



“Quick Build During a Crisis: Constructing Projects Rapidly for Social Distancing, Planning for Social Cohesion”

Vignesh Swaminathan, Crossroad Lab

Thursday, April 9, 12pm-1pm



Crossroad Lab

Quick Build Webinar Agenda

1. What is Quick Build?
2. Introduction to MTC Goals
3. Consultant Presentation
4. Moderated Q&A
5. Please fill out Survey Link



What is “Quick Build”?

- 1** REVERSIBLE, ADJUSTABLE AND/OR TEMPORARY TRAFFIC SAFETY IMPROVEMENTS
- 2** INCREMENTAL, LOW-COST, RAPID INSTALLATION
- 3** BUILDABLE WITHIN DAYS, WEEKS, MONTHS (DEMO, PILOT, INTERIM)
- 4** DESIGN TESTING AND PROTOTYPING: CAN BE UNDONE!



Bike NWA Pilot Projects; Bella Vista, Rogers, and Bentonville, AR



Public Plaza and Parking Lot Access Improvements, Santa Monica



Quick Build Webinar Goals

- **Initiate discussions** on how this method can **enhance social distancing** in all neighborhoods in the Bay Area
- Support **quick build** as a **project delivery method**
- Introduce **best practices**



Quick Build Webinar Goals

- Facilitate conversations with **local agencies**
- Acknowledge that City staff are **resource-constrained** right now during this **public health** crisis
- Conduct a **survey for needs assessment**

27th Street, City of Oakland, CA



Introducing Crossroad Lab



Vignesh Swaminathan



Crossroad Lab



**METROPOLITAN
TRANSPORTATION
COMMISSION**



Crossroad Lab

Mountain View, CA



San Jose, CA



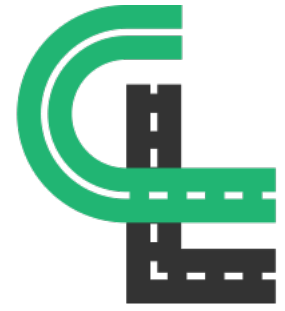
San Jose, CA



Quick-Build During a Crisis
Constructing Projects Rapidly for Social Distancing
Planning for Social Cohesion

Agenda

- Crossroad Lab – What work we do
- City Structure and Project Delivery Types
- Still Planning During a Shutdown
- Equity Before Covid and Active Transportation
- Success from San Jose
- Traffic Control Opportunities and Constraints
- Key Steps to Delivery



Crossroad Lab



BETTER
BIKEWAYSJ
Explore your city.



**METROPOLITAN
TRANSPORTATION
COMMISSION**



Mountain View, CA



San Jose, CA





Crossroad Lab

- Civil and Transportation Engineering
- Local to Santa Clara County
- SBE, MBE, DBE, LBE
- Focused on Delivering Quick Build and Civil Projects
- Support Planning Effort and Design Review
- 100% Plans, Specs, and Estimate
- Design – Build Project Management
- Public, Private, and Non-profit Clients



San Jose, CA

Project Management and Delivery

Vignesh Swaminathan, PE
CEO and President
Crossroad Lab

Experience:

Downtown Operations (City of San Jose)

(Parking, Events, CIP, and Traffic Control)

Civil Engineer Roadway (MTCO)

(Highways, Structures, Drainage, Civil, Complete Intersections)

Crossroad Lab

(Protected Intersections, ADA, CycleTracks, Feasibility, PSE)

Sustainability Commissioner

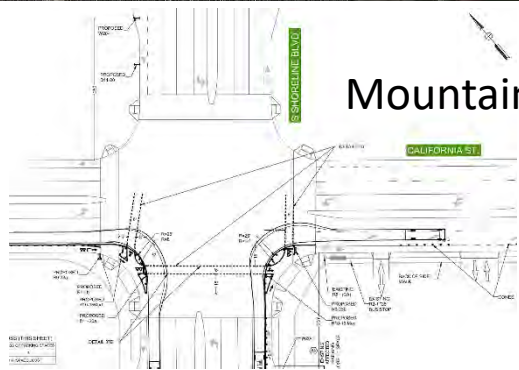
(Energy Management, Waste Diversion, LID, Climate Action Plan)

VTA Citizen Advisory Committee and Measure A Citizen Watchdog Committee

(Transit, Active Transportation, Congestions Management, Funding)



Crossroad Lab



Mountain View, CA



Don't Give Up at the Intersection

Designing All Ages and Abilities
Bicycle Crossings



May 2019



Crossroad Lab



San Jose, CA

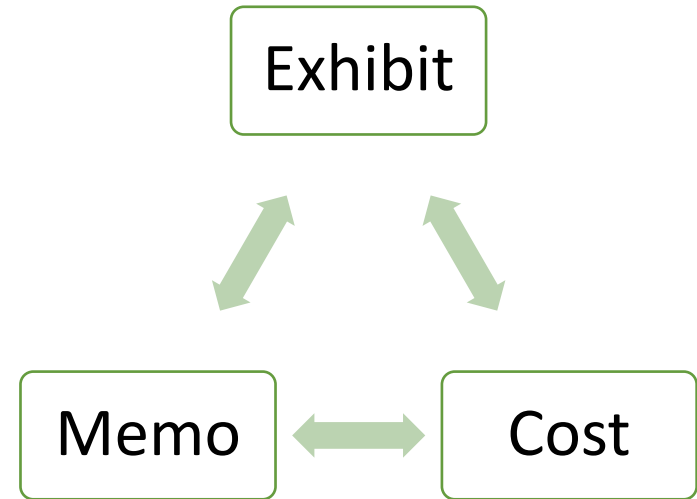
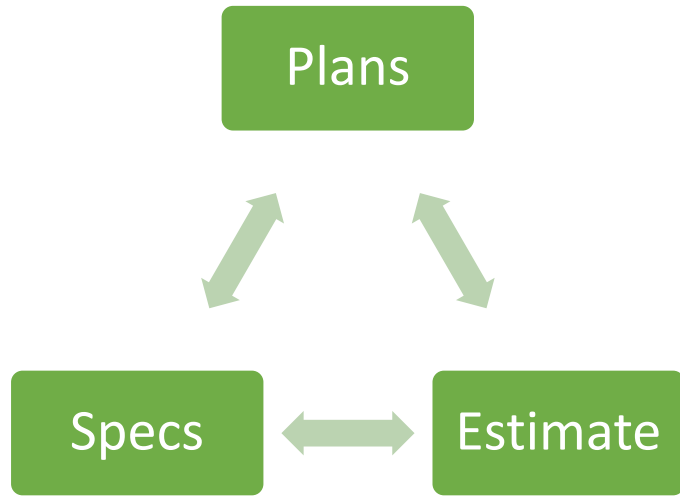
Mountain View, CA



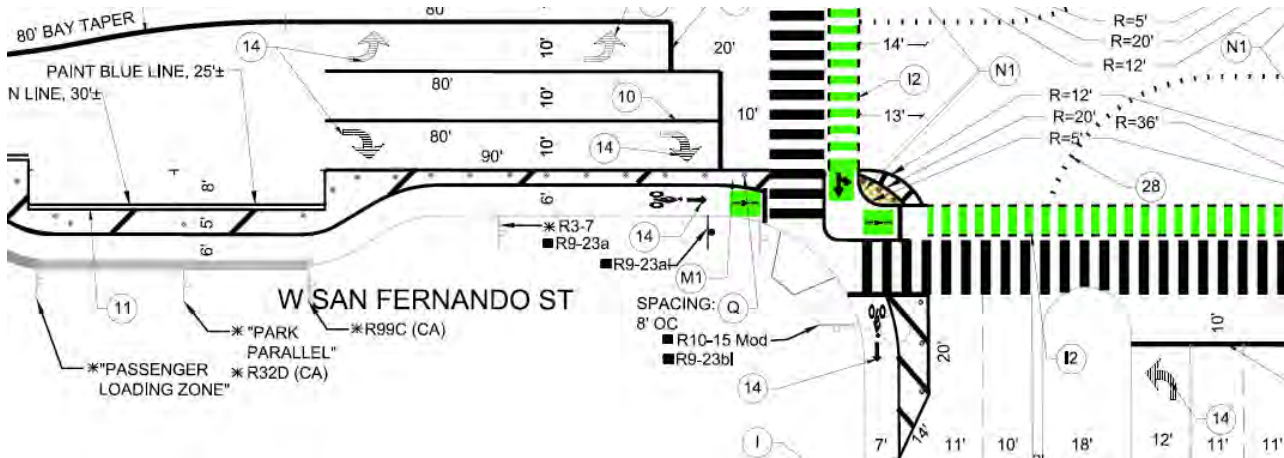
San Jose, CA



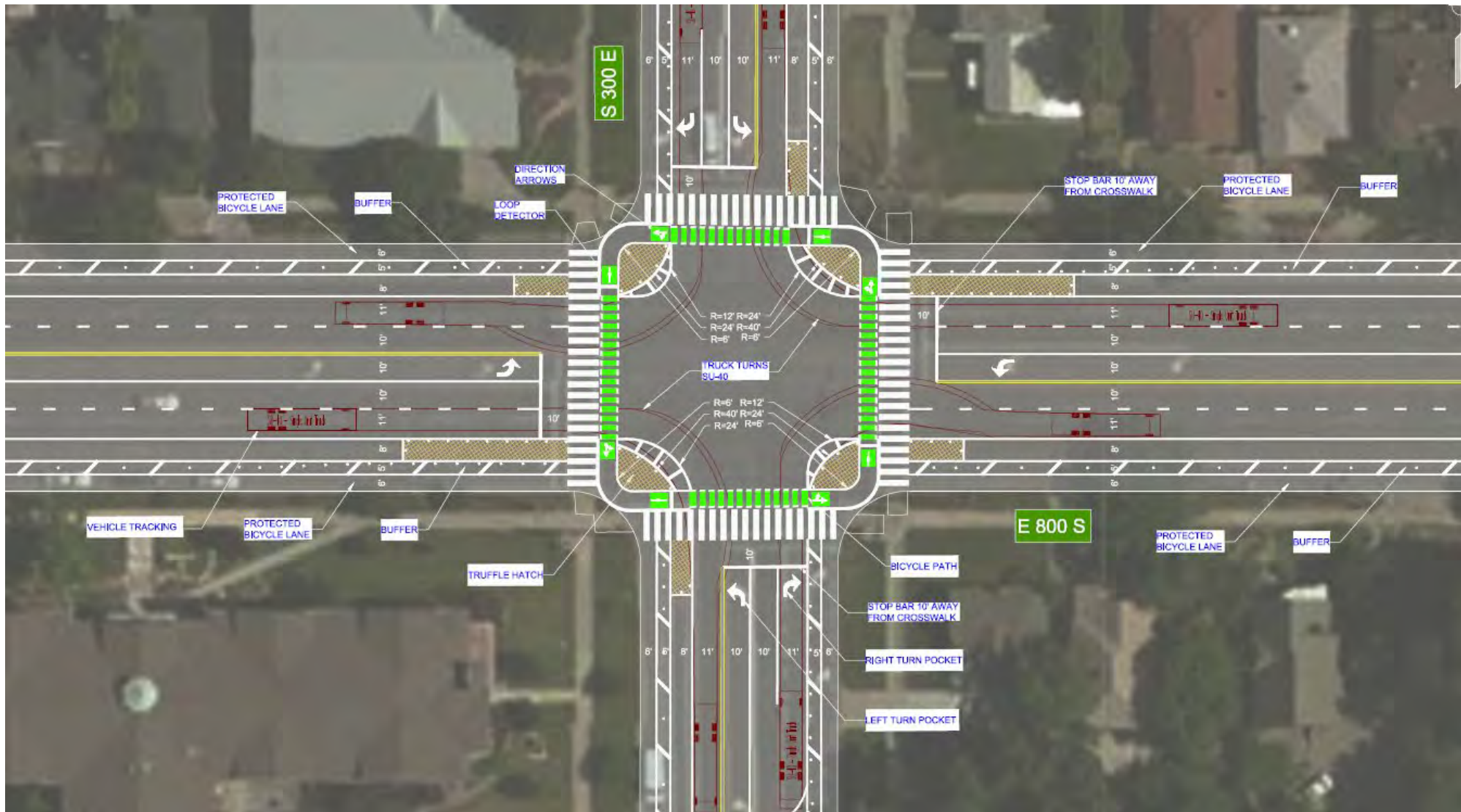
Communication in Engineering



San Jose, CA



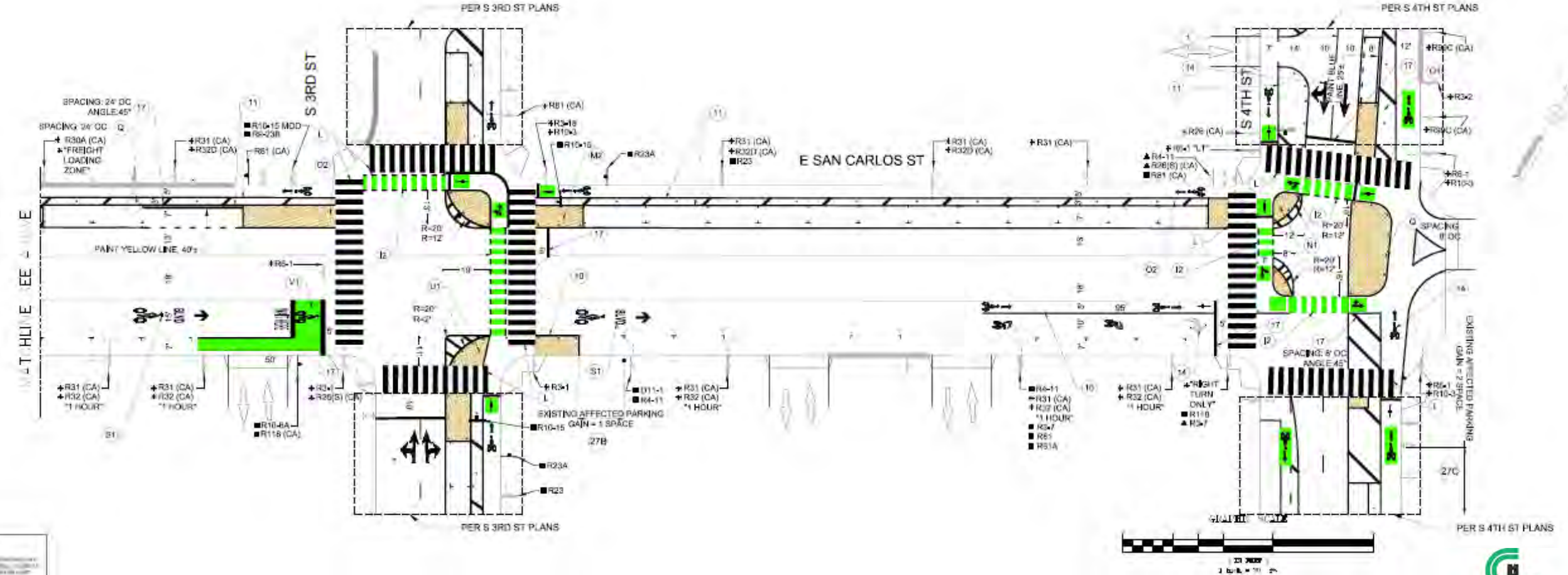
Exhibit



Salt Lake City, UT

Plans

S 2



San Jose, CA

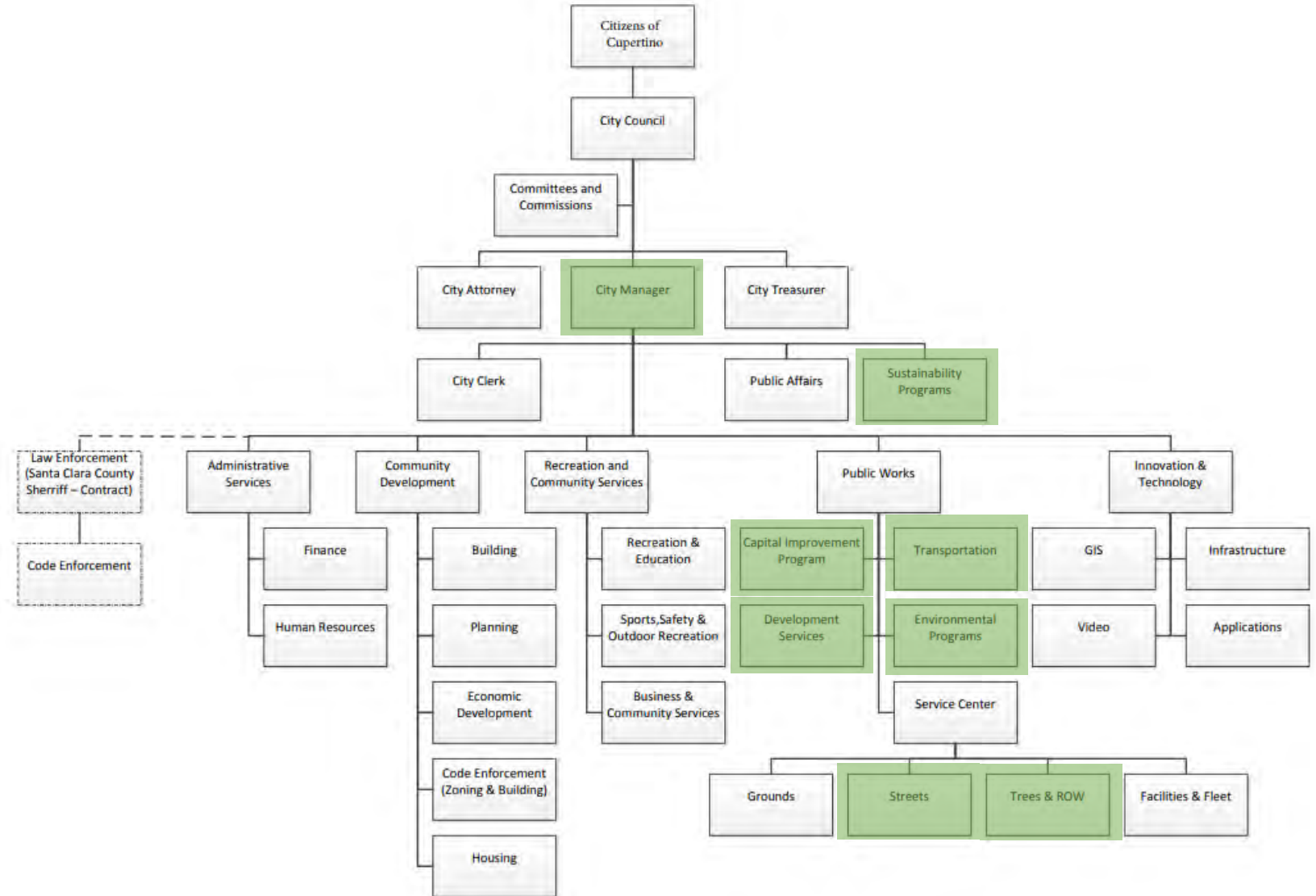


Crossroad Lab

City Structure

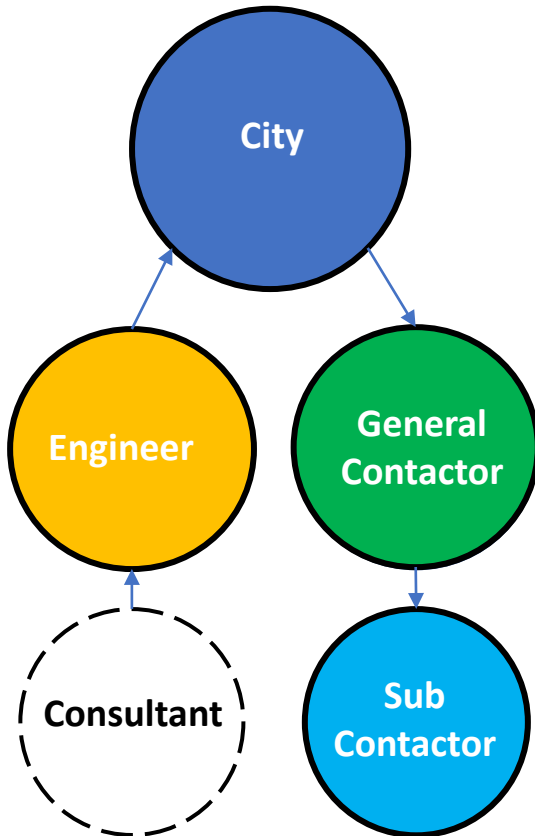
Projects Stem From

- Grants-CIP
- Operations
- Development
- Maintenance
- Environmental
- Sustainability
- Private Sector
- Advocacy
- Work Order

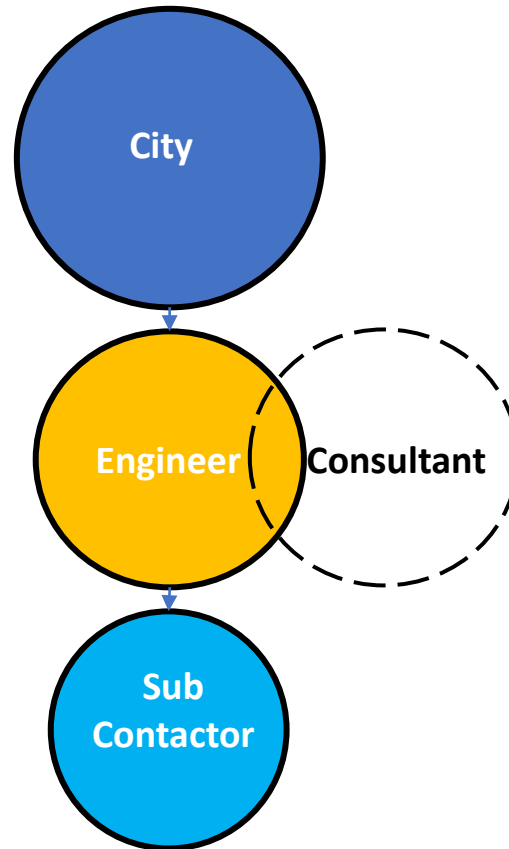


Project Delivery Methods

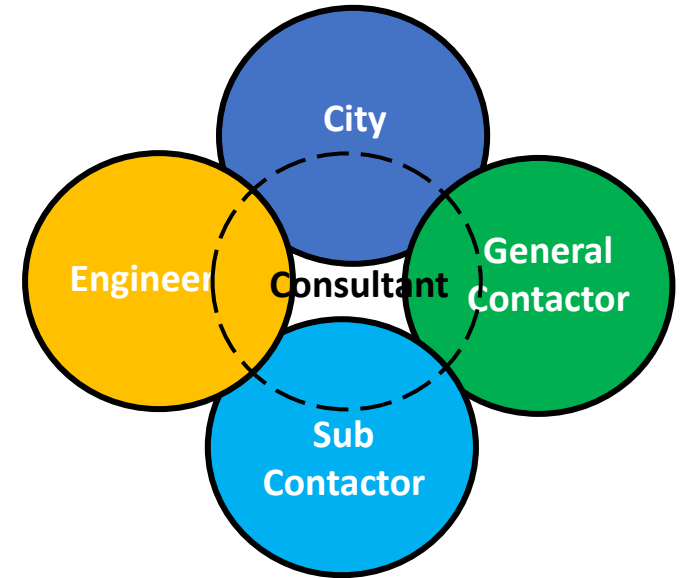
Design-Bid-Build



Design-Build



Integrated Project Delivery



100%

Percent Design Complete When the Contractors are Engaged

0%





Crossroad Lab

Cupertino, CA



PERMANENT INSTALLATION

Mountain View, CA



PILOT PROJECT

Fremont, CA



PERMANENT INSTALLATION

From Pop-Up to Permanent

DEMONSTATION

San Jose, CA



San Jose, CA (New Bart Station)

