APPENDIX A

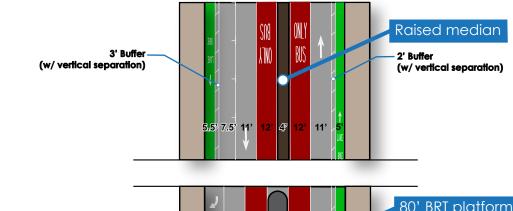
RIGHT-OF-WAY AND CONCEPT PROTOTYPE DRAWINGS





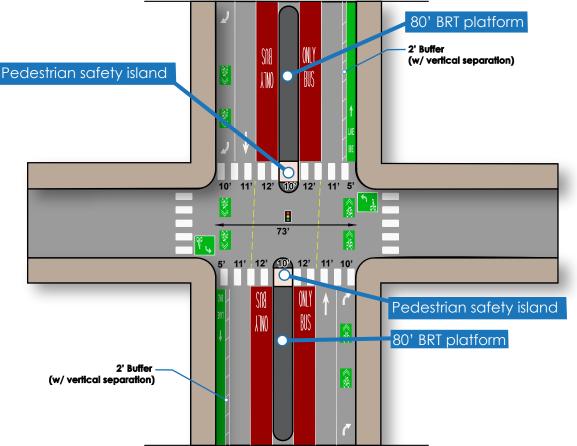






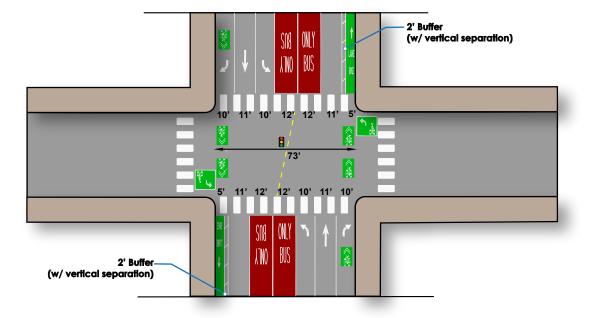
I. MID-BLOCK

- Parking on one side and center median
- Option for parking on both sides with no median where the curb-to-curb width is greater than or equal to 78'



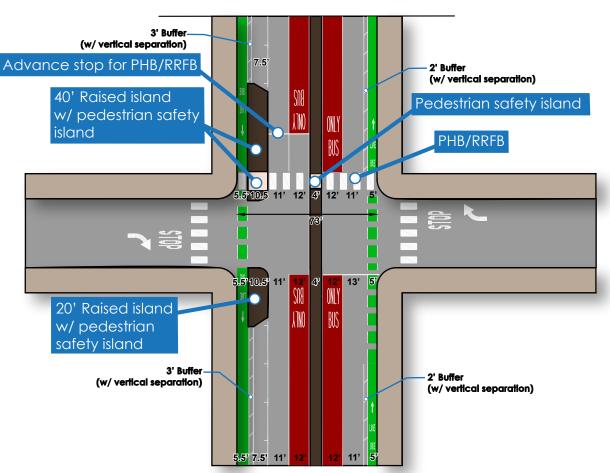
II. SIGNALIZED WITH STATION

- No right turn on red for minor street
- No left turns from San Pablo Ave allowed



III. SIGNALIZED WITHOUT STATION

- No right turn on red for minor street

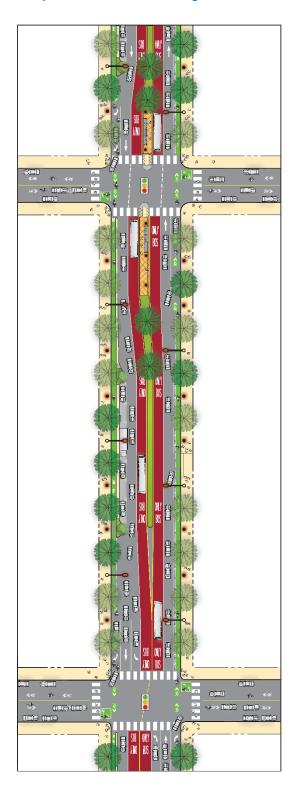


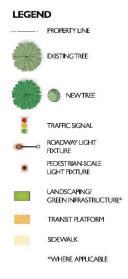
IV.UNSIGNALIZED WITHOUT STATION

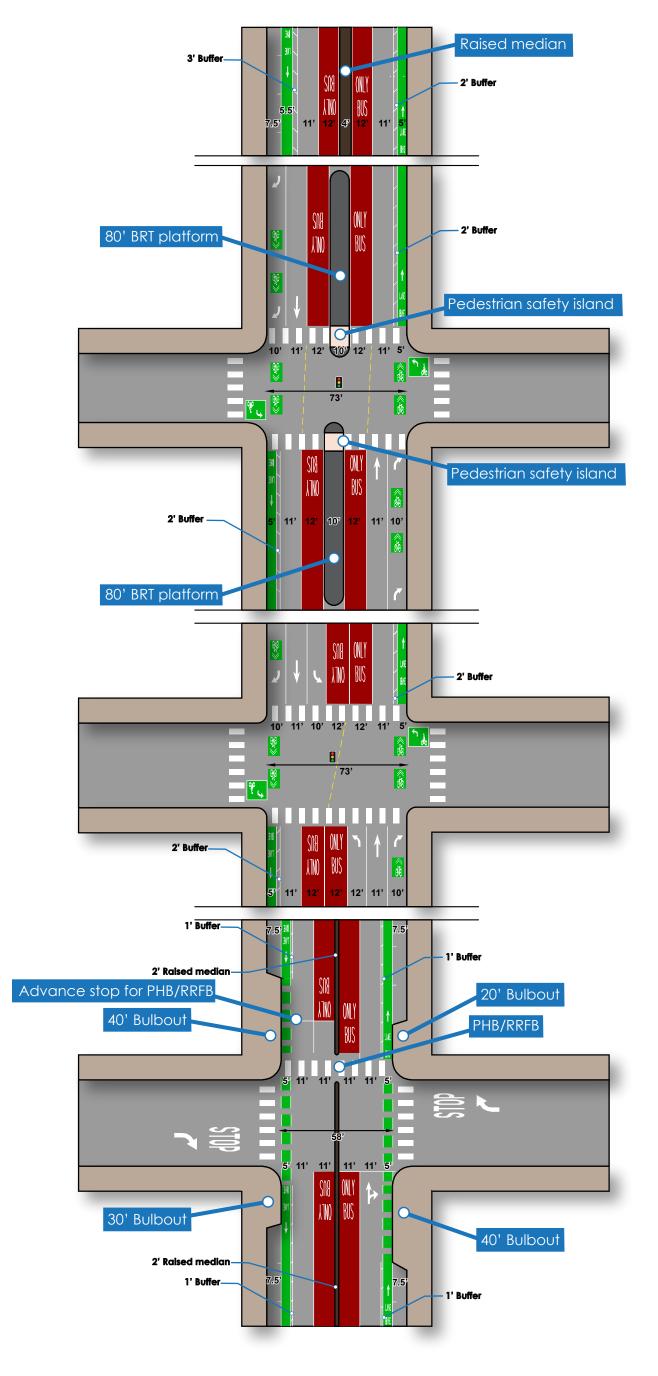
- Left turn prohibition from minor street
- Provision of PHB/RRFB will be at select locations, generally spaced at 500'



Concept A with Center-running Bus Lanes







I. MID-BLOCK

- Parking on one side and center median
- Option for parking on both sides with no median where the curb-to-curb width is greater than or equal to 78'

II. SIGNALIZED WITH STATION

- No right turn on red for minor street
- No left turns from San Pablo Ave allowed

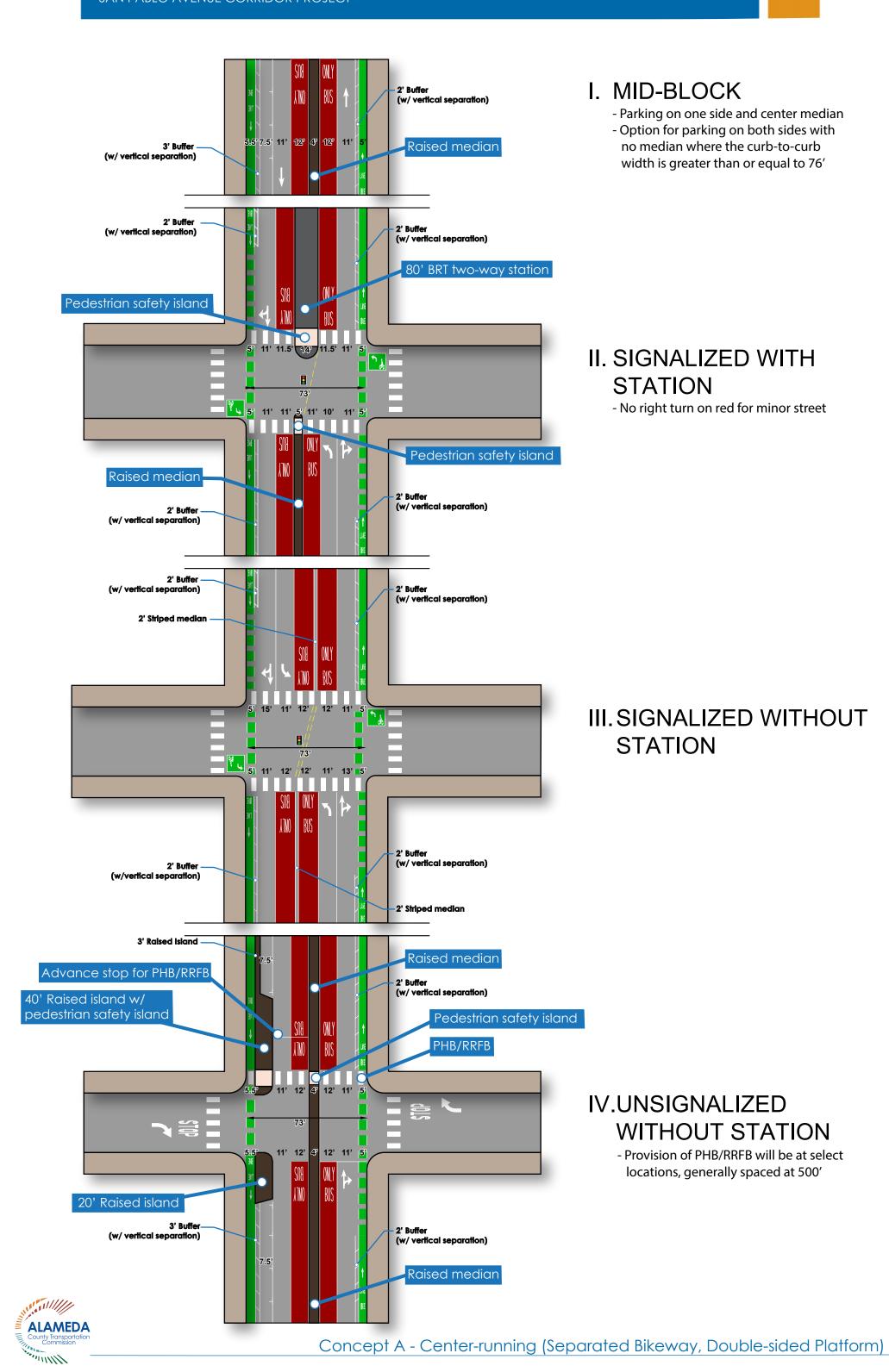
III. SIGNALIZED WITHOUT STATION

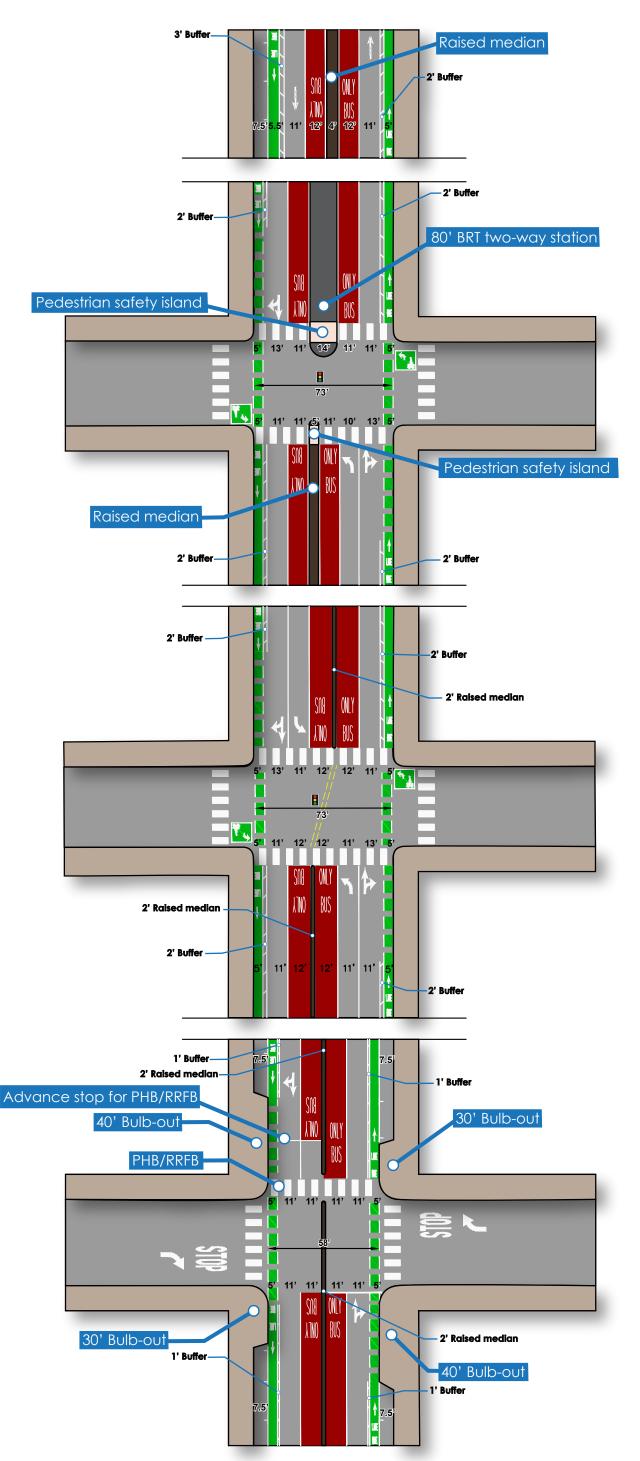
- No right turn on red for minor street

IV.UNSIGNALIZED WITHOUT STATION

- Left turn prohibition from minor street
- Provision of PHB/RRFB will be at select locations, generally spaced at 500'







I. MID-BLOCK (OPTION 1)

- Parking on one side and center median
- Option for parking on both sides with no median where the curb-to-curb width is greater than or equal to 76'

II. SIGNALIZED WITH STATION

- No right turn on red for main street

III. SIGNALIZED WITHOUT STATION

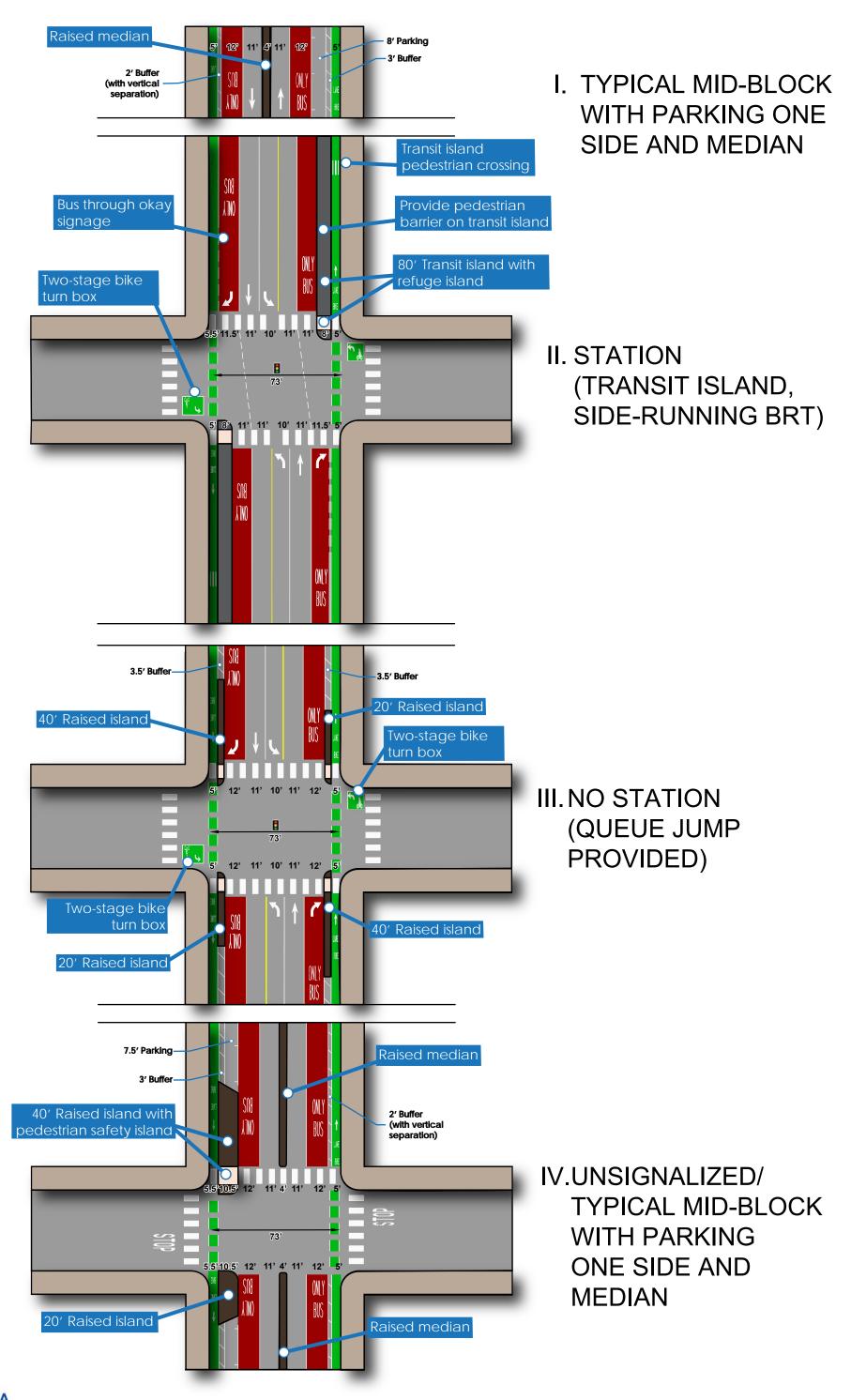
IV.UNSIGNALIZED WITHOUT STATION

- Provision of PHB/RRFB will be at select locations, generally spaced at 500'

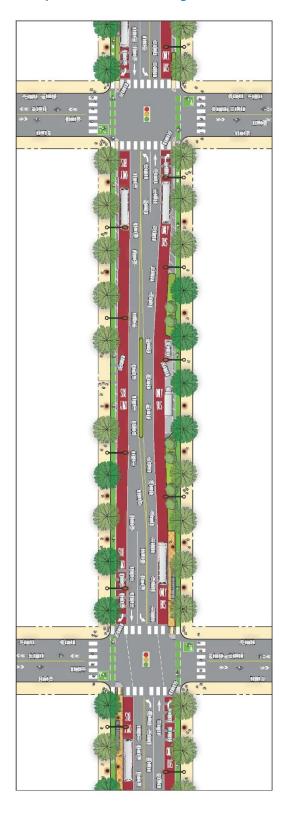
V. MID-BLOCK (OPTION 2)

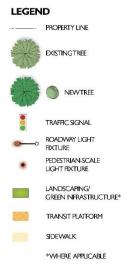
- Parking on both sides with narrow median and narrow bus lanes
- If additional width available, allocate to bus lanes, median, and buffer (in order of priority)

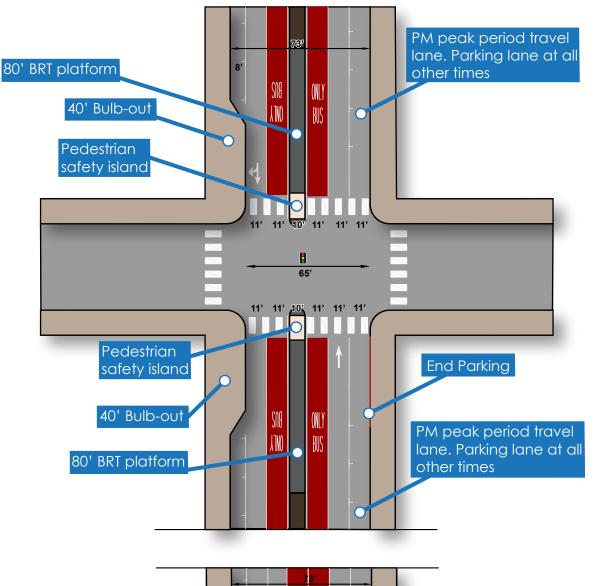




Concept A with Side-running Bus Lanes





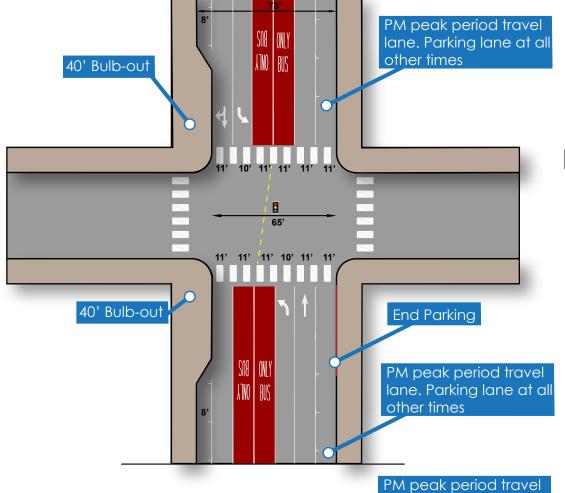


I. MID-BLOCK

 Parking on both sides plus median, except in northbound direction during PM Peak (hours to be determined)

II. SIGNALIZED WITH STATION

- No left turns from San Pablo Ave allowed



1710

ONLY

11' 12' 8' 12' 11' 11'

8' 11' 12' 8' 12' 11' 11'

ONLY

III. SIGNALIZED WITHOUT STATION

IV. UNSIGNALIZED WITHOUT STATION - Left turn prohibition from minor street - Provision of PHB/RRFB will be at select locations, generally spaced at 500'

lane. Parking lane at all

other times

Pedestrian

safety island

End Parking

other times

PM peak period travel lane. Parking lane at all

Advance stop for PHB/RRFB

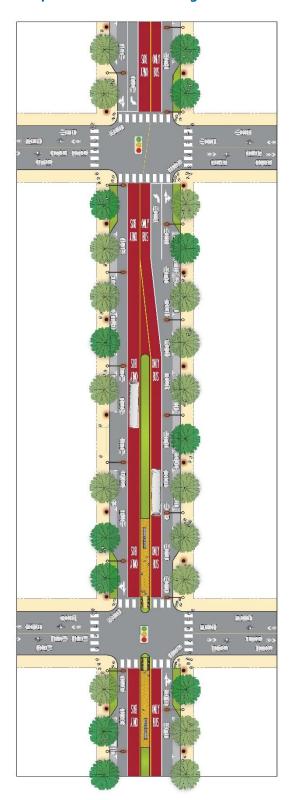
40' Bulb-out

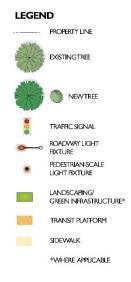
20' No parking

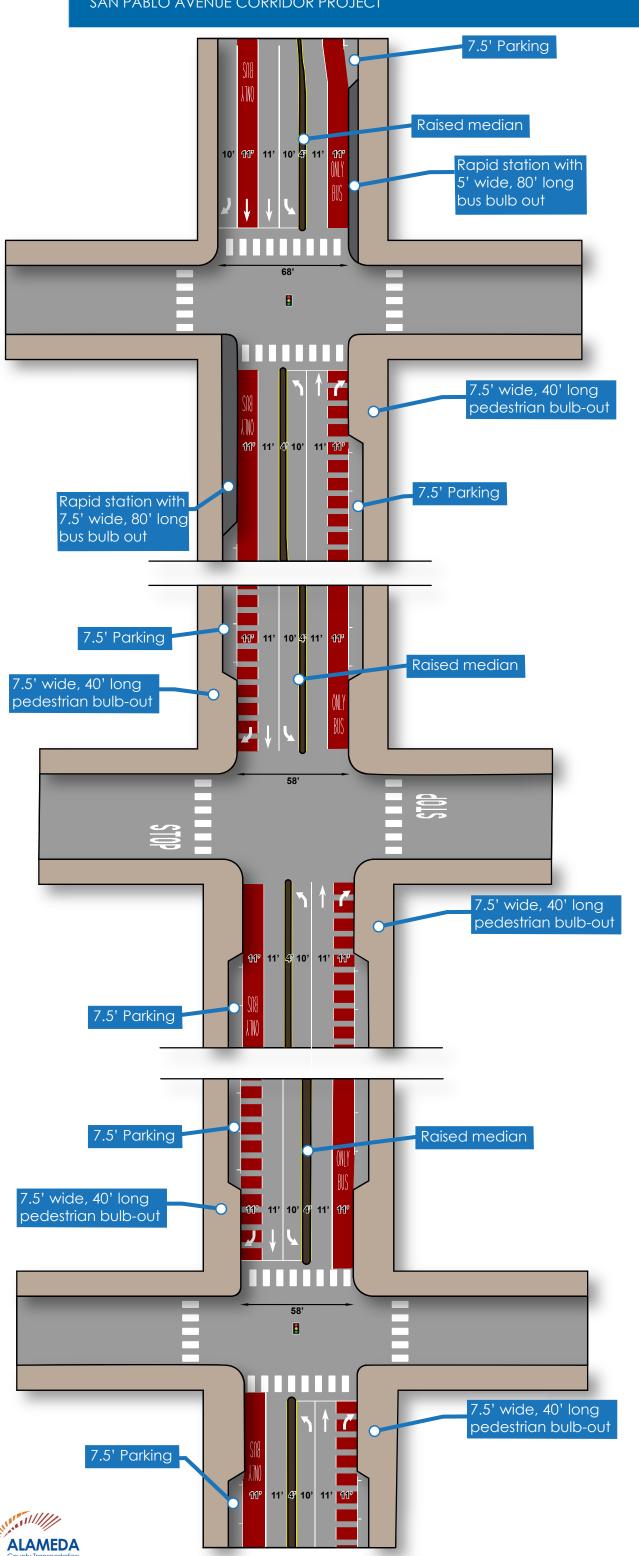
Raised median

buffer stripe

Concept B with Center-running Bus Lanes







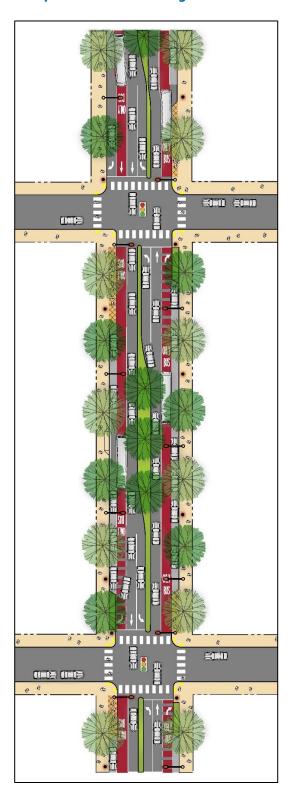
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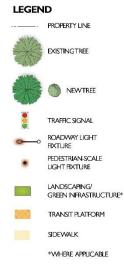
SIGNALIZED WITH **STATION**

