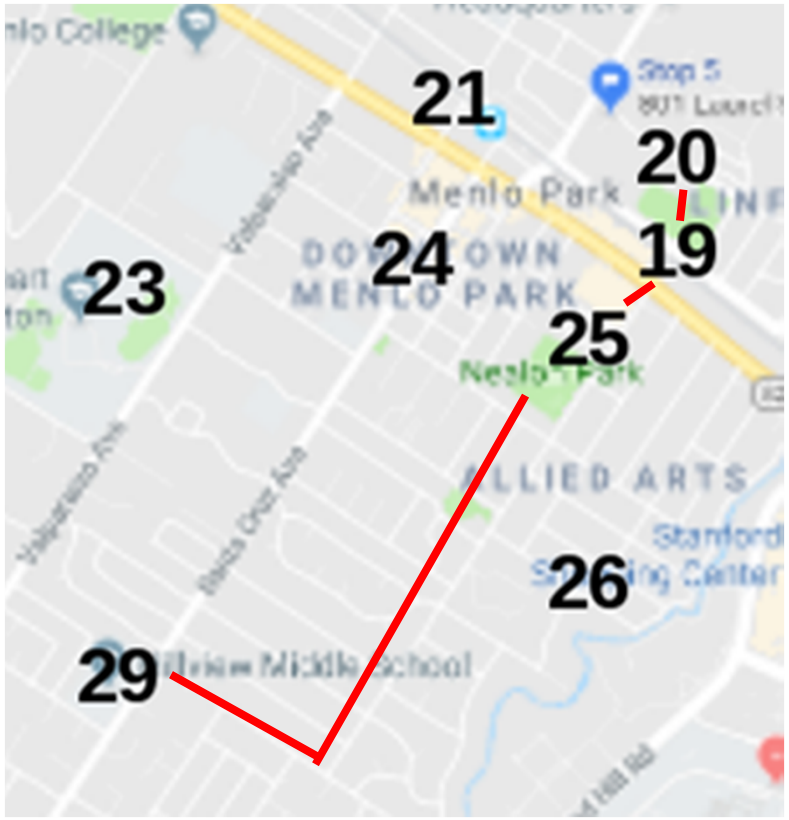
E. Burgess to Hillview (a): 20-19-25-29

- 20-19 (Burgess to Middle Undercrossing)
  - Project Item x
  - Project item y
  - Project item z
- 19-25 (Middle Undercrossing to Safeway/Nealon)
  - Project Item x
  - Project Item y
  - Project Item z
- 25-29 (Safeway/Nealon to Hillview)
  - Project Item x
  - Project Item y
  - Project Item z

E. Burgess to Hillview (b): 20-21-24-29

- 20-21 (Burgess to Menlo Park Train Station)
  - Project Item x
  - Project item y
  - Project item z
- 21-24 (Menlo Park Train Station to Downtown Menlo Park)
  - Project Item x
  - Project Item y
  - Project Item z
- 24-29 (Downtown Menlo Park to Hillview)
  - Project Item x
  - Project Item y
  - Project Item z

Slide 6 - 1 Example of Projects Within a Route Arranged Into implementation Phases



E. Burgess to Hillview (a): 20-19-25-29

- 20-19 (Burgess to Middle Undercrossing)
  - Project Item x
  - Project item y
  - Project item z
- 19-25 (Middle Undercrossing to Safeway/Nealon)
  - Project Item x
  - Project Item y
  - Project Item z
- 25-29 (Safeway/Nealon to Hillview)
  - Project Item x
  - Project Item y
  - Project Item z

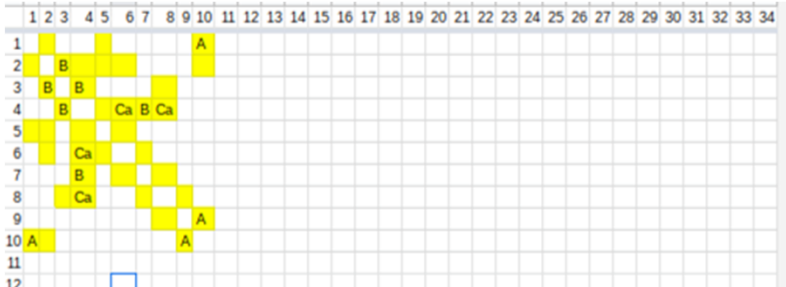
E. Burgess to Hillview (a) Phases

- Plase 1
  - 20-19 Project Item x and z
  - 19-25 Project Item x, y and z
  - 25-29 Project Item y
- Phase 2
  - 20-19 Project Item y
  - 25-29 Project Item x
- Phase 3
  - 25-29 Project Item z

Slide 7 - Example of How to Audit Network to Ensure That Adjoining Hubs Connect

Partial Map of Belle Haven (and Flood Park) that Shows Connections Between Hubs

***Note**: Map and Grid Need to be Completed for the Entire City*



Grid Shows Belle Haven Hubs Along Major Routes (per ordering on Slide 4)(Only Hubs in BH [and Flood Park] Shown):

A - Haven to Train (1-10-9)
B - TIDE to EPA (2-3-4-7)
Ca - Mid-Pen to Burgess (6-4-8)

- Yellow = Adjacent Hubs in BH
- Letter in Cell = Indicates Connected Hubs
- Empty Yellow Cell = Remaining Hubs that Need to be Connected that are Not Part of a Major Route (per Slide 4).

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