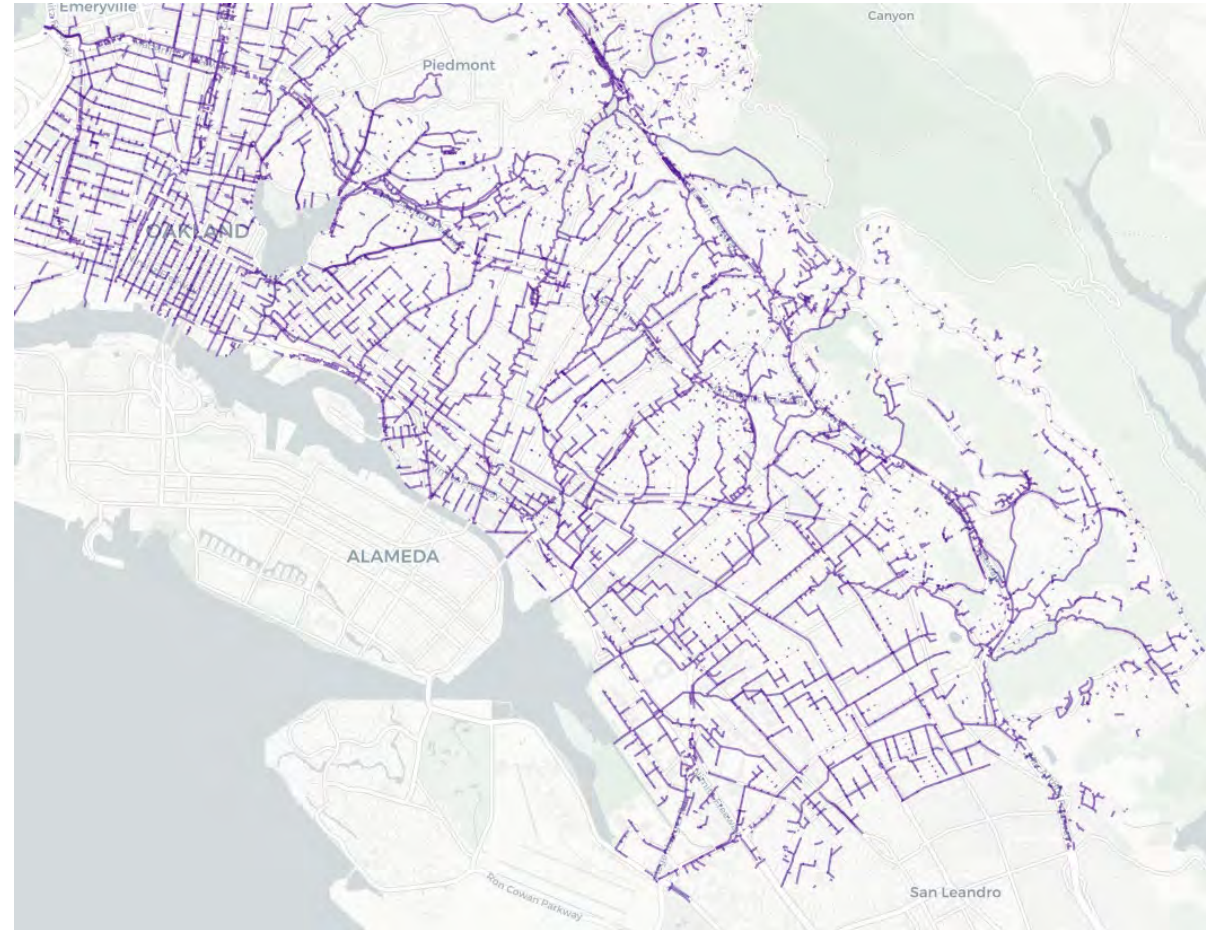


INTERIM DESIGN

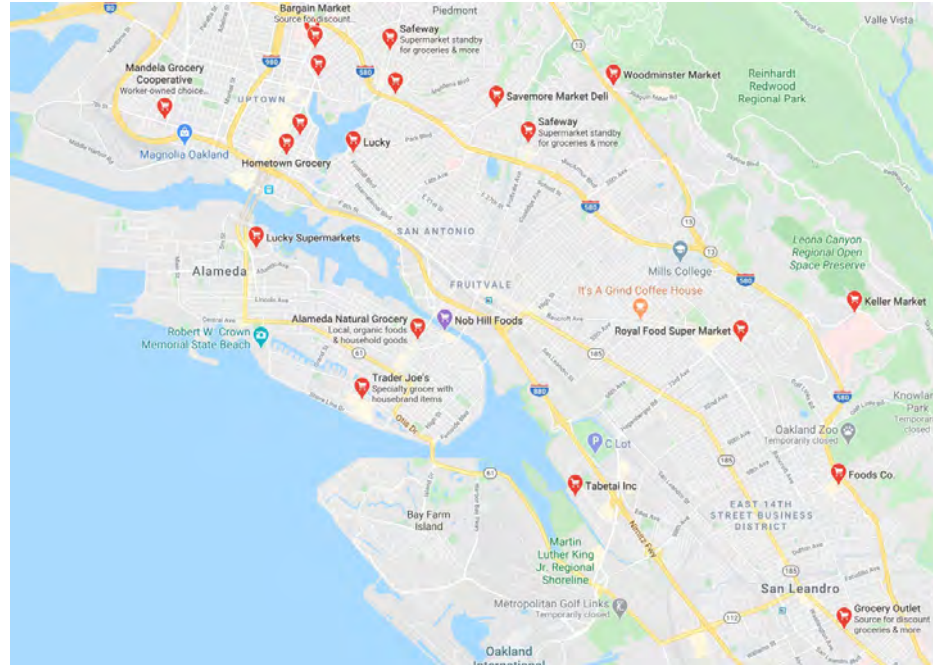
Equity Before Covid and Infrastructure



Oakland, CA



Equity Before Covid and Infrastructure

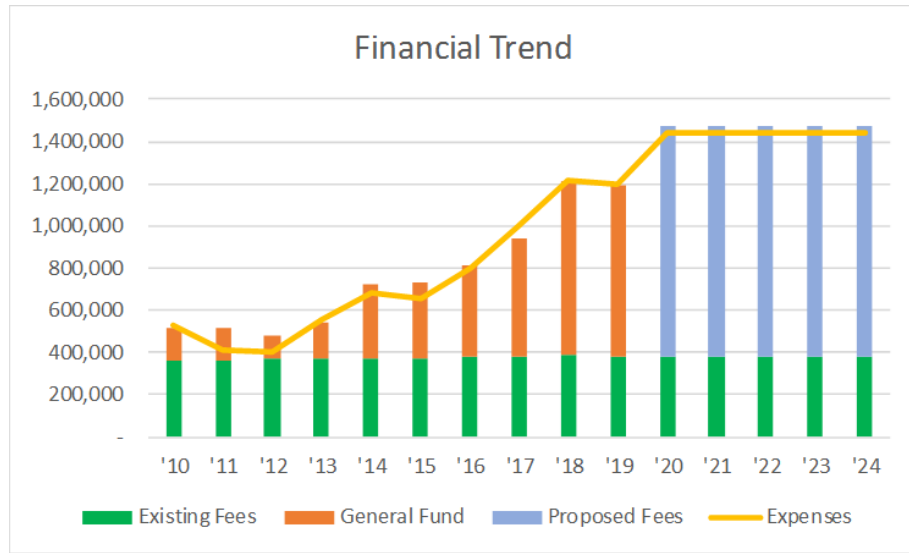


- DOT
 - Lighting
 - Paving
- PW
 - ADA
 - Drainage
 - Street Sweeping
 - Utilities
 - Facilities



Oakland, CA

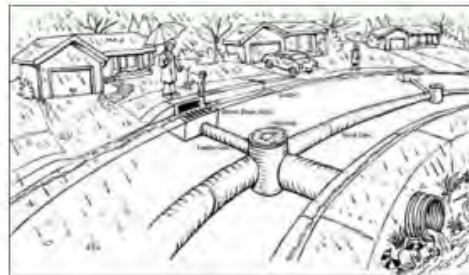
Equity Before Covid and Infrastructure



City of Cupertino Stormwater Fees ~\$56 Annually

- Paving
- Street Sweeping
- Stormwater
 - ADA

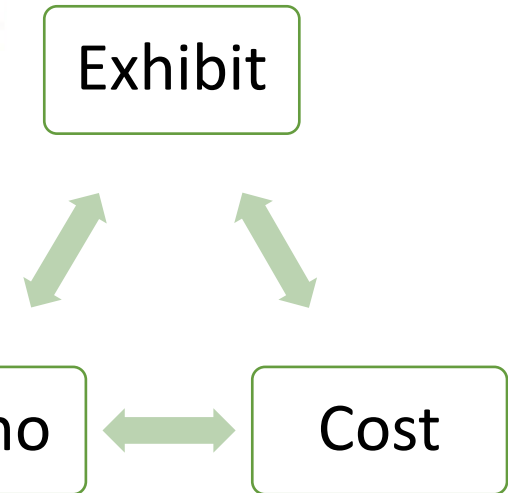
Storm Water Management Fee



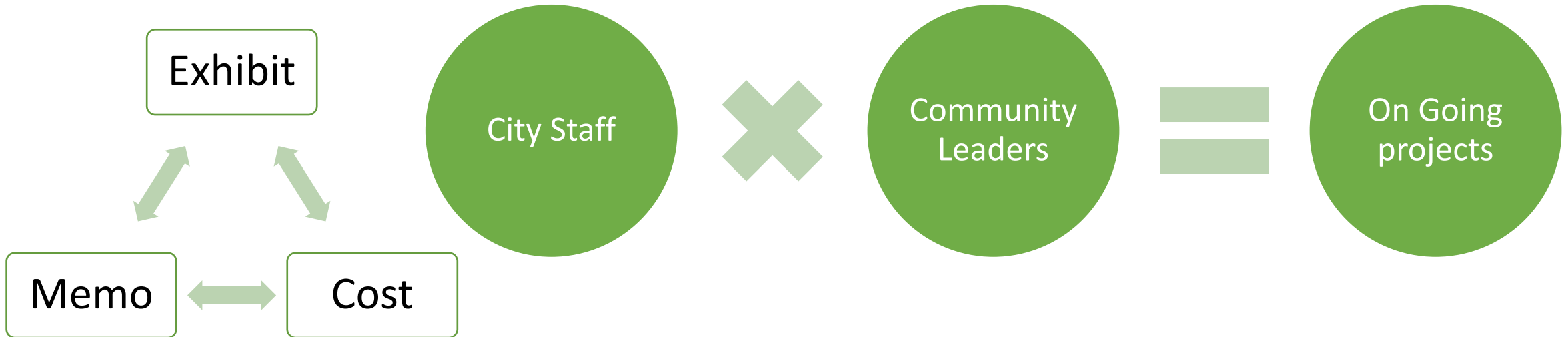
2017 Storm Water Management Fee Ballot Measure Passes

In April 2017, Palo Alto property owners voted to approve a new Storm Water Management fee that will replace the City's existing Storm Drainage fee. A typical homeowner will pay about \$13.65 per month, effective June 1, 2017.

The Storm Water Management fee will be included on the monthly utility bill and represents a 62 cent increase for a typical property. The fee was approved by approximately 64 percent of those submitted with 50 percent needed to pass.



Enable the Leaders and the Community



Enable the Leaders and the Community



Cupertino, CA



Oakland, CA



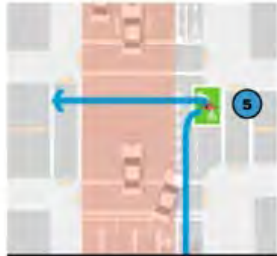
Fremont, CA



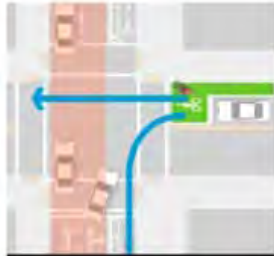
Cycle Track Buffer Configuration



Parking Lane Configuration



Crosswalk Setback Configuration
Wider corner radii, set back pedestrian crossing, and/or narrowed bikeway space, provides opportunity for queue box.



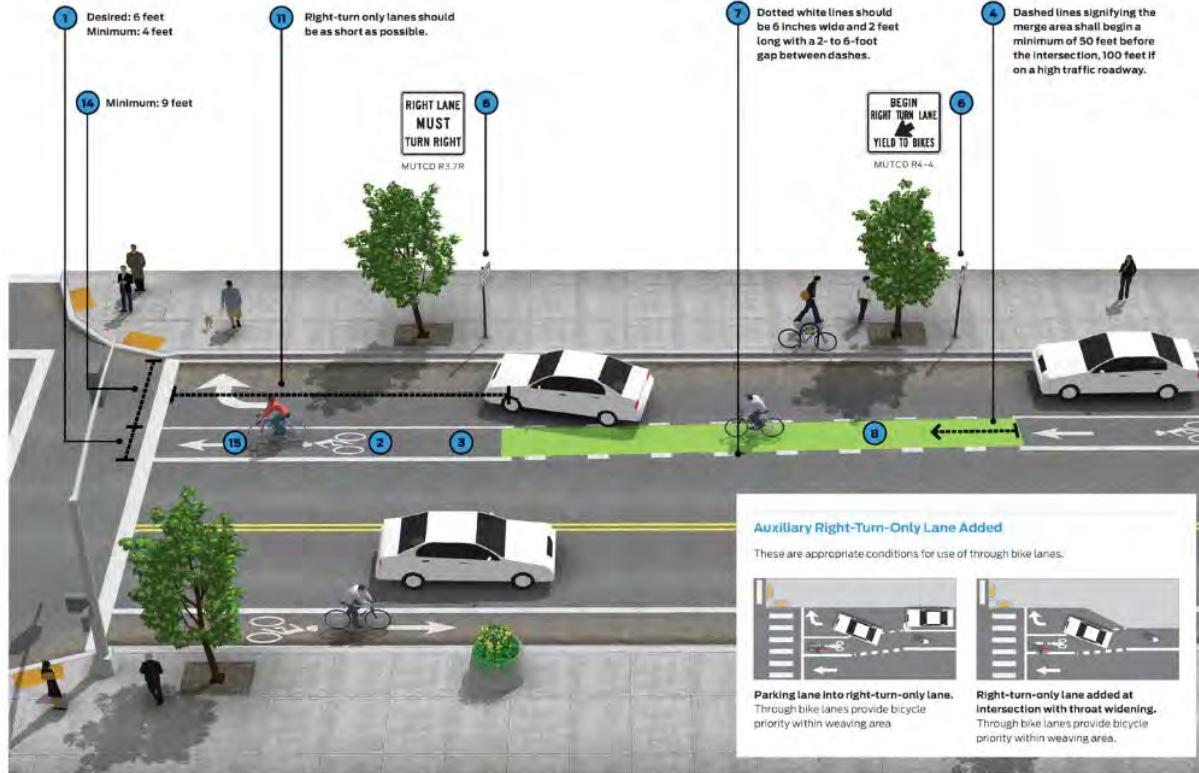
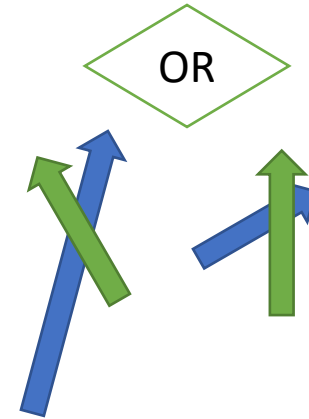
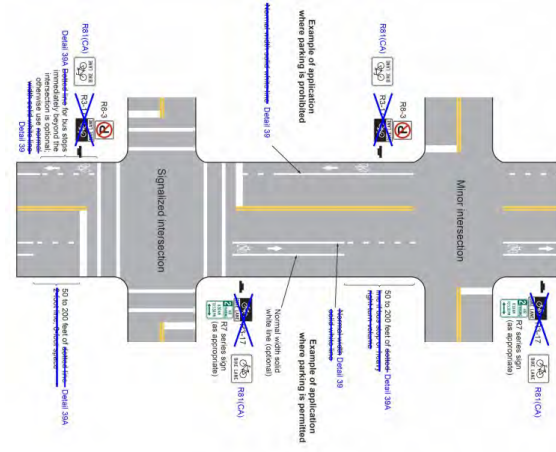
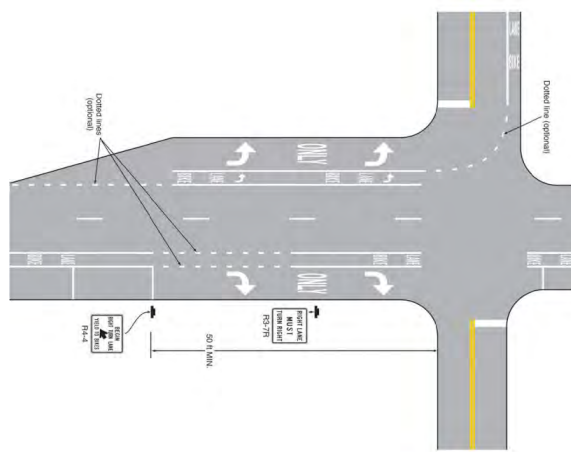
Bike Box Configuration
Bicyclists yield to pedestrians. Not recommended in areas with high pedestrian volumes.



T-intersection Parking Lane Configuration



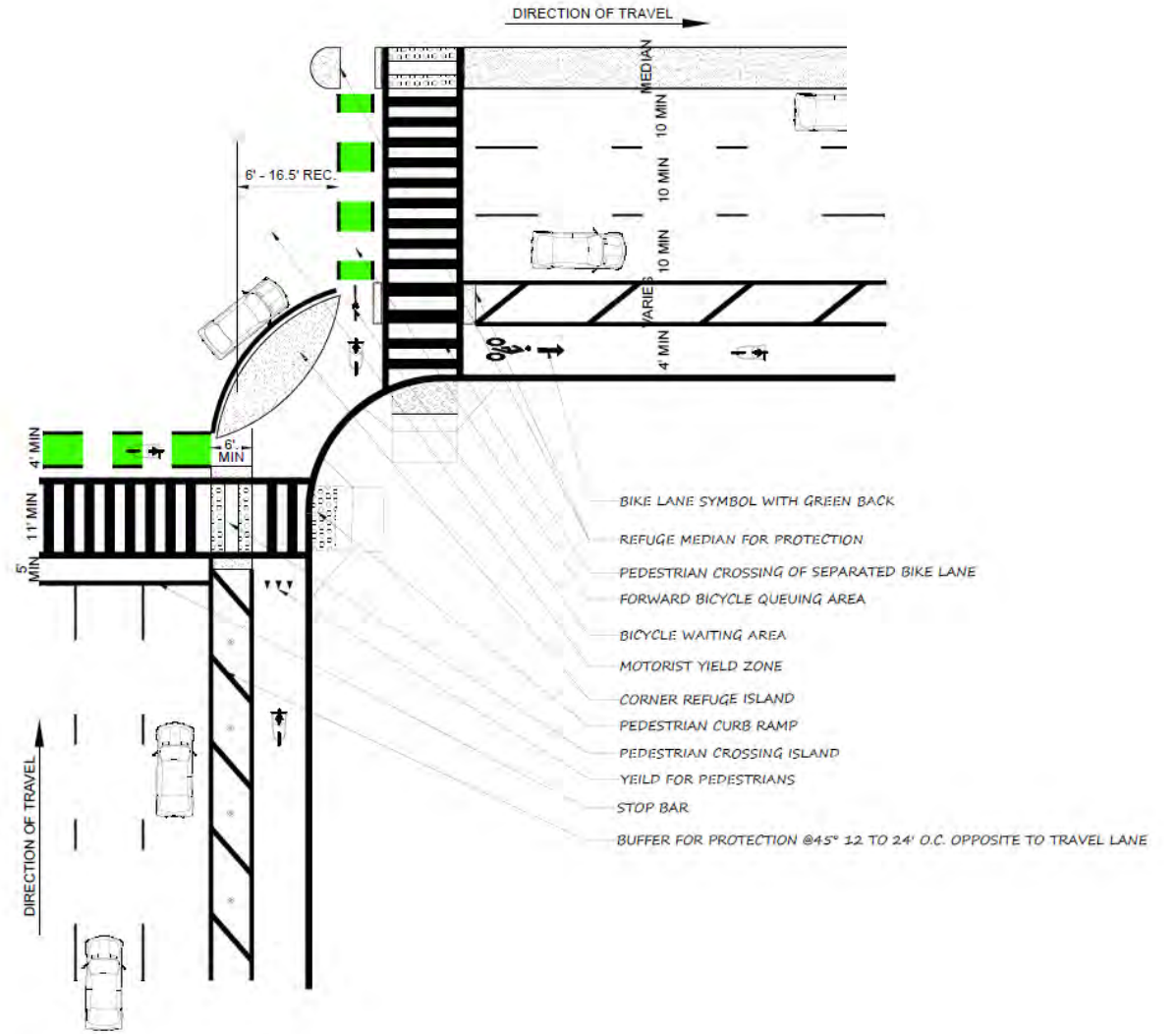
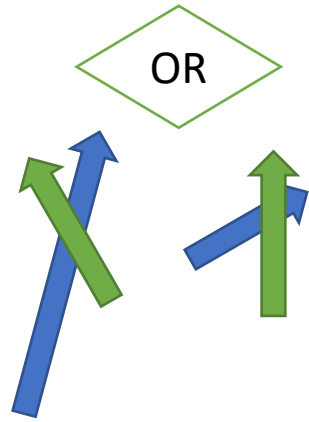
T-Intersection "Jughandle" Sidewalk Configuration



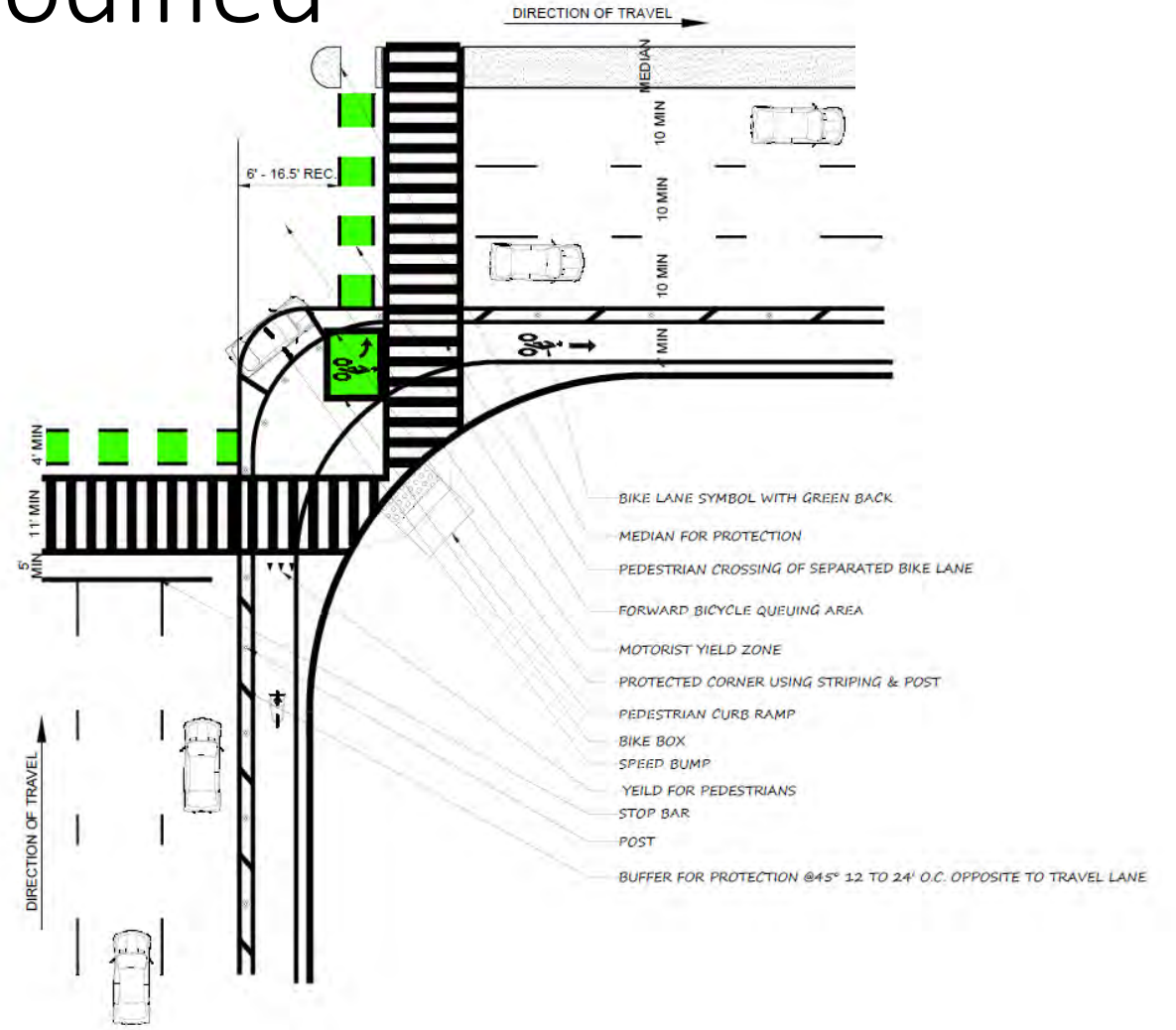
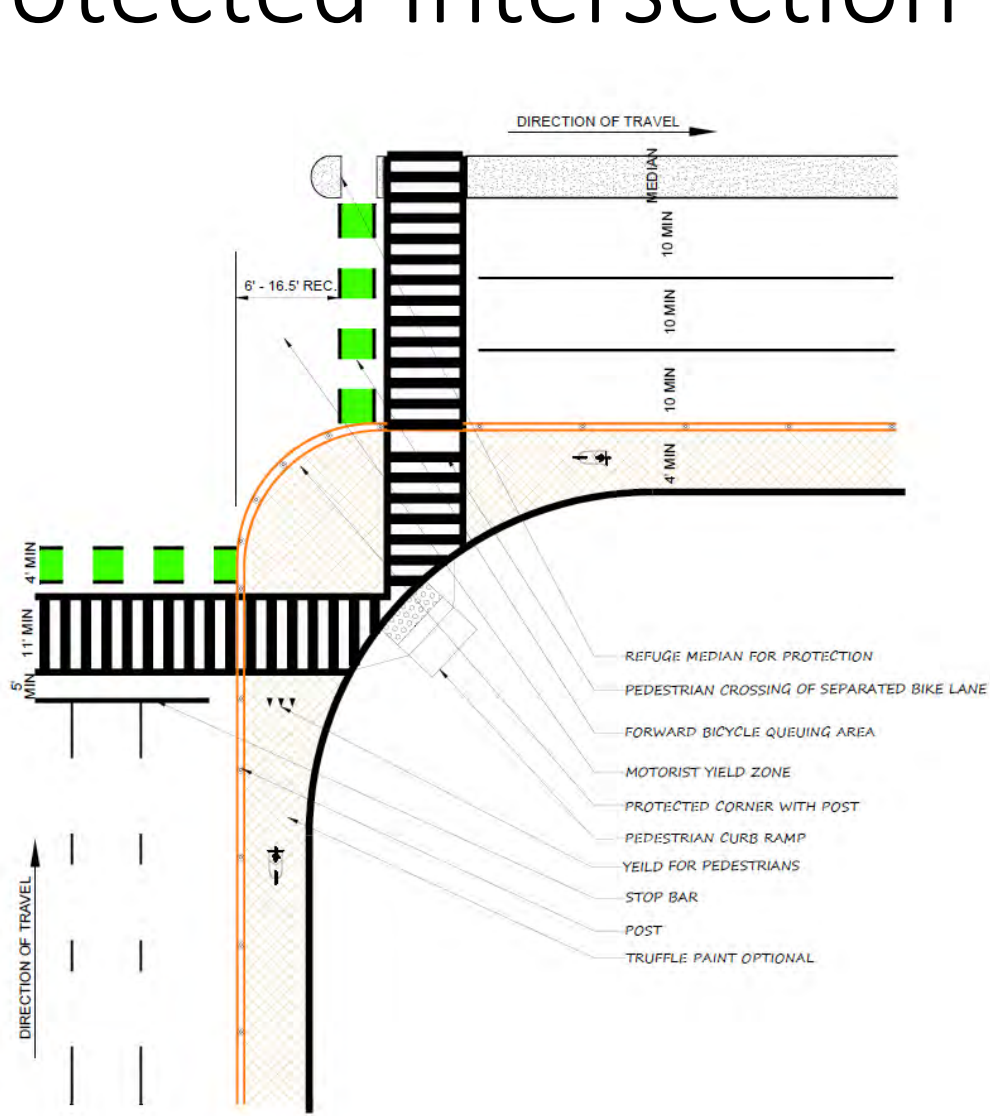
- Optional Features**
- 12** Terminating the bike lane in advance of the intersection is discouraged.
 - 13** For intersections that lack the physical width to install a bicycle pocket, a combined bike/turn lane should be used.
 - 14** Vehicle turn lane width should not be reduced to less than 9 feet.
 - 15** Bicycle detection should be provided within the through bike lane.
 - 16** On streets with a combined turn and through lane, shared lane markings may be used in the center of the lane.
 - 17** A bike box may be used in lieu of a designated through bike lane.
 - 18** Bicycle warning signs may be used in advance of the merge/transition area.