UNSIGNALIZED/ TYPICAL MID BLOCK

SIGNALIZED WITH NO **STATION**

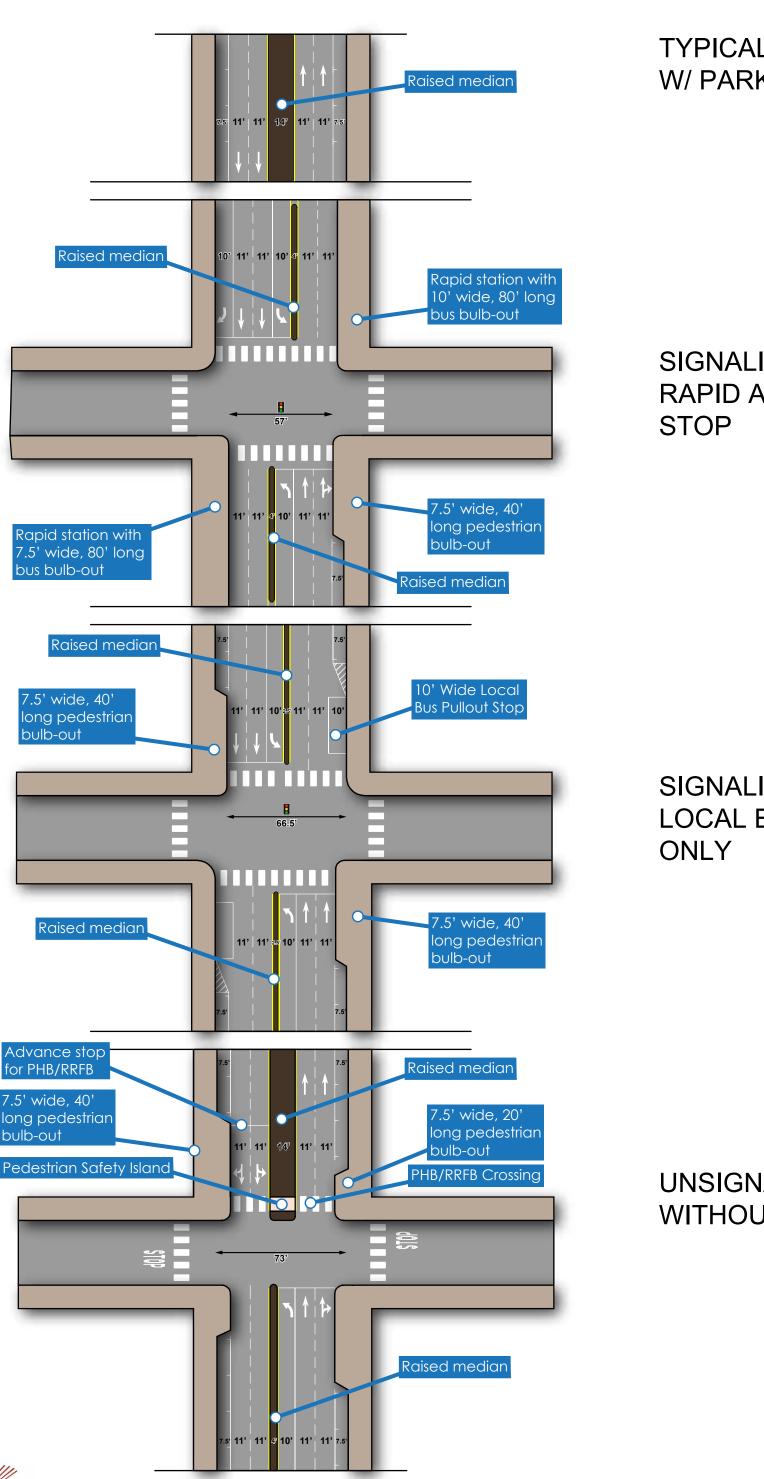
Concept B with Side-running Bus Lanes





ALAMEDA

See WILLIAM



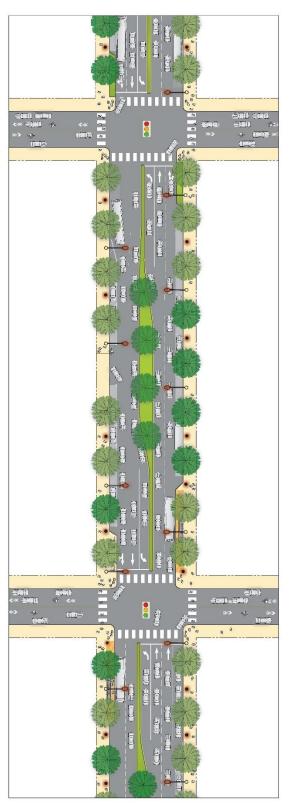
TYPICAL MID-BLOCK W/ PARKING & MEDIAN

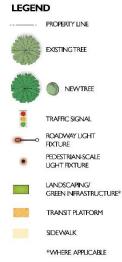
SIGNALIZED WITH RAPID AND LOCAL STOP

SIGNALIZED WITH LOCAL BUS STOP ONLY

UNSIGNALIZED WITHOUT STATION

Concept D





APPENDIX B

OTHER ALTERNATIVES CONSIDERED AND REJECTED

INTRODUCTION

As part of the Phase 1 study, additional concepts were considered and ultimately deemed either infeasible or removed from further consideration due to a variety of factors, such as geometric conditions on San Pablo Avenue, travel demand in the San Pablo corridor, feedback received from stakeholders, and transportation best practices. These concepts included:

- Concept C (Bike Lane + On-street Parking)
- Full Road Diet Option
- Two-way Bikeway (side-running, median-running)
- Reversible or non-reversible single lane bus lane
- Pedestrian Overcrossing
- 23rd Street BRT Alternative to San Pablo Avenue

Appendix B contains an explanation of why these concepts were removed from further consideration.

CONCEPTS

Concept C

One of the three concepts presented as part of the 2019 public engagement process, Concept C proposed protected bike lanes on San Pablo Avenue. Parking would be preserved in some locations. Transit priority treatments would generally be limited to bus bulbs at stations, with the bus operating in mixed-flow conditions.

Concept C was eliminated from further consideration in Alameda County as a result of Phase 1 project efforts. This was primarily a result of the concept offering fewer benefits and receiving less support during the public outreach process, notably:

- least popular option in Alameda County
- limited constituency for support (not preferred by AC Transit or bicycle advocacy groups)
- very limited bus performance benefits
- does not achieve the objective of an all ages and abilities bicycle facility on San Pablo Avenue.

Enhancing the effectiveness of the bus service on San Pablo Avenue in Alameda County was widely viewed as a priority for the corridor. However, Concept C did the least of the concepts to improve transit on San Pablo Avenue.

Full Road Diet

A full road diet option similar to Telegraph Avenue in Oakland was initially considered for San Pablo Avenue. Such a configuration would remove an auto lane in order to provide both a protected bike facility and on-street parking. The full road diet would reduce the number of mixed-flow travel lanes to on. This concept was removed from consideration early on in the project process because it would result in the bus being confined to the single mixed-flow lane. With any mixed-flow lane reduction, the amount of congestion on San Pablo Avenue is anticipated to increase. However, all of the other concepts proposed for advancement that include the reduction of mixed-flow lanes also include a transit lane. The road diet option that doesn't include a transit lane would result in a significant increase to transit delay and a decrease in reliability, thereby reducing viable transportation options for users, running counter to the goals of this project.

Two-way Bikeway (side-running/median-running)

Two-way separated bikeways can be installed in either side-running or median-running configurations. Both were deemed infeasible on San Pablo Avenue for the reasons detailed below.

Side-running two-way bikeway

San Pablo Avenue has relatively short blocks, typically between 300 and 400', and numerous driveways. Two-way separated bikeways are generally not a good solution in these conditions, because these features allow frequent uncontrolled movements across the bikeway which undermine safety improvements gained by separating bikes from through-traffic. These uncontrolled movements create new conflict points detailed below:

• Right Turn/Right Hook from San Pablo: A driver driving on San Pablo Avenue attempts to turn right onto a side street or into a driveway across the path of a bicyclist who is traveling in the same direction. This is one of the most common and dangerous types of collisions for cyclists with any bicycle lane, called a "right hook". However, it is also a risk for bicyclists traveling in the contraflow direction, especially since the driver may not be looking out for a cyclist traveling against the flow of traffic.

- Left Turn/Left Hook from San Pablo: A driver traveling along San Pablo on the opposite side of the street from the bikeway turns left across the path of a bicyclist traveling in the contra-flow direction. A driver making this movement is going to primarily be looking for oncoming traffic in the standard direction of travel and is unlikely to check for bicyclists traveling in the same direction as they are traveling. As with any bike lane, this is also a risk for the bicyclists traveling in the standard direction of travel.
- Right Turn onto San Pablo: A driver approaching San Pablo from a side street or driveway turns right across the path of a bicyclist traveling in the contraflow direction. This driver is primarily focused on looking for travelers moving in the standard direction of travel and may not see the bicyclist traveling in the contraflow direction.

These conflicts would occur very frequently on San Pablo Avenue given the substantial number of driveways and intersections. A safe two-way bikeway would require significantly limiting left-turn movements to and from side streets at unsignalized intersections and closing a large number of business driveways, which was deemed infeasible given the high level of business activity, the need for neighborhood access, and the potential for removal of on-street parking, making access to off-street parking and side-street parking more vital.

Ideal two-way separated bikeways also required separate signal phases. The MassDOT Separated Bikeway Guide recommends that multi-lane streets, like San Pablo Avenue, have a protected left-turn signal. This stops bicycles and removes the conflict point as vehicles turn left across the bikeway. Additionally, if there are more than 100 conflicting right-turning vehicles in an hour, which occurs in many locations along the corridor, the right-turn across the two-way bikeway is recommended to be protected as well. Each separate signal phase increases travel time for all users (people biking, walking, in a bus, and in a car), potentially significantly, and would undermine other improvements on the corridor.

Separated two-way bikeways are often recommended on roads that have a much higher proportion of driveways on only one side of the street. By placing the bikeway on the opposite side of the street of the driveways, it allows cyclists in both directions to avoid driveway conflicts noted above. For example, the planned 40th Street Bus Hub Design project in Emeryville includes a two-way bikeway on the north side of the street where there are a limited number of driveways as opposed to the south side where there is a

major retail center¹. San Pablo Avenue, however, has a similar number of driveways on both sides of the street, thus placing the bike on one side or the other would not limit the number of driveway conflicts.

Median-running two-way bikeway

Median-running bikeways are generally appropriate in a limited access setting where long segments of bikeway can proceed uninterrupted, and where the need to access street-side uses is more limited, for example Mandela Parkway in West Oakland. Turning movements across a median-running two-way bikeway are highly recommended be signal controlled to avoid significant auto/bicycle conflicts, which would require additional signalization and/or median closure at unsignalized intersections. The frequency of signalized and unsignalized intersections along San Pablo, as well as frequent protected left turn pockets, and high demand for left-turn movements at unsignalized intersections on San Pablo Avenue make a median-running two-way bikeway infeasible.

At signalized intersections, to accommodate protected left-turn pockets, the bikeway would have to shift to accommodate left-turn lanes, creating a significant offset through the intersection slowing travel times for cyclists, creating wayfinding difficulties, and potentially creating conflict points with other modes

A median-running two-way separated bikeway would also limit bicyclist access to and from mid-block land uses. With a median bikeway, cyclists would need to access all mid-block businesses by using the nearest crosswalk and walking their bicycle on the sidewalk to nearest bicycle rack. This could also create incentives for cyclists to ride on the sidewalk or in the other side-running travel lanes, reintroducing conflicts at driveways, with other vehicles and/or with pedestrians.

Additionally, bicycle turning movements from the median bikeway would be challenging for several reasons. They would require either a dedicated queuing space in the median to avoid conflicts between through and turning cyclists or a dedicated bicycle-only phase. Dedicated queuing space requires physical space that is not available on San Pablo Avenue and each separate signal phase increases travel time for all users (people biking, walking, in a bus, and in a car), and would undermine other improvements on the corridor potentially significantly.

AlamedaCTC.org • Appendix

¹ Section 4.3.1 of the Summary Report summarizes the considerations for integrating the 40th Street Bus Hub Design Project with the San Pablo Avenue Corridor Project as part of the Phase 2 study.

Geometry for two-way bikeways

Two-way separated bikeways are more space efficient then a one-way separated facility because both directions of bike travel may share a buffer; a two-way facility takes up one to two feet less space than two one-way facilities. An evaluation of the specific geometry of San Pablo Avenue indicates that while it is extremely space-constrained in certain segments, the one to two feet saved by a two-way bikeway is not sufficient to allow for the significant enhancement of any other potential facilities on the corridor.

Reversible or non-reversible single lane bus lane

In order to conserve limited right-of-way space, a single-lane bus lane was considered, including two distinct operating plans, and both were found to be infeasible.

One form of operation would be a **single reversible center lane used by buses traveling in the peak direction only**: southbound in the A.M. and northbound in the P.M. This was deemed infeasible for several reasons:

- Congestion and transit ridership on San Pablo Avenue is not constrained to the peak direction. While there is significant peak-direction congestion, there is still considerable congestion in the reverse direction. In a configuration where San Pablo Avenue would be reduced to one lane in each direction with the reversible bus lane, off-peak buses would share a single lane with personal automobiles and trucks, leading to significant impacts to reliability, on-time performance, and operating cost. Similarly, ridership is fairly closely balanced between both directions in significant portions of the corridor, notably south of University Avenue where northbound and southbound PM peak period transit vehicle loads are within 20 percent of each other.
- While this configuration would need less space than a two-way bus lane in the mid-block sections, it would not create any more space at intersections with stops, which are the most constrained locations along the corridor. Because two buses traveling in opposite directions would need to be able to serve any given stop simultaneously, a dedicated lane would be required in both directions on either side of all stops.
- Signal operations would be complicated by the fact that reverse-direction buses departing a stop would need to receive a queue jump to rejoin the single lane of traffic, lengthening the signal cycle phase and delaying travel times for all users.

The second proposed operation method is a **center lane used by buses traveling in both directions simultaneously**. Under this operation method, there would be two

bus lanes (one each direction) mid-block and one bus lane total (shared by both directions) where there are left-turn lanes at signalized intersections. The benefit of this configuration would be a reduction in the cross-section required at signalized intersections. When two buses approach one another, one would yield upstream while at a stop in a two-lane section while the other passed through the one-lane segment. Given bus acceleration/deceleration speeds and typical required left-turn pocket lengths, yielding buses could be required to wait approximately 40 to 45 seconds for an opposing bus to clear the upcoming segment. This would frequently cause the yielding bus to miss the traffic signal green phase, requiring riders to wait for the next signal cycle phase and resulting in total delay of over two minutes at each crossing location, of which there would be numerous throughout the corridor. These delays would significantly undermine the potential benefits of a dedicated lane and the transit signal priority system.

In addition, portions of the corridor currently have more than one bus trip per signal cycle. In such a situation, the corridor would never be able to recover from a single bus delay, with delays cascading through the system. With planned increases in frequency leading from the corridor project, conflicts would only increase, leading to significant bus delays and schedule unpredictability.

Other noteworthy considerations for either configuration of a reversible lane include:

- A blockage of the bus lane, whether caused by a bus breakdown, a collision, debris on the road, etc., would impact both directions of service rather than a single direction.
- Striping and signaling over the entire corridor would be non-standard and could lead to driver confusion and safety concerns.
- A private vehicle illegally using the transit lane would have the potential to collide head-on with a bus, a substantial safety hazard.
- Such a configuration of bi-directional operating in a single lane simultaneously
 has not been implemented in the Caltrans network. The liability associated with
 this design exception might result in Caltrans being unwilling to consider this
 option.

Pedestrian Overcrossing

Pedestrian overcrossings are used to provide safe passage for those traveling by foot or other non-motorized form over a variety of barriers. These barriers include natural features such as waterways or valleys, or human-made ones such as freeways, railways, or busy surface streets. In the cases of natural features, freeways, or railways, a pedestrian

overcrossing may be the only feasible means of traversing the barrier – people will use it because they have no other option.

For surface streets, however, a pedestrian overcrossing may compete with existing atgrade travel pathways. In most cases, the pedestrian path of travel to climb a ramp or staircase and traverse an overpass will be significantly longer than simply crossing a street at grade. To accommodate traffic below on a busy arterial truck/bus route such as San Pablo Avenue, a pedestrian bridge must commonly provide at least 17' of vertical clearance. Pedestrian bridges themselves are typically no less than 3' in depth, meaning that pedestrians need to climb 20' to the deck of the bridge before descending. ADA requirements limit the slope of the ramp and require landings, meaning that a ramp must be approximately 400' long to attain the 20' vertical height required to cross. At a walking speed of 3.5 feet/second (recommended by the MUTCD for calculating pedestrian clearance intervals for traffic signals), a pedestrian using ascending and descending ramps to access an overcrossing will add nearly four minutes to their trip, minus any signal delay they would have experienced with an at-grade crossing, which commonly average around one to two minutes on San Pablo Avenue.

Due to the longer travel times associated with using ramps for an overcrossing, when both an overcrossing and at-grade crossing are provided, pedestrians far more commonly use at-grade crossings. When an at-grade crossing is not provided, pedestrians will commonly walk into the street even without a crossing, creating a greater safety hazard since the signals may not be timed to facilitate safe pedestrian crossings.

Pedestrian overcrossings are costly to construct and require significant amounts of space to overcome the vertical rise between the street surface and the overcrossing deck. A pedestrian overcrossing not requiring any additional right-of-way and not including an elevator would likely cost in excess of \$5 Million per location. Stairs present the most direct means of accessing an overcrossing for able-bodied pedestrians; or those willing to carrying a bicycle, scooter, or stroller. However, a staircase alone will not satisfy ADA requirements and must be provided along with ramps or an elevator, which would be costly and must be maintained. Ramps require less maintenance, but as mentioned above, approximately 400' of ramp must be provided (longer than some blocks that border San Pablo Avenue), either in a straight line or switchbacks. Given the relatively narrow sidewalks on San Pablo Avenue, new ramps would require significant property acquisition, impacting existing businesses and residents and a time-consuming and costly process.

Existing striped crosswalks occur every 300-600' on San Pablo Avenue. A program of installing pedestrian overcrossings could take several forms:

- Provide overcrossings at major streets and eliminate other existing striped crosswalks
- 2. Provide overcrossings at minor streets while retaining at-grade crossings at major streets
- 3. Provide overcrossings at all existing striped crosswalks

None of the above options were deemed feasible. Option 1 would significantly decrease pedestrian access between the two sides of San Pablo Avenue and the neighborhoods that border it, option 2 would reduce vehicle delay but would still require significant property acquisition from land-holders, and option 3 would be too expensive to be feasible.

23rd Street as Alternative to San Pablo

San Pablo Avenue and 23rd Street have both been analyzed in previous planning efforts. The possibility of Bus Rapid Transit (BRT) on 23rd Street was considered in the 2017 West Contra High Capacity Transit Study and was advanced as one of the refined alternatives. Such a project would connect future ferry service at the Richmond ferry terminal to Richmond BART, Contra Costa College, Hilltop Mall, and Hercules Transit Center via 23rd Street and San Pablo Avenue in the cities of San Pablo and Hercules.

BRT on San Pablo Avenue serving El Cerrito Plaza BART, El Cerrito del Norte BART, Contra Costa College, Hilltop Mall, Richmond Parkway Transit Center, and Hercules Transit Center through the cities of El Cerrito, Richmond, San Pablo, and Hercules was considered as a separate refined alternative.

If constructed, the 23rd Street BRT would supplement or replace the existing AC Transit Route 74, a community-serving route with relatively low daily ridership (1,300 average weekday trips) which runs every 30 minutes. Existing land use on the corridor does not support additional transit-supportive density and will not in the near-term without significant zoning changes. AC Transit cannot currently increase service frequency due to funding limitations.

San Pablo Avenue is the alignment of the Route 72 family of routes, which serve as regional connectors with high ridership. AC Transit is currently focused on improving service on Route 72. Due to a significant amount of anticipated growth in El Cerrito and Emeryville, the corridor is likely to become increasingly congested and will require additional transit service to accommodate growing travel demand.

APPENDIX C

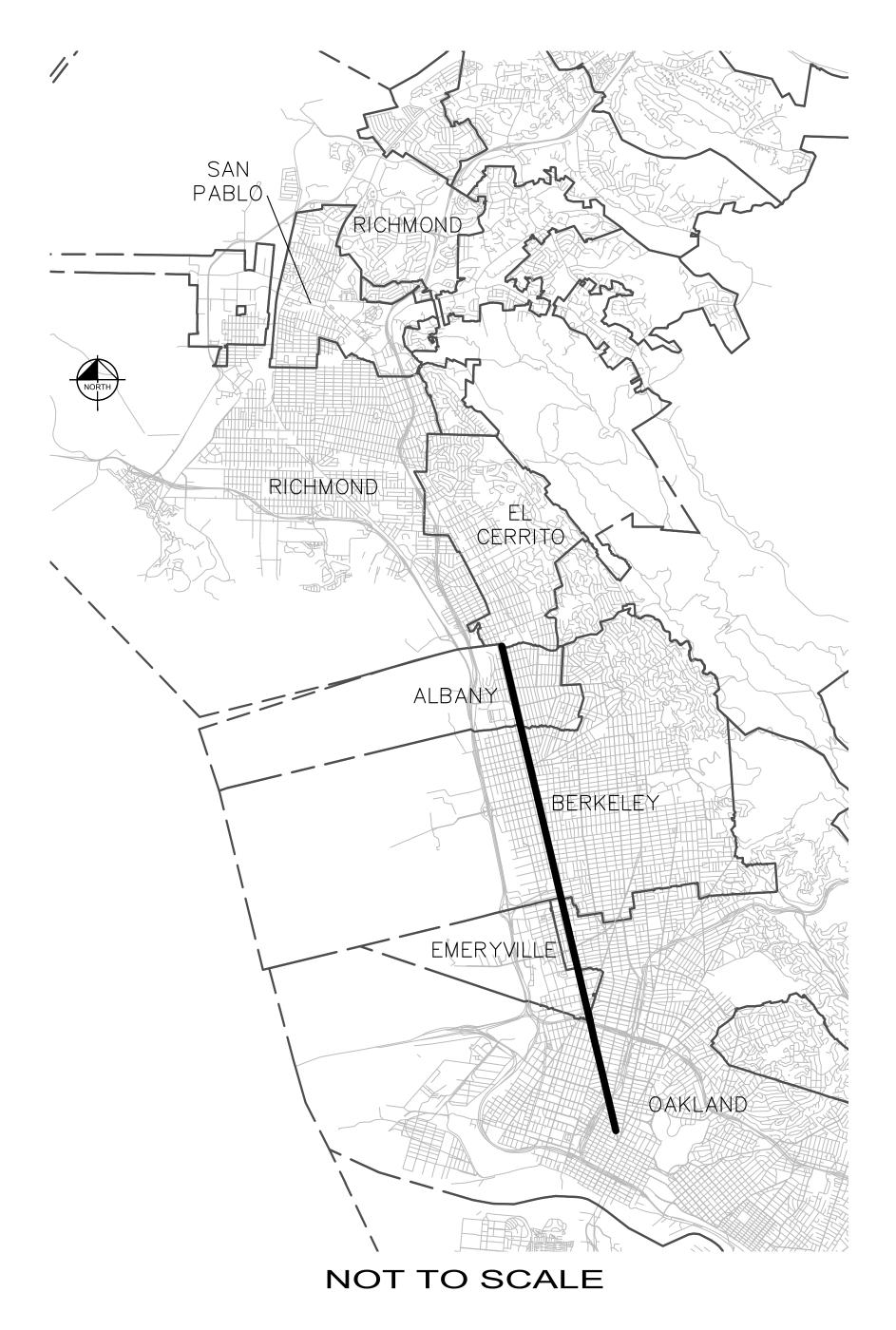
VERY NEAR-TERM PLANS

SAN PABLO AVENUE CORRIDOR PROJECT



SAN PABLO AVENUE CORRIDOR PROJECT DRAFT VERY NEAR TERM IMPROVEMENTS

JUNE 2020



PROPOSED VERY NEAR-TERM IMPROVEMENT SUMMARY

The improvements proposed herein are scaled for implementation within the very near-term (1- to 3-year timeframe) and were informed by field observations, baseline analyses, community input, and existing and on-going planning efforts by each stakeholder jurisdiction and agency. To fit within the very near-term timeframe, improvements are limited to those that would require minimal environmental and Caltrans review processes, a relatively short construction duration, and do not include any right-of-way or easement acquisition.

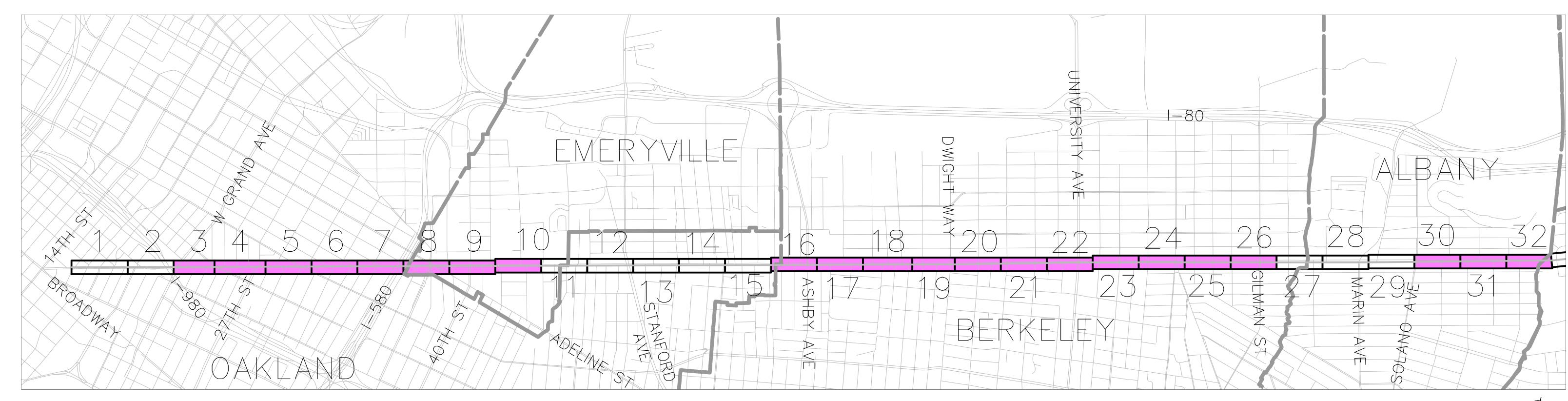
Improvements are aligned to meet the identified project needs for comfort and quality and enhanced safety. As shown in the "Improvement Legend" in the following pages, a symbol was developed for types of improvements that are most prevalent along the corridor, including continental crosswalk striping and ramp reconstruction. Text call-outs provide additional information for improvements that are location specific and not commonly proposed along the corridor. Several types of improvements are proposed to be applied consistently throughout the corridor, including:

- Continental striping for crosswalks. All existing crosswalks with standard striping (i.e., transverse lines only) proposed to be restriped with continental striping to enhance crosswalk visibility. No existing crosswalks with ladder striping are proposed for improvement. All proposed continental striping improvements also include installation of advanced stop bars at signalized intersections and yield pavement markings at uncontrolled crossings.
- Ramp upgrades. Ramps identified to be deficient per current ADA standards are proposed to be improved, with the provision of directional ramps where feasible (to be determined in a further design stage)
- Sharrows. All existing sharrows proposed to be replaced with green-backed sharrows.
- Leading pedestrian interval. Leading pedestrian intervals are proposed at all intersections within the high injury pedestrian network.
- Adaptive pedestrian signal. Adaptive pedestrian signals are primarily proposed near senior centers and schools. Further investigation of existing signal controllers to determine compatibility is needed.
- RRFB/HAWK installation. Proposed locations for an RRFB/HAWK is based on spacing to nearby signalized and enhanced crossings. At a further stage of project development, a warrant analysis is proposed to be conducted to determine where a HAWK signal is warranted.
- AC Transit bus stops. AC Transit has completed an inventory of the bus stop amenities and conditions along the project corridor and provide recommended improvements. The recommendations have been incorporated into the improvements proposed in these plans.
- Stop amenities. A number of existing or relocated bus stops are proposed for additional amenities, which may include one or more trash cans, benches, bike parking, and shelters are identified. Further coordination will be needed with local jurisdictions and AC Transit on the specific amenities to be provided at each stop.