- Through Travel Lane Transitions into Right-Turn-Only Lane**
- These are generally inappropriate conditions for use of through bike lanes. Consider alternate treatments.
- Exclusive bicycle signal phase used to separate conflicting movements.
 - Bicycle lane dropped in advance of the intersection encourages bicyclists to merge across as gaps permit. Shared lane markings may be used to provide additional guidance.
 - Bicyclists are not provided priority in weaving area and must use caution to merge across potentially motor vehicle traffic. Dot line transition areas to thru lanes should not be provided.

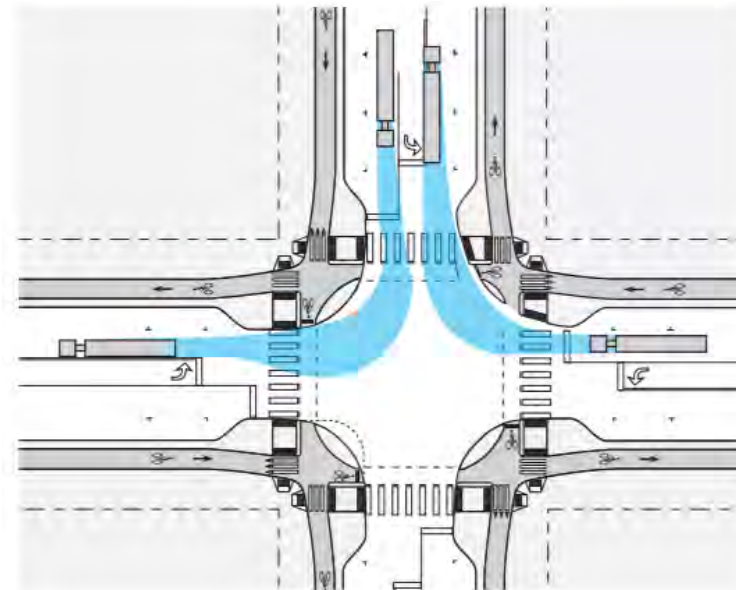
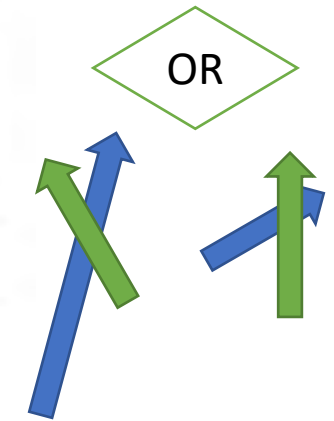
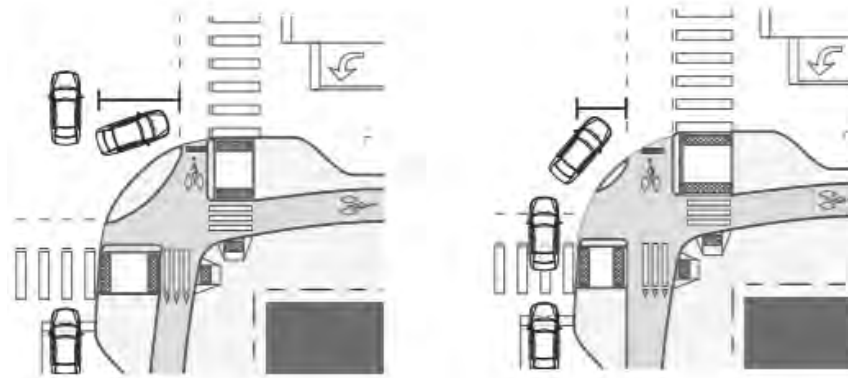
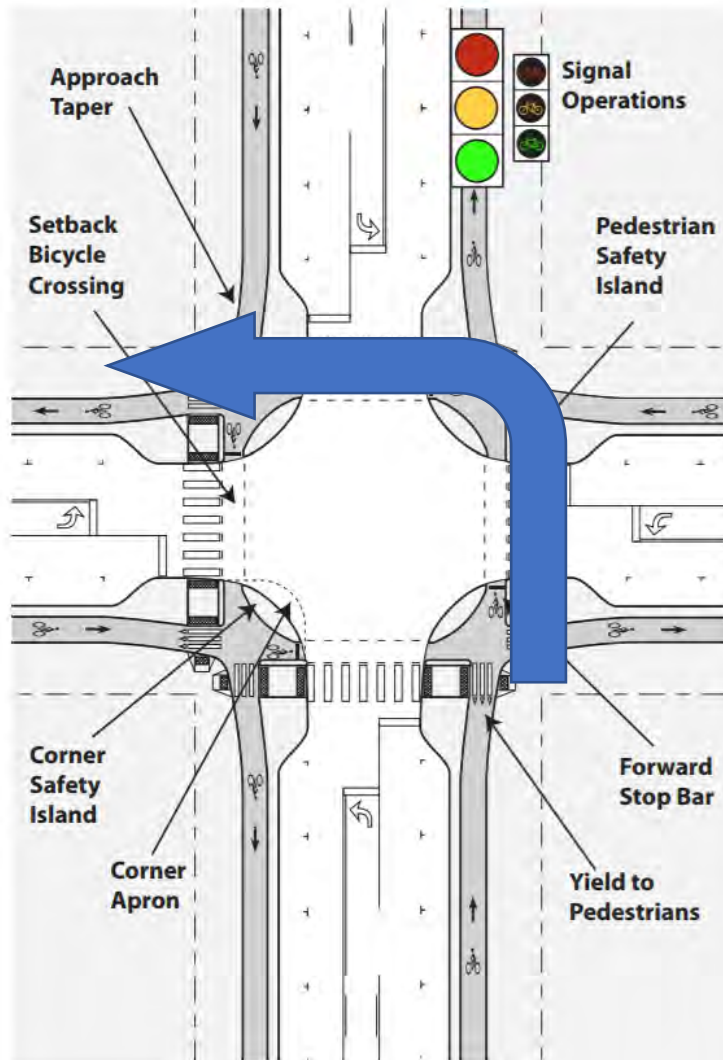
Protected Intersections



Protected Intersection Modified



Protected Intersections

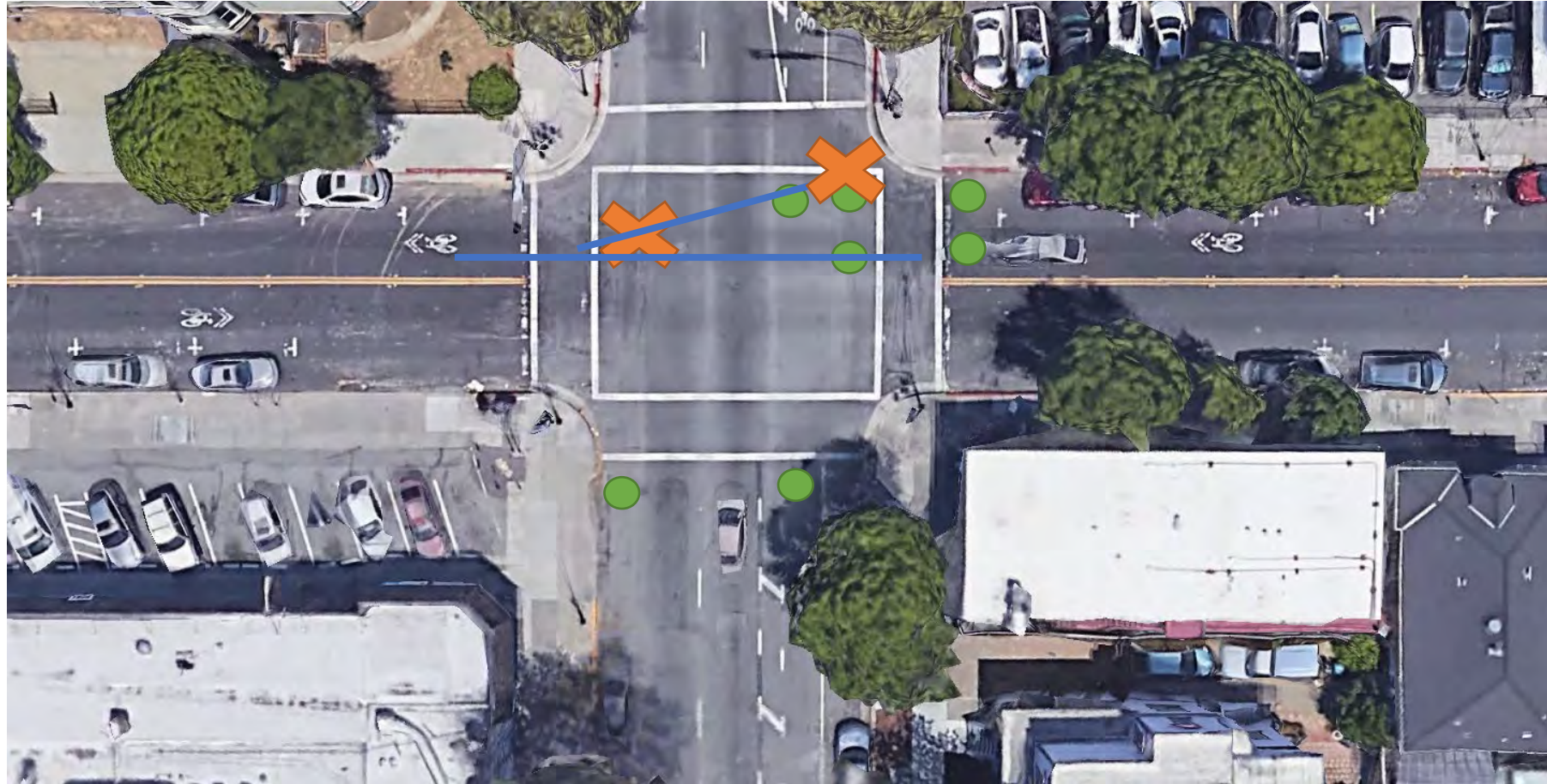


Alta: Evolution of the Protected Intersection



San Jose, CA

Bike Route Approach



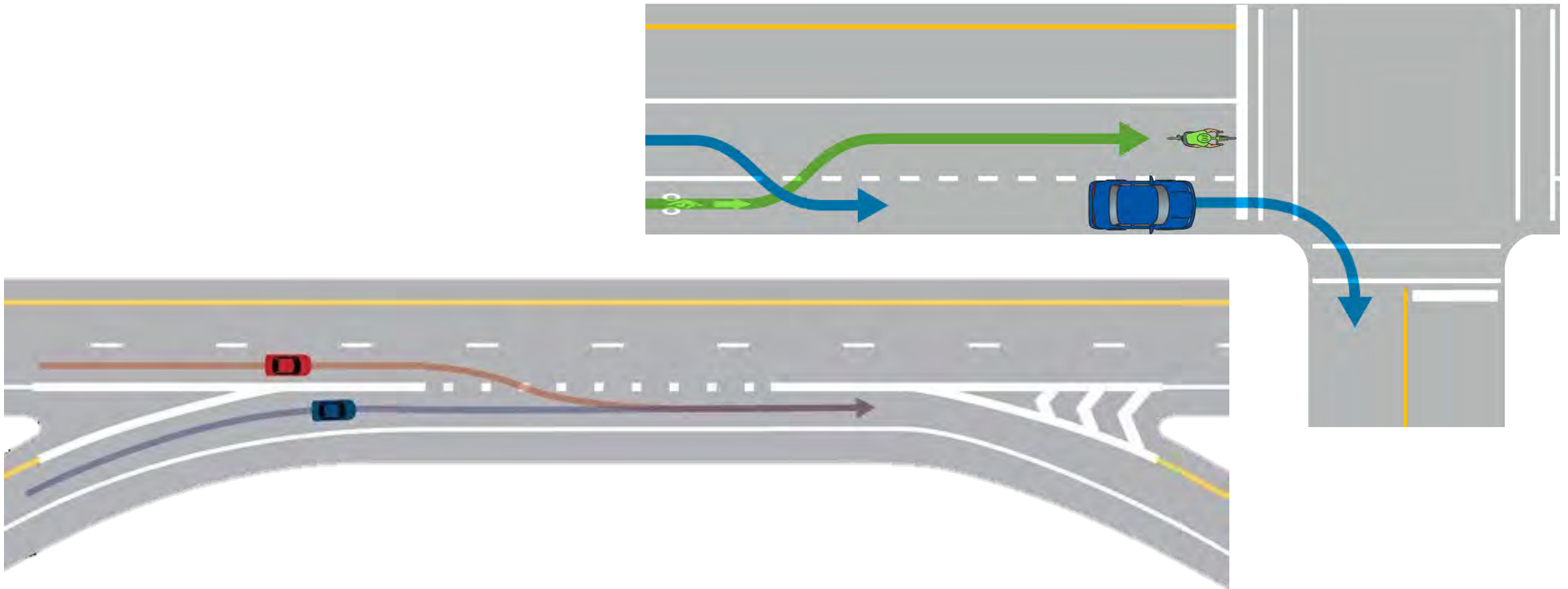
San Jose, CA

Bike Lane Approach

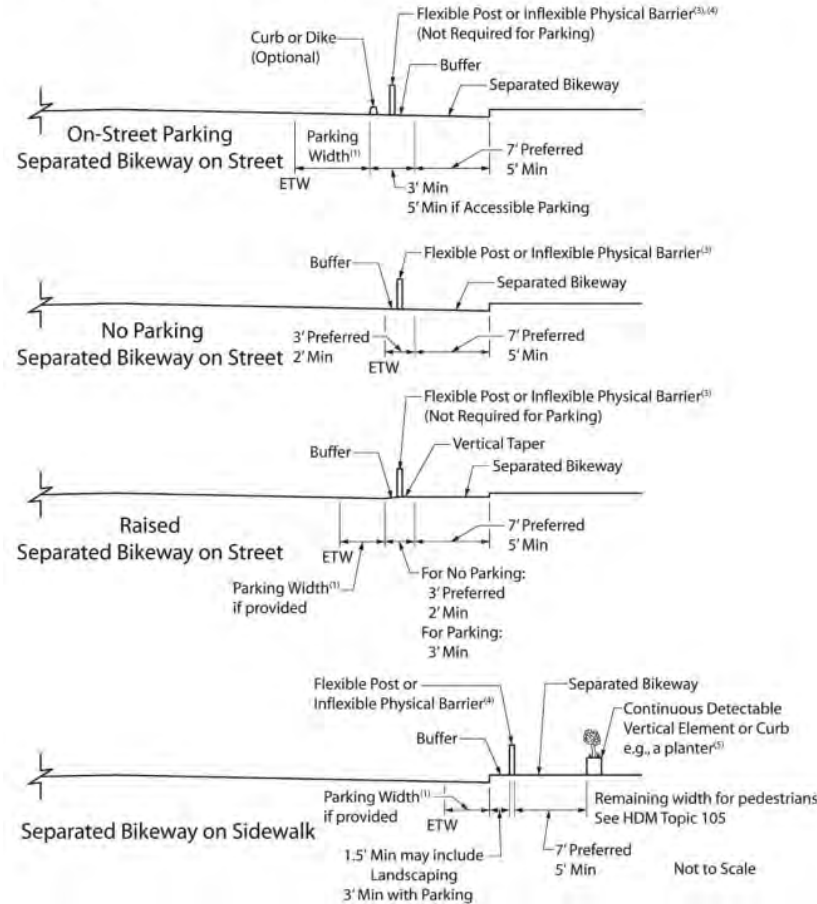


San Jose, CA

Intersection weaving and Speed Differential

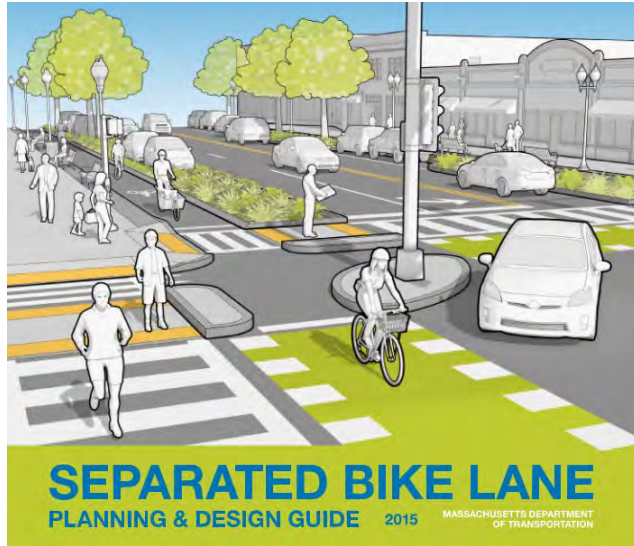


Typical Class IV Bikeway (Separated Bikeway) Cross Sections



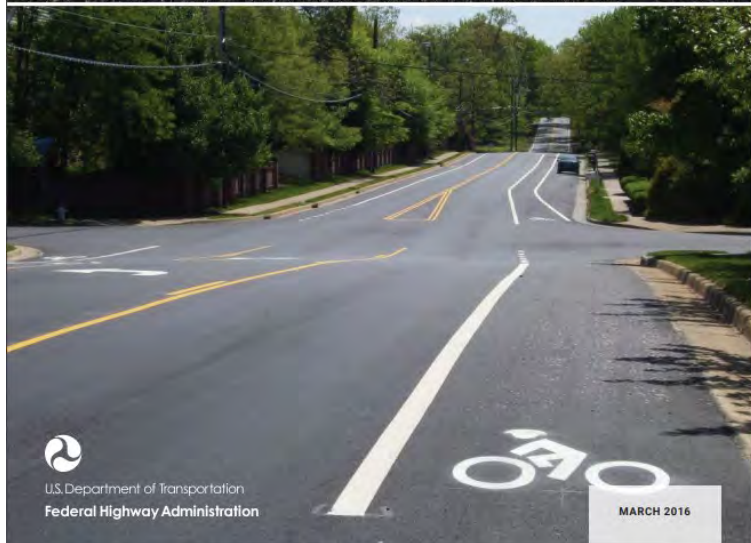
NOTES:

- (1) See CA MUTCD Section 3B.19 for parking guidance.
- (2) For separated bikeway marking and signing guidance, see the CA MUTCD Part 9.
- (3) May be a raised island in lieu of flexible posts or inflexible physical barriers.
- (4) Flexible posts or inflexible physical barriers may be omitted.
- (5) Periodic openings should be provided for bicyclists to access buildings.





Incorporating On-Road Bicycle Networks into Resurfacing Projects




U.S. Department of Transportation
Federal Highway Administration

MARCH 2016



Don't Give Up at the Intersection

Designing All Ages and Abilities
Bicycle Crossings

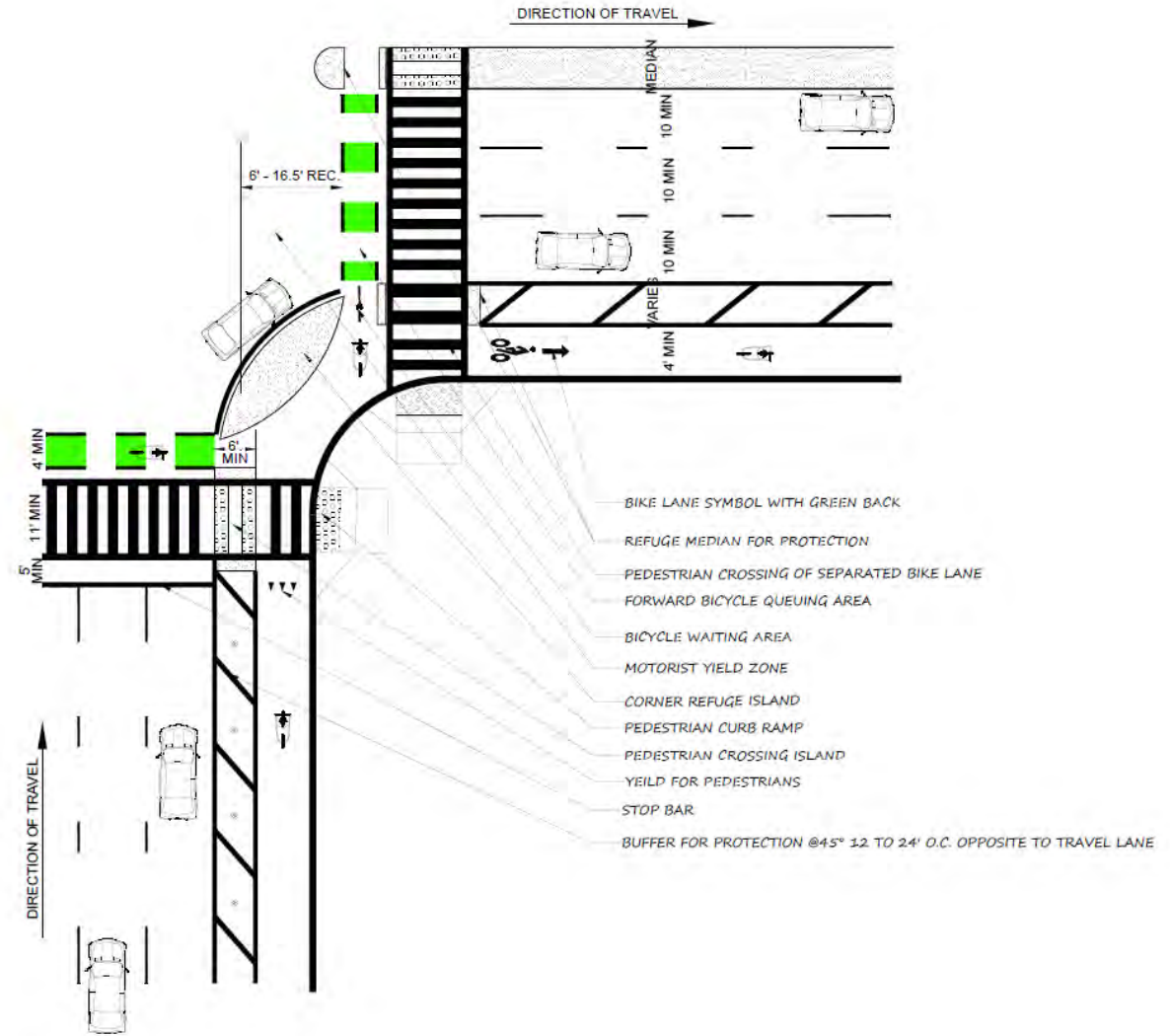
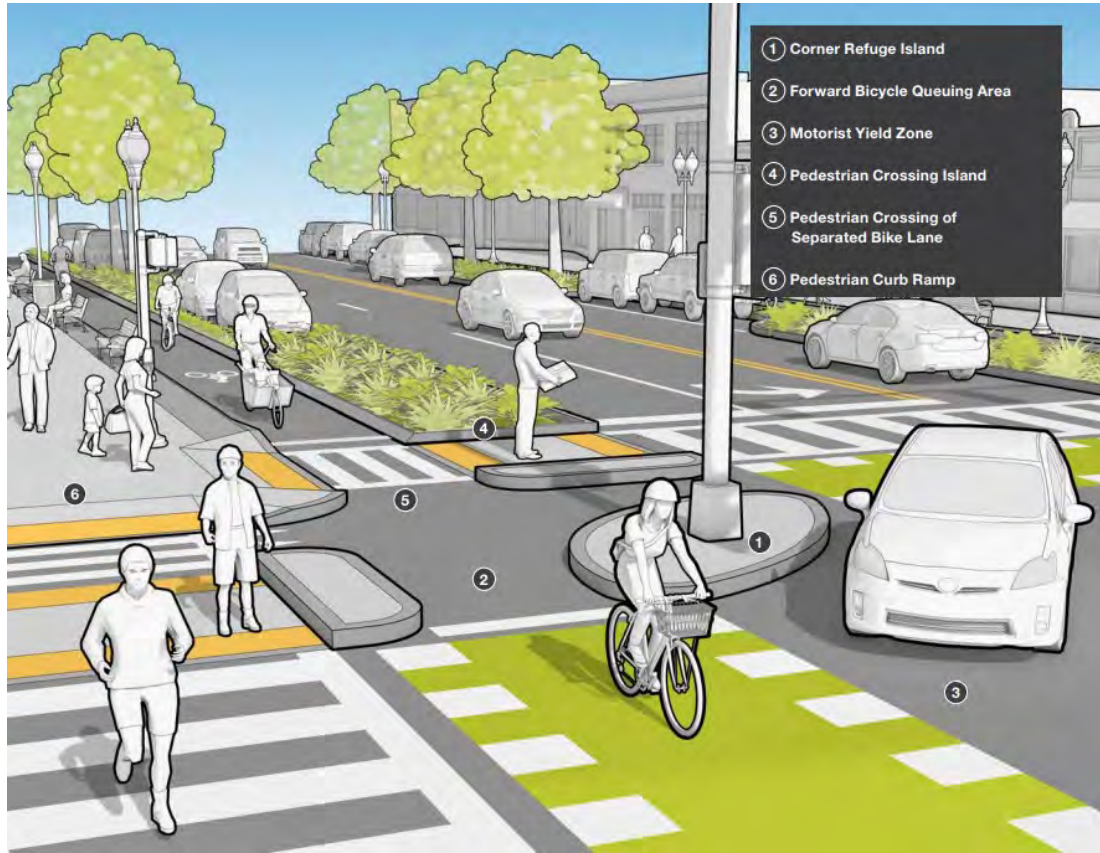



National Association of
City Transportation Officials

May 2019

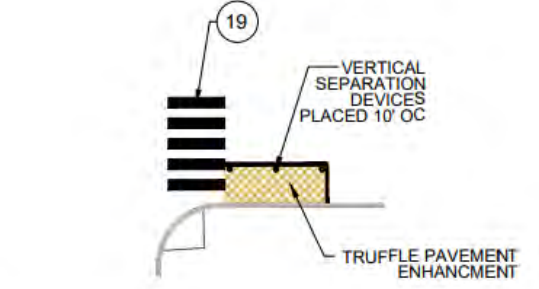


Crossroad Lab

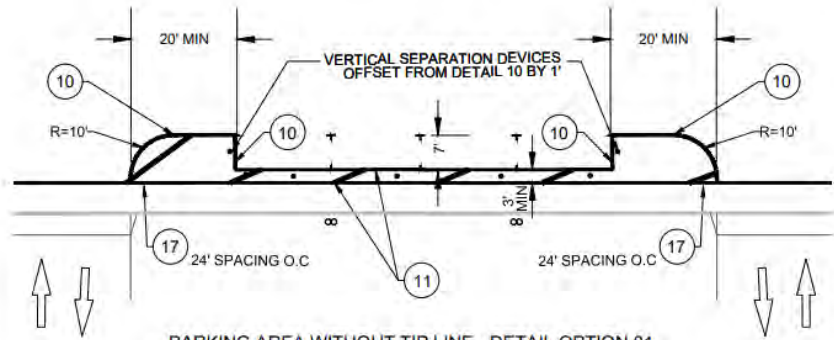


MASS DOT Separated Bikeway Guidance

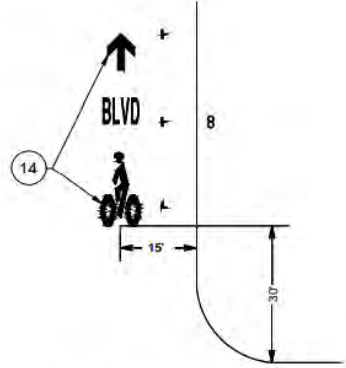
Build a Menu of Options



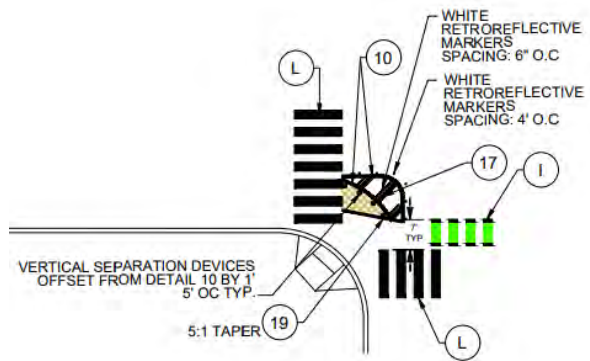
PAINTED CURB EXTENSION - DETAIL X
N.T.S.



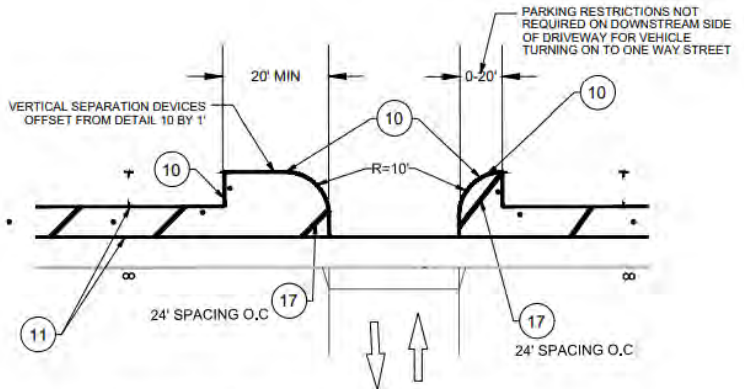
PARKING AREA WITHOUT TIP LINE - DETAIL OPTION 01
N.T.S.



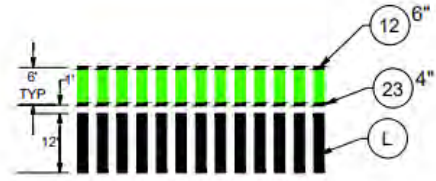
**BIKE BLVD MARKING
DETAIL S1**
N.T.S.



BIKE REFUGE ONE DIRECTION - DETAIL U1
N.T.S.



DRIVEWAY RADIUS OFFSET - DETAIL T2
N.T.S.



DETAIL I2
N.T.S.

Protected Intersections

No Stopping / No Standing Zone

Motor vehicle parking and stopping are prohibited on the approach to the intersection.

Pedestrian Islands

Islands reduce crossing distances and improve visibility by keeping the intersection clear. Wider islands support high volumes of people walking and biking, raising the capacity of the intersection. In some cases, islands can reduce the signal time needed for pedestrians.

Bikeway Setback

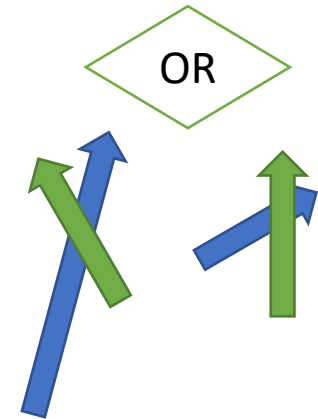
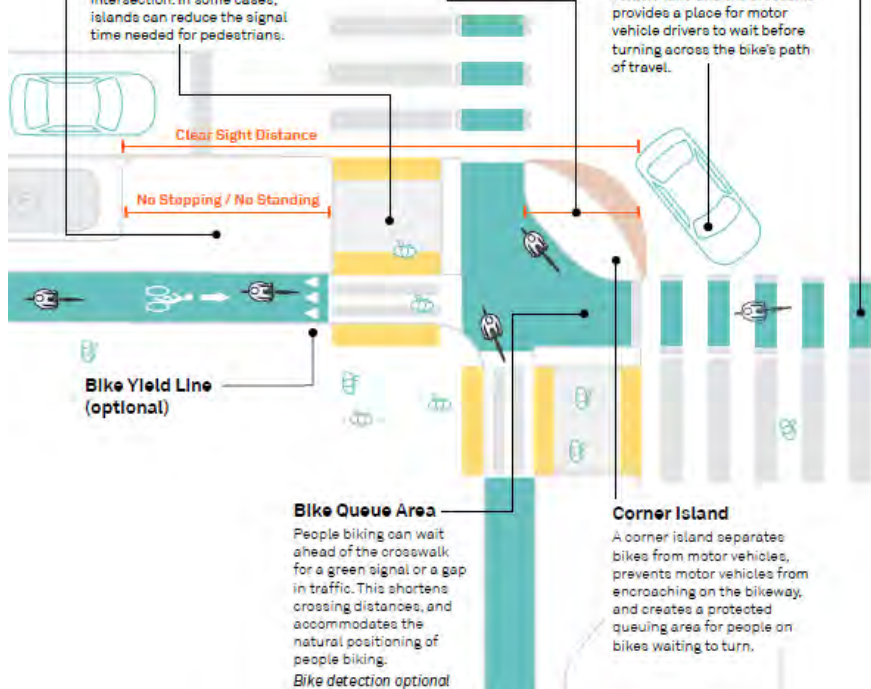
The setback determines how much room will be available for drivers to wait and yield, and the angle at which they cross the bikeway. Larger setbacks provide better visibility and give people bicycling more time to notice and react to turning vehicles.

Crossbikes / Intersection Crossing Markings

Markings provide conspicuity and directional guidance to bikes in the intersection. They are marked with dotted bicycle lane line extensions and may be supplemented with green color or bike symbols between these lines.¹¹

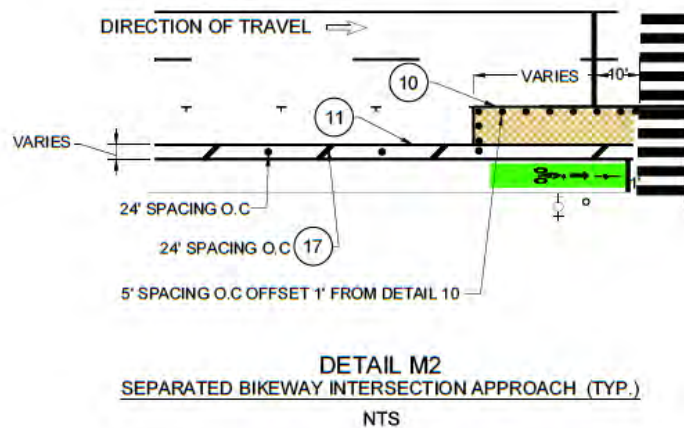
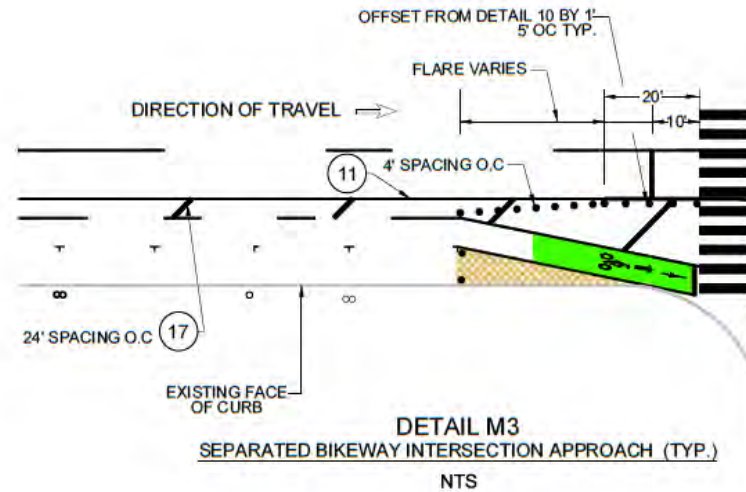
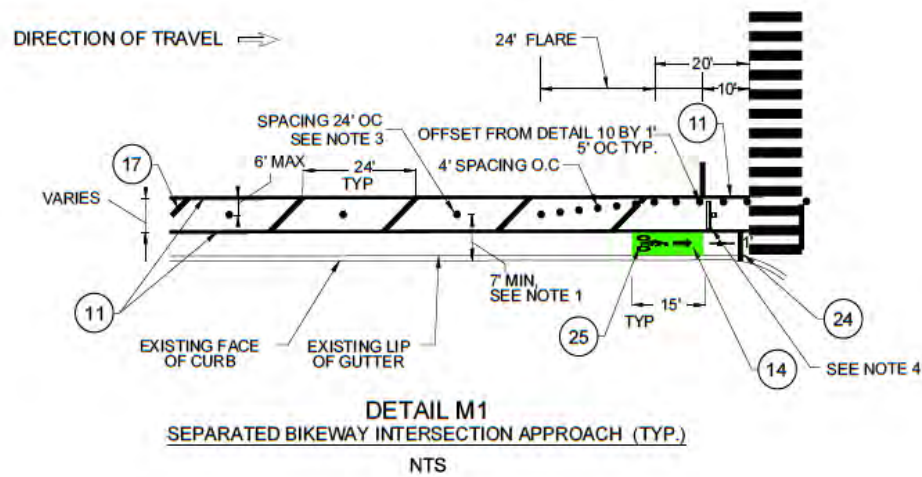
Motorist Waiting Zone

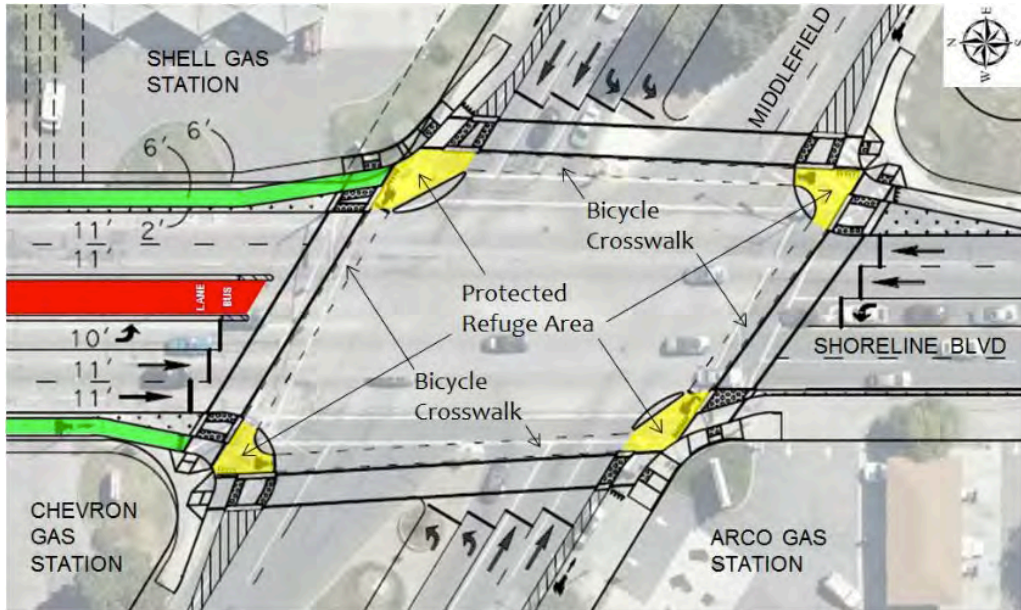
The space between the motor vehicle lane and the crossbike provides a place for motor vehicle drivers to wait before turning across the bike's path of travel.



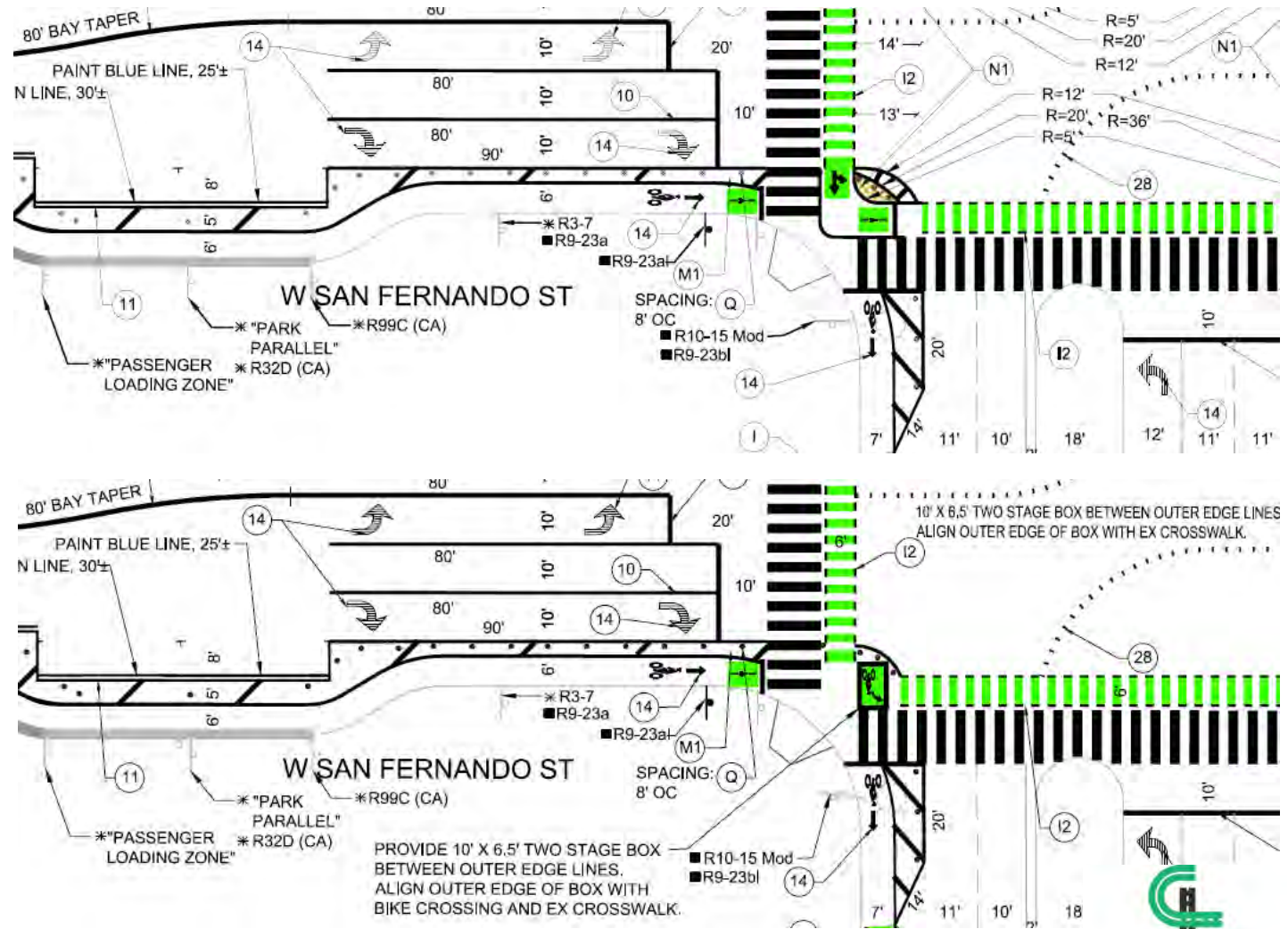
San Jose, CA

Cycle Track Approach

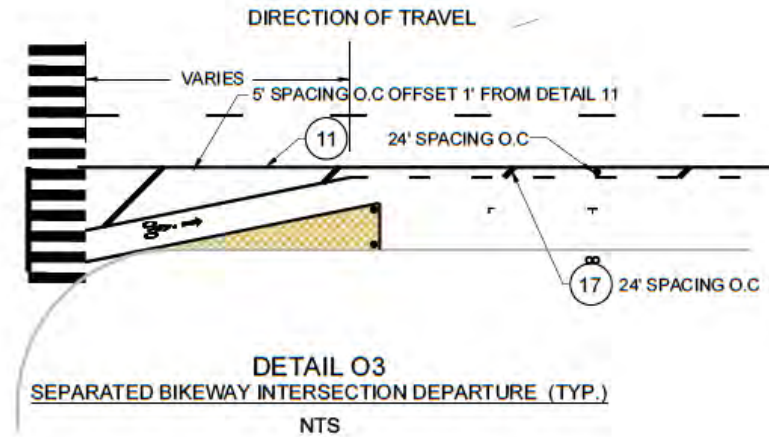
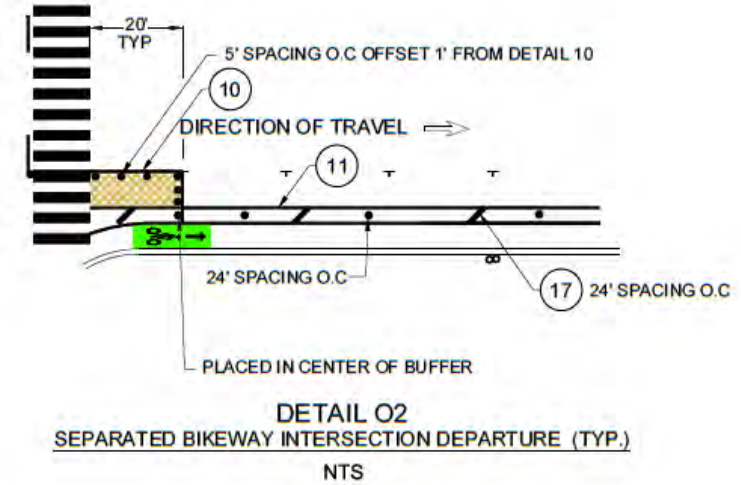
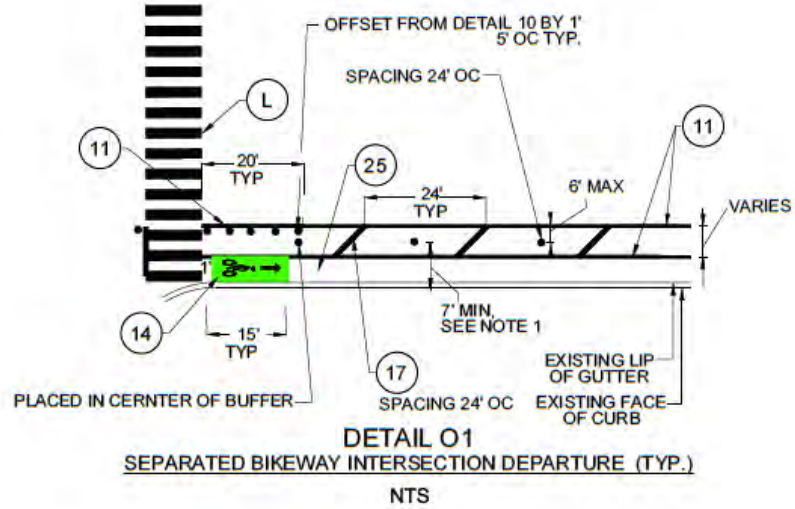