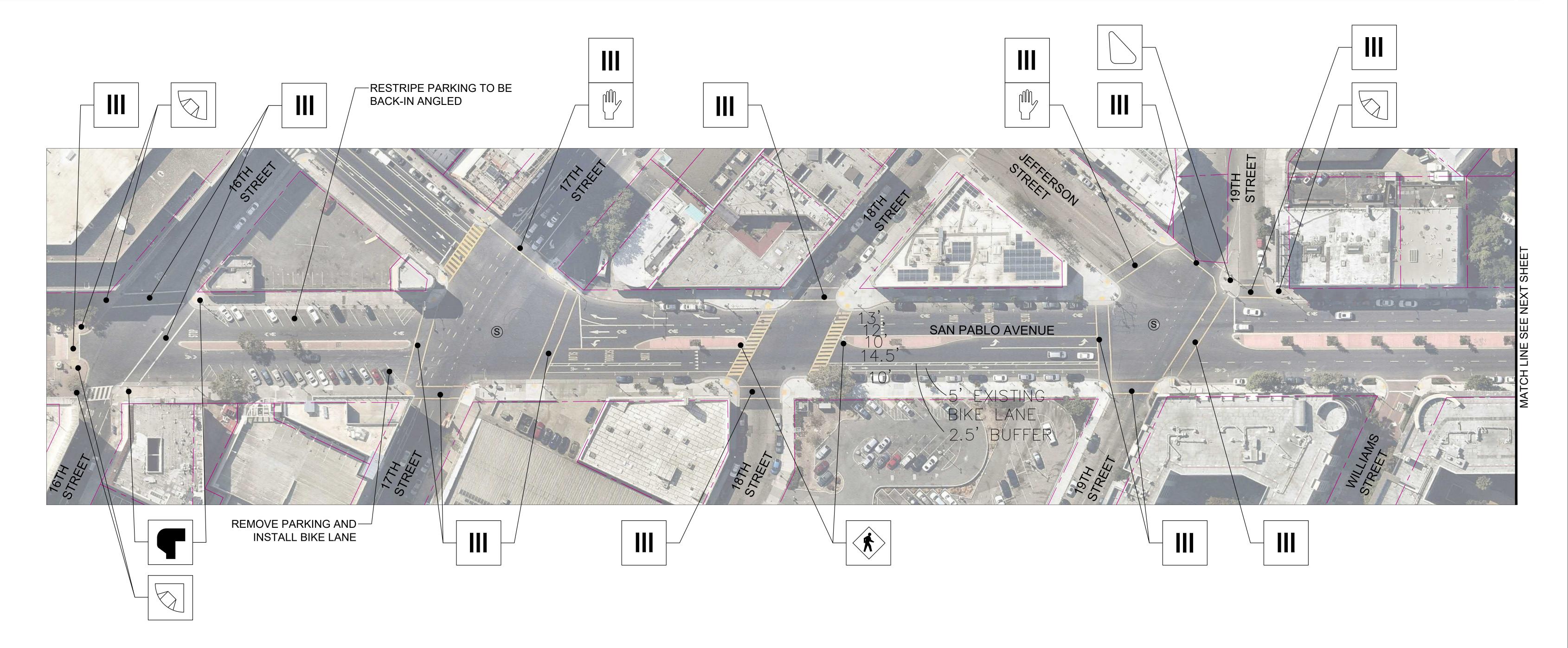
The Project Team collected field observations of existing signal equipment; however, the following improvement types and their locations should be confirmed by each jurisdiction:

- Countdown pedestrian heads
- Audible pedestrian signal and pushbutton

PRIORITY IMPROVEMENT AREAS









RECONSTRUCT RETURN AND RAMP(S)



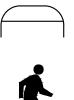
RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



ALAMEDA
County Transportation
Commission

1111111

INSTALL COUNTDOWN PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL

INSTALL PHB AS



DETERMINED BY WARRANT



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH **CONTINENTAL STRIPING**



INSTALL PEDESTRIAN SIGN

RECONSTRUCT SIDEWALK



REMOVE CROSSWALK

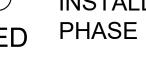




RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN



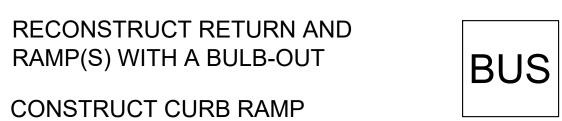
CUT BACK MEDIAN NOSE





IMPROVE EXISTING BUS STOP (IMPROVEMENTS NOTED ON PLAN)

INSTALL AUDIBLE PEDESTRIAN



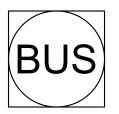
EXISTING BUS STOP TO REMAIN



EXISTING BUS STOP TO BE RELOCATED

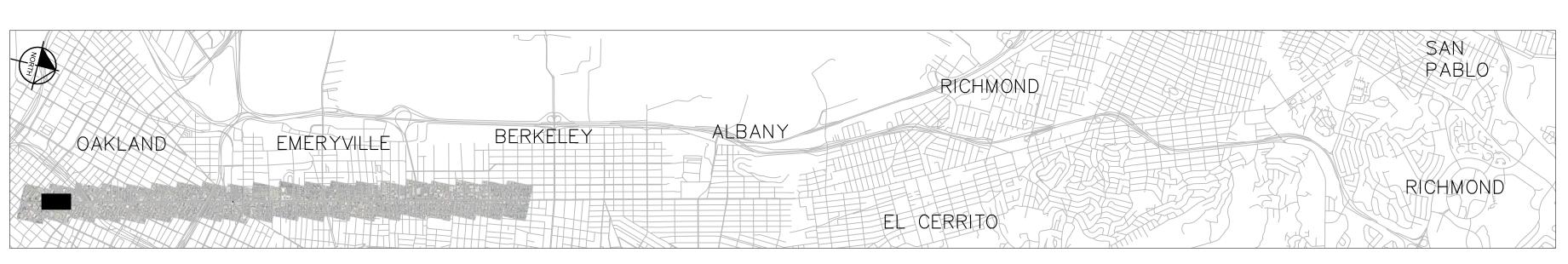


EXISTING BUS STOP TO BE ELIMINATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

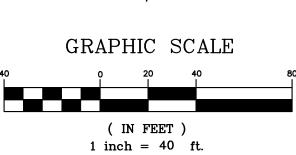


LEGEND

PARCEL BOUNDARY/PROPERTY LINE

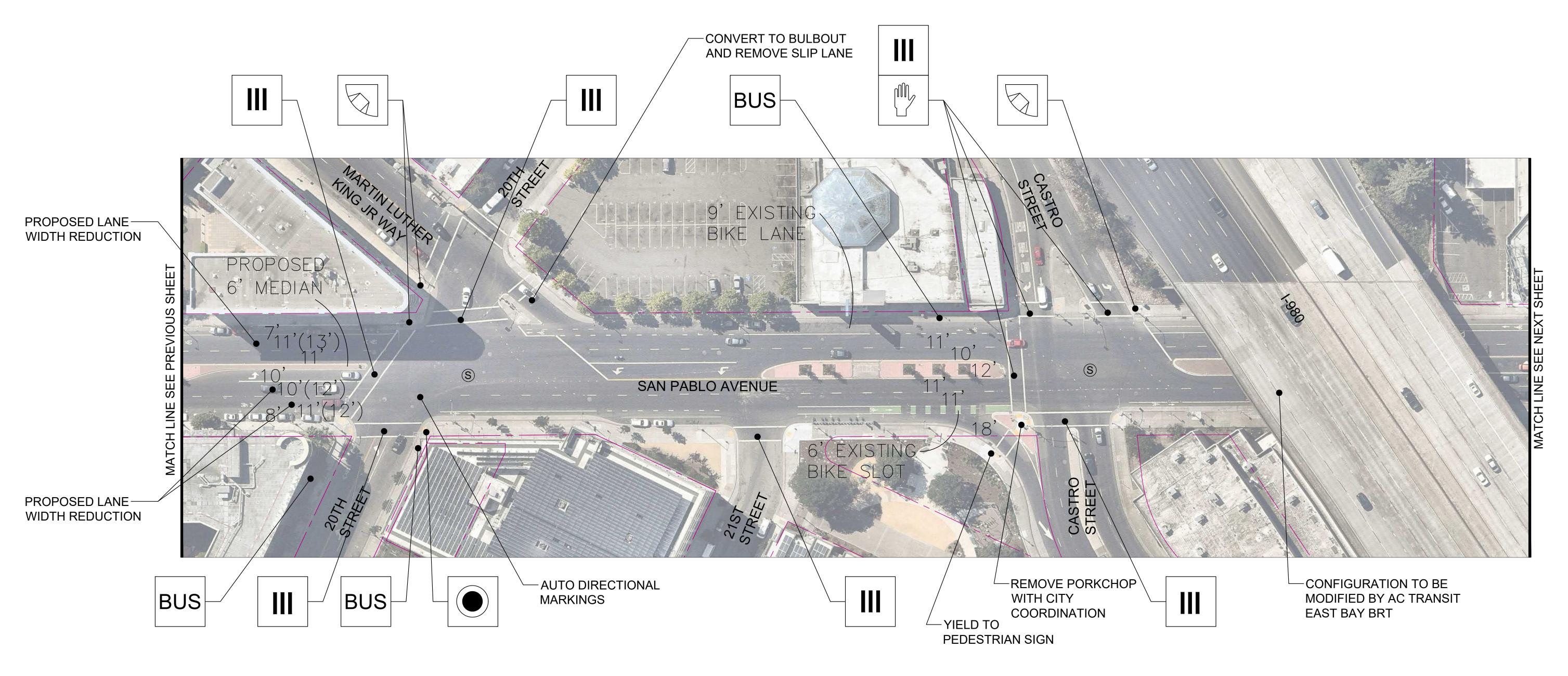


CITY BOUNDARY SIGNALIZED INTERSECTION



BASE MAP MARCH 2019

SHEET 1 OF 32







RECONSTRUCT RETURN AND



RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



ALAMEDA

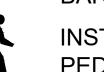
County Transportation
Commission

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INSTALL COUNTDOWN PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS DETERMINED BY WARRANT



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN





REMOVE CROSSWALK RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE CONSTRUCT PEDESTRIAN

REFUGE MEDIAN NOSE

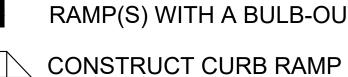


RECONSTRUCT RETURN AND

INSTALL AUDIBLE PEDESTRIAN

IMPROVE EXISTING BUS STOP

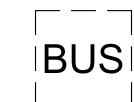
(IMPROVEMENTS NOTED ON PLAN)



RAMP(S) WITH A BULB-OUT



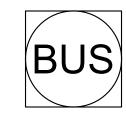
EXISTING BUS STOP TO REMAIN



EXISTING BUS STOP TO BE RELOCATED

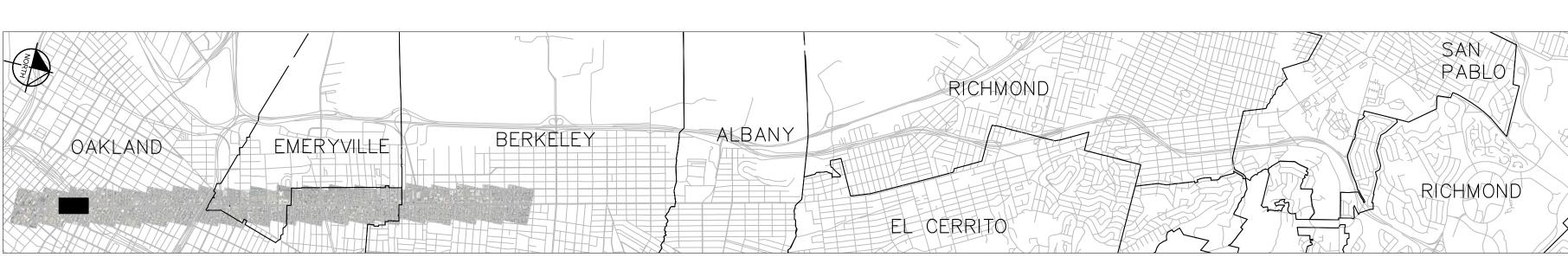


EXISTING BUS STOP TO BE ELIMINATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND



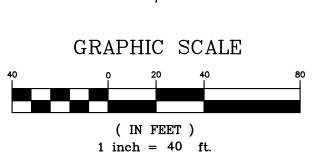
LEGEND

PARCEL BOUNDARY/PROPERTY LINE

SIGNALIZED INTERSECTION



CITY BOUNDARY

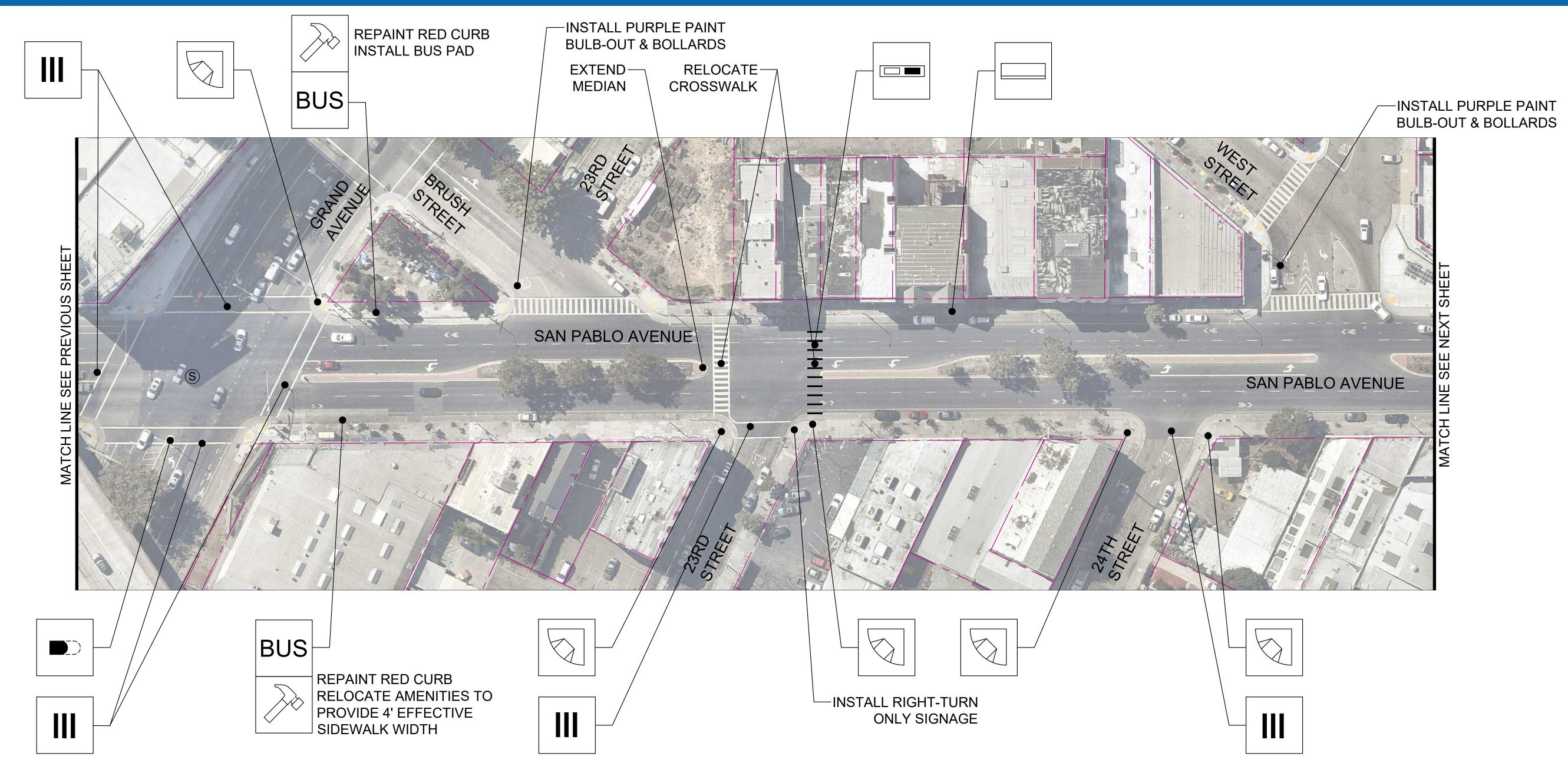


BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SHEET 2 OF 32

SAN PABLO AVENUE CORRIDOR PROJECT







RECONSTRUCT RETURN AND RAMP(S)



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County Transportation
Commission

RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



INSTALL COUNTDOWN PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**

INSTALL WAYFINDING SIGN





REMOVE CROSSWALK



RECONSTRUCT SIDEWALK

REPLACE CROSSWALK WITH

INSTALL PEDESTRIAN SIGN

CONTINENTAL STRIPING



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE





SIGNAL

RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT

INSTALL AUDIBLE PEDESTRIAN

IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



CONSTRUCT CURB RAMP



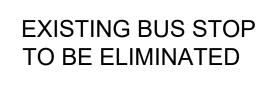
BUS

EXISTING BUS STOP TO REMAIN



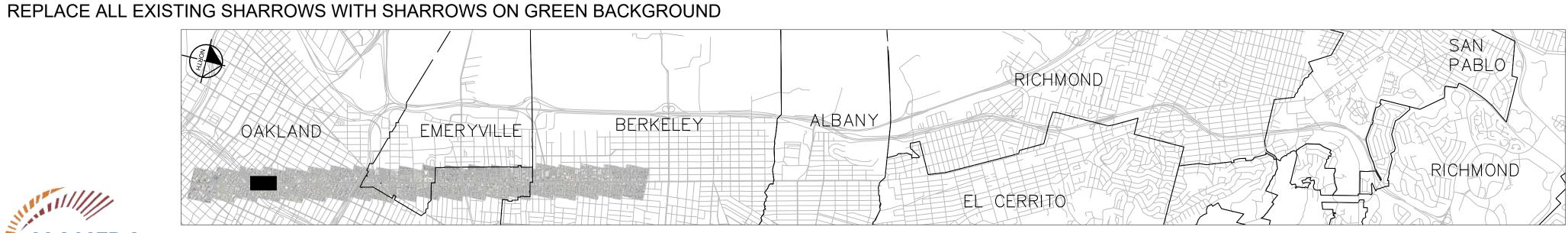
(BUS)

EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED.

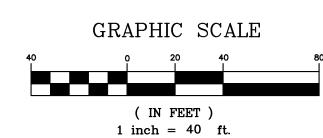


LEGEND

PARCEL BOUNDARY/PROPERTY LINE





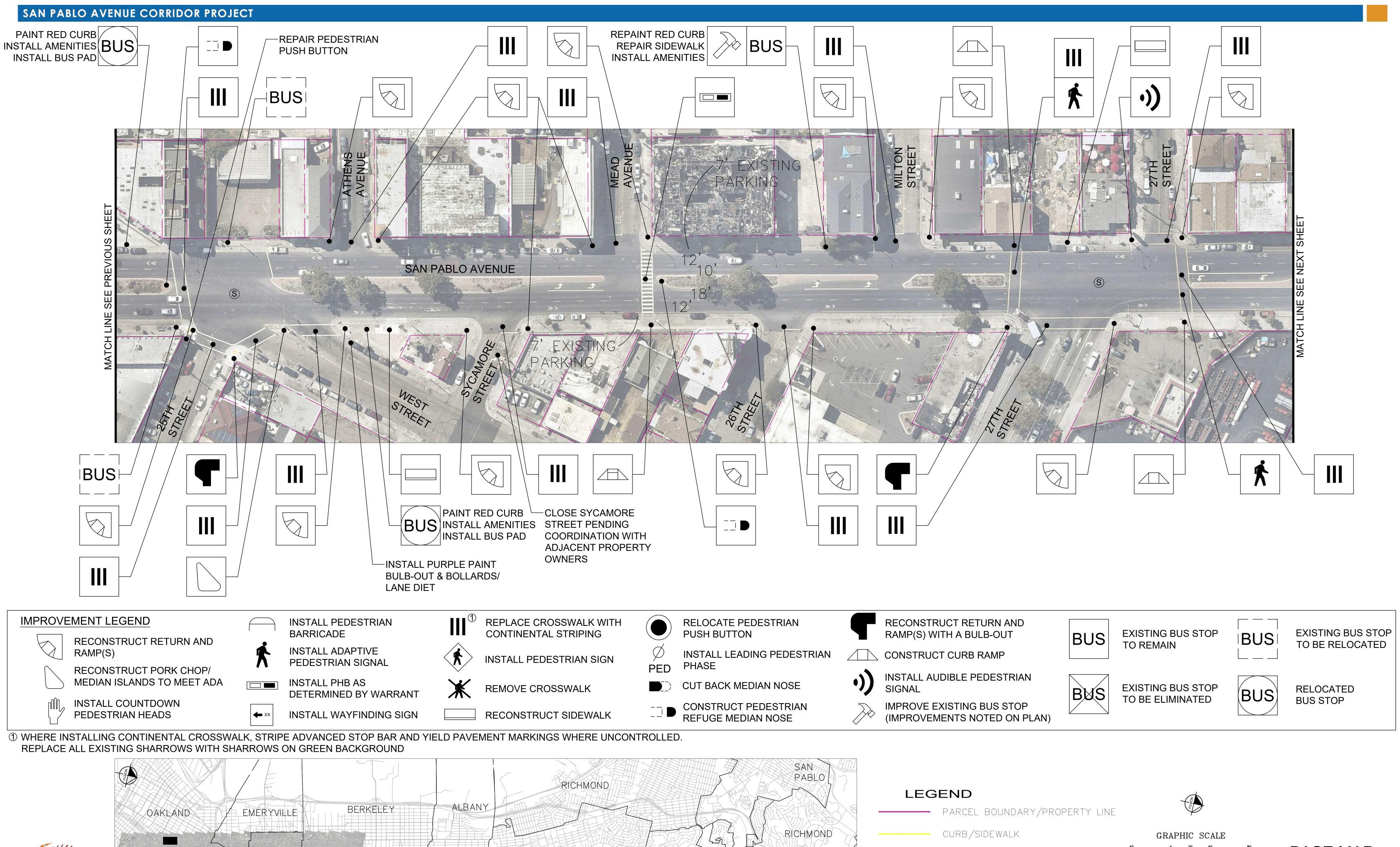


BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SHEET 3 OF 32



VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

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County Transportation Commission - CITY BOUNDARY

SIGNALIZED INTERSECTION

GRAPHIC SCALE

O 20 40

(IN FEET)

1 inch = 40 ft.

BASE MAP MARCH 2019

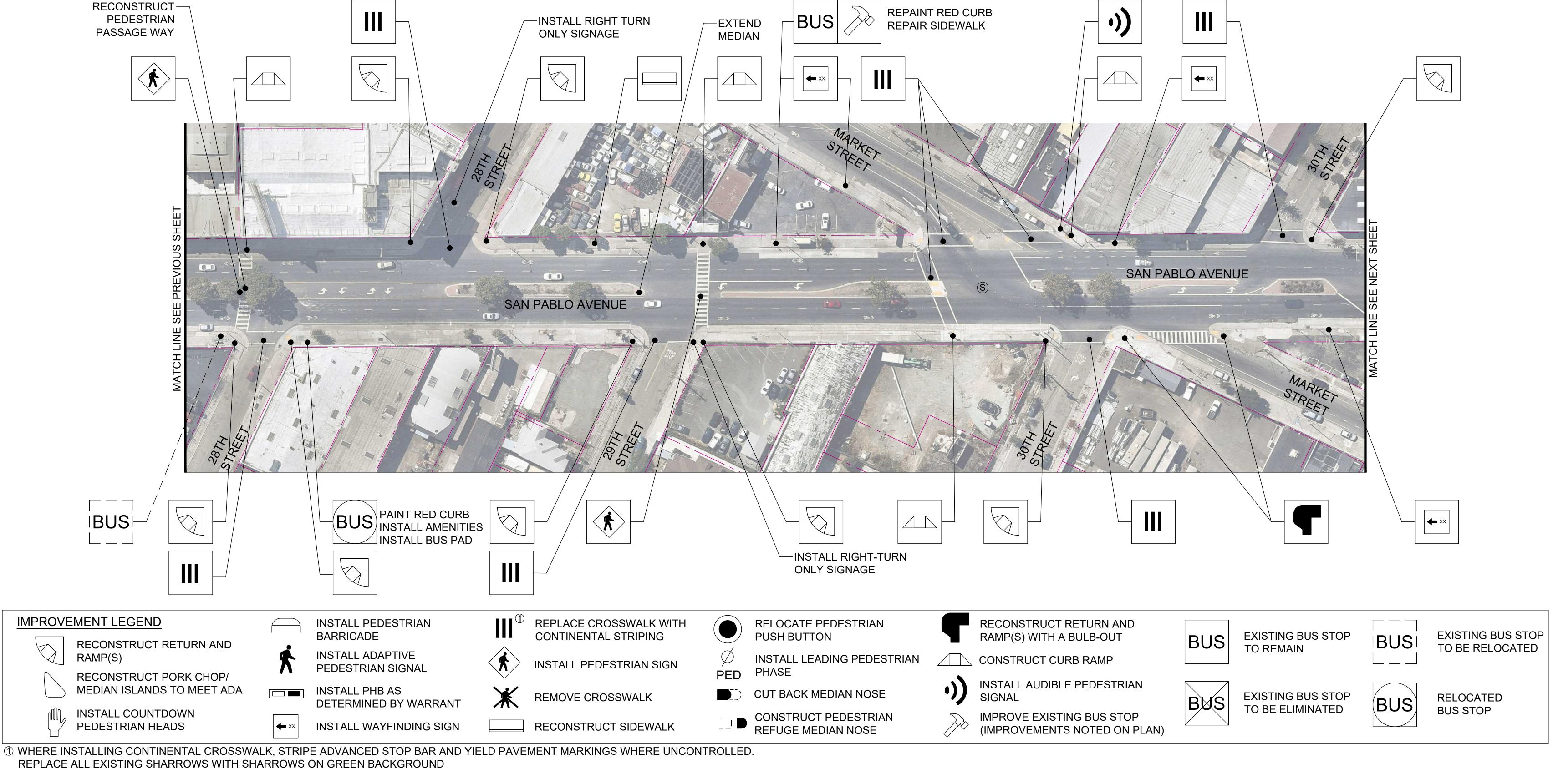
SHEET 4 OF 32

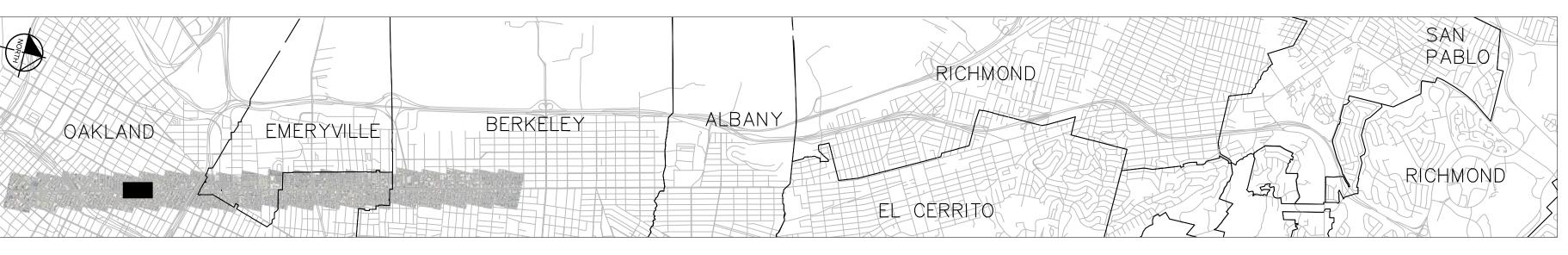
SAN PABLO AVENUE CORRIDOR PROJECT

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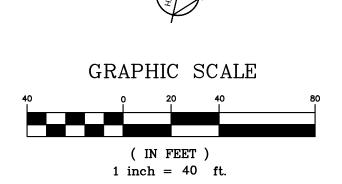


VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT



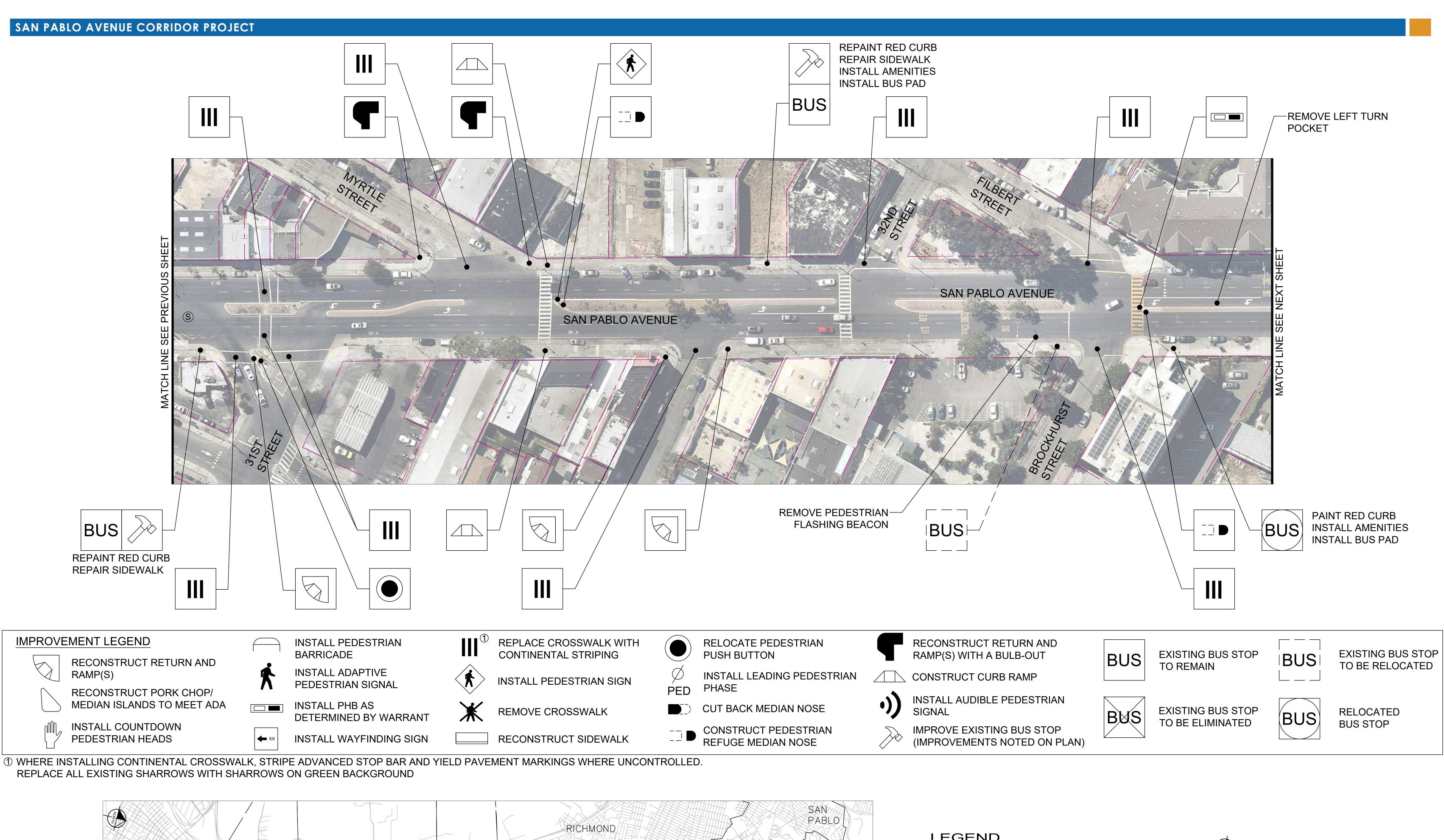
SIGNALIZED INTERSECTION

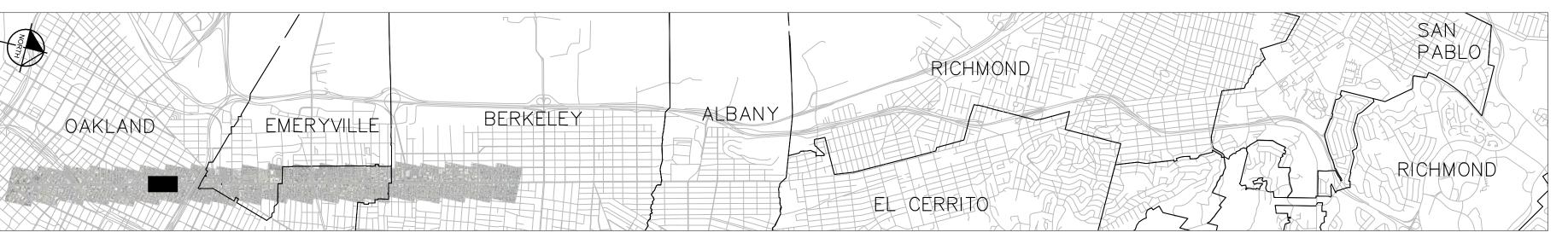
CITY BOUNDARY



BASE MAP MARCH 2019

SHEET 5 OF 32





VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

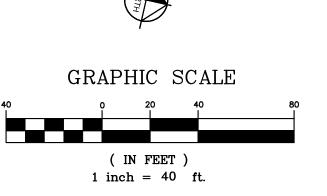
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SIGNALIZED INTERSECTION



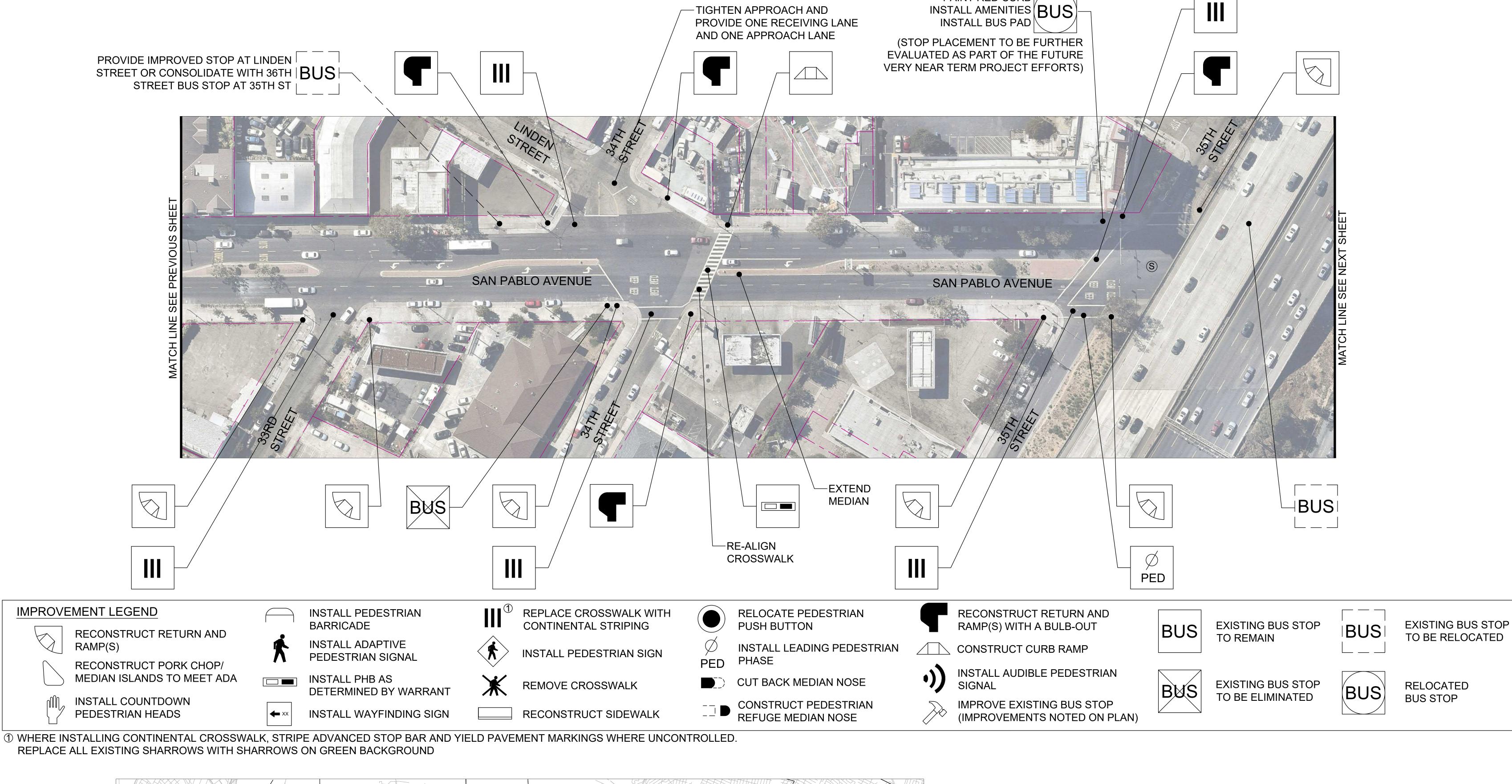
BASE MAP MARCH 2019

SHEET 6 OF 32

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VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT



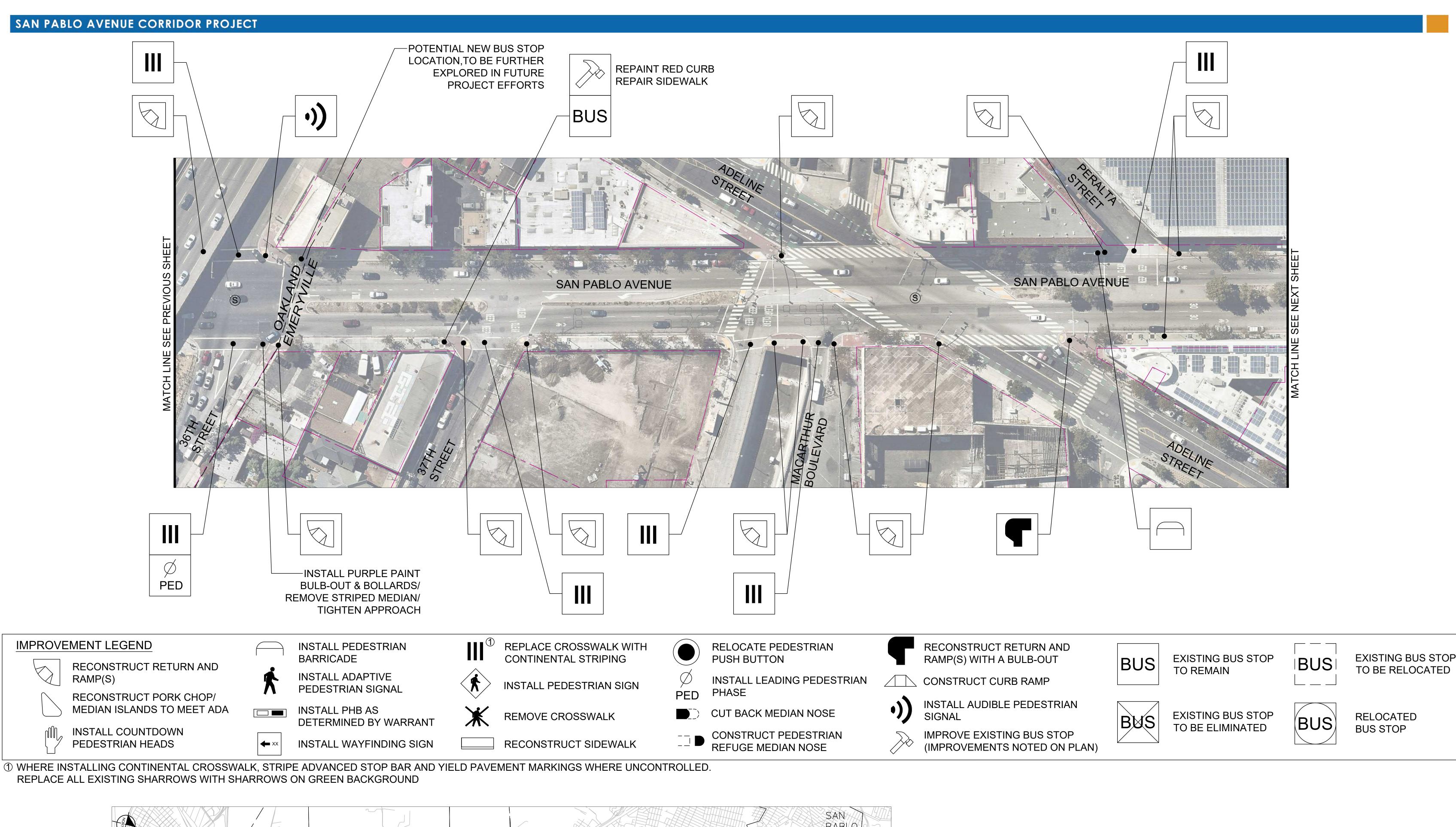
CITY BOUNDARY

PAINT RED CURB /



BASE MAP MARCH 2019

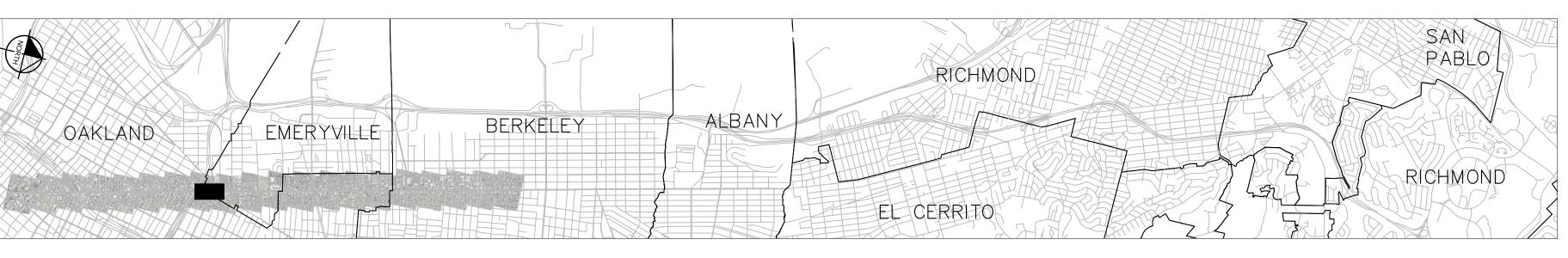
SHEET 7 OF 32



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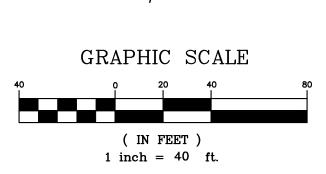


PARCEL BOUNDARY/PROPERTY LINE CURB/SIDEWALK

SIGNALIZED INTERSECTION

CITY BOUNDARY

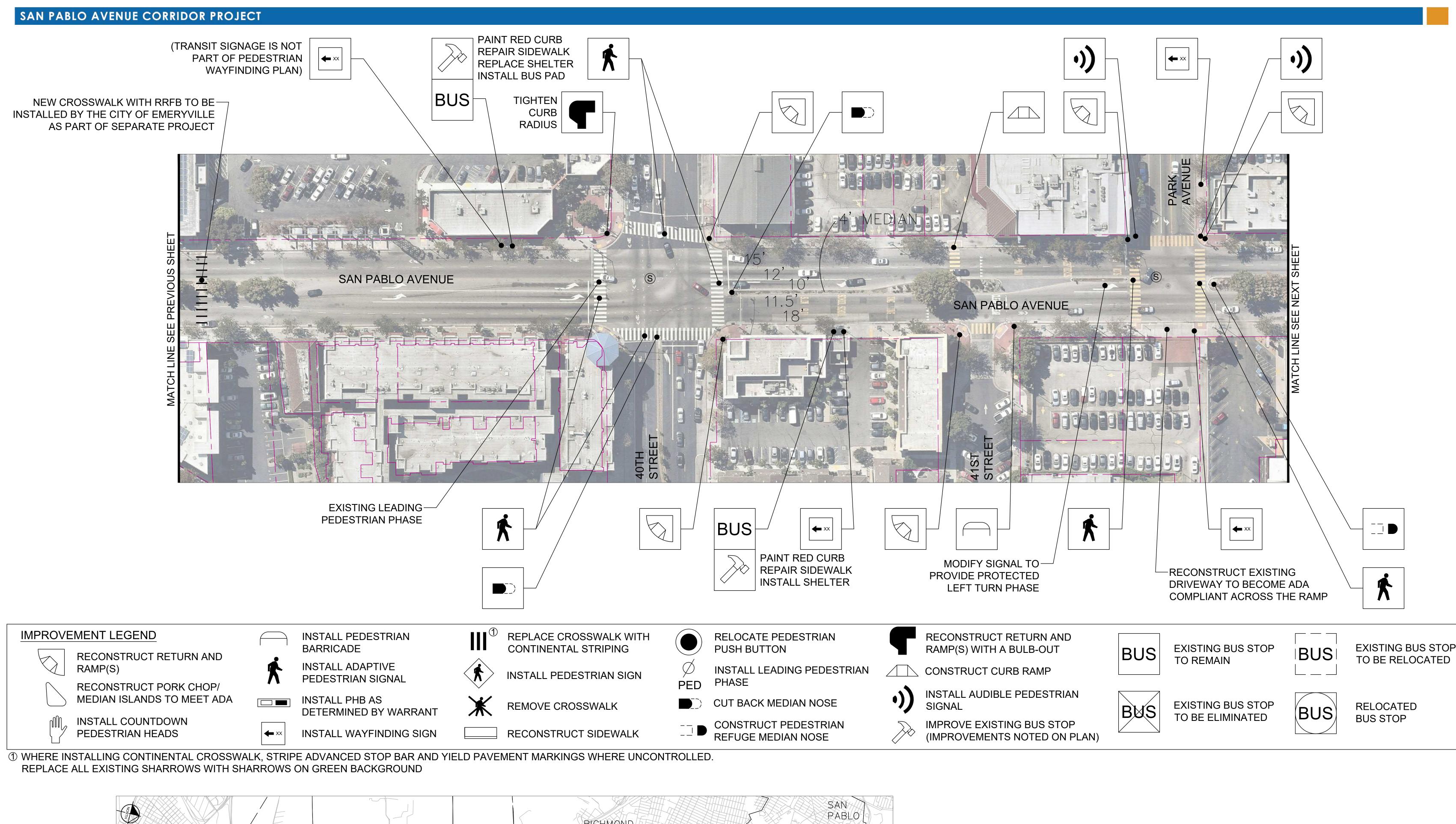
LEGEND

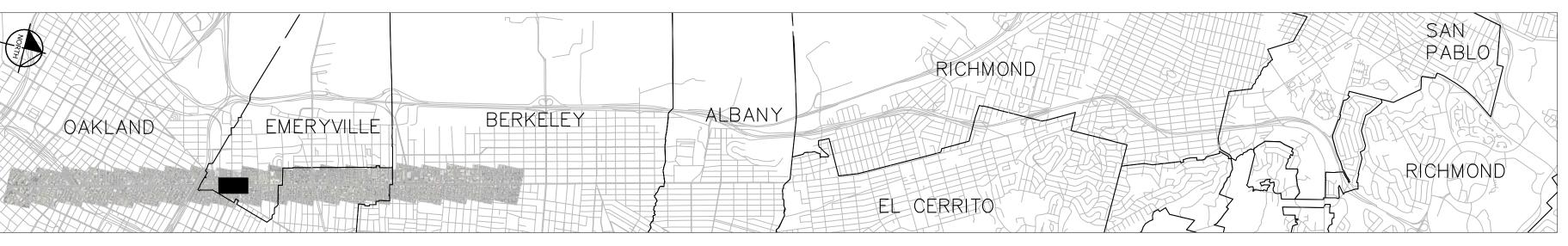


BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SHEET 8 OF 32





PARCEL BOUNDARY/PROPERTY LINE CURB/SIDEWALK GRAPHIC SCALE CITY BOUNDARY SIGNALIZED INTERSECTION

LEGEND

(IN FEET) 1 inch = 40 ft.

BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

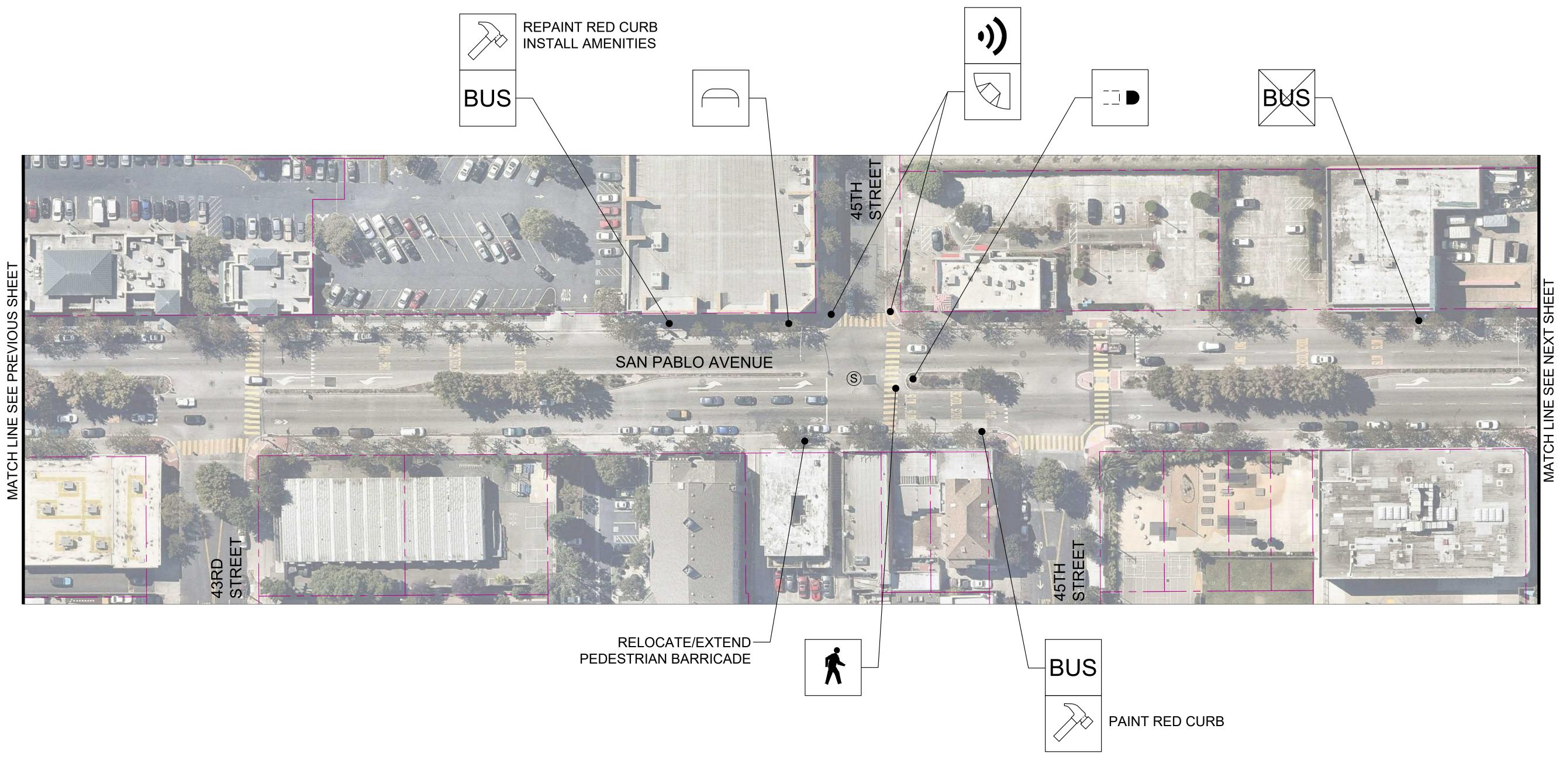
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SHEET 9 OF 32









MEDIAN ISLANDS TO MEET ADA

RECONSTRUCT PORK CHOP/



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH **CONTINENTAL STRIPING**



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND

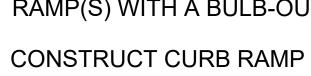


RAMP(S) WITH A BULB-OUT

INSTALL AUDIBLE PEDESTRIAN

IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



BUS

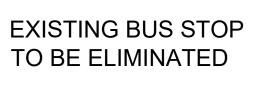


EXISTING BUS STOP TO REMAIN



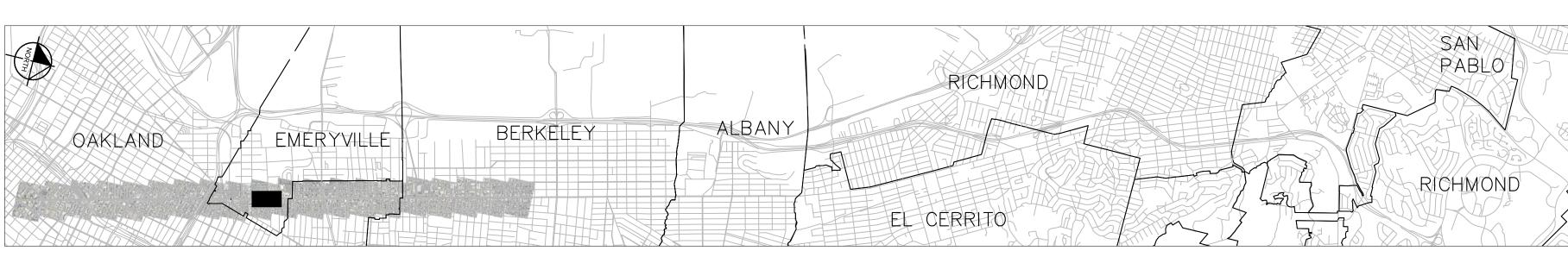
(BUS)

EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

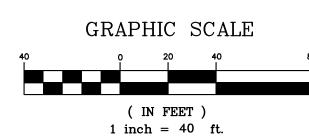


LEGEND

PARCEL BOUNDARY/PROPERTY LINE



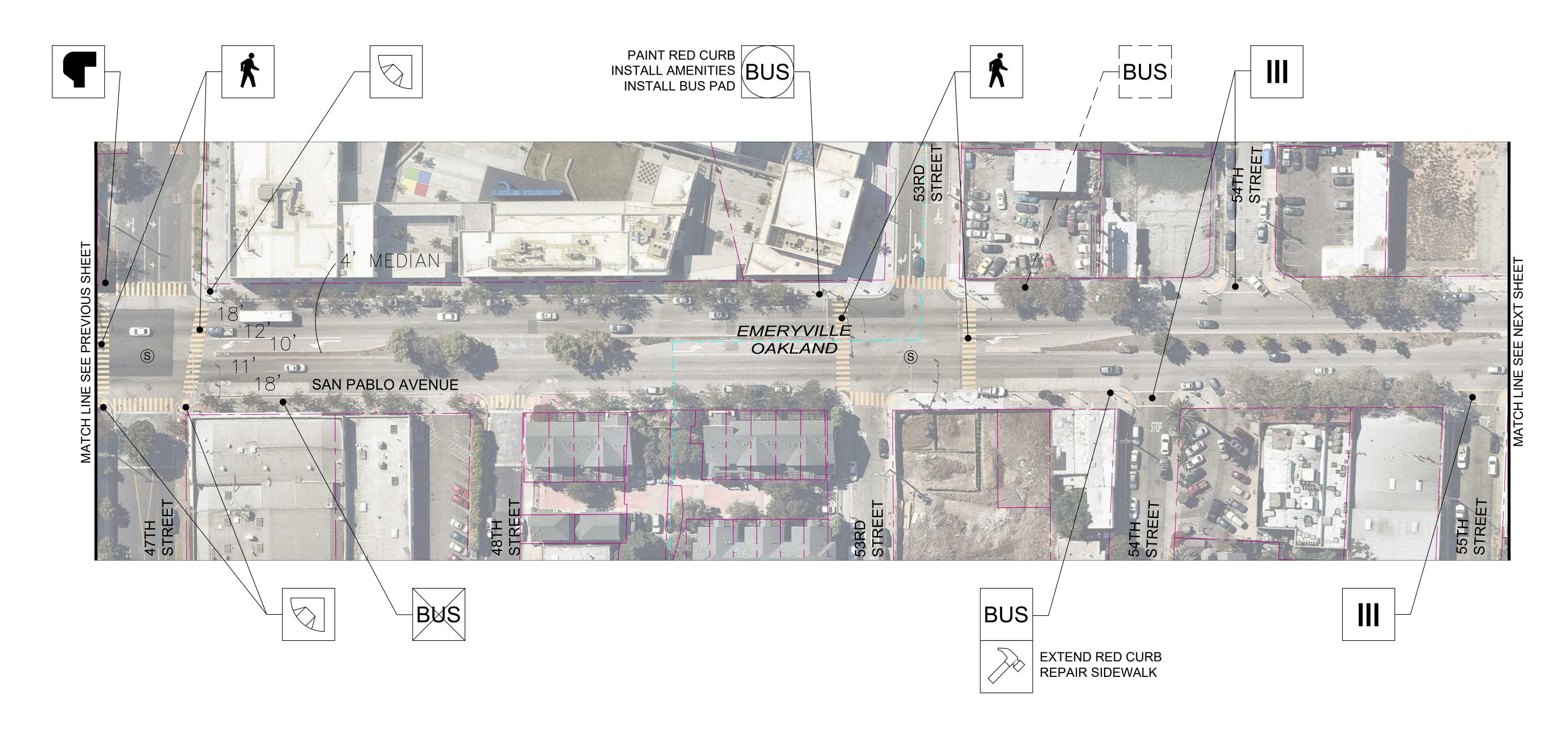




BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

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RECONSTRUCT PORK CHOP/

MEDIAN ISLANDS TO MEET ADA



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INSTALL COUNTDOWN PEDESTRIAN HEADS



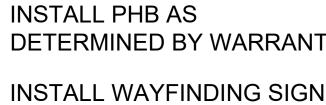
INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



DETERMINED BY WARRANT





RECONSTRUCT SIDEWALK

REMOVE CROSSWALK



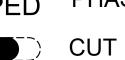
INSTALL PEDESTRIAN SIGN



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



SIGNAL

IMPROVE EXISTING BUS STOP (IMPROVEMENTS NOTED ON PLAN)