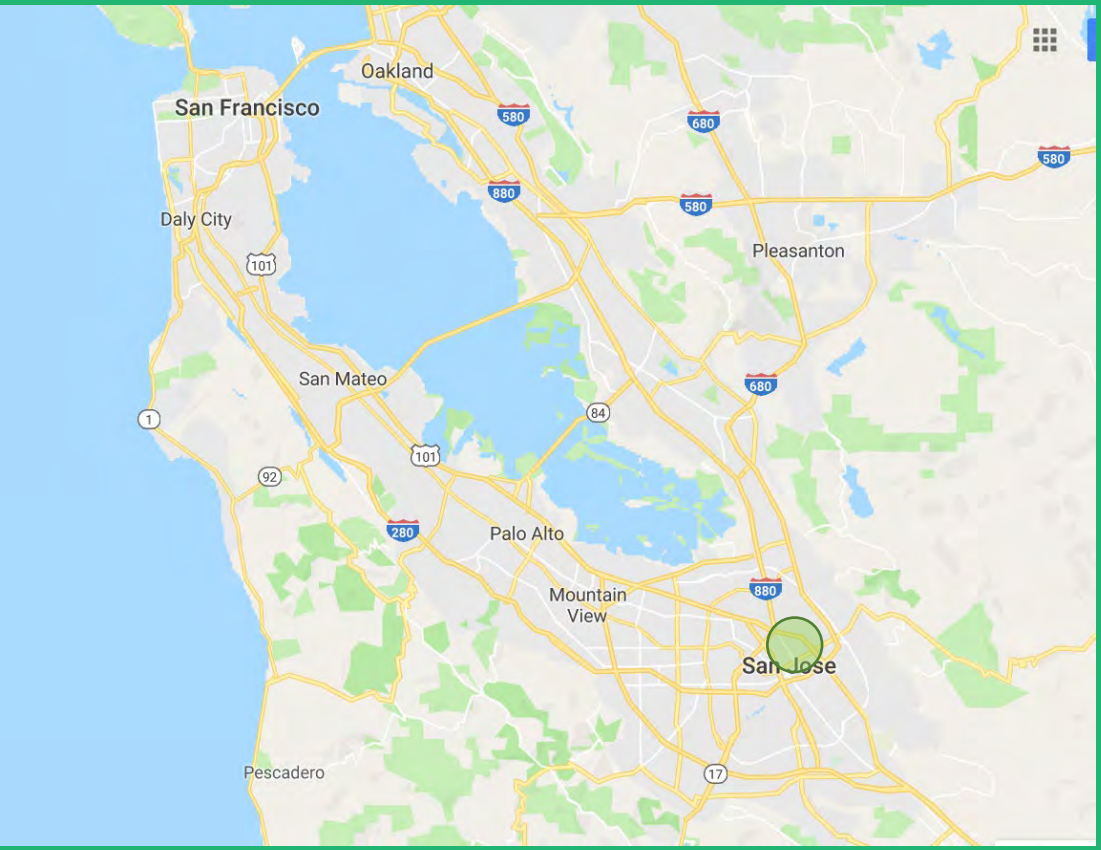
Mountain View, CA



Cycle Track Departure

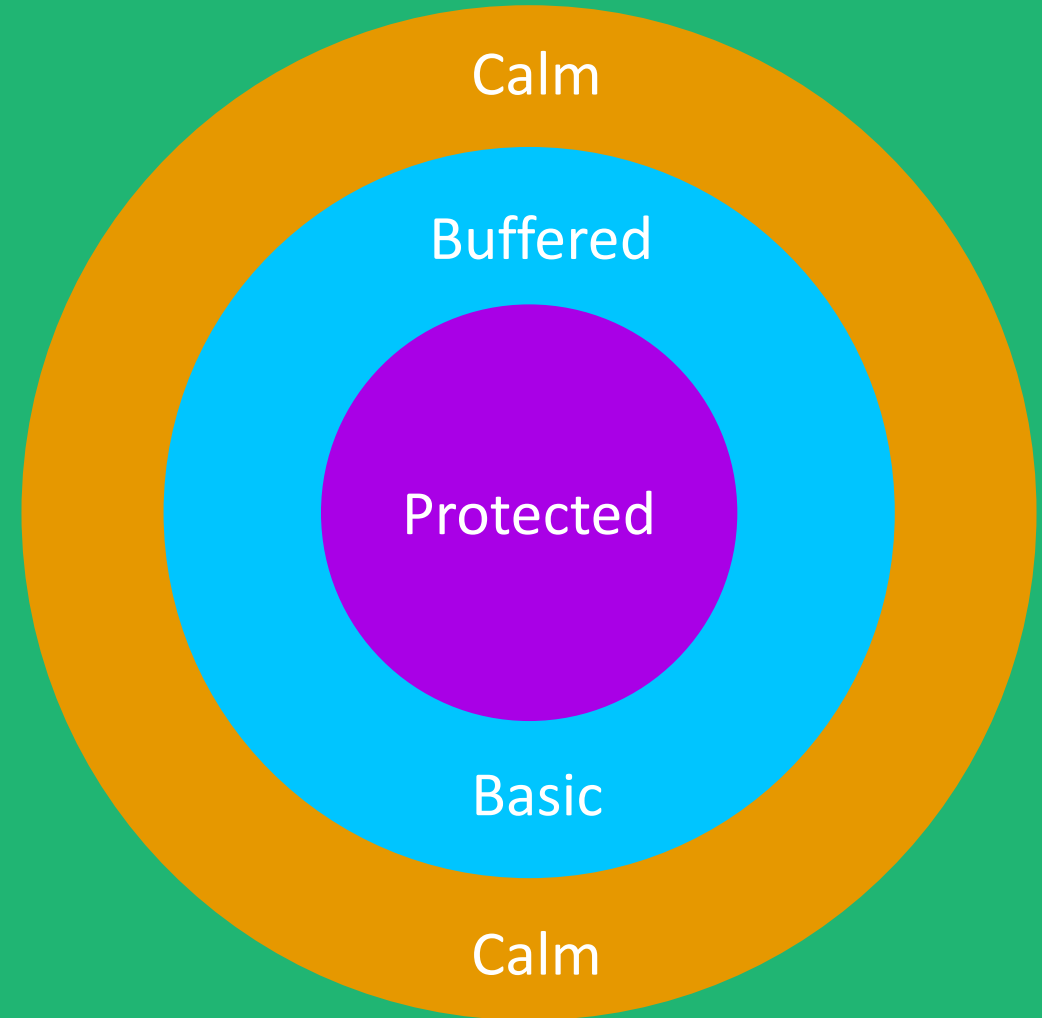


Design Build - Delivering Transportation Networks



~1.5 Mile Radius

Context Helps Select Facilities

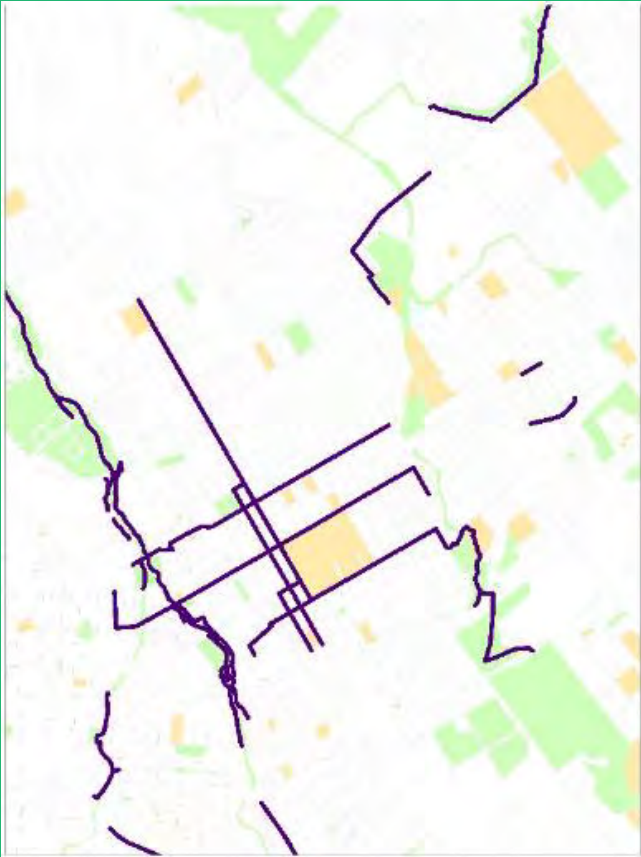


All Ages and Abilities Network

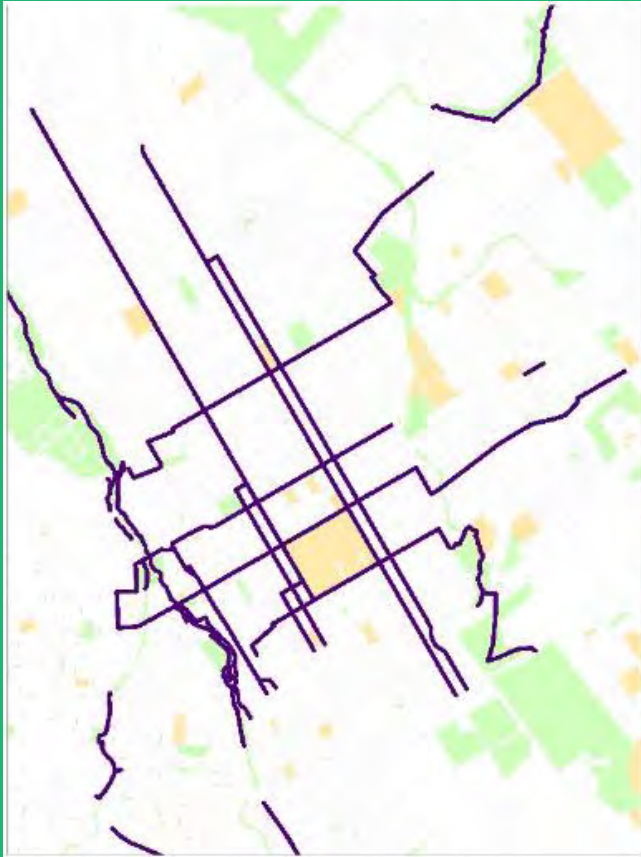
2016



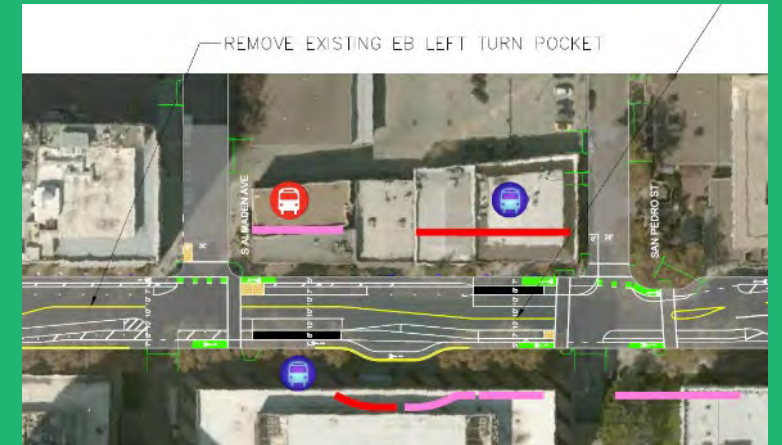
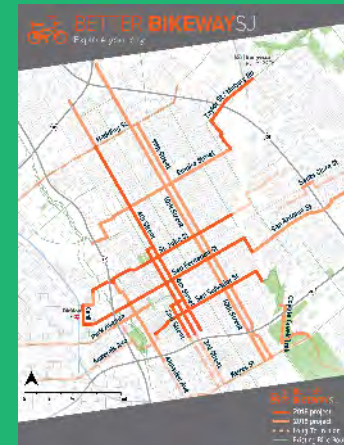
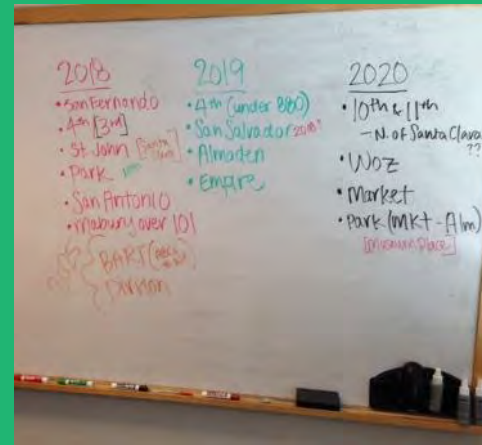
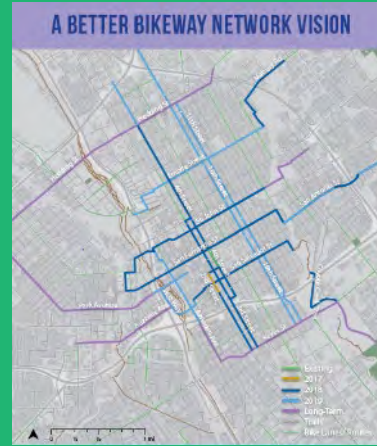
2018



2020



From Network Vision to Conceptual Design



San Jose, CA

Outreach Events, Meetings, & Partners

- Pop-up Bikeway & Media Coverage
- 12 Community Meetings
- 20+ Neighborhood & Stakeholder Meetings
- Website & Social Media
- Survey (~600 responses)
- Project Postcards
- Business Flyering
- Freight Loading Truck Turns
- Fire Access
- ADA Outreach
- Vietnamese and Spanish Meeting Material



The Word on the Street

How to use the new street



Drive
Stay in the moving lane. Do not drive in parking lane or bicycle lane.

Park
Park your car in the marked parking stalls to the left of the buffer and bicycle lane.

Load
Use buffer zone to get to parked cars. Look for passing bikes when opening car doors.

Bike
Ride in the new bicycle lanes. Watch for crossing pedestrians.

Walk
Look for oncoming bicycles when crossing new bicycle lanes.


BETTER BIKEWAYS SJ
Explore your city.

SAN SALVADOR STREET

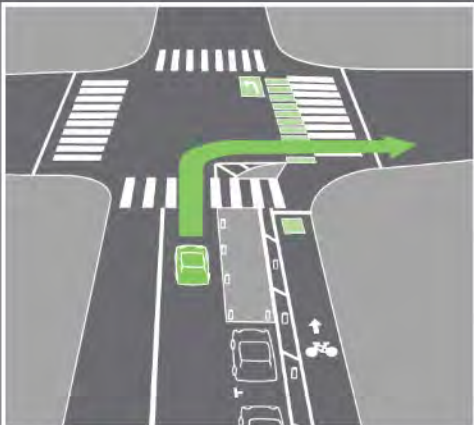
Better Bikeways San José upgrades streets to support safety, placemaking, and local business.
Visit sanjoseca.gov/betterbikeways for more information.



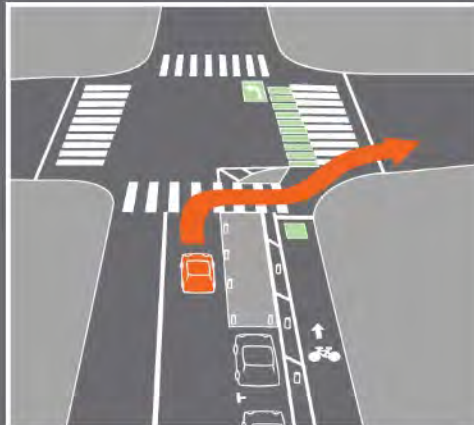
How to make a right turn in a protected intersection



sanjoseca.gov/betterbikeways



✓ Turn around the corner island. Yield to bicyclists and pedestrians.



✗ Don't turn through the crosswalk & crossbike.

San Jose, CA

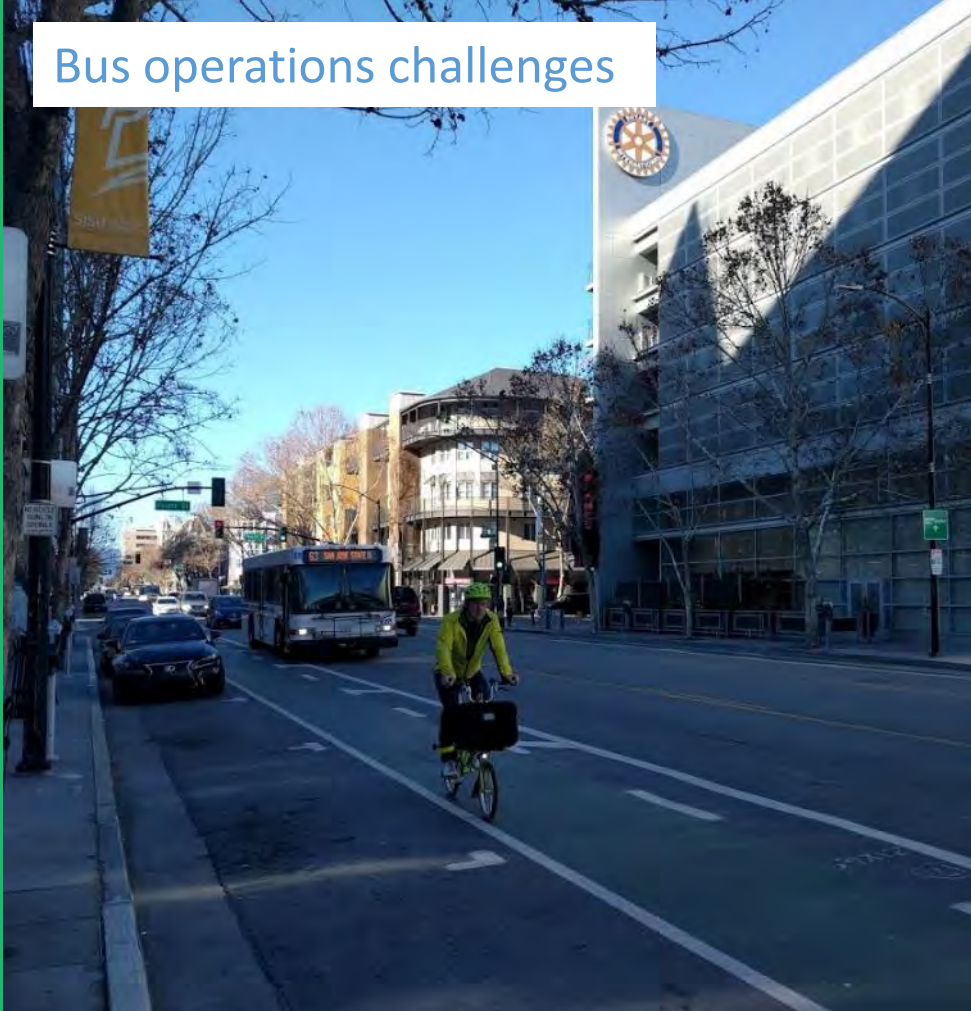
The Word on the Street



San Jose, CA

Protected Bikeways and Transit

Bus operations challenges



Bicycling challenges



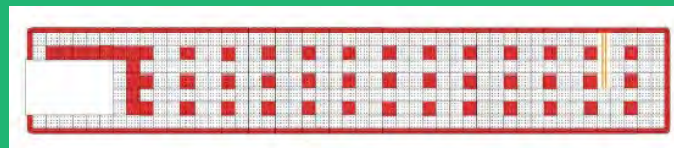
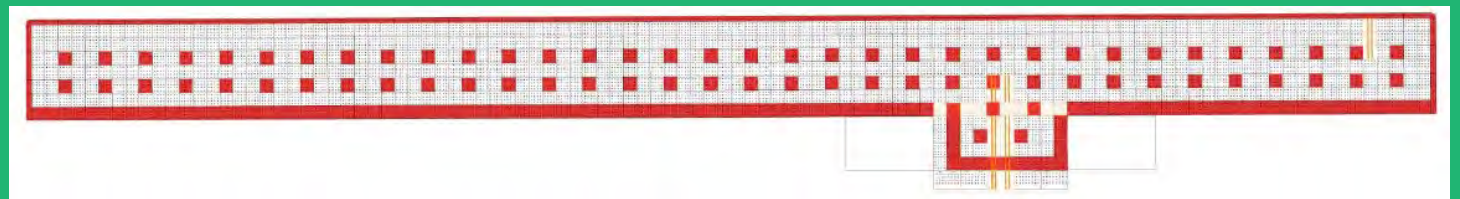
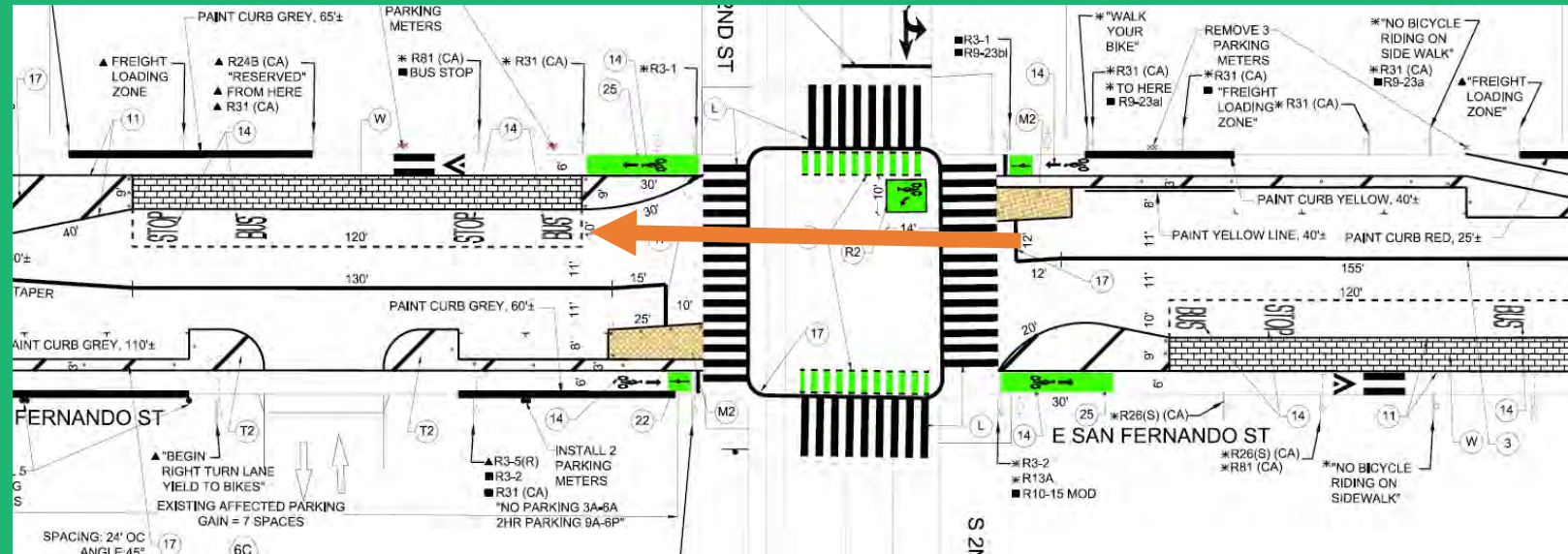
San Jose, CA



San Jose, CA



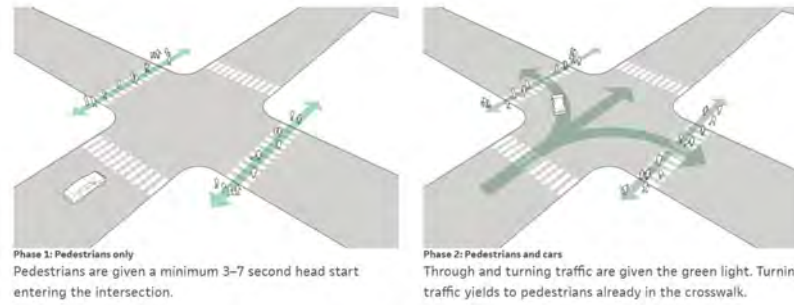
System Basics





Toronto, Canada

New York, NY



104

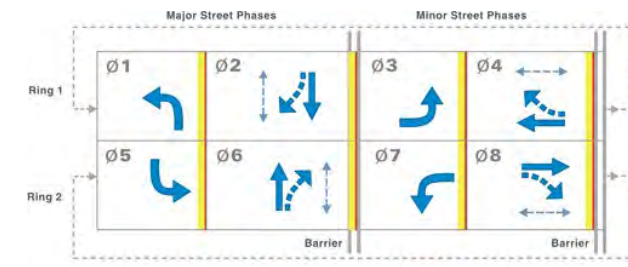
SYSTEM ACTIVATIONS

THERMAL DETECTION

The pedestrian thermal sensor uses infrared heat profiles to identify vulnerable road users moving within targeted detection zones to activate TAPCO Pedestrian Crosswalk Systems.

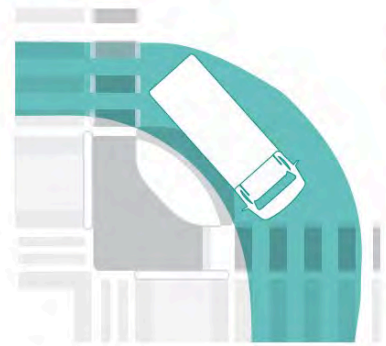
WHY THERMAL?
The sensor's ability to detect directionality and presence serves a vital function as it reduces false detections caused by people walking away from the crosswalk or bicycles traveling parallel to oncoming traffic.