INSTALL AUDIBLE PEDESTRIAN

RECONSTRUCT RETURN AND

RAMP(S) WITH A BULB-OUT

CONSTRUCT CURB RAMP



BUS

EXISTING BUS STOP TO REMAIN

EXISTING BUS STOP

TO BE ELIMINATED

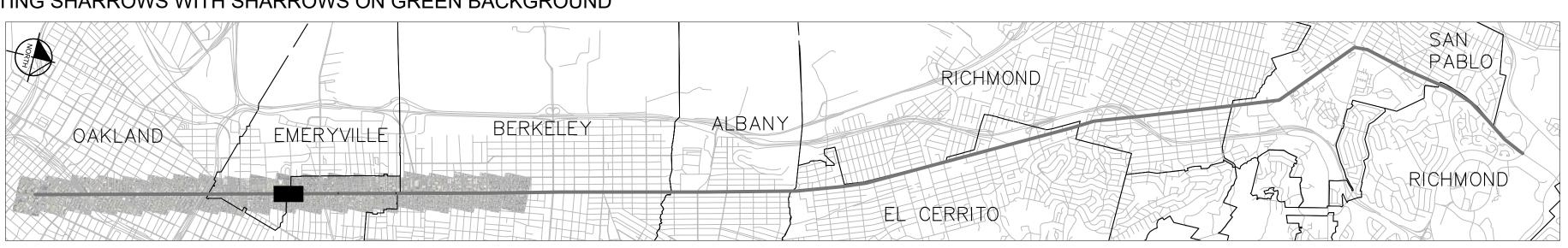


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND



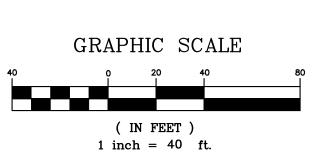
VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT





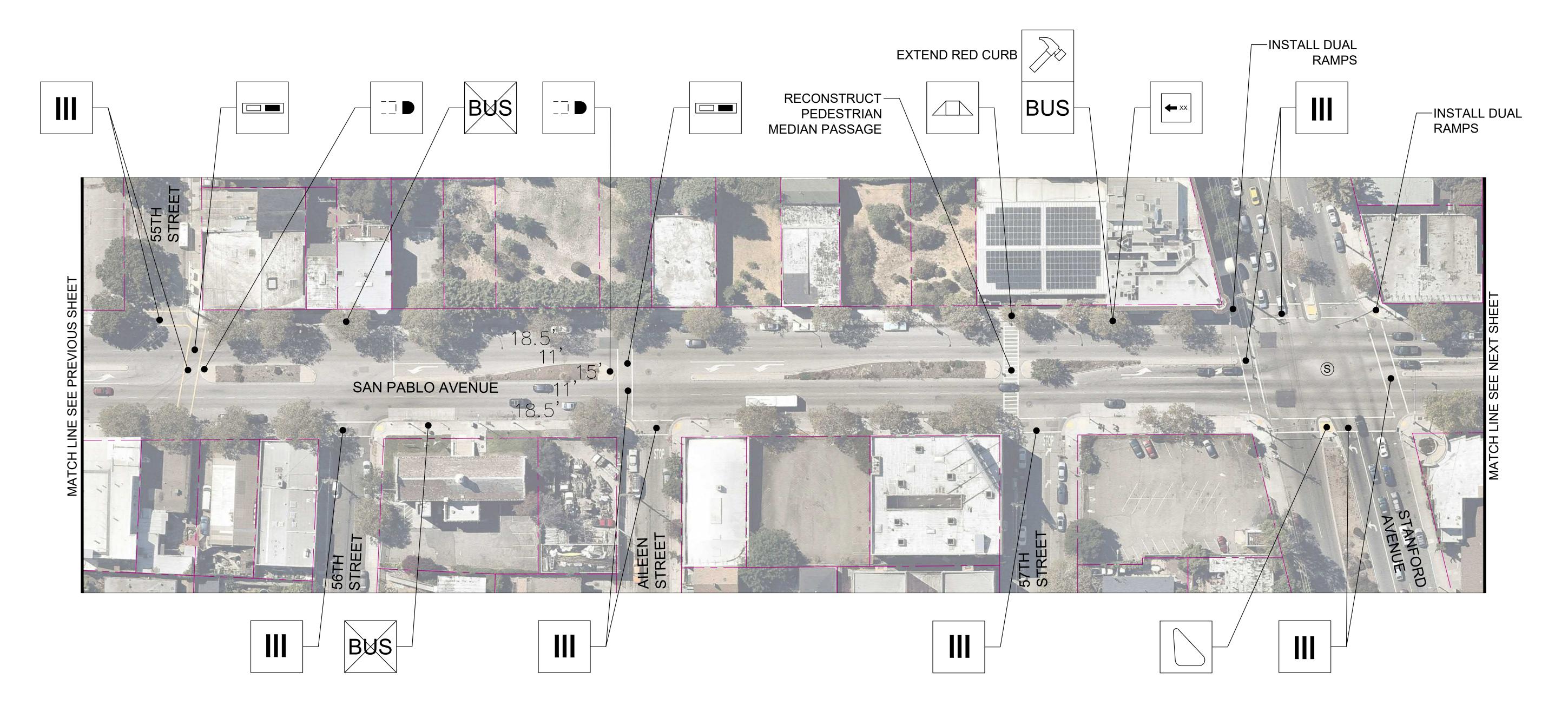


SIGNALIZED INTERSECTION



BASE MAP MARCH 2019

SHEET 11 OF 32







RECONSTRUCT PORK CHOP/

MEDIAN ISLANDS TO MEET ADA



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INSTALL COUNTDOWN PEDESTRIAN HEADS



INSTALL PEDESTRIAN



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



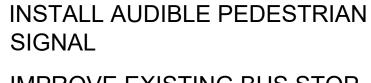
CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



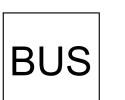
RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



IMPROVE EXISTING BUS STOP (IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

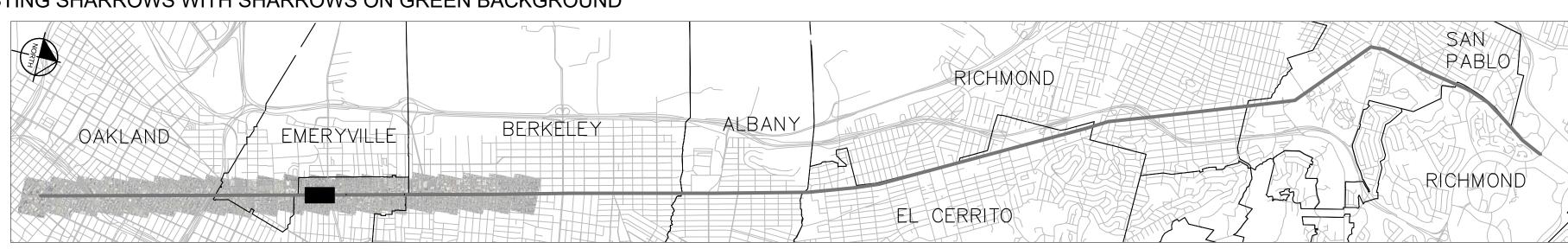


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND



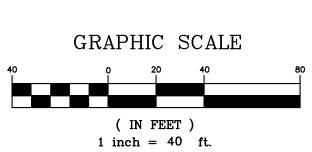






CITY BOUNDARY

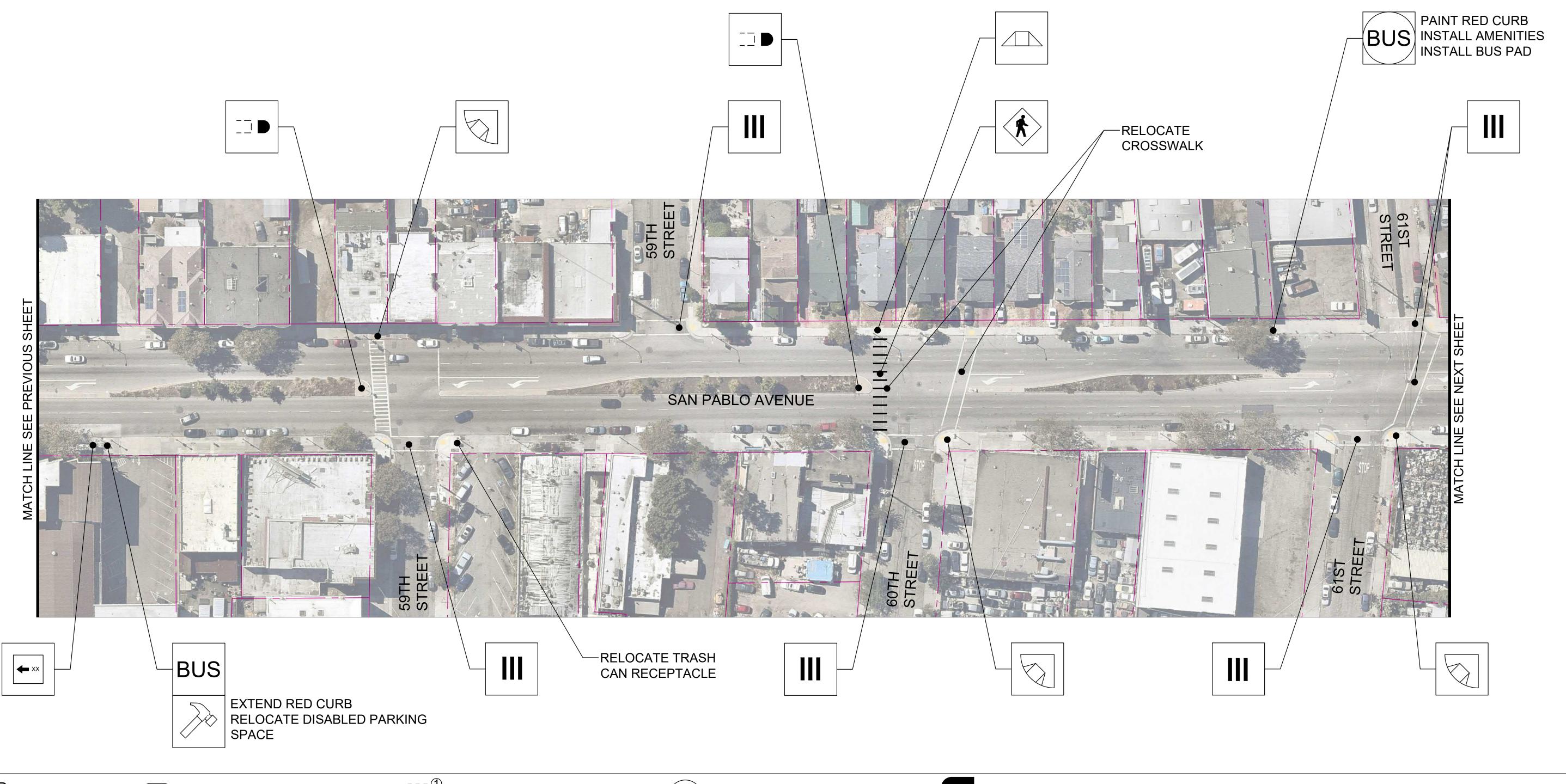
SIGNALIZED INTERSECTION



BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SHEET 12 OF 32



IMPROVEMENT LEGEND



RECONSTRUCT RETURN AND RAMP(S)



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County Transportation
Commission

MEDIAN ISLANDS TO MEET ADA

INSTALL COUNTDOWN

PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE

INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



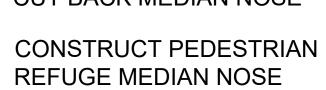
RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE





RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



INSTALL AUDIBLE PEDESTRIAN SIGNAL

IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

EXISTING BUS STOP

TO BE ELIMINATED

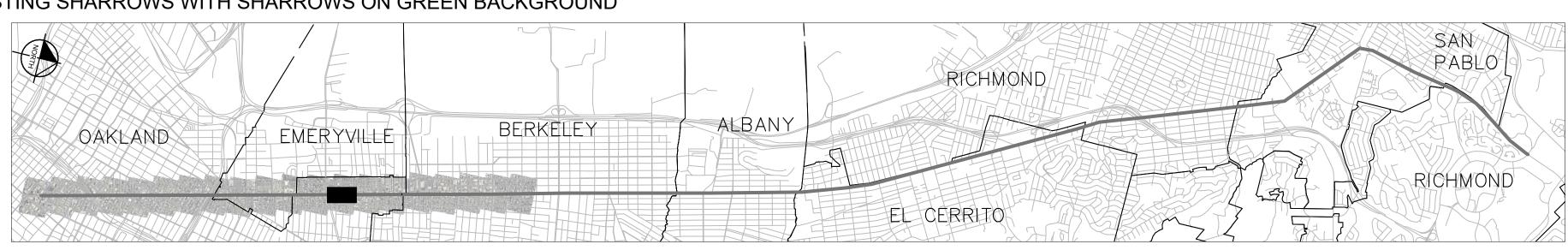


EXISTING BUS STOP TO BE RELOCATED

(BUS)

RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

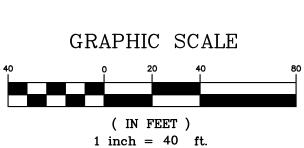


LEGEND

PARCEL BOUNDARY/PROPERTY LINE





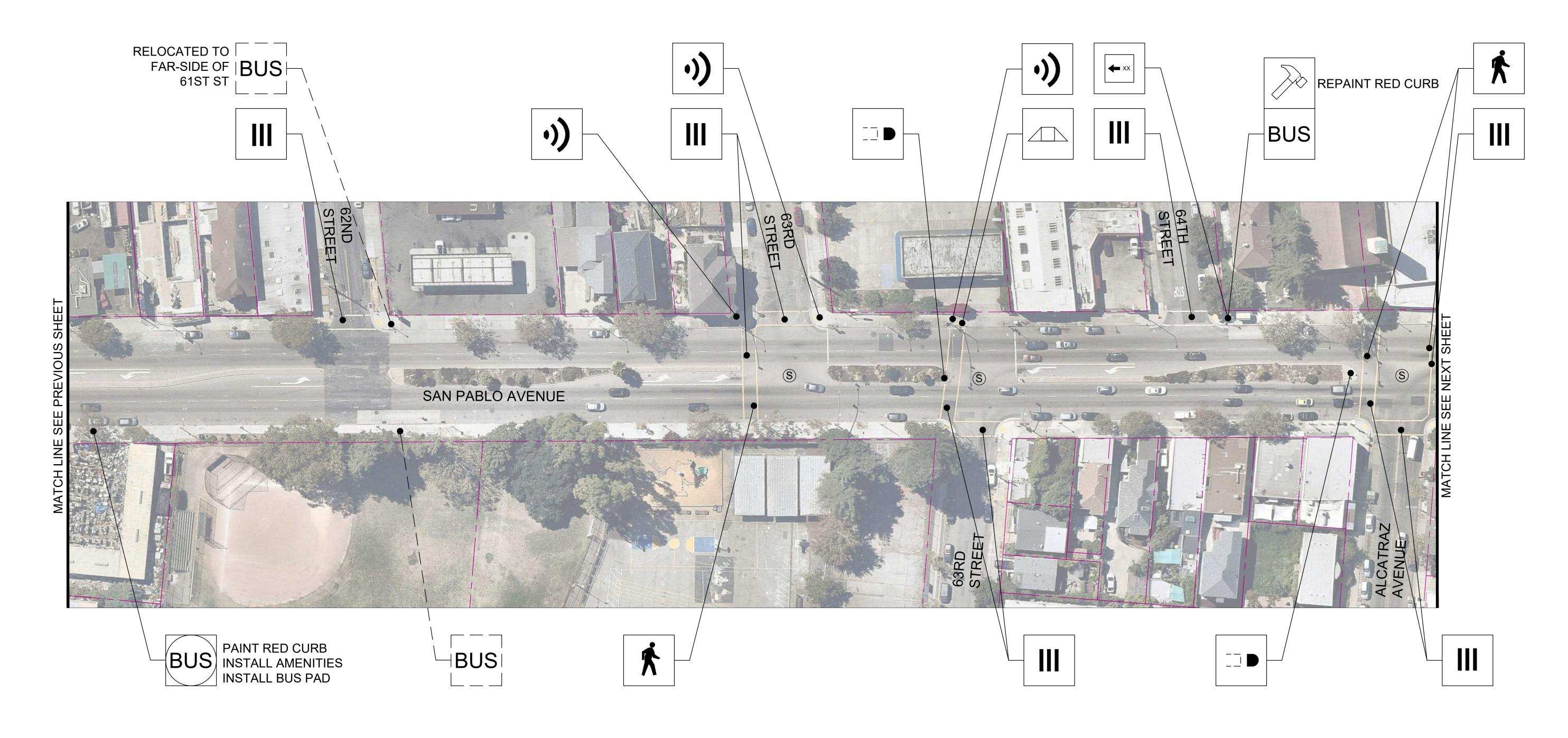


BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SHEET 13 OF 32







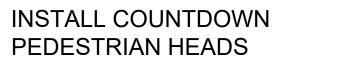


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RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



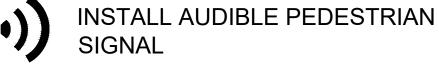
CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



SIGNAL IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

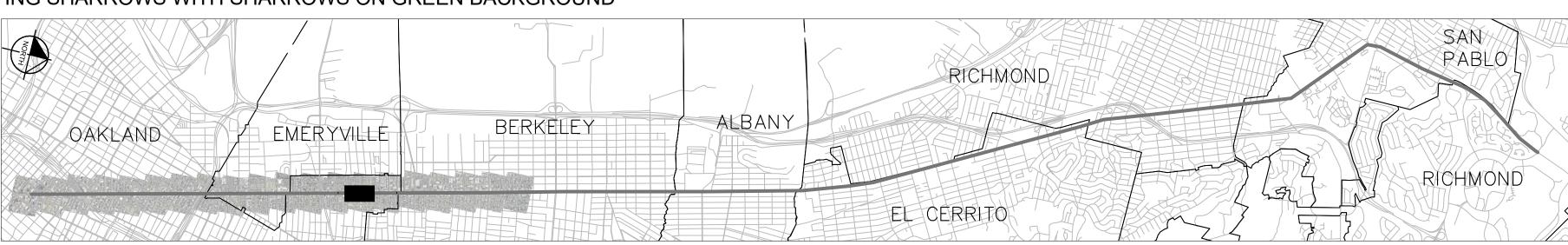


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

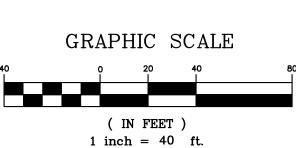
① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND



LEGEND PARCEL BOUNDARY/PROPERTY LINE



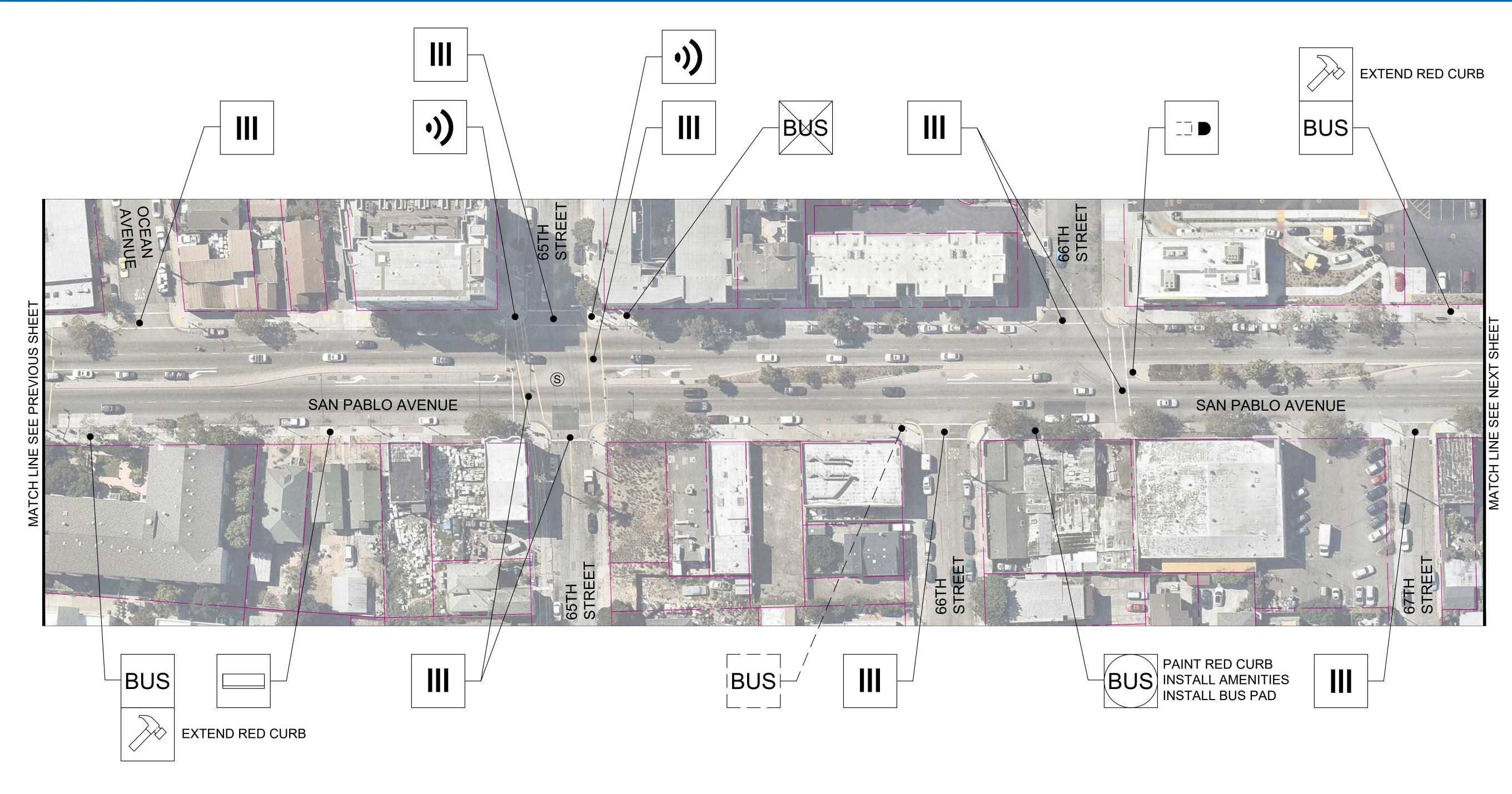




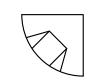
BASE MAP MARCH 2019

SHEET 14 OF 32











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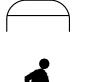
ALAMEDA

County Transportation
Commission

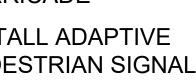
RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



INSTALL COUNTDOWN PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL WAYFINDING SIGN







INSTALL PEDESTRIAN SIGN

RECONSTRUCT SIDEWALK



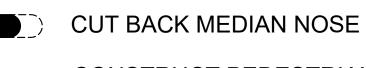
REMOVE CROSSWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



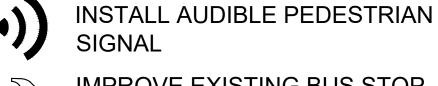
CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



IMPROVE EXISTING BUS STOP (IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

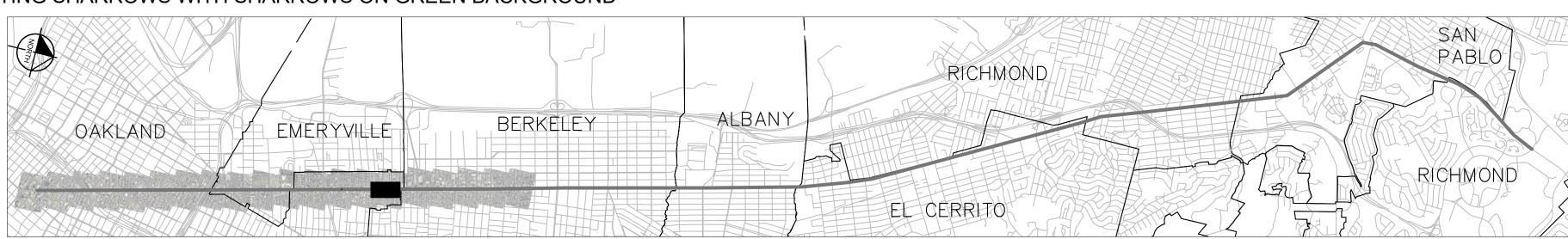


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

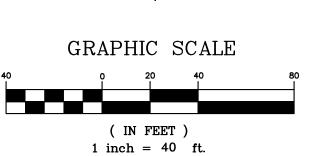


VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT



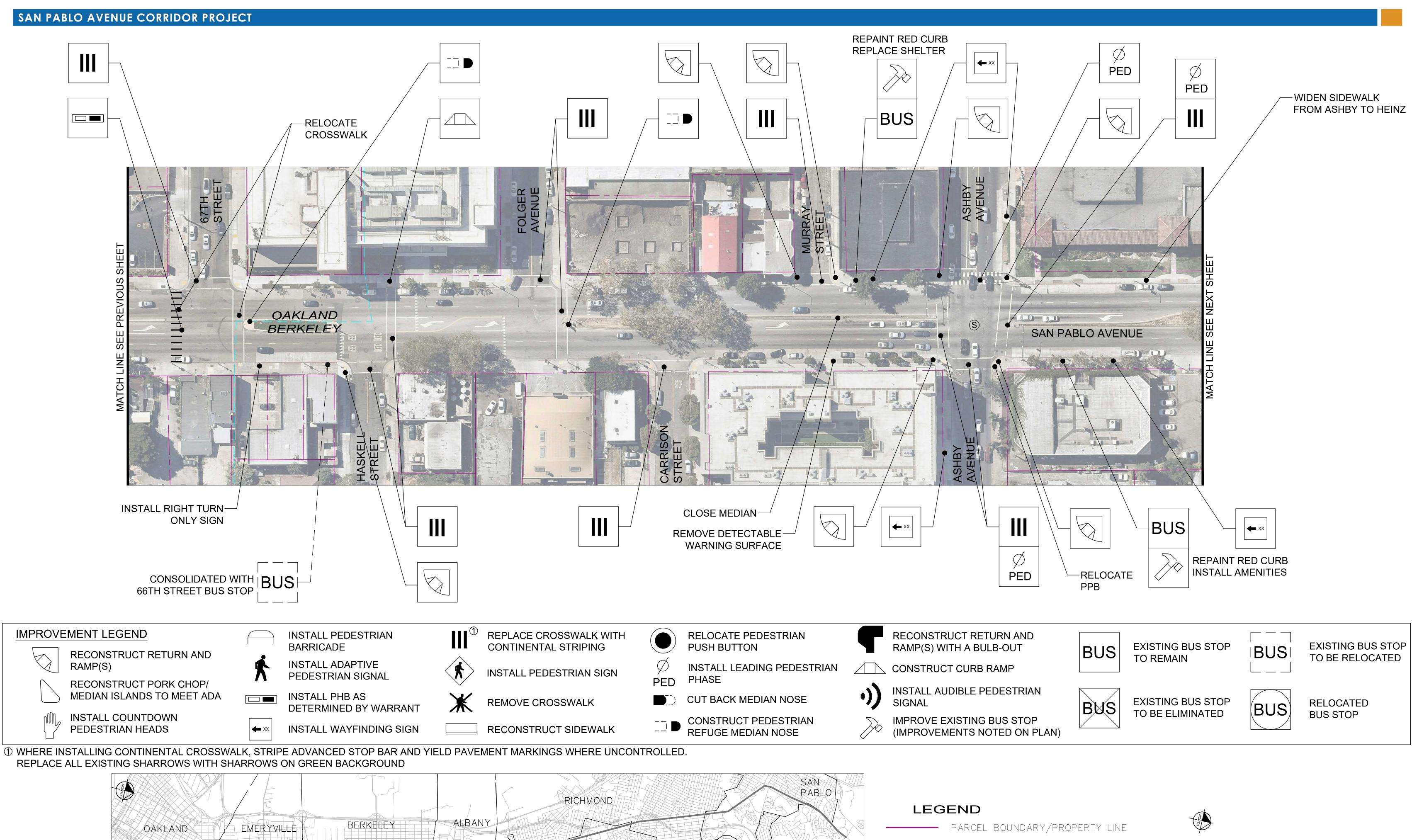




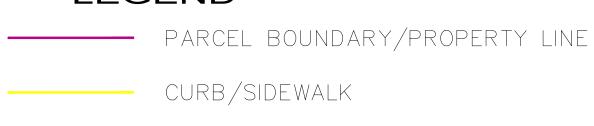


BASE MAP MARCH 2019

SHEET 15 OF 32



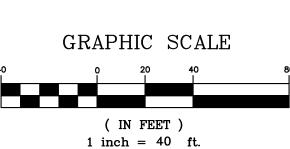




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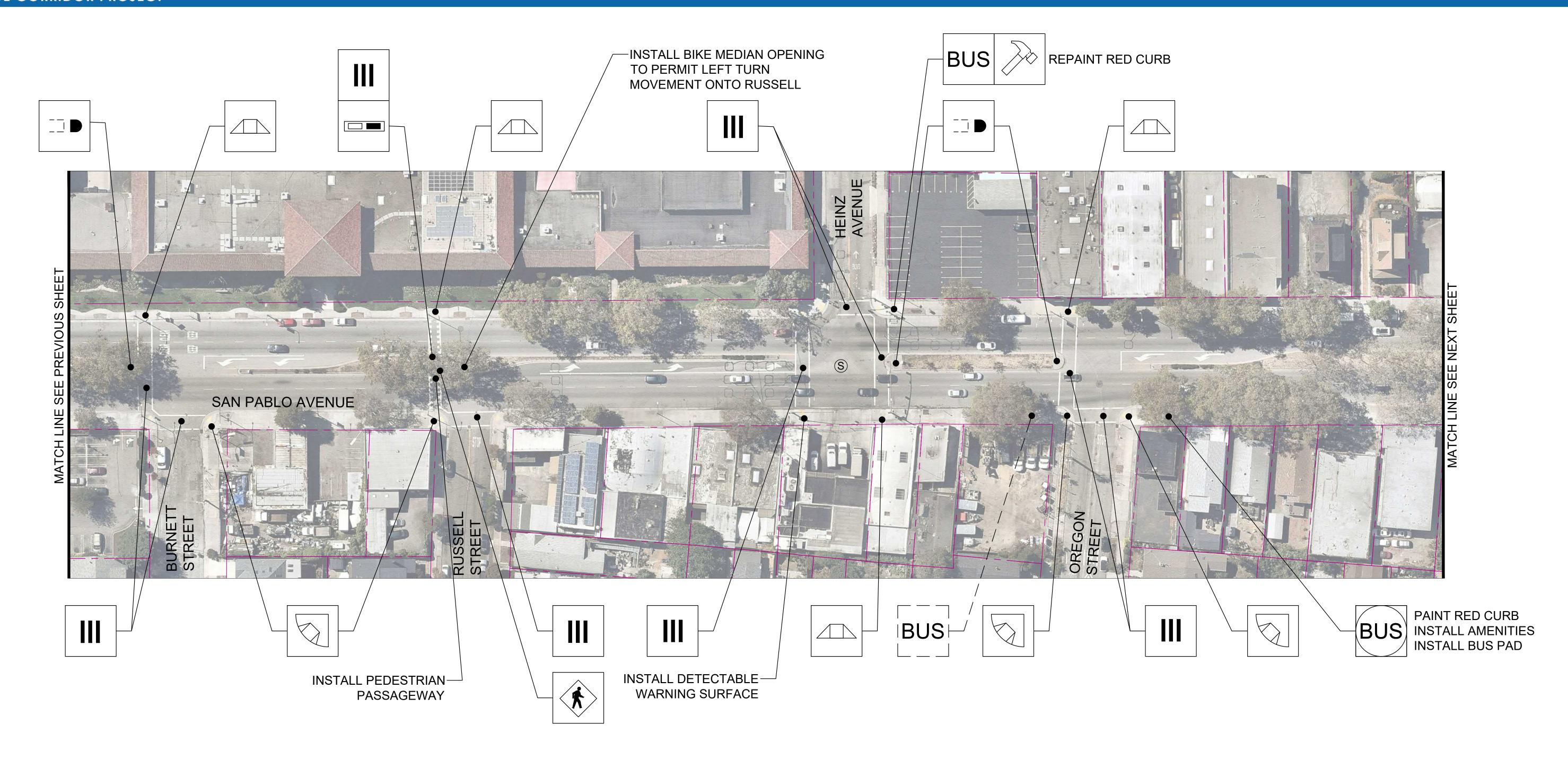
CITY BOUNDARY



BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

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MEDIAN ISLANDS TO MEET ADA INSTALL COUNTDOWN

PEDESTRIAN HEADS

RECONSTRUCT PORK CHOP/



INSTALL PEDESTRIAN BARRICADE

INSTALL ADAPTIVE

INSTALL PHB AS

PEDESTRIAN SIGNAL





REPLACE CROSSWALK WITH CONTINENTAL STRIPING





REMOVE CROSSWALK

RECONSTRUCT SIDEWALK



PHASE PED

PUSH BUTTON

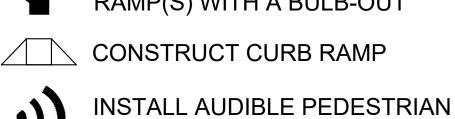


CUT BACK MEDIAN NOSE

CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE

RELOCATE PEDESTRIAN

INSTALL LEADING PEDESTRIAN



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT

IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



EXISTING BUS STOP TO REMAIN



EXISTING BUS STOP TO BE RELOCATED



EXISTING BUS STOP TO BE ELIMINATED

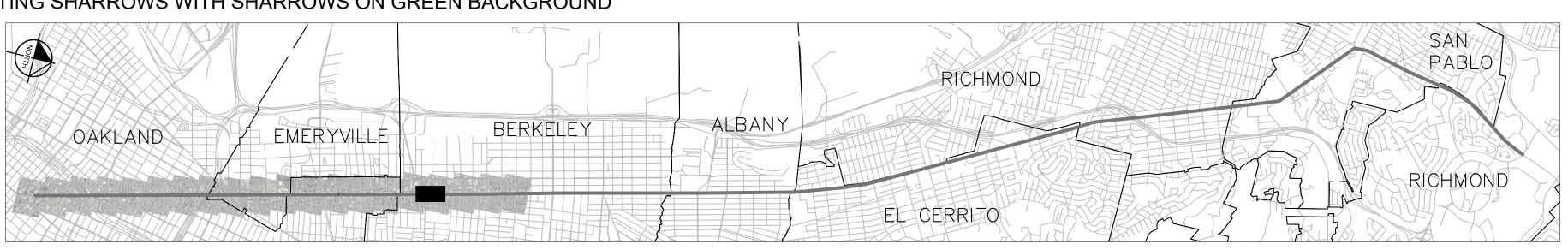


RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

DETERMINED BY WARRANT

INSTALL WAYFINDING SIGN



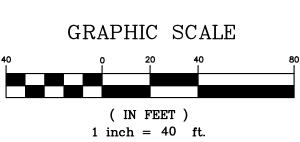
SIGNAL

PARCEL BOUNDARY/PROPERTY LINE



LEGEND

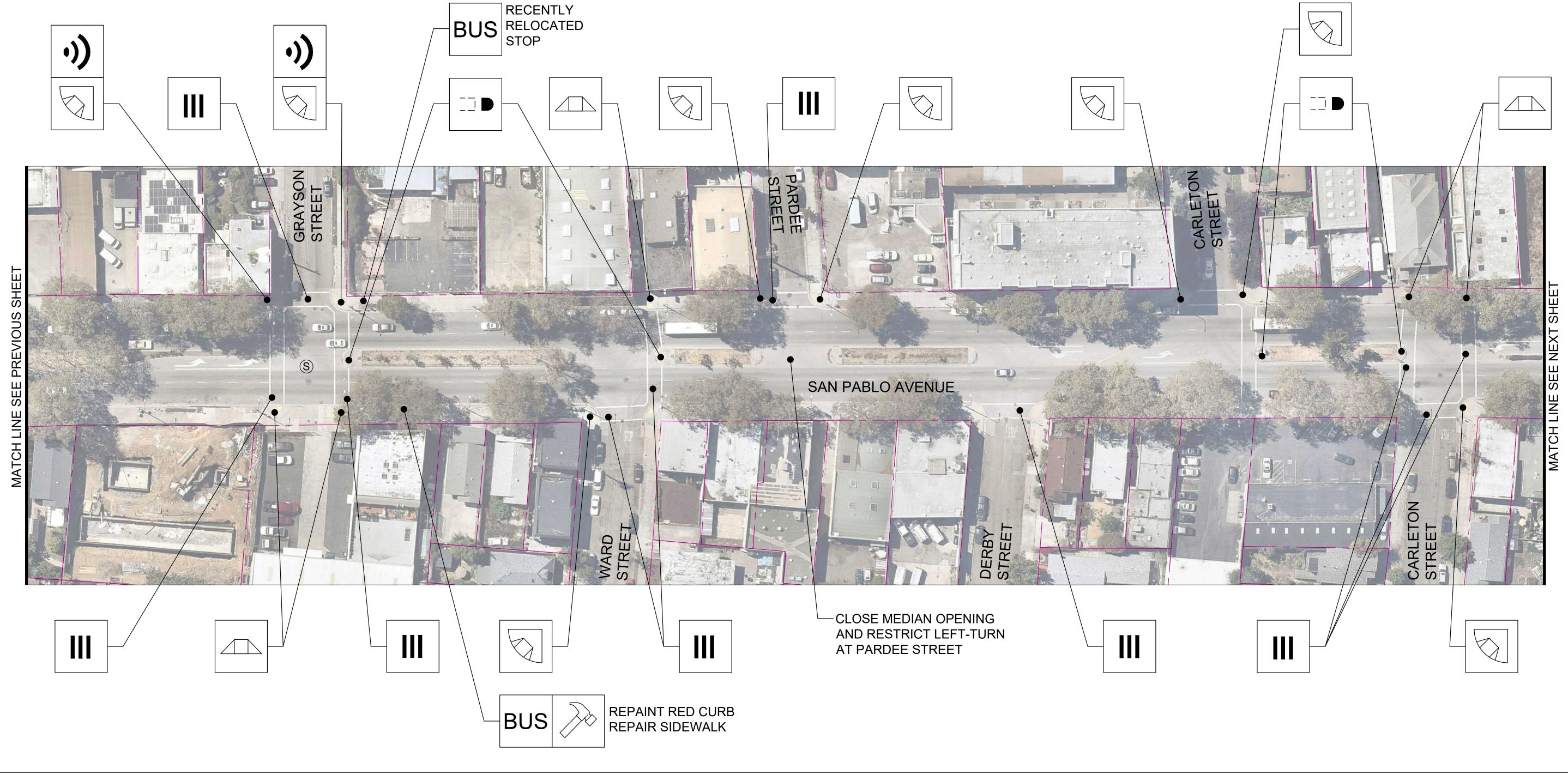
CITY BOUNDARY



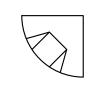
BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SIGNALIZED INTERSECTION









119 111////

1111111

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County Transportation
Commission

RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



INSTALL COUNTDOWN PEDESTRIAN HEADS

INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



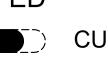
RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



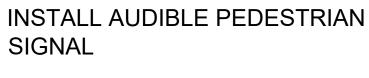
CUT BACK MEDIAN NOSE CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



SIGNAL IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

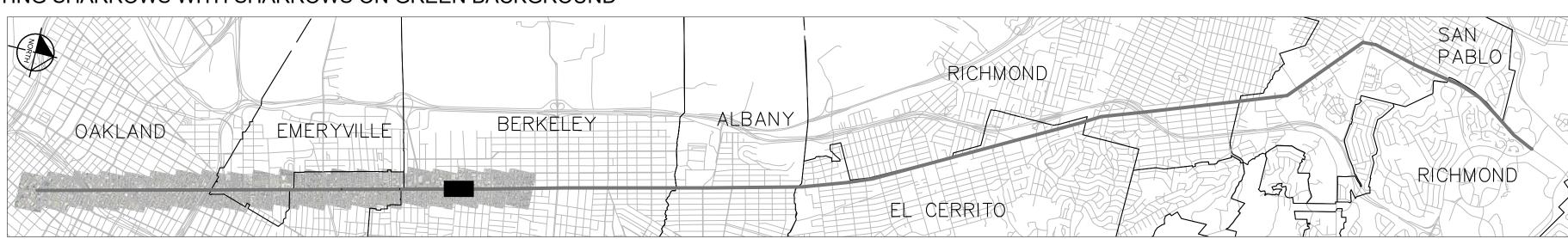


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND



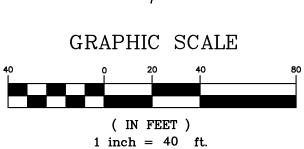
VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT







CITY BOUNDARY SIGNALIZED INTERSECTION



BASE MAP MARCH 2019

SHEET 18 OF 32

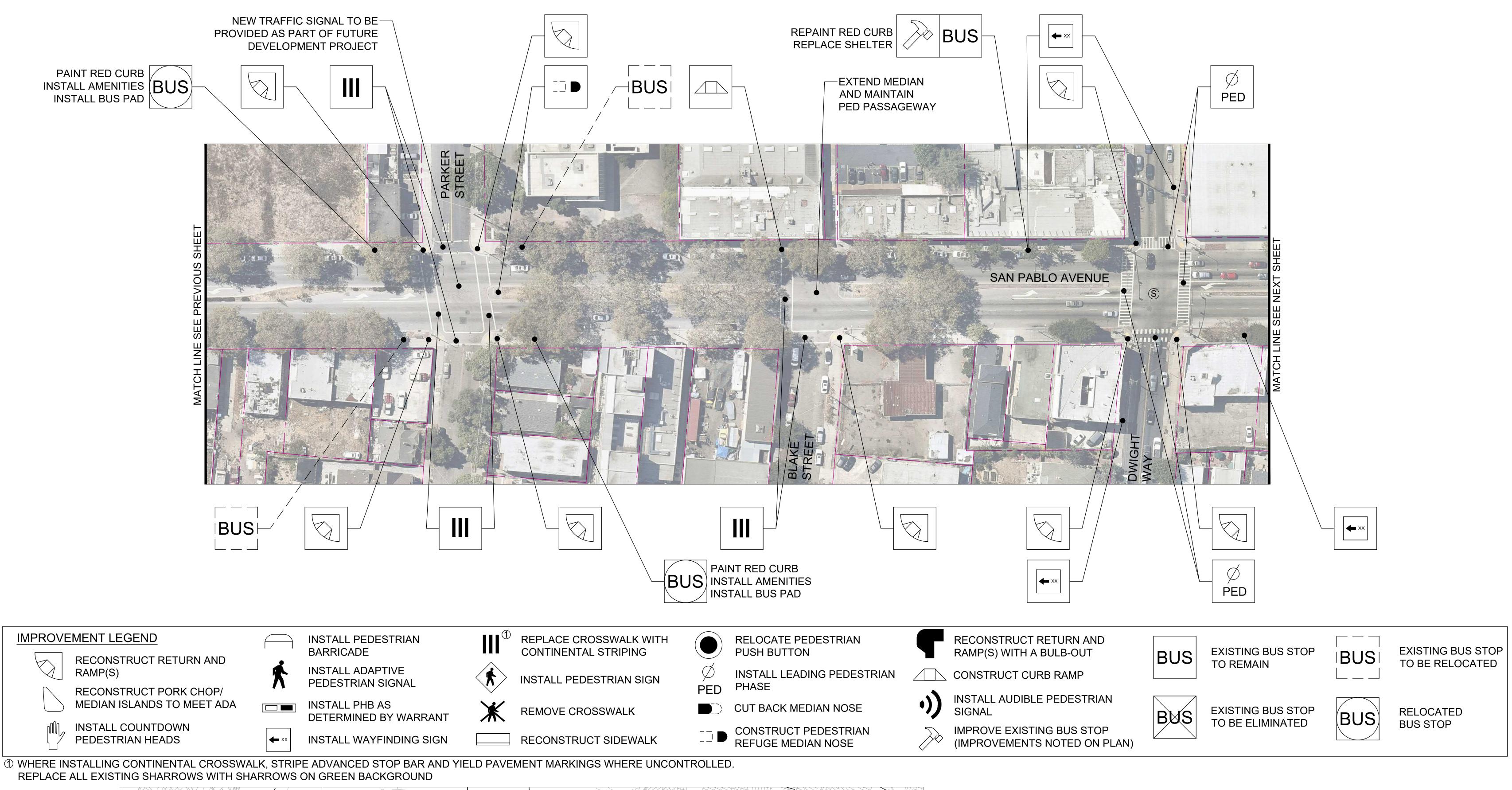


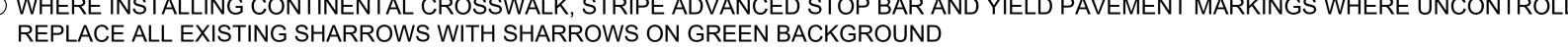
119 111////

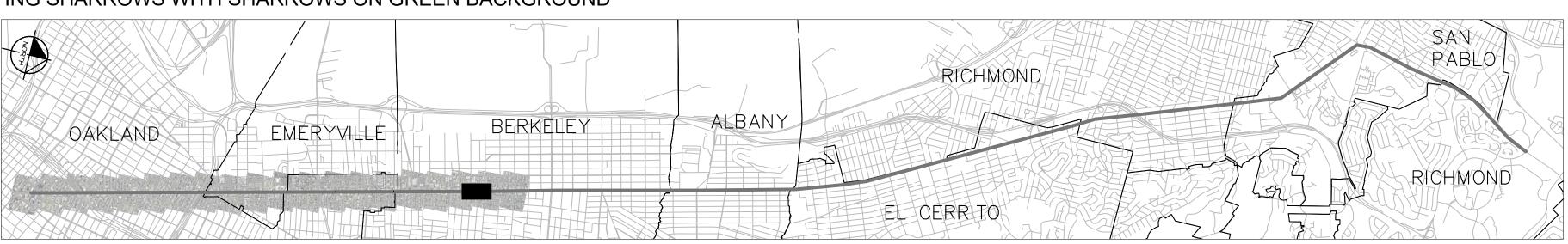
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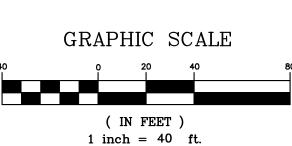
VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT



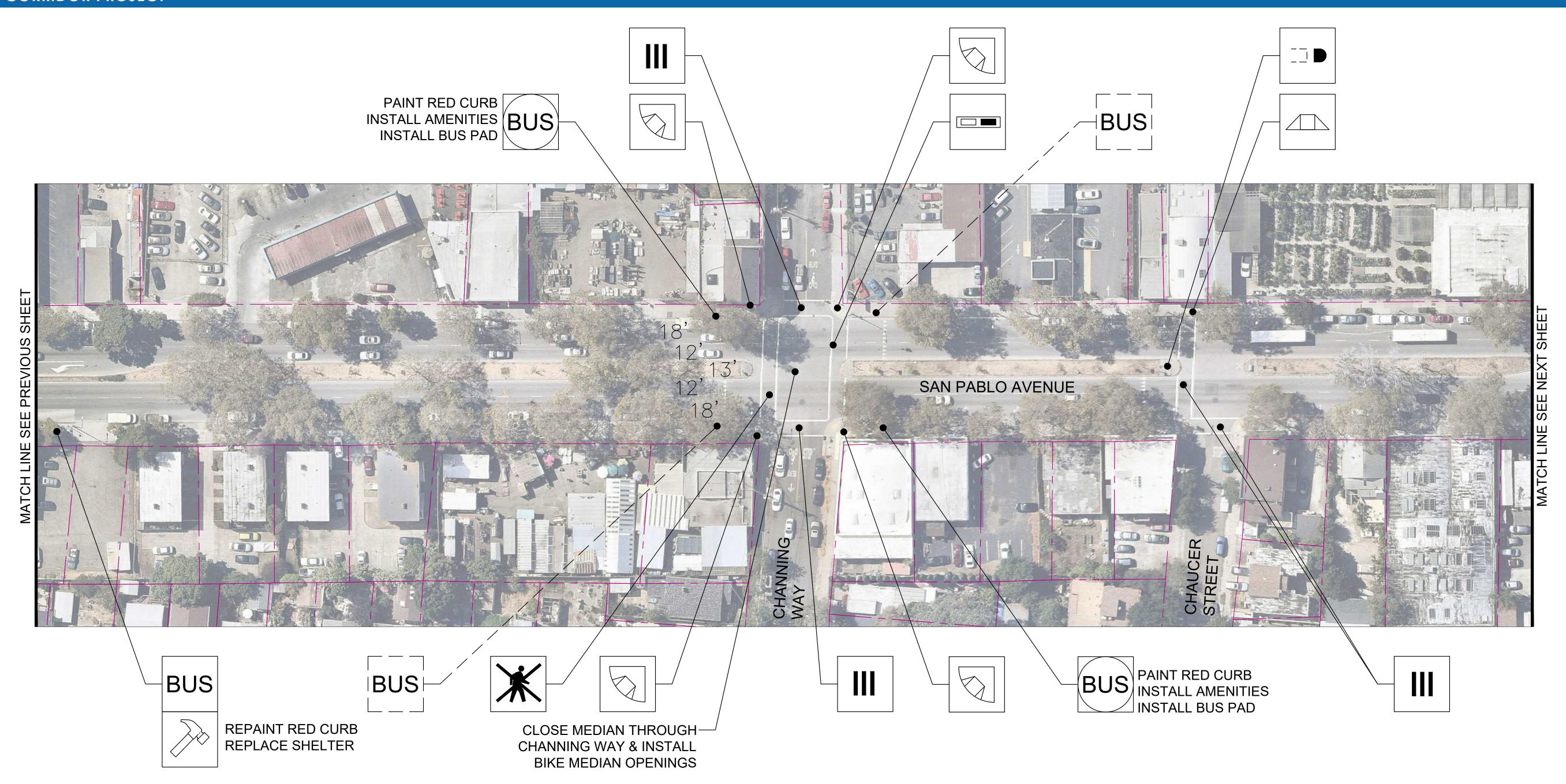
SIGNALIZED INTERSECTION

CURB/SIDEWALK

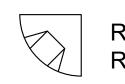
CITY BOUNDARY



BASE MAP MARCH 2019







RECONSTRUCT PORK CHOP/



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County Transportation
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MEDIAN ISLANDS TO MEET ADA INSTALL COUNTDOWN

PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



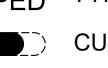
RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT

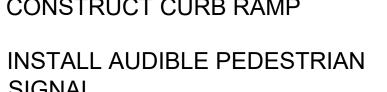
IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



CONSTRUCT CURB RAMP

SIGNAL



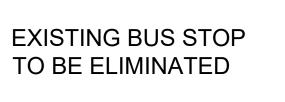
BUS

BUS

EXISTING BUS STOP TO REMAIN

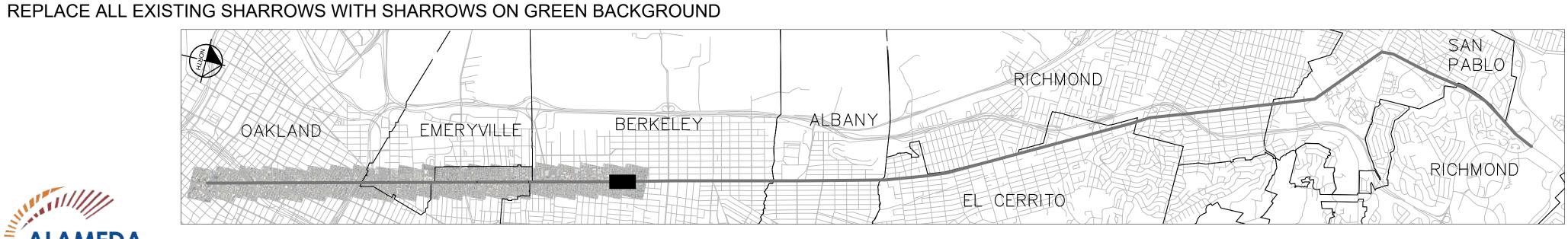


EXISTING BUS STOP TO BE RELOCATED



RELOCATED (BUS) **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED.

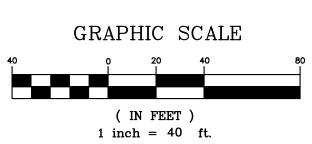


LEGEND

PARCEL BOUNDARY/PROPERTY LINE



CITY BOUNDARY

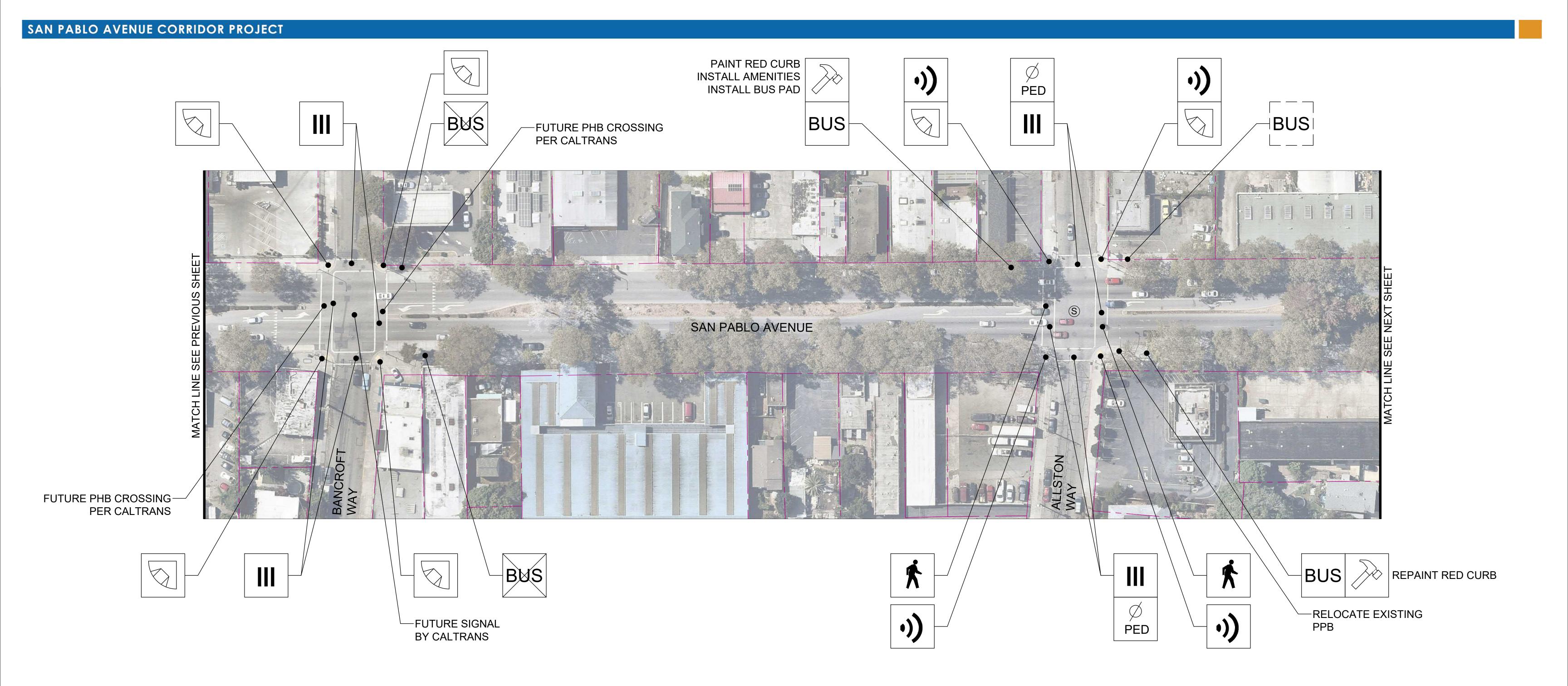


BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

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County Transportation
Commission

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RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA

INSTALL COUNTDOWN

PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN



PHASE



CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



SIGNAL IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

EXISTING BUS STOP

TO BE ELIMINATED

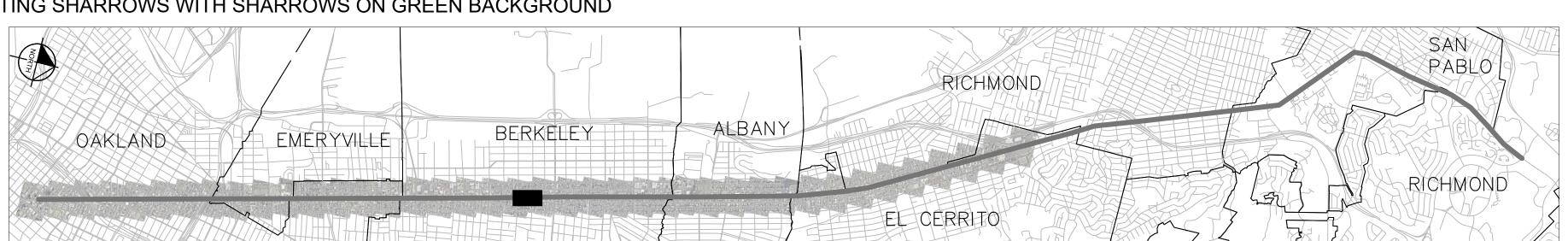


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

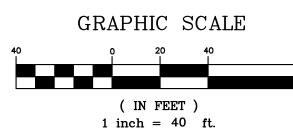


LEGEND

PARCEL BOUNDARY/PROPERTY LINE



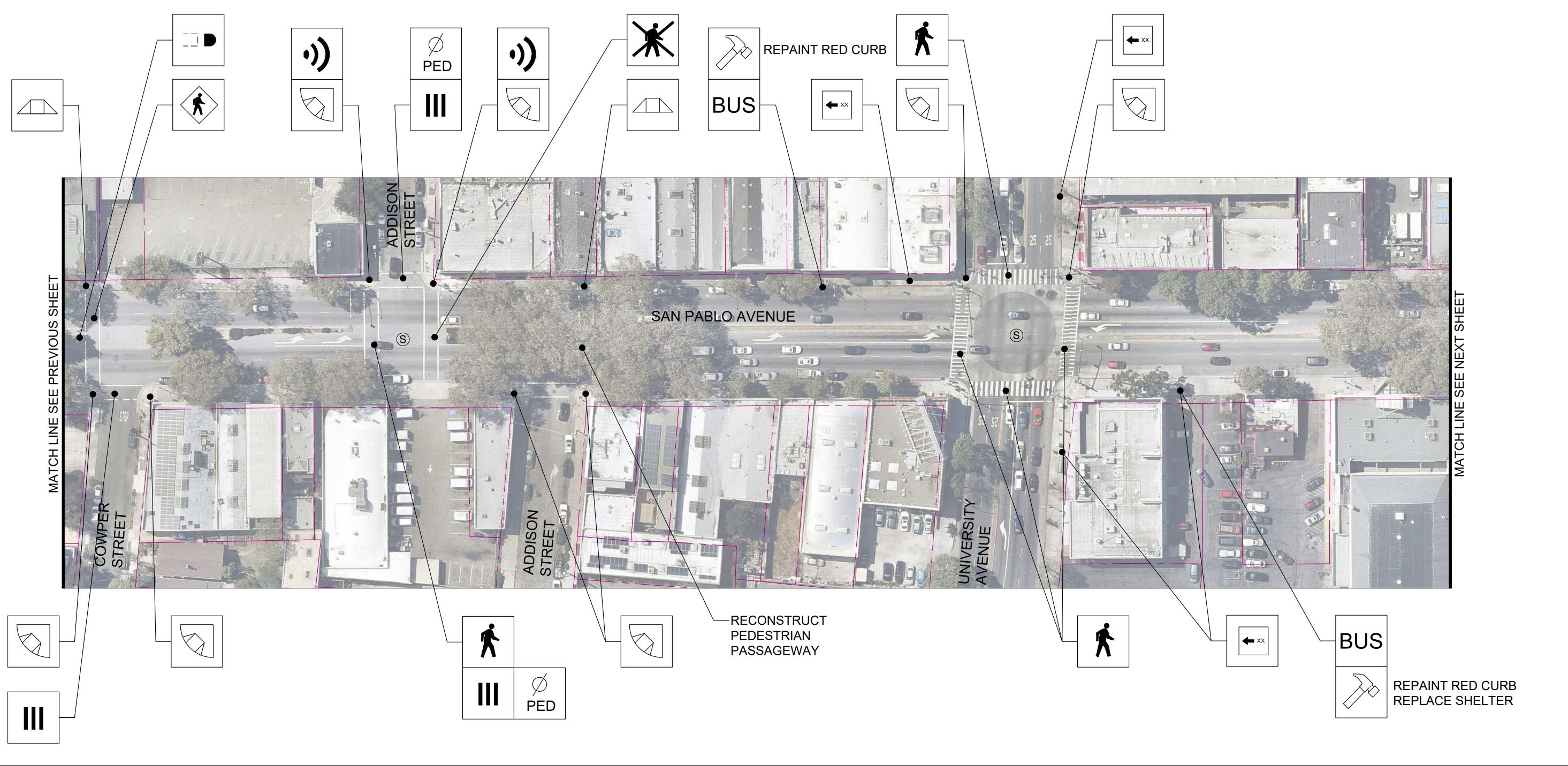
CITY BOUNDARY



BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

SAN PABLO AVENUE CORRIDOR PROJECT







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RECONSTRUCT RETURN AND

RECONSTRUCT PORK CHOP/



MEDIAN ISLANDS TO MEET ADA INSTALL COUNTDOWN

PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING





INSTALL PEDESTRIAN SIGN

RECONSTRUCT SIDEWALK



REMOVE CROSSWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE





SIGNAL

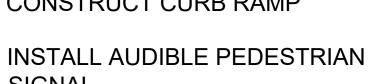
RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT

IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



CONSTRUCT CURB RAMP



EXISTING BUS STOP BUS TO REMAIN

EXISTING BUS STOP

TO BE ELIMINATED

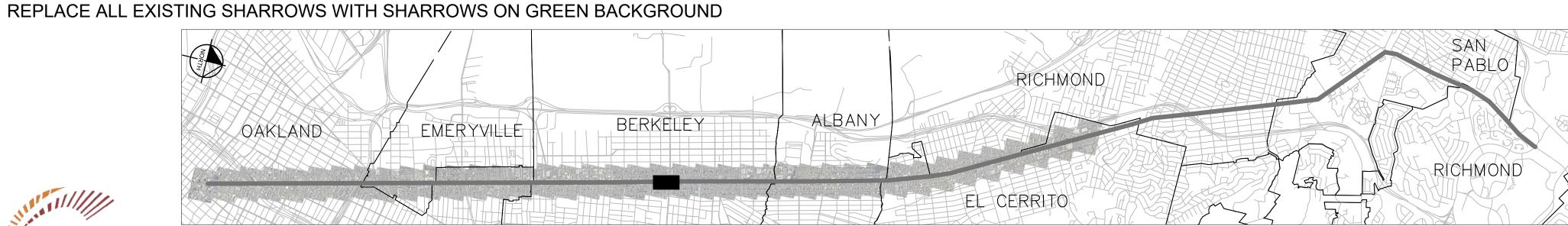


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED.



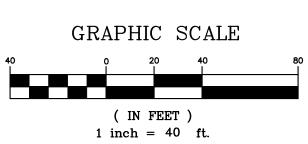
LEGEND

PARCEL BOUNDARY/PROPERTY LINE





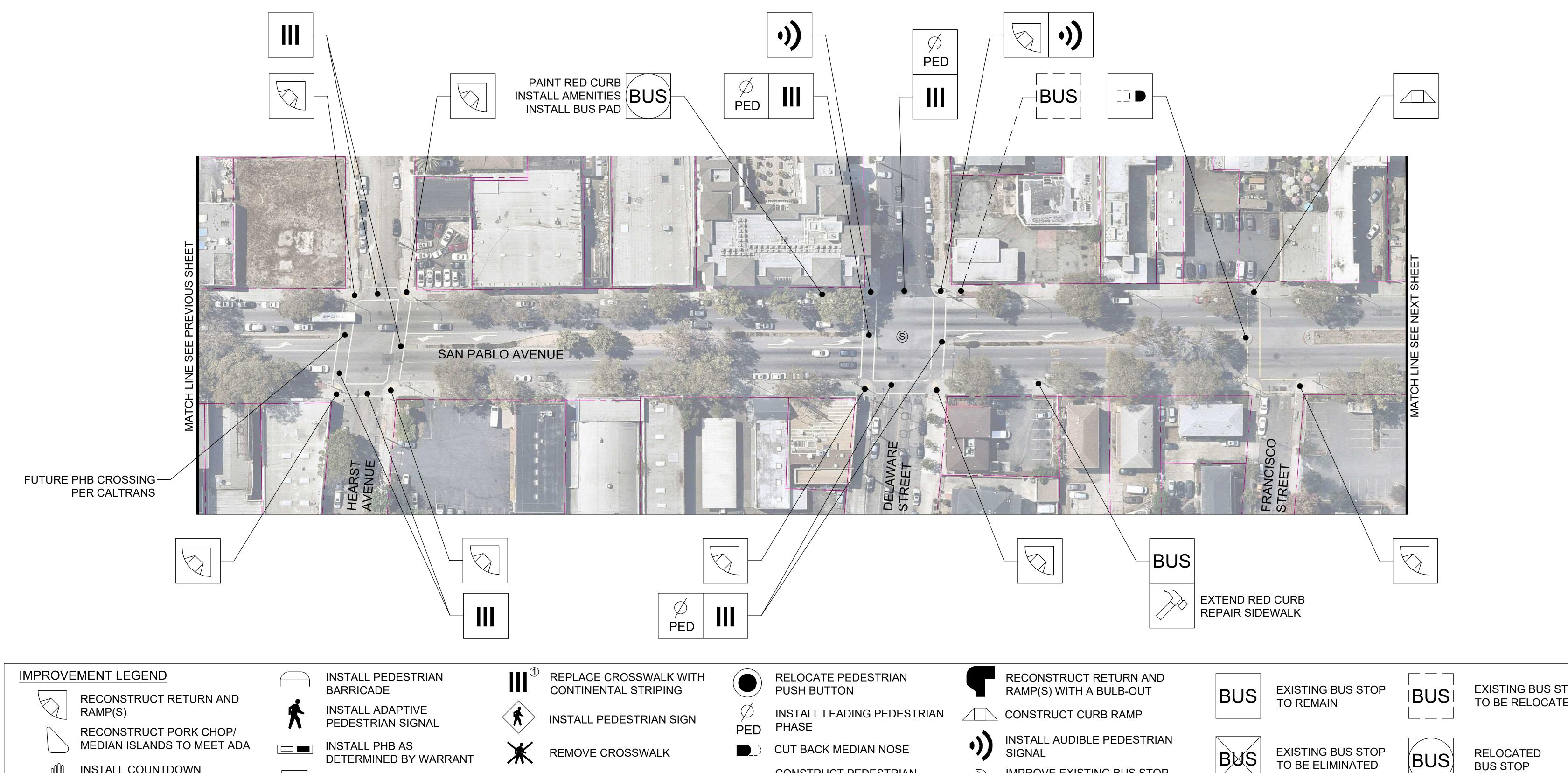
BUS



BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

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County Transportation Commission

INSTALL COUNTDOWN PEDESTRIAN HEADS

DETERMINED BY WARRANT



INSTALL WAYFINDING SIGN





RECONSTRUCT SIDEWALK



CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



(IMPROVEMENTS NOTED ON PLAN)

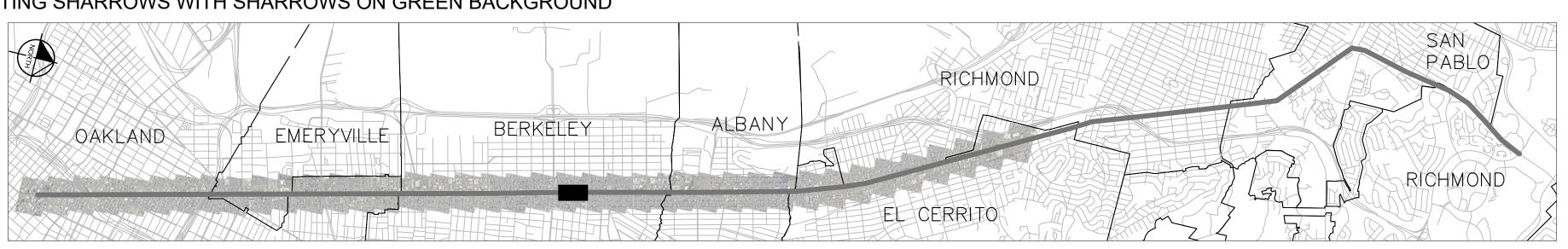
IMPROVE EXISTING BUS STOP

EXISTING BUS STOP TO BE RELOCATED



BUS STOP

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

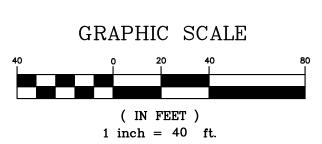


LEGEND

PARCEL BOUNDARY/PROPERTY LINE



CITY BOUNDARY



BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

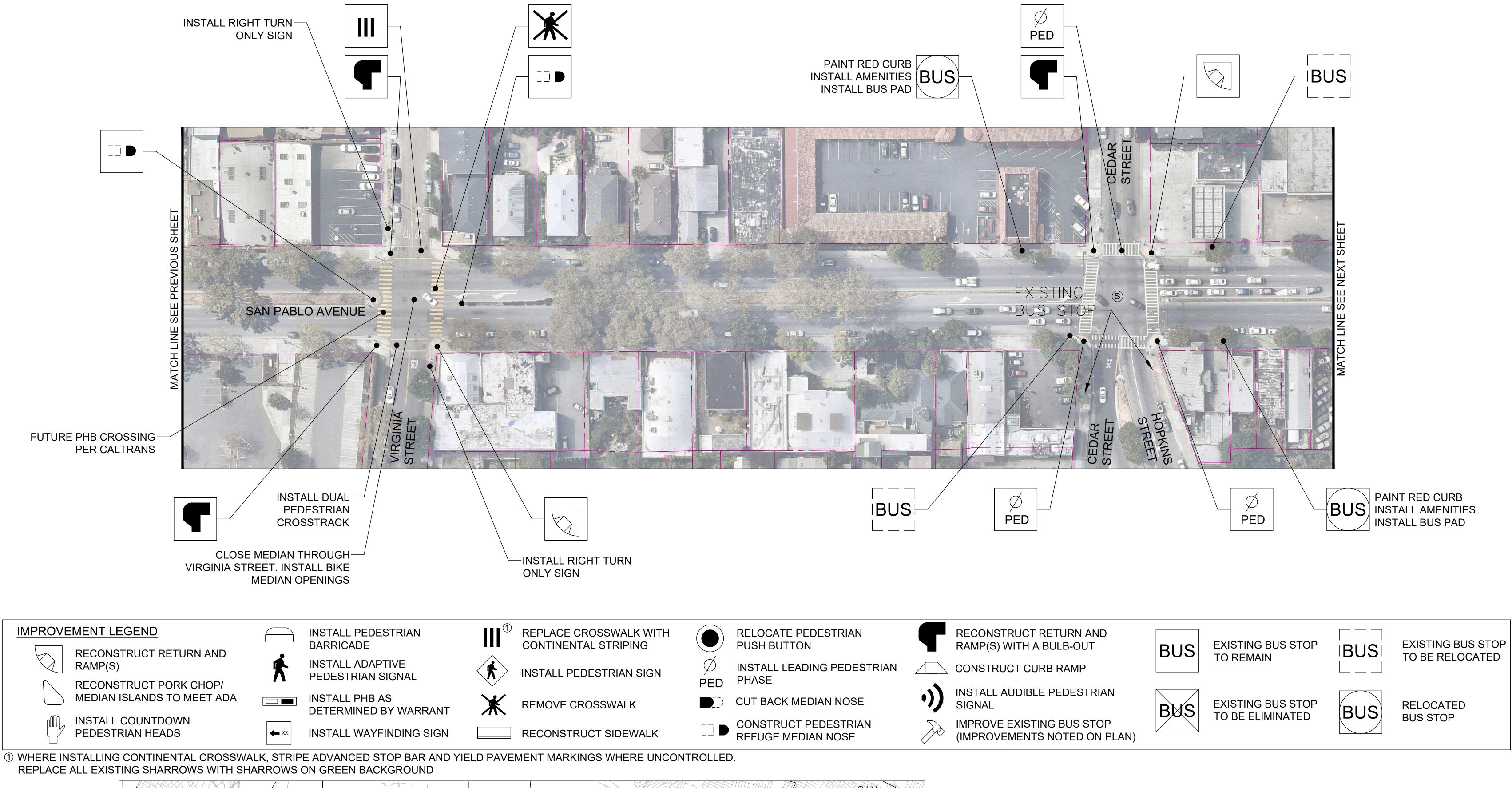
SIGNALIZED INTERSECTION

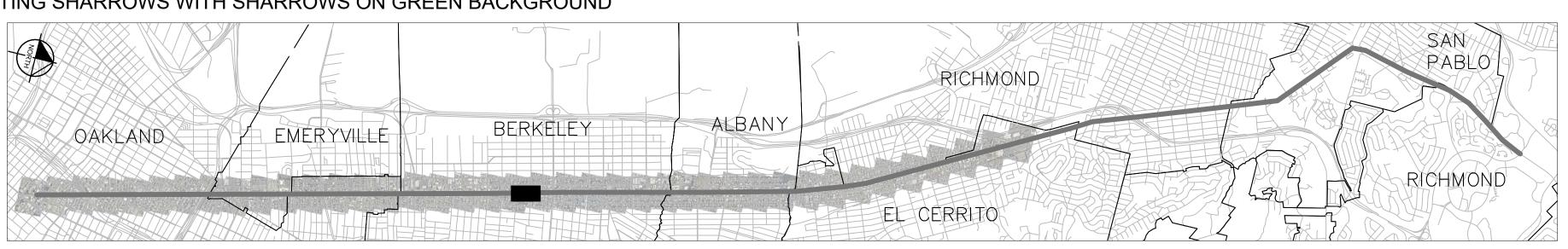
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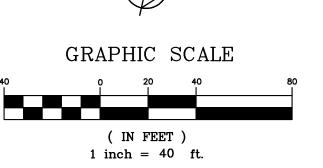




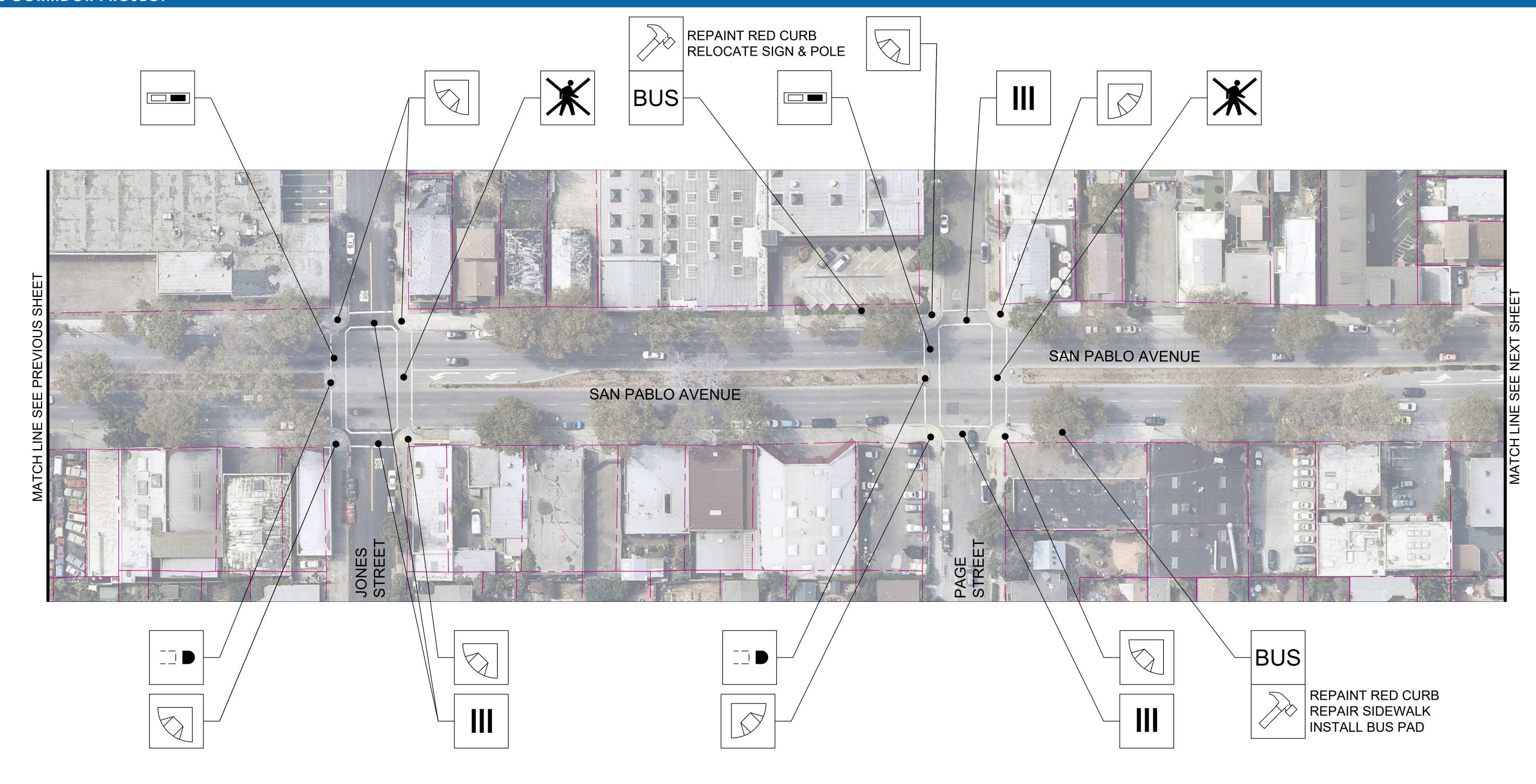
LEGEND PARCEL BOUNDARY/PROPERTY LINE







BASE MAP MARCH 2019









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County Transportation
Commission

MEDIAN ISLANDS TO MEET ADA

INSTALL COUNTDOWN

PEDESTRIAN HEADS

RECONSTRUCT PORK CHOP/



INSTALL PEDESTRIAN BARRICADE

INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



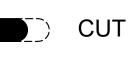
RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN



PHASE



CUT BACK MEDIAN NOSE CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



INSTALL AUDIBLE PEDESTRIAN SIGNAL IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

EXISTING BUS STOP

TO BE ELIMINATED

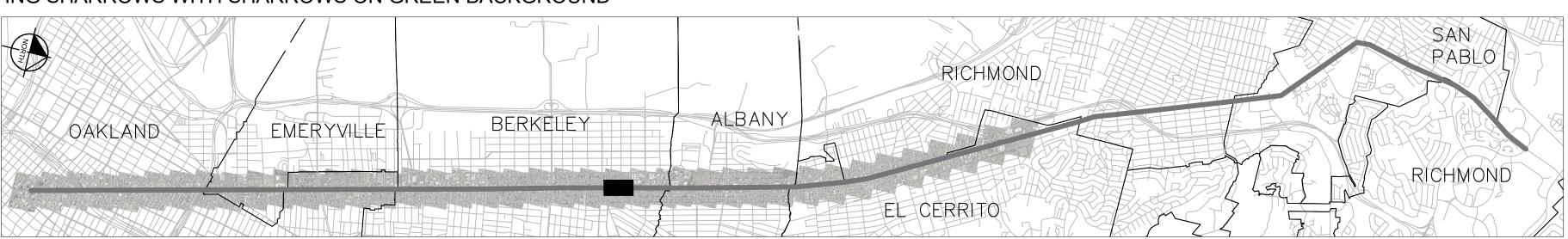


EXISTING BUS STOP TO BE RELOCATED

(BUS)

RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

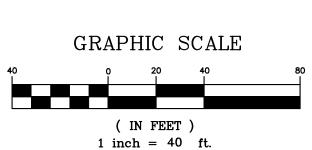


LEGEND

PARCEL BOUNDARY/PROPERTY LINE



CITY BOUNDARY



BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

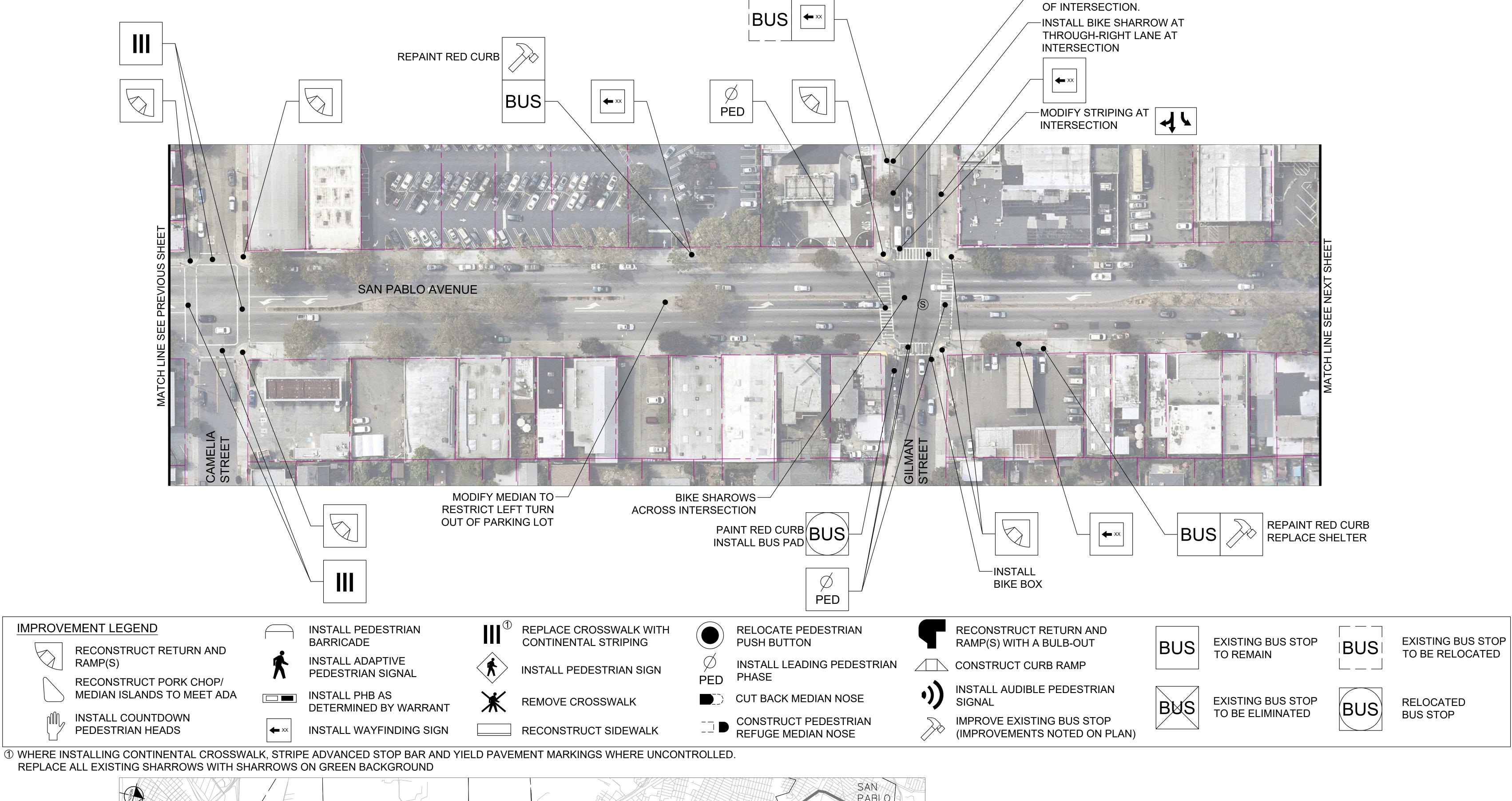


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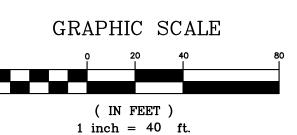
PARCEL BOUNDARY/PROPERTY LINE CURB/SIDEWALK