- Thermal imaging cameras see in total darkness, through shadows and sun glare, providing reliable detection 24/7
- Accurate detection utilizing infrared heat profiles
- Versatile functionality dependent upon need, with many possible zones and configurations
- Easily integrates with user-actuated system options



→ Protected Phase
 - - - Permissive Phase
 <- - - Pedestrian Phase

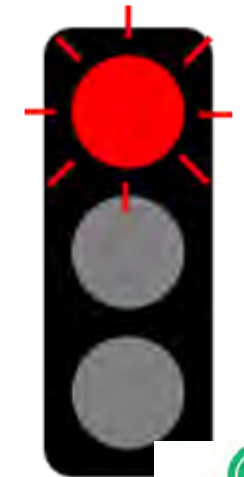
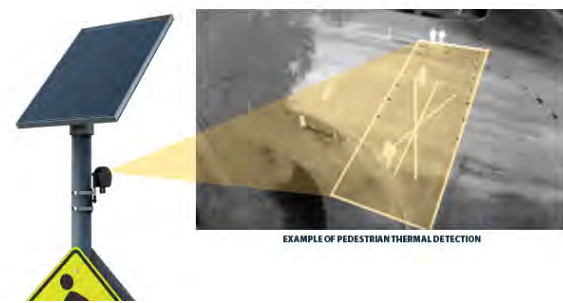
Design Vehicle



Control Vehicle

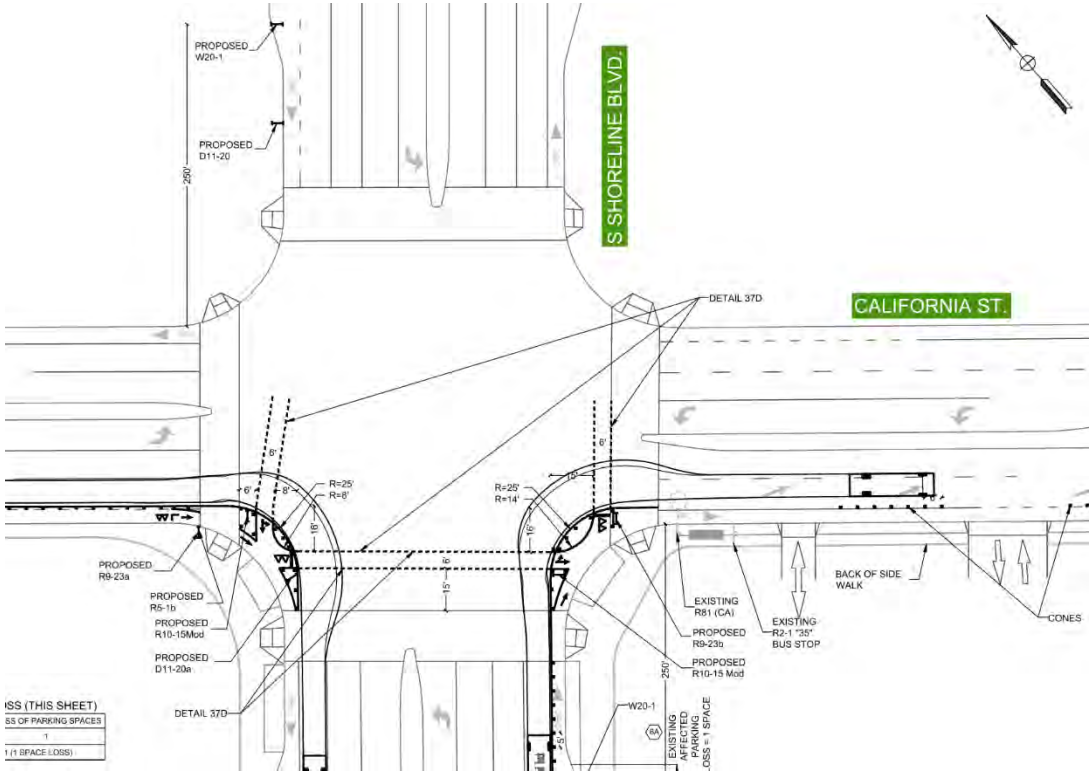


Managed Vehicle



Crossroad Lab

POP-UP PILOT SV BIKE SUMMIT 2019



Mountain View, CA

- K71 (\$100)



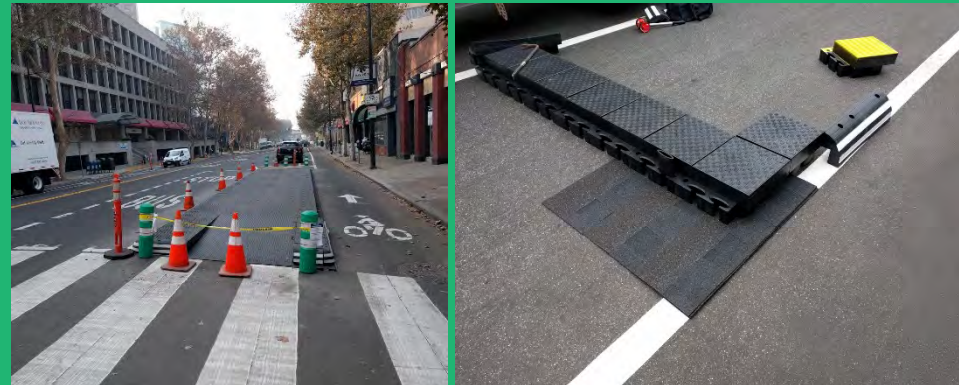
- Deesignline BikeRail (\$250)



- Zicla Zebra (\$60)



- Zicla Vectorial (\$40K)



Vertical separation

K71 (\$100)



DURA CURB (\$80)



BIKE RAIL (\$80)



ZICLA ZEBRA (\$30)

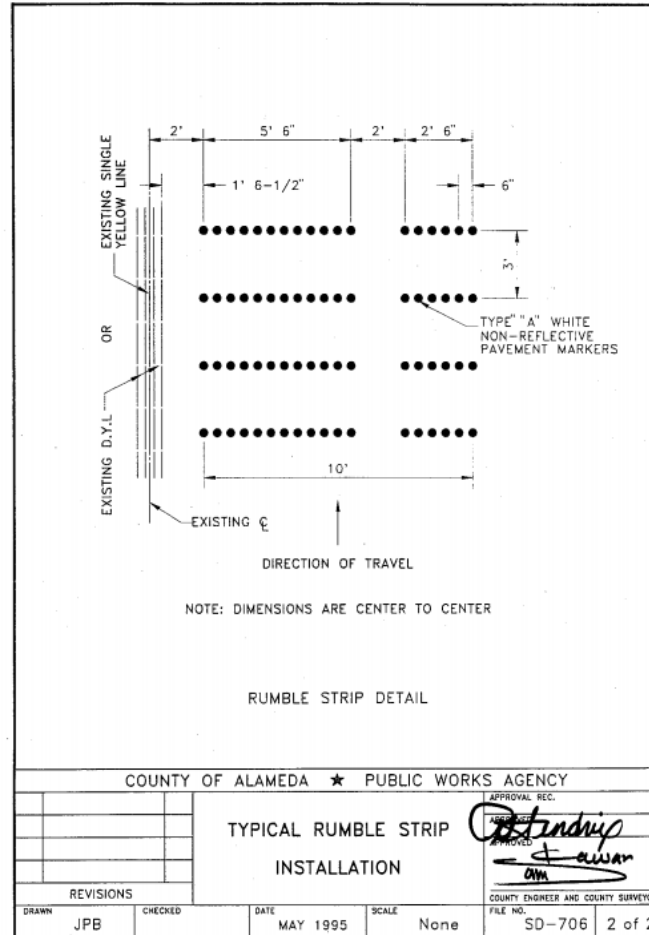


Vertical separation

RUBY LAKE GLASS (\$17 SF)



ALAMEDA RUMBLE (\$80)



3M ROADWAY TAPE (\$1.5/LF)

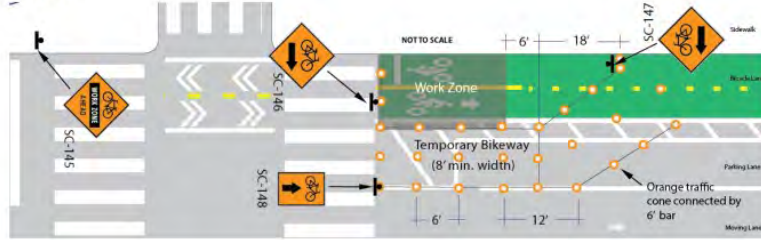
THERMOPLASTIC (\$14 SF)



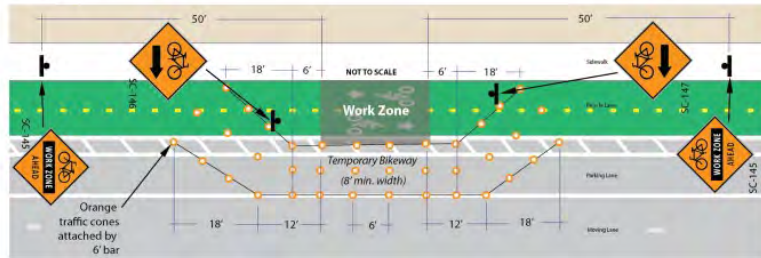
WATER BARRIERS \$350

Standardize Everything

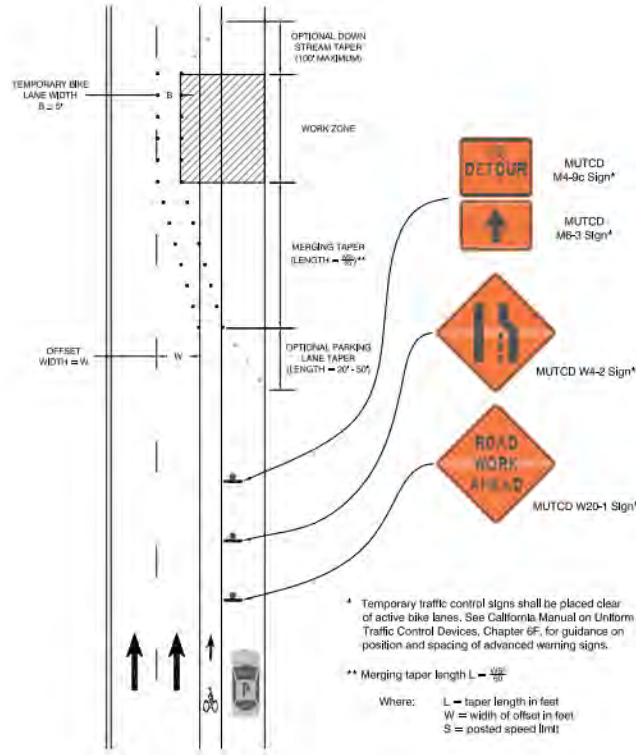
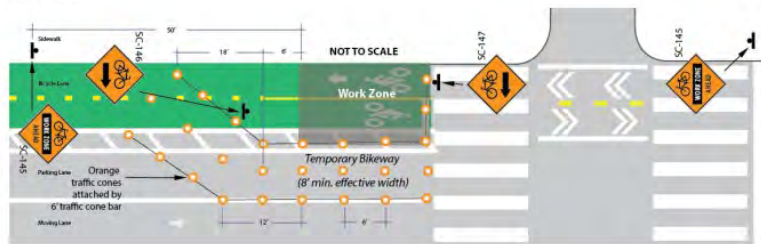
Block Start



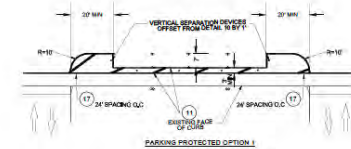
Mid-Block



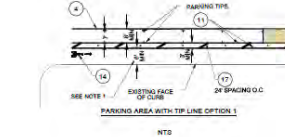
Block End



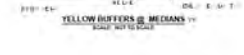
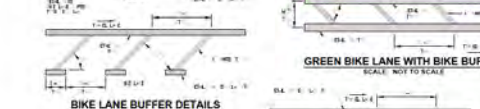
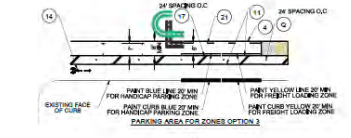
R (SPECIAL)
"ALL TURNS FROM BIKE LANE"
R0-23a (12"X18")
SPECIAL BICYCLE SIGNS
NTS



R (SPECIAL)
"LEFT (RIGHT) TURN MUST USE TURN BOX"
R0-23aL (12"X18")
SPECIAL BICYCLE SIGNS
NTS



R (SPECIAL)
"LEFT (RIGHT) TURN MUST USE TURN BOX"
R0-23aL (12"X18")
SPECIAL BICYCLE SIGNS
NTS

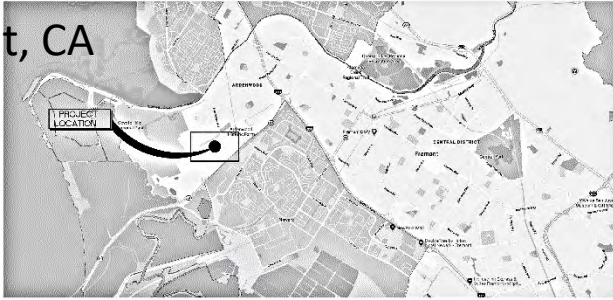




Fremont, CA



Fremont, CA



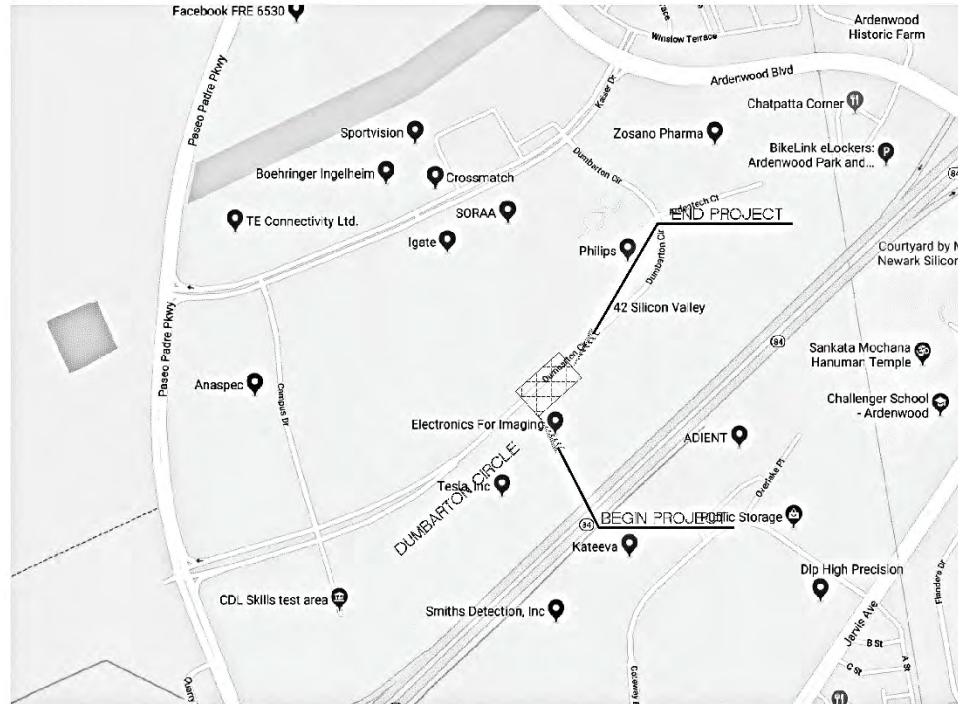
VICINITY MAP
NOT TO SCALE

UNCONTROLLED CROSSWALK FACEBOOK FREMONT CAMPUS DUMBARTON CIR

FACEBOOK FRE 125



LOCATION MAP



SCHEDULE OF DRAWINGS

SHEET	DRAWING	DRAWING DESCRIPTION
1	T-01	COVER SHEET
2	LD-01	NOTES AND DETAILS
3	DF-01	DEMOLITION PLAN
4	IP-01	IMPROVEMENT PLAN
5	PD-01	SIGNING AND STRIPING PLAN
6	EL-01	RRFB INSTALLATION & POLE DETAILS



No.	DATE	REVISION

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CUPERTINO, CA 95014
www.CrossroadLab.com
Call Us +408-827-8449
info@crossroadlab.com **Crossroad Lab**



APPROVED - PRINCIPAL ENGINEER

UNCONTROLLED CROSS WALK
TITLE PAGE
Not for Construction
PUBLIC WORKS DEPARTMENT

DATE: MM/DD/YYYY RECOMMENDED - PROJECT MANAGER

DATE: 03 FEB 2020

CITY PROJECT: SCALE: AS SHOWN DRAWING:
FEDERAL PROJECT: T-01
DESIGNED BY: VIGNESH S. CHECKED BY: VIGNESH S.
DRAWN BY: A.SIDDIQUE DATE: 03 FEB 2020
SHEET 01 OF 06

DESIGN CONSULTANT

VIGNESH SWAMINATHAN P.E.
10496 BYRNE AVE
CUPERTINO, CA 95014
www.CrossroadLab.com
Call Us +408-827-8449
info@crossroadlab.com



Crossroad Lab

Fremont, CA

GENERAL NOTES

- LOCATION OF EXISTING FACILITIES WERE TAKEN PARTIALLY FROM RECORDS AND MAY BE INCOMPLETE. THE CONTRACTOR SHALL DETERMINE THE EXACT OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR TRENCHING IN THEIR LOCALITY.

ALAMEDA COUNTY WATER DISTRICT (ACWD)
40885 SOUTH GRIMMER BOULEVARD
FREMONT, CA 94537

ALAMEDA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT (ACFC)
899 FLEMING STREET



- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL ACCESSORY UTILITY RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY.
- REFER TO OTHER SHEETS FOR ADDITIONAL NOTES AND LEGENDS PERTAINING TO SPECIFIC ITEMS OF WORK.

SIGNAGE AND STRIPING NOTES

- ALL NEW SIGNING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST PROVISIONS OF THE CALIFORNIA MUTCD AND STANDARD PLANS AND THE CITY OF FREMONT STANDARD DETAILS.
- THE CONTRACTOR SHALL PROVIDE FULL PEDESTRIAN AND BICYCLE ACCESS DURING CONSTRUCTION.
- REFER TO OTHER SHEETS FOR ADDITIONAL NOTES AND LEGENDS PERTAINING TO SPECIFIC ITEMS OF WORK.
- ALL EXISTING SIGNING SHOWN IS TO REMAIN, UNLESS OTHERWISE NOTED. LOCATION OF EXISTING SIGNS, STRIPING AND PAVEMENT MARKINGS ARE APPROXIMATE ONLY.
- ANY EXISTING STRIPING CONFLICTING WITH THE FINAL STRIPING SHALL BE REMOVED BY SANDBLASTING.
- ALL TRAFFIC STRIPES, LINES, AND SIGN POSITIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- DIRECTIONAL ARROWS SHALL BE INSTALLED 10' PRECEDING THE LIMIT LINES.
- ALL NEW STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH HIGH NIGHT VISIBILITY.
- THE QUANTITIES OF THE NEW STRIPING SHOWN ARE APPROXIMATE.

NOTES

- LOCATION OF POLES, PULL BOXES, AND EQUIPMENT ARE SCHEMATIC UNLESS OTHERWISE NOTED BEFORE BEGINNING ANY CONSTRUCTION OPERATION. THE CONTRACTOR SHALL CHECK FOR CONFLICTS WITH UNDERGROUND UTILITIES, OVERHEAD UTILITIES, OR OTHER OBSTACLES. IF EQUIPMENT OR POLES MUST BE RELOCATED, THE ENGINEER MUST APPROVE THE NEW LOCATION PRIOR TO INSTALLATION.
- PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
- NEW SIGNAL POLES SHALL BE LOCATED IN THE PRESENCE OF THE ENGINEER. LOCATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO EXCAVATION.
- POLES SHALL BE A MINIMUM OF 30' FROM THE FACE OF CURB AND A MINIMUM OF 3' SIDEWALK CLEARANCE SHALL BE PROVIDED FOR VEHICLE-AIR ACCESS AND PEDESTRIAN TRAFFIC.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED 30" FROM GROUND LEVEL AND SHALL HAVE 2 DIAMETER ACTUATORS.
- REFER TO SIGNAGE AND STRIPING PLANS FOR SIGNS ON STANDARD POLES.

CALTRANS STANDARD PLANS (2015)

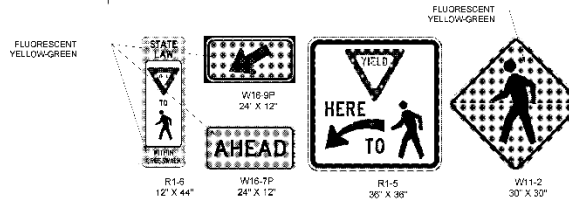
- ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
 A10A ACROMYMS AND ABBREVIATIONS (SHEET 2 OF 2)
 A109 PAVEMENT MARKERS AND TRAFFIC LINES - TYPICAL DETAILS
 A20A PAVEMENT MARKERS AND TRAFFIC LINES - TYPICAL DETAILS
 A20B PAVEMENT MARKERS AND TRAFFIC LINES - TYPICAL DETAILS
 A20C PAVEMENT MARKERS AND TRAFFIC LINES - TYPICAL DETAILS
 A20D PAVEMENT MARKINGS - ARROWS
 A24A PAVEMENT MARKINGS - ARROWS
 A24B PAVEMENT MARKINGS - SYMBOLS AND NUMERICAL
 A24C PAVEMENT MARKINGS - WORDS AND CROSSWALKS
 A24E CURB RAMP DETAILS
 A88A CURB RAMP AND ISLAND PASSAGE WAY DETAILS
 A88B

- T11 TRAFFIC CONTROL SYSTEM FOR LAND CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS
 ES-1A ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)
 ES-1B ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)
 FS-1C ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)
 ES-8C ELECTRICAL SYSTEMS (ACCESSIBLE PEDESTRIAN SIGNAL AND PUSH BUTTON ASSEMBLY)
 ES-7J ELECTRICAL SYSTEMS (FLASHING BEACON ON A TYPE 1, TYPE 15-FBS, AND TYPE 40 STANDARD)
 ES-11 ELECTRICAL SYSTEMS (FOUNDATIONS INSTALLATION)

ABBREVIATIONS

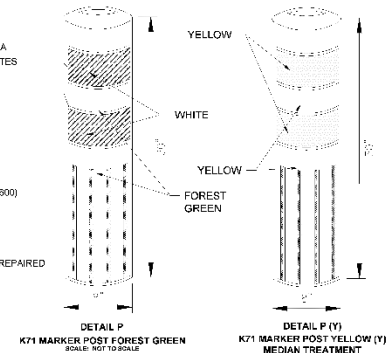
ABA/SB	AGGREGATE BASE/SUB BASE	L LT	LEFT
AC	ASPHALT CONCRETE	LG	LIP OF GUTTER
AP	ANGLE POINT	LP	LOW POINT
BC	BEGINNING OF CURVE	MAX	MAXIMUM
BFV	BACKFLOW VALVE	MIN	MINIMUM
BW	BACK WALK	MN	MAN-HOLE
CL	CENTERLINE/STATION LINE	MOD	MODIFIED
CATV	CABLE T.V.	MON	MONUMENT
C&G	CURB AND GUTTER	P	PAVEMENT GRADE
CLR	CLEAR	PB	PULL BOX
CONC	CONCRETE	PC	PORTLAND CEMENT CONCRETE
CR	CURB RAMP	PE	PEDESTRIAN EASEMENT
DW	DRIVEWAY	PL	PROPERTY LINE
EG	EDGE OF CURB	PUE	PUBLIC UTILITY EASEMENT
EG	EXISTING GRADE	PROJ	PROJECTED
ELECT	ELECTRICAL	P.S.E.	PUBLIC SERVICE EASEMENT
EX	EXISTING	P.V.M.T.	PAVEMENT
EP	EDGE OF PAVEMENT	R	RADIUS
FC	FACE OF CURB	R, RT	RIGHT
FH	FIRE HYDRANT	RET	RETURN
GB	GRADE BREAK	RET&B	RECTANGULAR RAPID FLASHING
GRD	GROUND	R.C.	RELATIVE COMPACTION
GV	GATE VALVE	RC2	REINFORCED CONCRETE PIPE
H.P.	HIGH POINT	ROW	RIGHT-OF-WAY
IC	INTERCONNECT	SW, SWK	SIDEWALK
INV	INVERT	SD	STORM DRAIN
IRR	IRRIGATION	SDWH	STORM DRAIN WHOLE
JT	JOINT TRENCH	SS	SANITARY SEWER
LAT	LATERAL	SIC	SIGNAL INTERCONNECT
		SL	STREET LIGHTING
		SL	TYPICAL

- EXISTING SIGN & POST
- EXISTING LUMINAIRE
- EXISTING PULL BOX / METER
- EXISTING MANHOLE
- PROPOSED SIGN & POST
- FLASHING BEACON SYSTEM
- PROPOSED YIELD LINE PER DETAIL Y
- PROPOSED CHEVRON STRIPING DETAIL
- PROPOSED K71 POST (WHITE & YELLOW)
- EXISTING HYDRANT
- EXISTING LEFT / RIGHT
- PROPOSED LEFT / RIGHT
- CALTRANS STRIPING DETAIL NUMBER / DRAWING DETAIL LETTER
- INSTALL 8" YELLOW LINE
- ZICLA ARMADILLO UNITS (WHITE & YELLOW)
- EXISTING PAINT REMOVALS
- CROSSWALK ILLUMINATOR



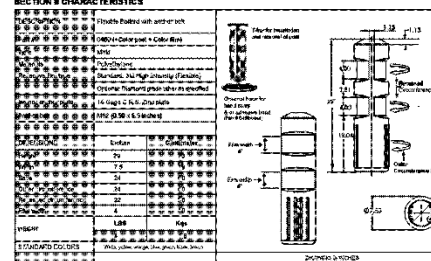
LIGHTING NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS (2015), MUTCD AND CALIFORNIA SUPPLEMENT, CITY OF CUPERTINO STANDARD SPECIFICATIONS, STANDARD DETAILS, AND THESE GENERAL NOTES.
- ALL POLE LOCATIONS SHALL BE VERIFIED BY CITY TRAFFIC ENGINEER OR DESIGNER PRIOR TO DIGGING OF ANY FOUNDATIONS. CONTRACTOR SHALL ARRANGE FOR INSPECTION OF PROPOSED POLE LOCATIONS BY THE STAFF. CONTRACTOR SHALL GIVE NO LESS THAN THREE (3) WORKING DAYS NOTICE TO THE ENGINEER PRIOR TO EXPECTED POLE FOUNDATION INSTALLATION DATE.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UNDERGROUND UTILITIES.
- WEATHER OR NOT THEY ARE SHOWN ON THESE PLANS, THE CONTRACTOR SHALL CONTACT USA 811 (800-277-2600) AT LEAST 48 HOURS PRIOR TO BEGINNING WORK, WHERE MARKING ARE NEAR PROPOSED FOUNDATION, THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES BY POT-HOLE PRIOR TO EXCAVATING.
- EXISTING IMPROVEMENTS, INCLUDING SUBSTRUCTURES THAT ARE DAMAGED BY THE CONTRACTOR WHICH ARE NOT DESIGNATED BY THE PLANS OR SPECIFICATIONS TO BE DISTURBED, SHALL BE RESTORED OR REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL NEW CONDUCTORS SHALL BE MARKED FOR PROPER IDENTIFICATION OF THEIR INTENDED FUNCTION.



TECHNICAL SPECIFICATIONS K71 SELF ERECTING MARKER POST

SECTION 1 IDENTIFY	SECTION 2 CHARACTERISTICS
K71 SURFACE MOUNT POST	1. Self-Erecting Marker Post
K71 REPLICATION COMPANY INC.	2. 12" x 12" x 12" (TYP.)
25 Pioneer St.	3. 12" x 12" x 12" (TYP.)
San Francisco, CA 94108	4. 12" x 12" x 12" (TYP.)
800-277-2600	5. 12" x 12" x 12" (TYP.)



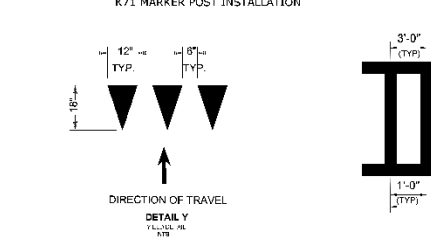
SECTION 3: BENEFITS

SAFETY: SELF-ERECTING MARKER POSTS PROVIDE A CLEAR WARNING TO DRIVERS OF A HAZARDOUS SITUATION, SUCH AS A POLE, SIGN, OR OBSTRUCTION IN THE ROADWAY. THE POSTS ARE EASY TO INSTALL AND REMOVE, AND THEY ARE DURABLE AND RESISTANT TO VANDALISM.

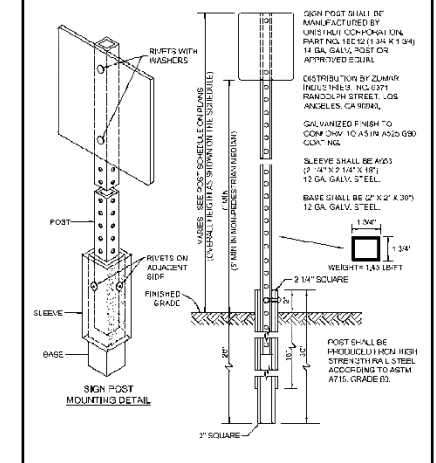
ALL-WEATHER RESISTANCE: SELF-ERECTING MARKER POSTS ARE MADE OF HIGH-QUALITY MATERIALS THAT ARE RESISTANT TO WEATHER, UV RADIATION, AND CORROSION. THEY ARE ALSO RESISTANT TO VANDALISM AND CAN BE REPAIRED OR REPLACED EASILY.

DISADVANTAGE OF LIABILITY: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THE SELF-ERECTING MARKER POSTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF THE POSTS AND THE COST OF THE INSTALLATION AND MAINTENANCE.

K71 MARKER POST INSTALLATION

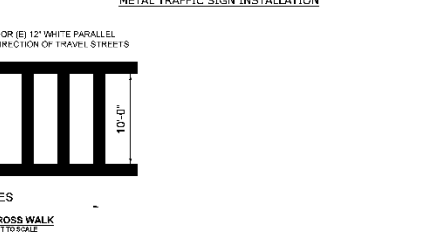


METAL TRAFFIC SIGN INSTALLATION



NO.	REVISION	DATE
1	REVISED	03/02/2020

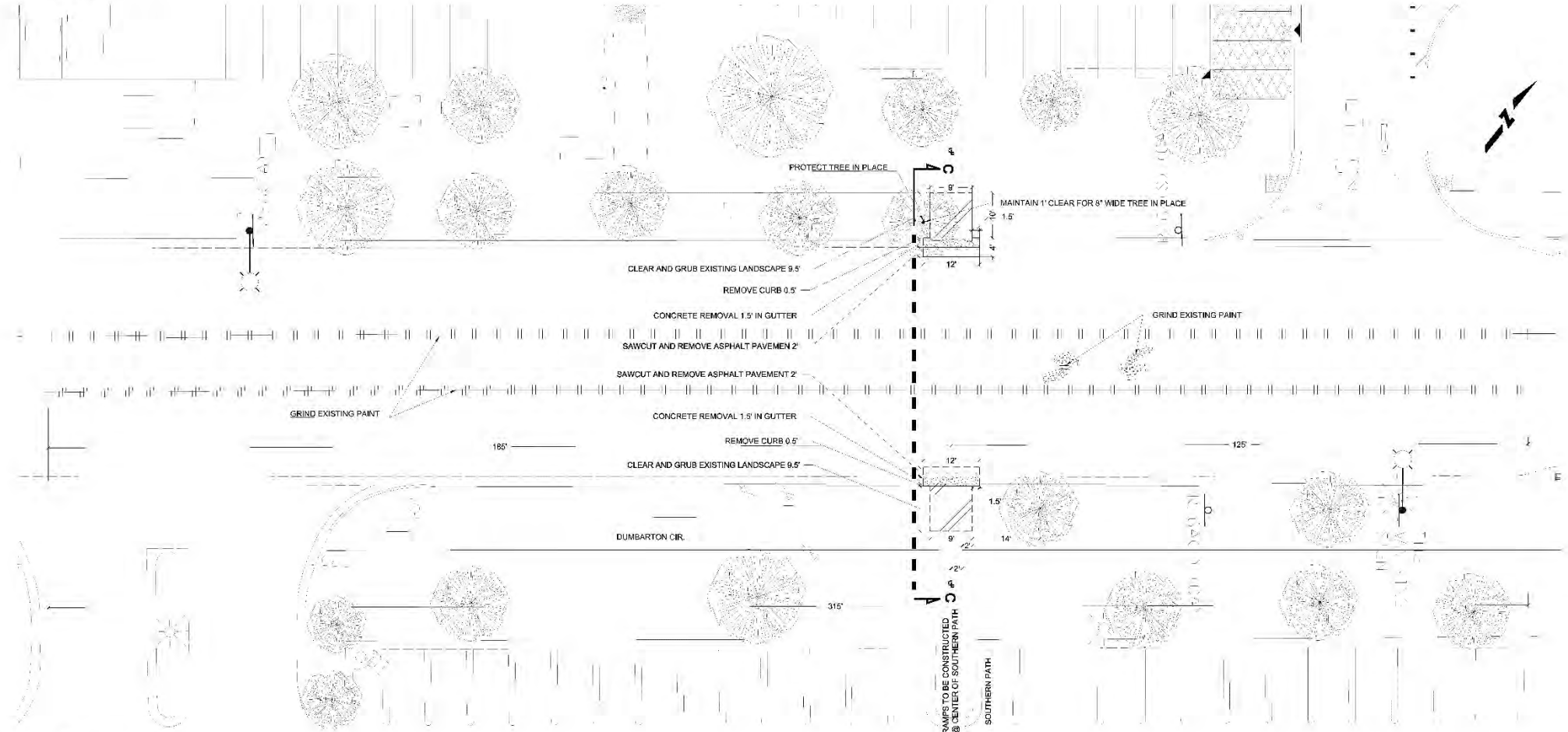
LADDER CROSS WALK



	No. _____ DATE _____ REVISION _____	BY APPD VIGNESH SWAMINATHAN P.E. Vignesh@crossroadlab.com 10406 BYRNE AVE CUPERTINO, CA 95014 www.crossroadlab.com Call Us: +1(408) 827-8442 info@crossroadlab.com	PERMIT _____ 	UNCONTROLLED CROSS WALK NOTES, LEGEND AND DETAILS Not for Construction PUBLIC WORKS DEPARTMENT	CITY PROJECT: _____ SCALE: NTS DRAWING: _____ FEDERAL PROJECT: _____ DESIGNED BY: VIGNESH S. CHECKED BY: VIGNESH S. DRAWN BY: A.SIDDIQUE DATE: 03 FEB 2020	LD-01 SHEET 02 OF 06
	APPROVED - PRINCIPAL ENGINEER DATE MM/DD/YYYY	RECOMMENDED - PROJECT MANAGER DATE 03 FEB 2020	CHECKED BY: _____ DATE: _____			

LEGEND

- EXISTING PAINT REMOVALS
- ▨ CLEAR & GRUB EXISTING LANDSCAPE
- ▨ EXISTING ASPHALT CONCRETE REMOVAL
- ▨ EXISTING CONCRETE REMOVAL
- LIMIT OF WORK



No.	DATE	REVISION

BY APPD VIGNESH SWAMINATHAN P.E.
 Vignesh@crossroadlab.com
 10498 RYRNF AVE
 CUPERTINO, CA 95014
 www.CrossroadLab.com
 Cell: (408) 927-8948
 info@crossroadlab.com **Crossroad Lab**



CITY OF Fremont
 APPROVED - PRINCIPAL ENGINEER

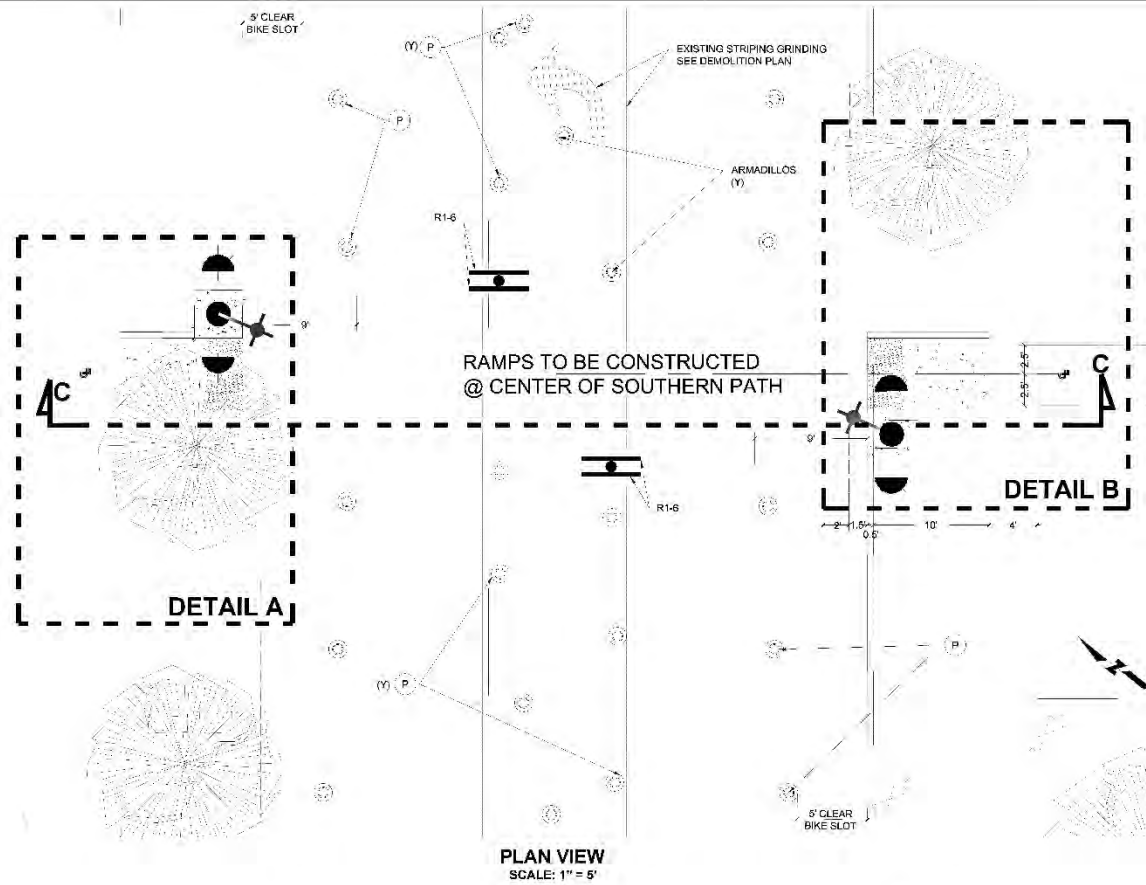
**UNCONTROLLED CROSS WALK
 DEMOLITION PLAN
 Not for Construction
 PUBLIC WORKS DEPARTMENT**

DATE: MM/DD/YYYY RECOMMENDED - PROJECT MANAGER

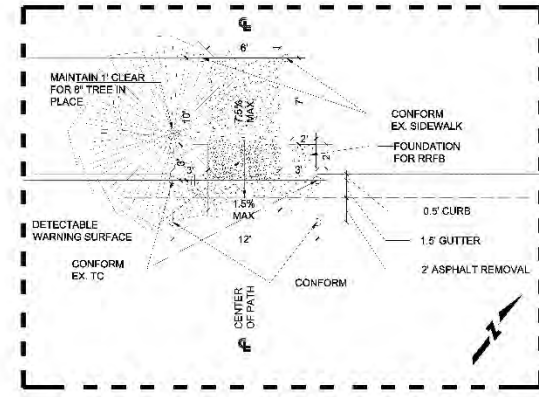
CITY PROJECT:
 FEDERAL PROJECT:
 DESIGNED BY: VIGNESH S.
 CHECKED BY: VIGNESH S.
 DRAWN BY: A.SIDDIQUE
 DATE: 03 FEB 2020

SCALE: 1" = 10'
 DRAWING:
 NOTE: VERIFY SCALE. BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES ACCORDINGLY IF BAR IS NOT ONE INCH.

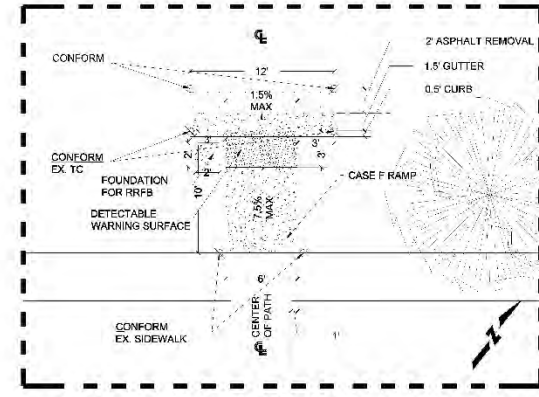
DP-01
 SHEET 03 OF 06



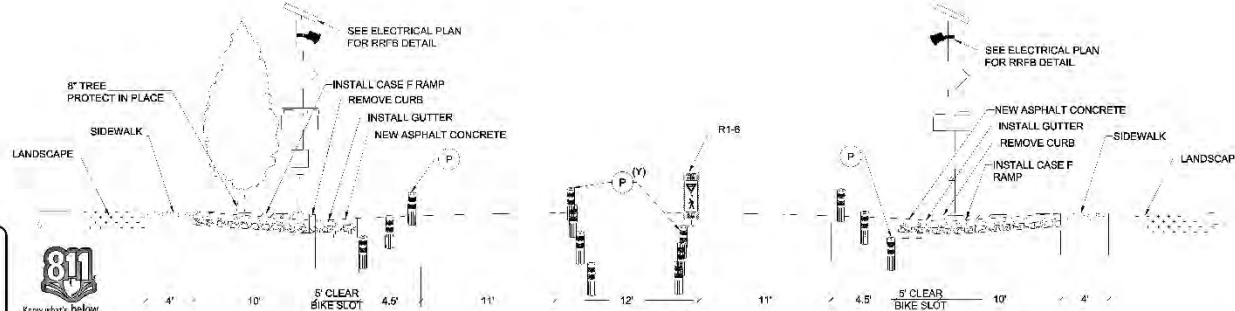
PLAN VIEW
SCALE: 1" = 5'



DETAIL A
SCALE: 1" = 5'



DETAIL B
SCALE: 1" = 5'



SECTION @ CC
NTS



No.	DATE	REVISION	BY	APPD	VIGNESH SWAMINATHAN P.E. Vignesh@crossroadlab.com	PERMIT
					10498 RYRNF AVE CUPERTINO, CA 95014 www.CrossroadLab.com Call Us: +1(408) 927-8948 info@crossroadlab.com	

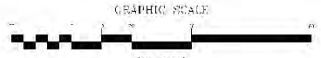
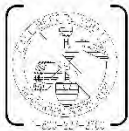
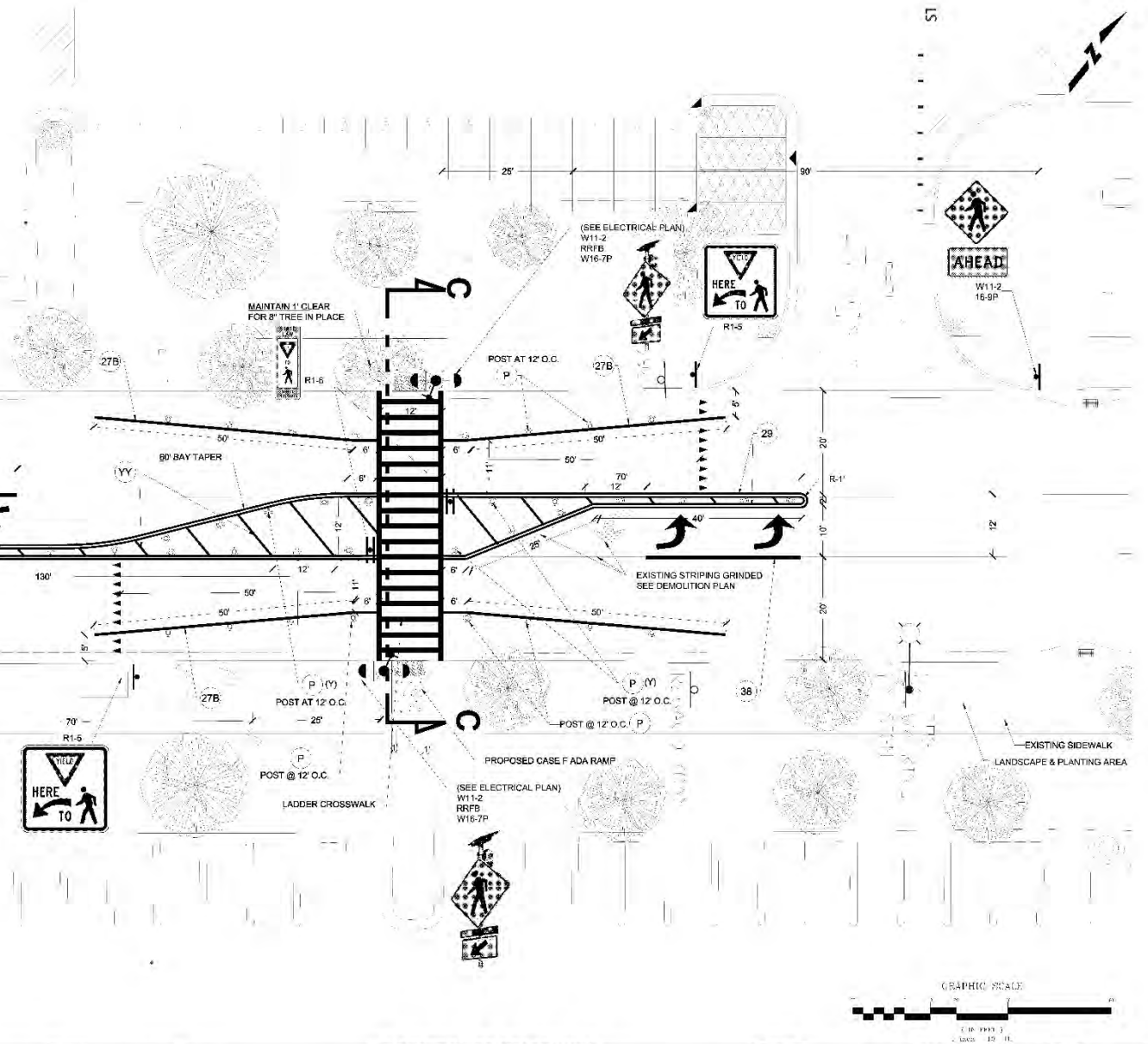


UNCONTROLLED CROSS WALK
IMPROVEMENT PLAN
Not for Construction
PUBLIC WORKS DEPARTMENT

APPROVED - PRINCIPAL ENGINEER DATE MM/DD/YYYY RECOMMENDED - PROJECT MANAGER

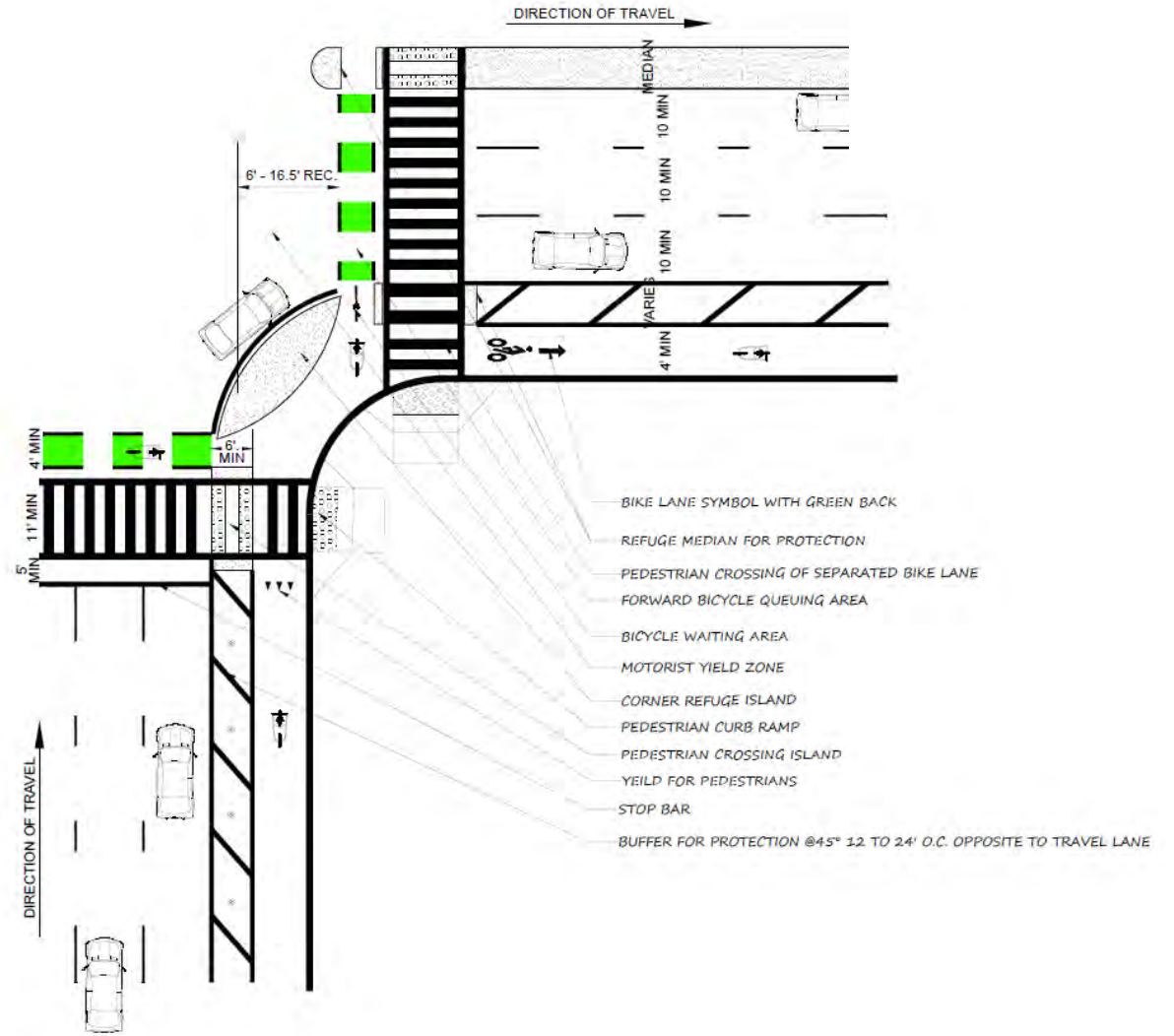
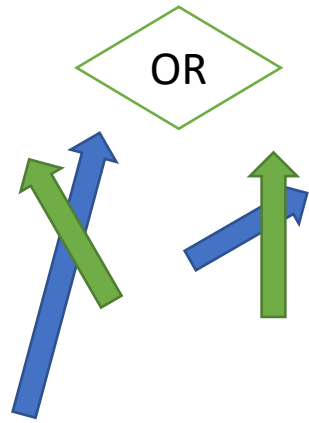
CITY PROJECT:	SCALE: 1" = 5'	DRAWING:
FEDERAL PROJECT:		
DESIGNED BY: VIGNESH S.	CHECKED BY: VIGNESH S.	IP-01
DRAWN BY: A.SIDDIQUE	DATE: 03 FEB 2020	SHEET 04 OF 06

Fremont, CA



No.	DATE	REVISION	BY APD VIGNESH SWAMINATHAN P.E. vignesh@crossroadlab.com 10496 BYRNE AVE CUPERTINO, CA 95014 www.CrossroadLab.com Call Us +408-927-6442 info@crossroadlab.com	 CITY OF Fremont APPROVED - PRINCIPAL ENGINEER	UNCONTROLLED CROSSWALK STRIPING & SIGNAGE PLAN Not for Construction PUBLIC WORKS DEPARTMENT	CITY PROJECT:	SCALE: AS SHOWN	DRAWING:
							FEDERAL PROJECT:	DESIGNED BY: VIGNESH S.
			 Crossroad Lab				NOTE: VERIFY SCALE. BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES ACCORDINGLY IF BAR IS NOT ONE INCH.	PD-01 SHEET 05 OF 06

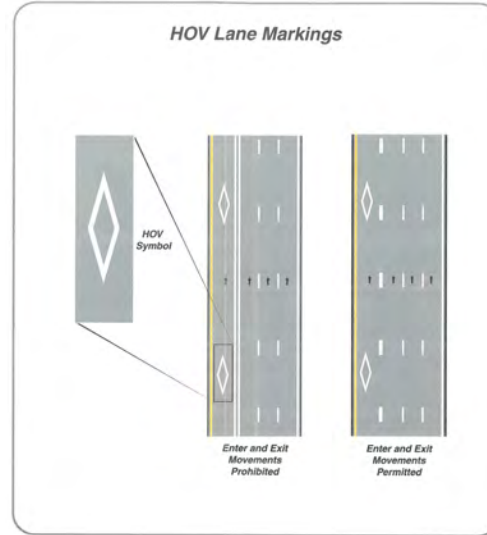
Protected Intersections



Edge of Travelway



San Jose, CA



Note: Drawings not to scale

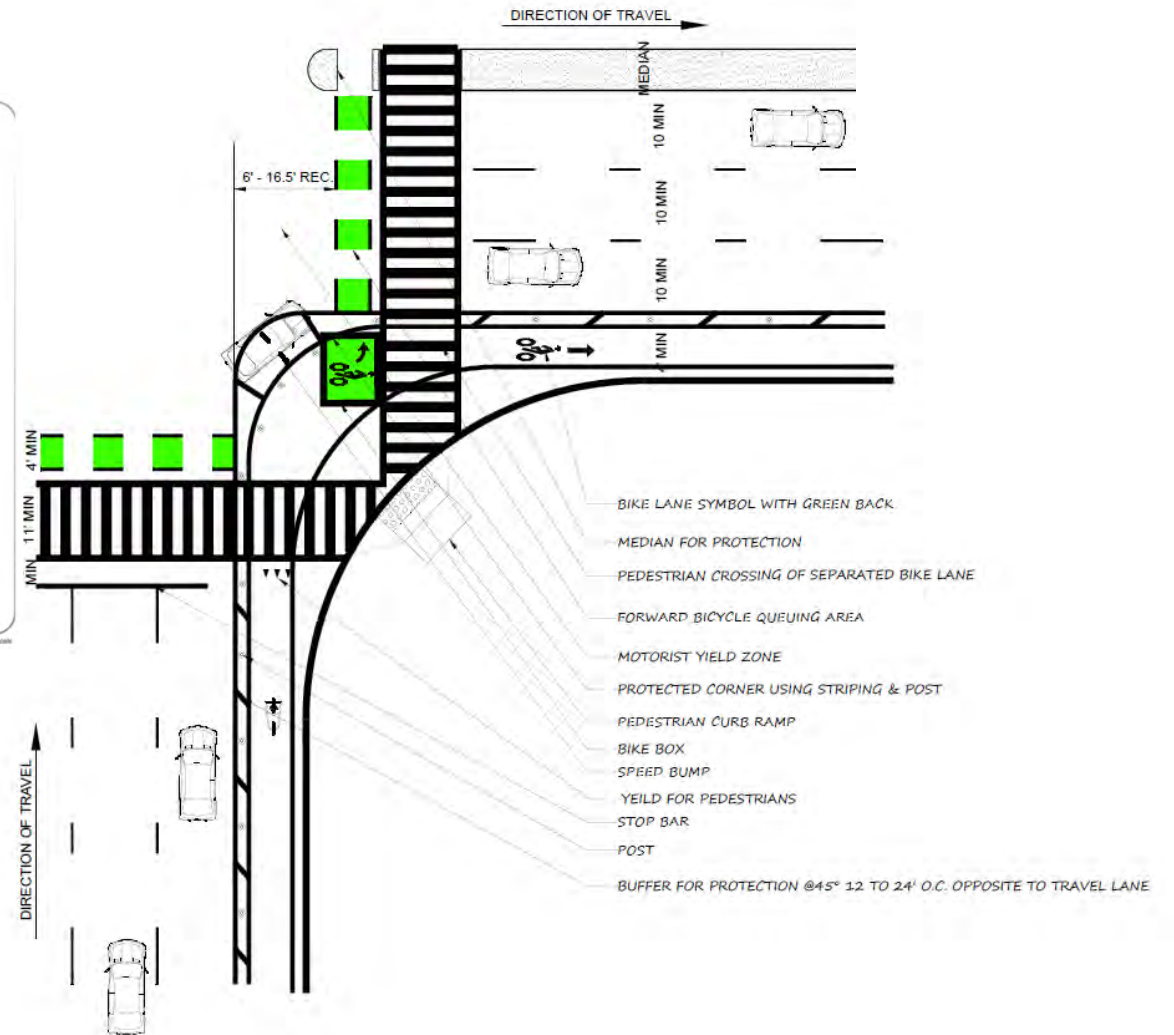
Two sets of solid double yellow lines spaced 2 feet or more apart are considered a barrier. Do not drive on or over this barrier, make a left turn, or a U-turn across it, except at designated openings (see diagram).



Solid white lines mark traffic lanes going in the same direction, such as one-way streets.

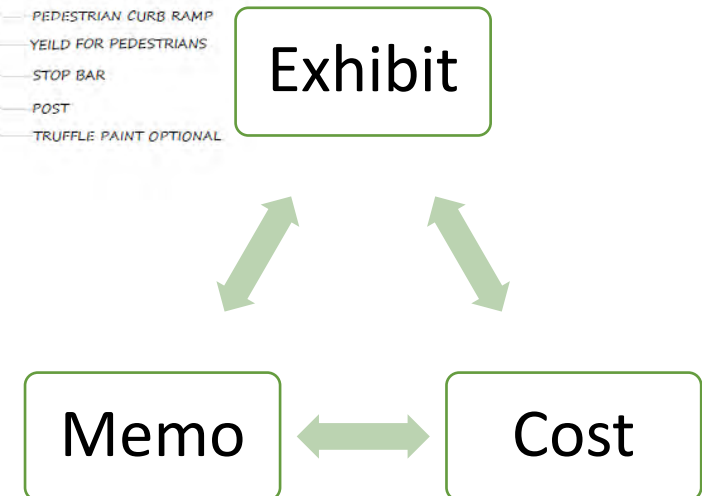
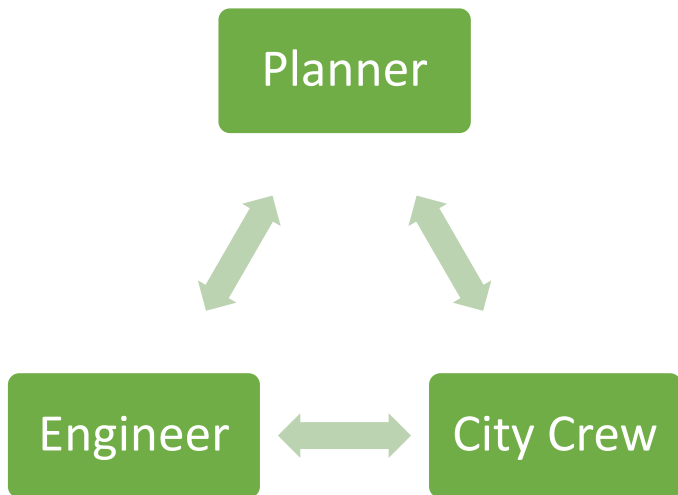
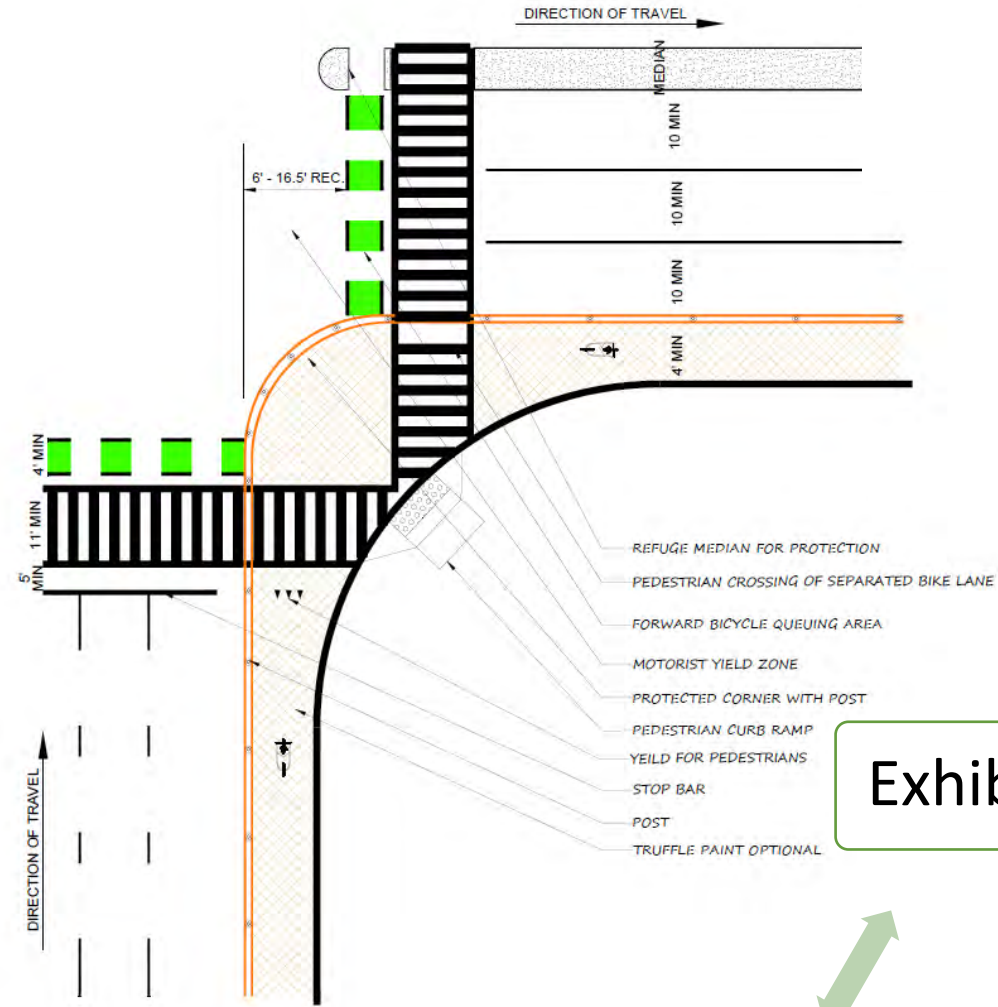
Broken white lines separate traffic lanes on roads with two or more lanes in the same direction.

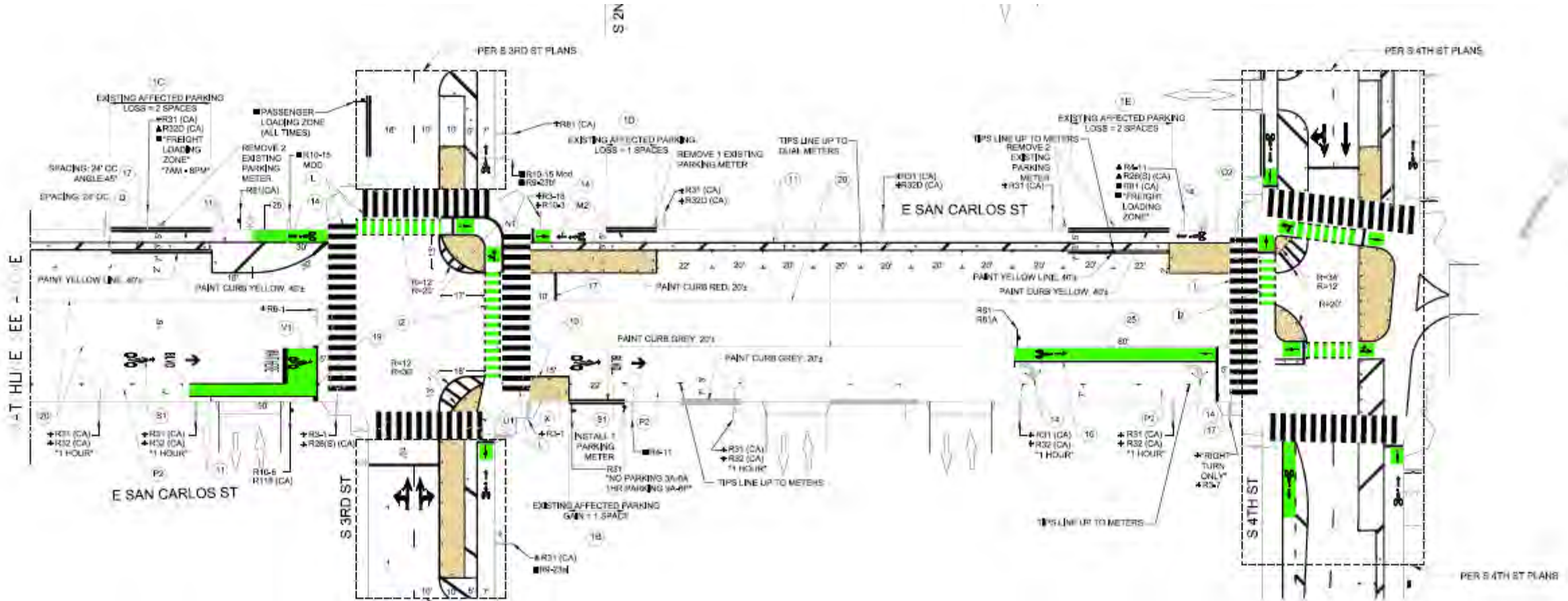
Double white lines are two solid white lines that indicate a lane barrier between a regular use and a preferential use lane, such as a carpool/HOV. Never change lanes while in these lanes; wait until a single broken white line appears. You may also see these parallel lines in or near freeway on and off ramps.



Protected Intersection Modification

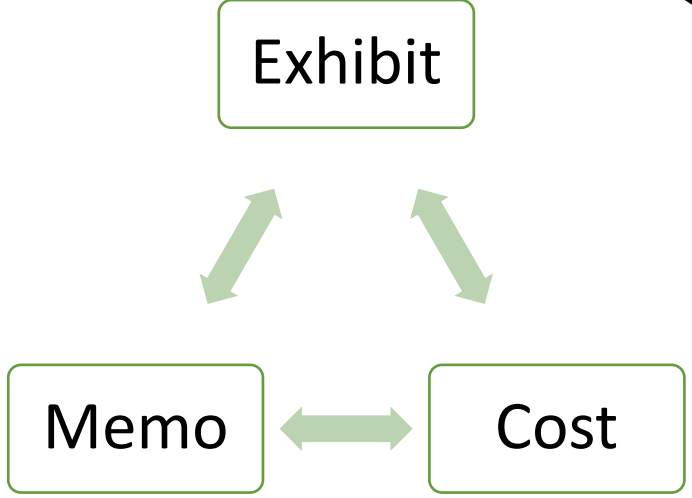
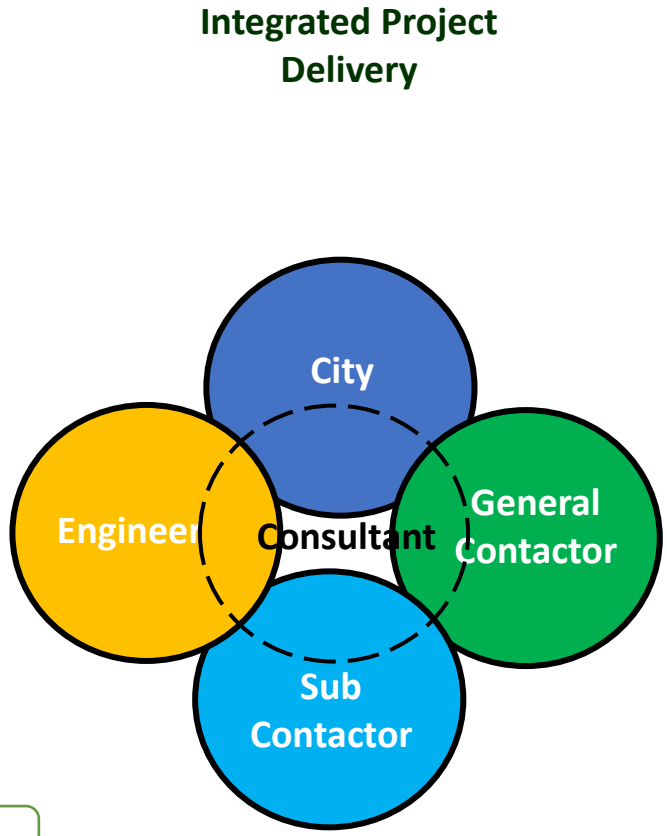
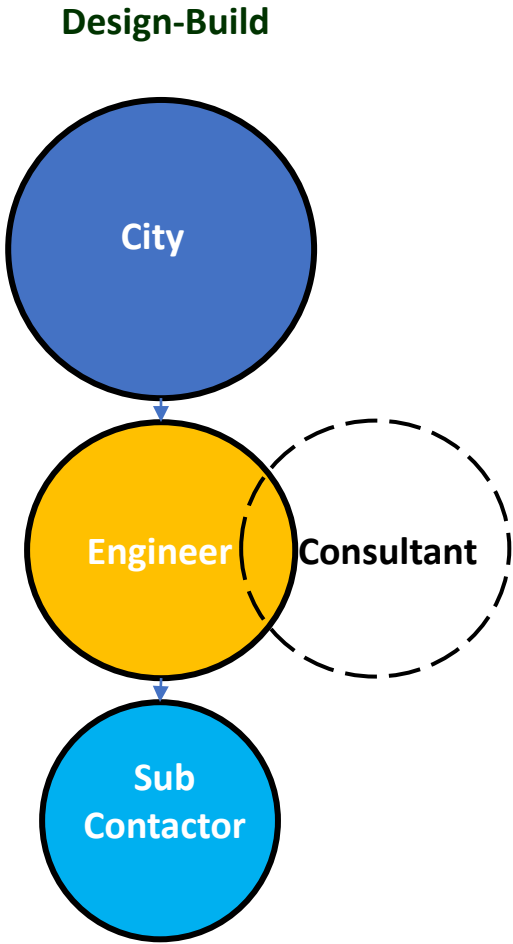
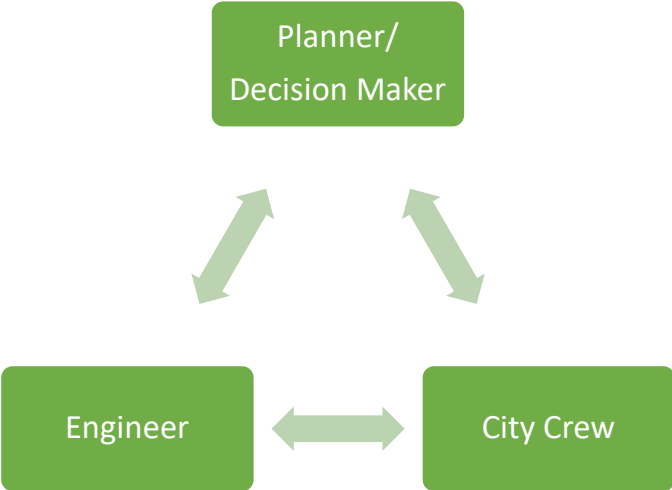
- Defines Edge of Travel with Engineering
- Allows space for future PBL or Art
- Write policy that this is Temporary
- Does not Affect Drainage
- Allows for the Trusting of users
- Requires Engineer in field to verify





San Jose, CA

After Covid Delivery



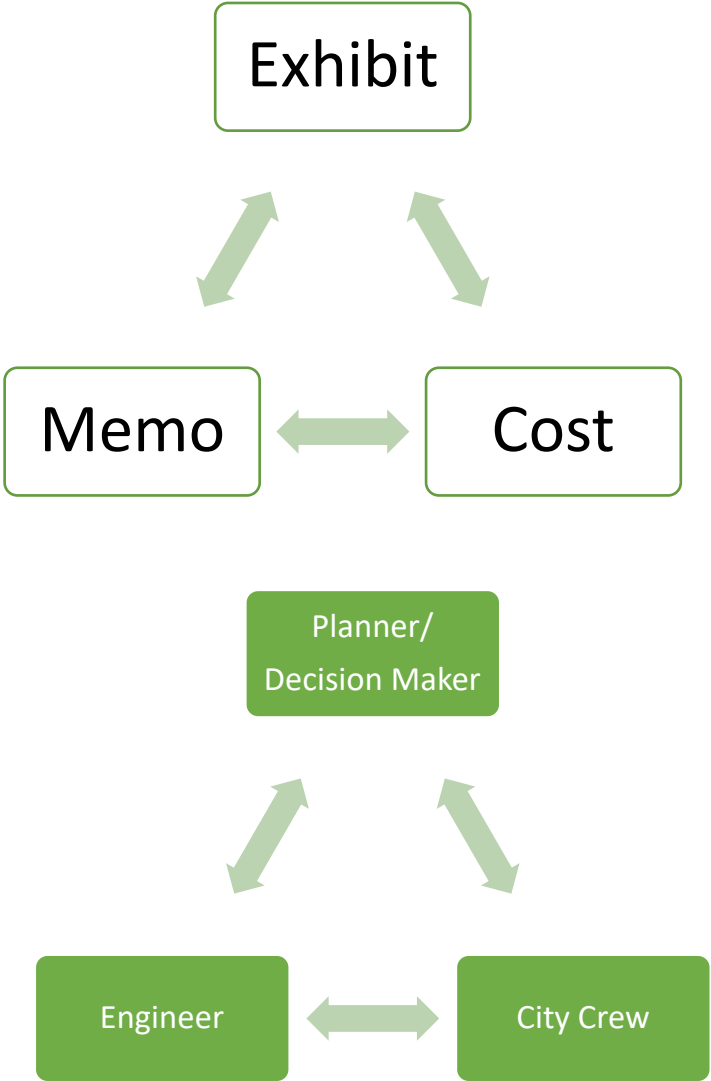
During Covid



San Jose, CA



During Shutdown



- For all Standard Details
 - Bulbouts
 - Protected Bike lane
 - Lane Reductions etc
- Key intersection and Ramps
- Develop Bus Standards
- Develop New Standards
 - Block Party Closure
 - Temporary Traffic control for Bikes
 - Parklets
- **DRAW,**
- **QUANTIFY,**
- **COMMUNICATE**



San Jose, CA

<https://www.youtube.com/watch?v=6-RYhnS0IMc>





**METROPOLITAN
TRANSPORTATION
COMMISSION**



Crossroad Lab

Quick-Build During a Crisis Questions?

Vignesh@crossroadlab.com

Vignesh Swaminathan
Crossroadlab.com

MTC Quick Build Survey Link

We want your feedback! What are your agency quick build needs?

Please take the time to fill out the below survey by April 17th:

<https://www.surveymonkey.com/r/QUICKBUILDS>

Thank you and Take Care!



Contact for more info:

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tshepard-ohta@bayareametro.gov

Nicola Szibbo, Program Manager

nszibbo@bayareametro.gov