-INSTALL BIKE LANE WEST

LEGEND

CITY BOUNDARY

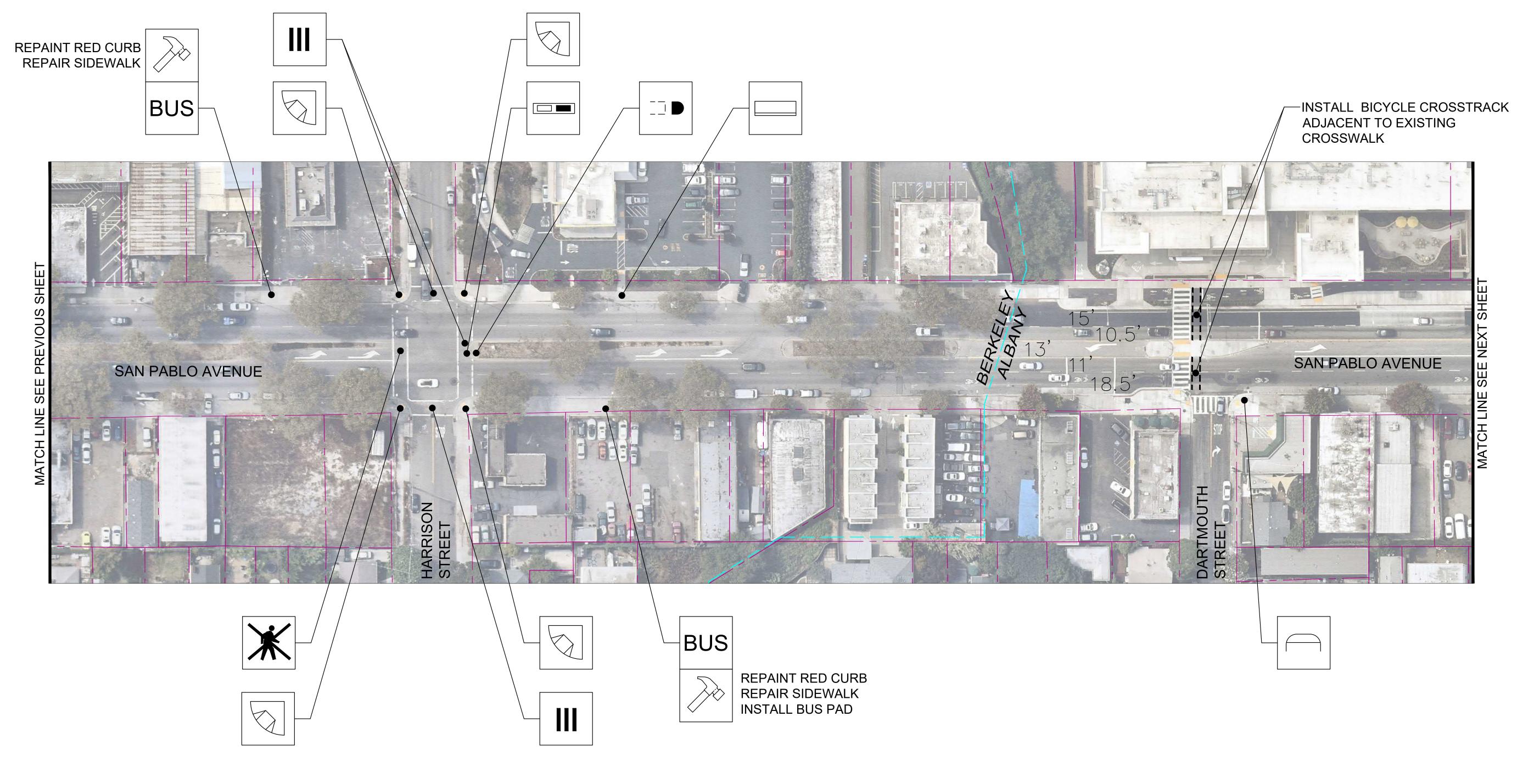
SIGNALIZED INTERSECTION



BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SHEET 26 OF 32









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County Transportation
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MEDIAN ISLANDS TO MEET ADA INSTALL COUNTDOWN

PEDESTRIAN HEADS

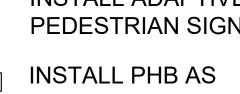


INSTALL PEDESTRIAN BARRICADE

INSTALL ADAPTIVE PEDESTRIAN SIGNAL



DETERMINED BY WARRANT



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH CONTINENTAL STRIPING



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



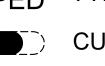
RECONSTRUCT SIDEWALK



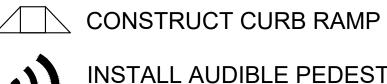
RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



INSTALL AUDIBLE PEDESTRIAN SIGNAL

RECONSTRUCT RETURN AND

RAMP(S) WITH A BULB-OUT



IMPROVE EXISTING BUS STOP (IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

EXISTING BUS STOP

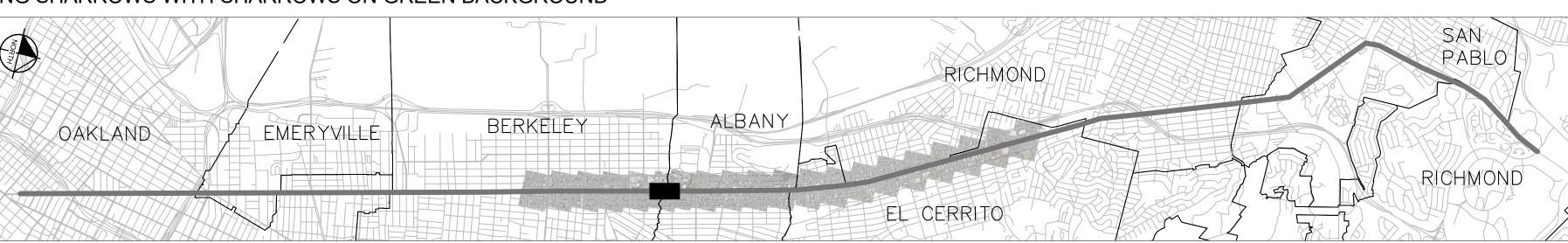
TO BE ELIMINATED



EXISTING BUS STOP TO BE RELOCATED

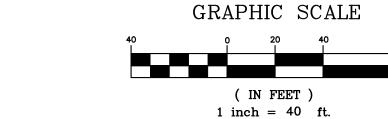
RELOCATED (BUS) **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND



LEGEND



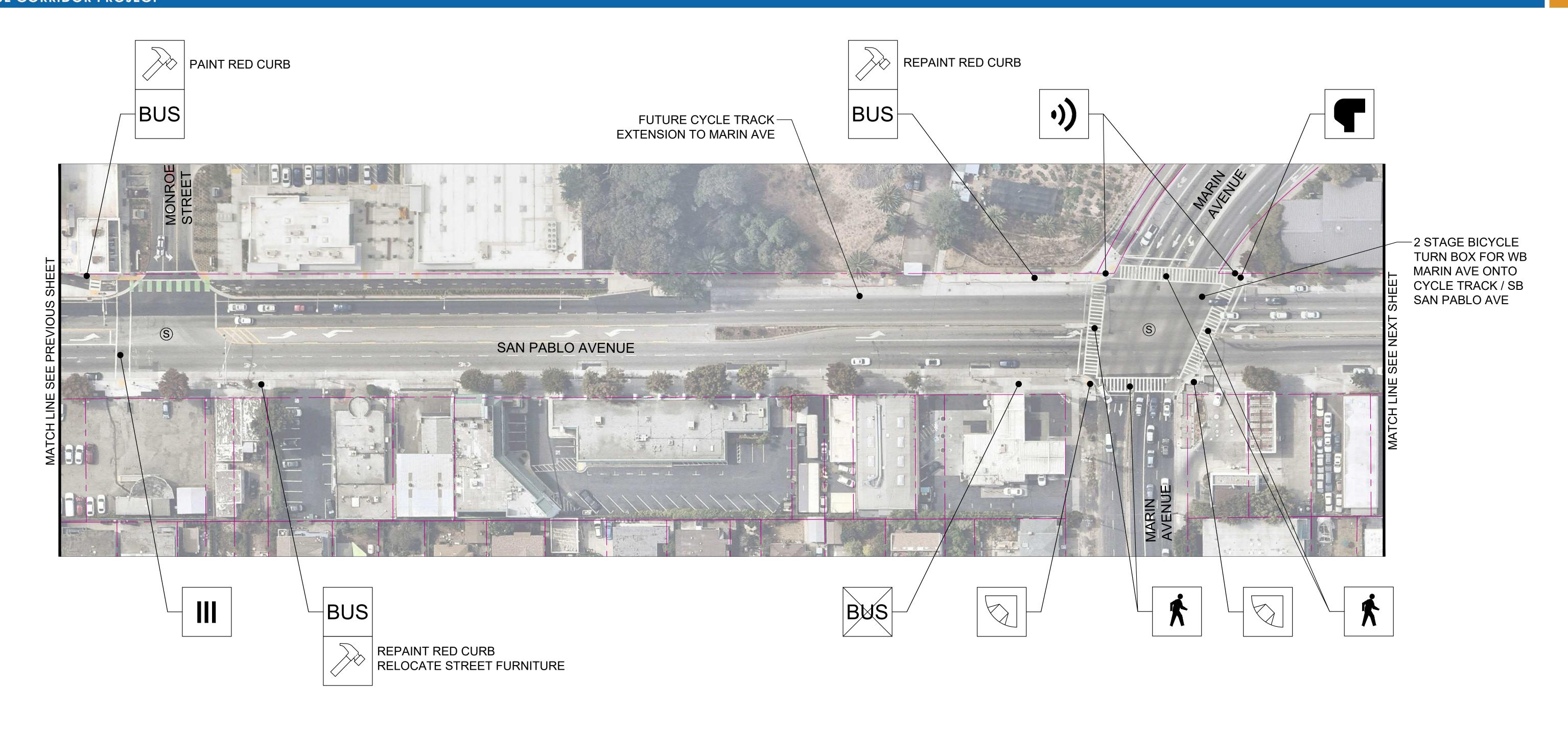


BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT



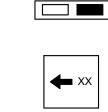
CITY BOUNDARY







RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



INSTALL COUNTDOWN PEDESTRIAN HEADS

INSTALL PEDESTRIAN BARRICADE

INSTALL ADAPTIVE

INSTALL PHB AS

PEDESTRIAN SIGNAL



REPLACE CROSSWALK WITH **CONTINENTAL STRIPING**



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT

INSTALL AUDIBLE PEDESTRIAN

IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



SIGNAL

CONSTRUCT CURB RAMP



BUS

TO REMAIN

EXISTING BUS STOP



EXISTING BUS STOP TO BE RELOCATED

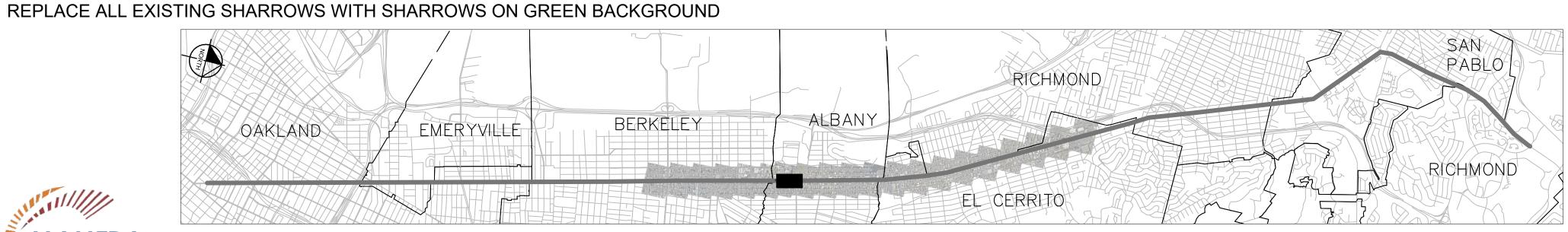


RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED.

DETERMINED BY WARRANT

INSTALL WAYFINDING SIGN

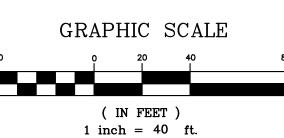


LEGEND

PARCEL BOUNDARY/PROPERTY LINE





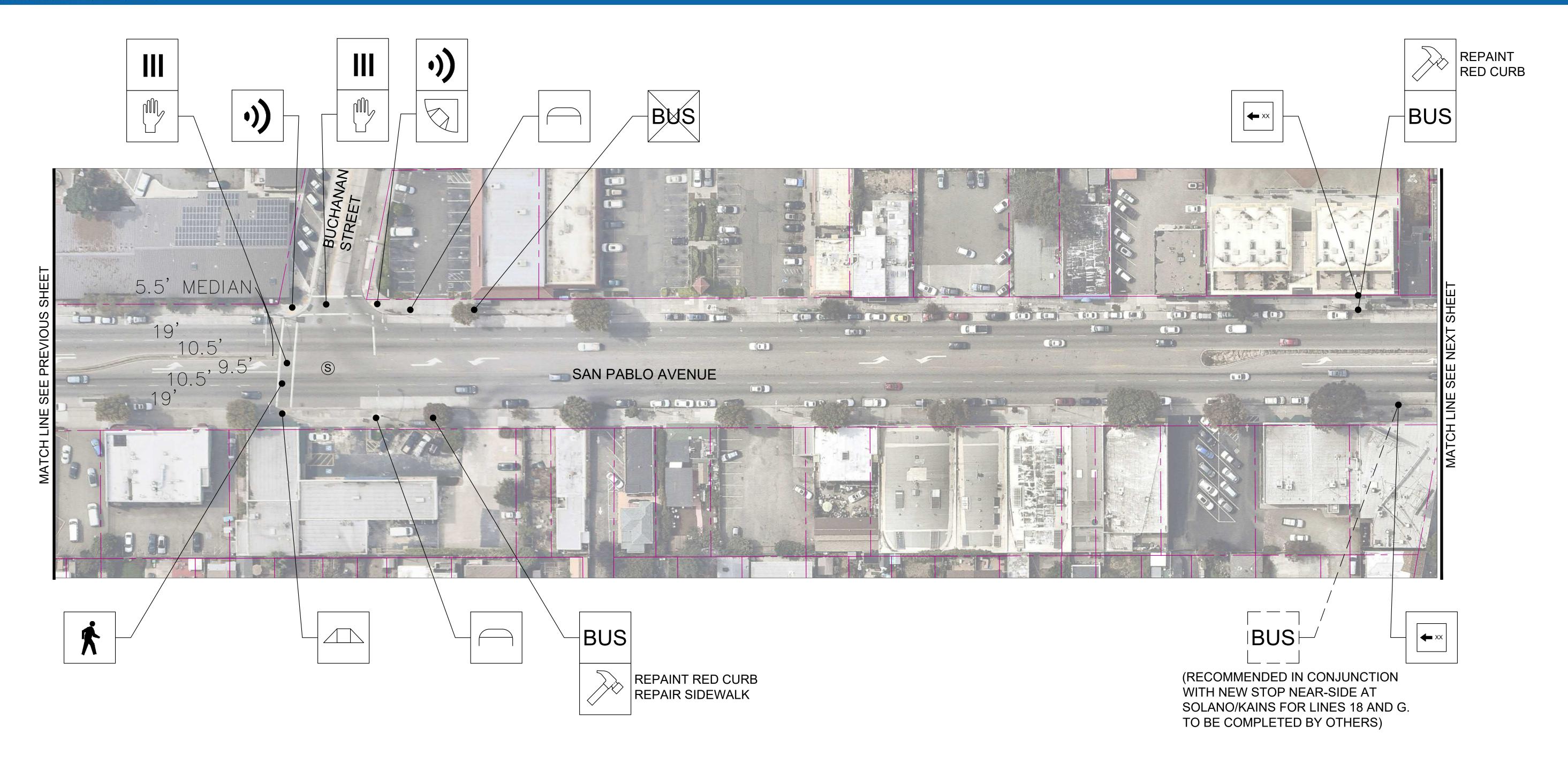


BASE MAP MARCH 2019

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VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

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RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



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County Transportation
Commission

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INSTALL COUNTDOWN PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



REPLACE CROSSWALK WITH **CONTINENTAL STRIPING**



INSTALL PEDESTRIAN SIGN



REMOVE CROSSWALK



RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE

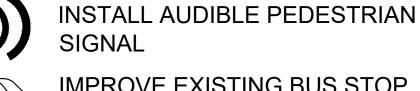




RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



IMPROVE EXISTING BUS STOP (IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

EXISTING BUS STOP

TO BE ELIMINATED

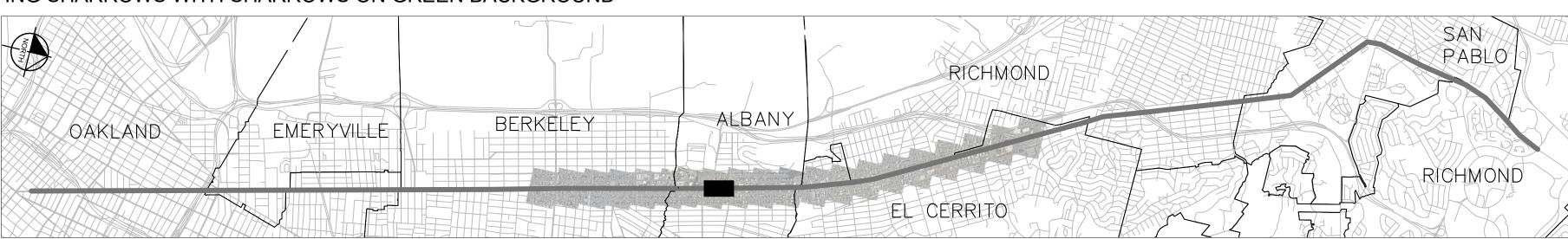


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

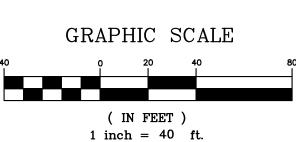


LEGEND

PARCEL BOUNDARY/PROPERTY LINE



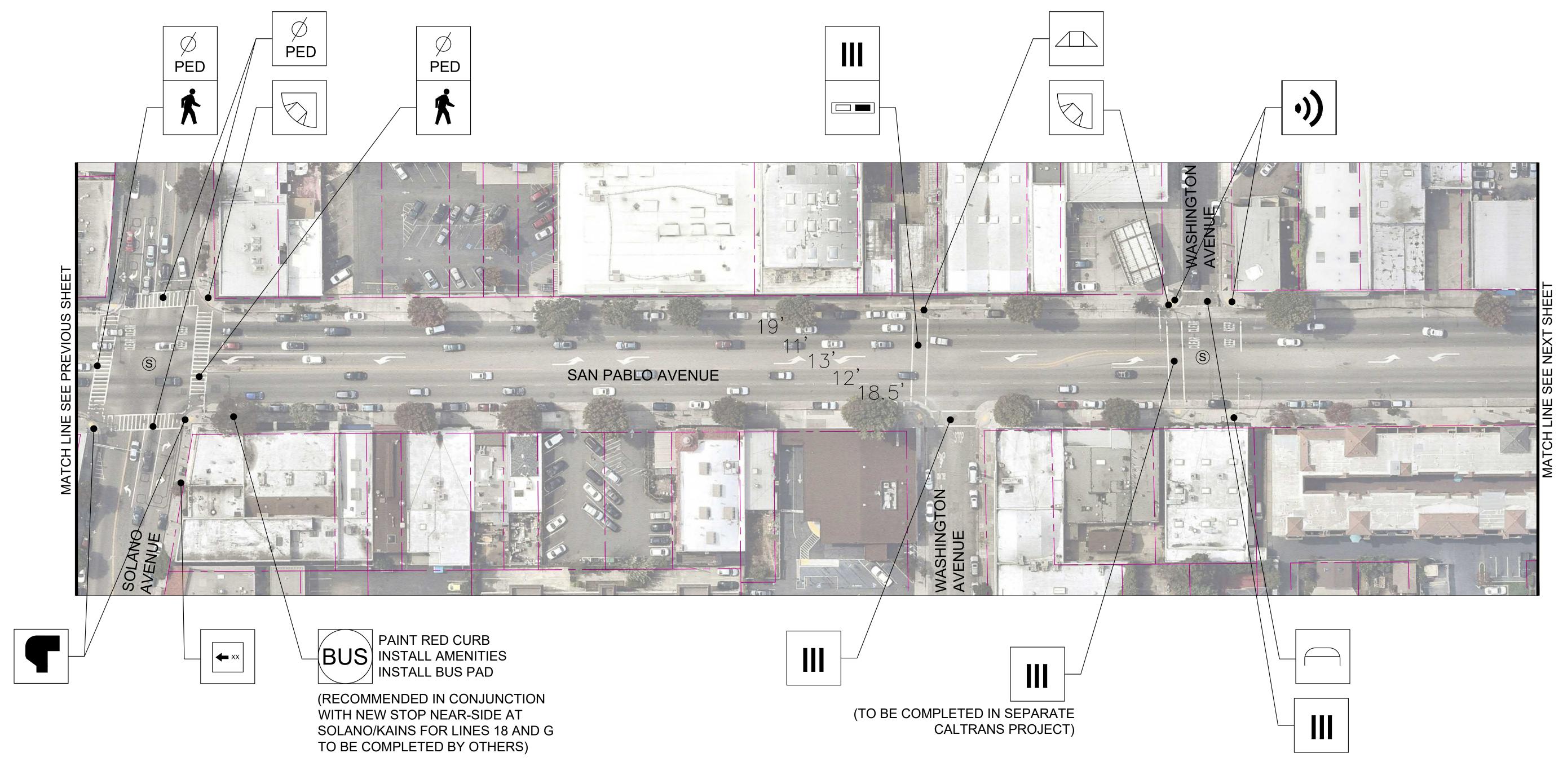
CITY BOUNDARY SIGNALIZED INTERSECTION



BASE MAP MARCH 2019

VERY NEAR TERM PROPOSED IMPROVEMENTS - JUNE 2020 DRAFT

SHEET 29 OF 32







RECONSTRUCT PORK CHOP/



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Commission

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MEDIAN ISLANDS TO MEET ADA INSTALL COUNTDOWN

PEDESTRIAN HEADS



INSTALL PEDESTRIAN BARRICADE



INSTALL ADAPTIVE PEDESTRIAN SIGNAL



INSTALL PHB AS **DETERMINED BY WARRANT**



INSTALL WAYFINDING SIGN



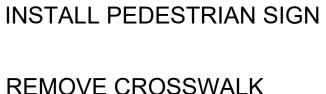
REPLACE CROSSWALK WITH CONTINENTAL STRIPING



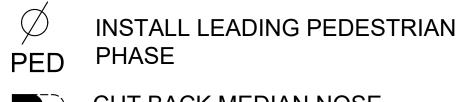


REMOVE CROSSWALK

RECONSTRUCT SIDEWALK







PUSH BUTTON

RELOCATE PEDESTRIAN



REFUGE MEDIAN NOSE



RECONSTRUCT RETURN AND RAMP(S) WITH A BULB-OUT



CONSTRUCT CURB RAMP



INSTALL AUDIBLE PEDESTRIAN SIGNAL IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)



BUS

EXISTING BUS STOP TO REMAIN

EXISTING BUS STOP

TO BE ELIMINATED

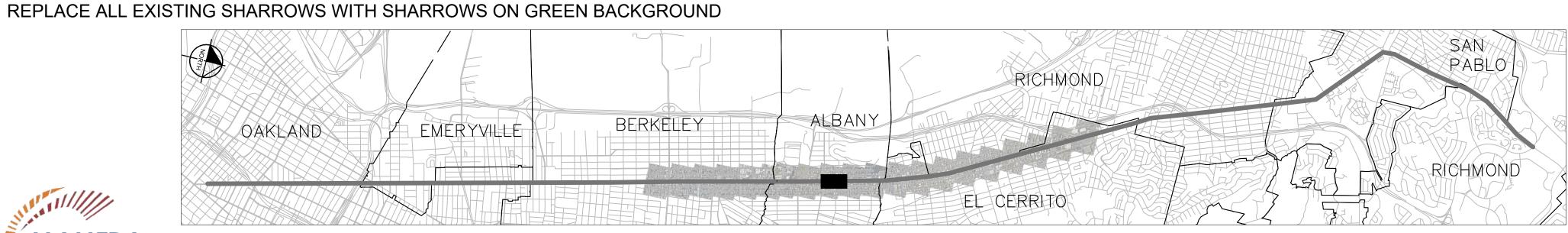


EXISTING BUS STOP TO BE RELOCATED



RELOCATED **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED.

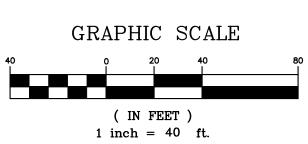


LEGEND

PARCEL BOUNDARY/PROPERTY LINE





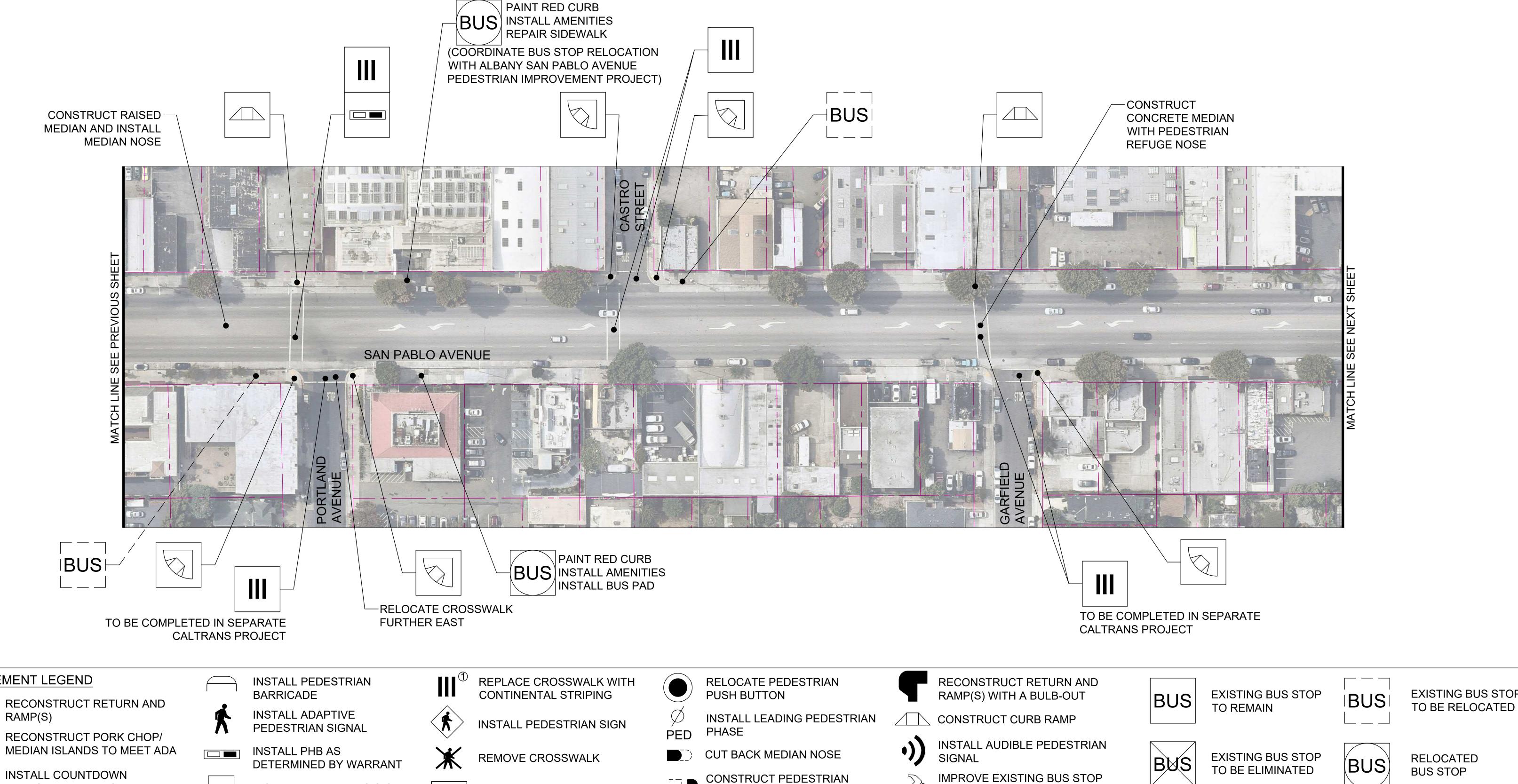


BASE MAP MARCH 2019

SIGNALIZED INTERSECTION

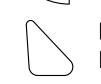


SHEET 30 OF 32









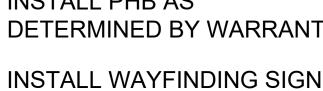
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ALAMEDA

County Transportation Commission

INSTALL COUNTDOWN PEDESTRIAN HEADS

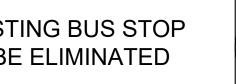




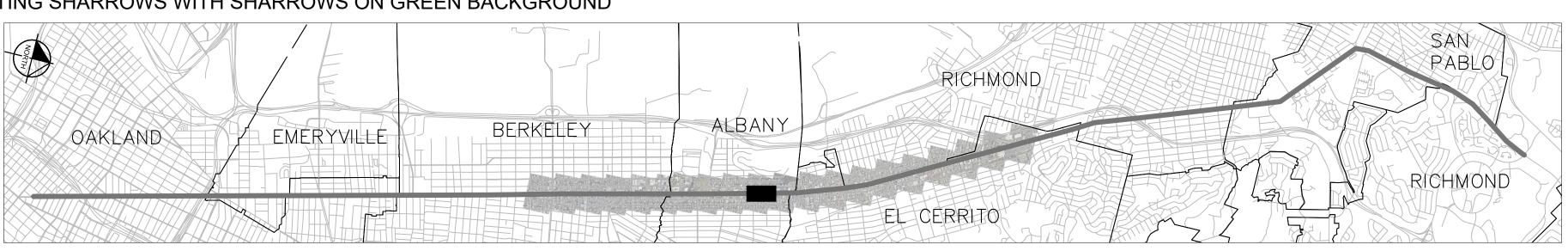
RECONSTRUCT SIDEWALK

CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE

EXISTING BUS STOP



① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED. REPLACE ALL EXISTING SHARROWS WITH SHARROWS ON GREEN BACKGROUND

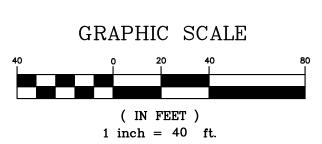


LEGEND

PARCEL BOUNDARY/PROPERTY LINE



CITY BOUNDARY



BASE MAP MARCH 2019

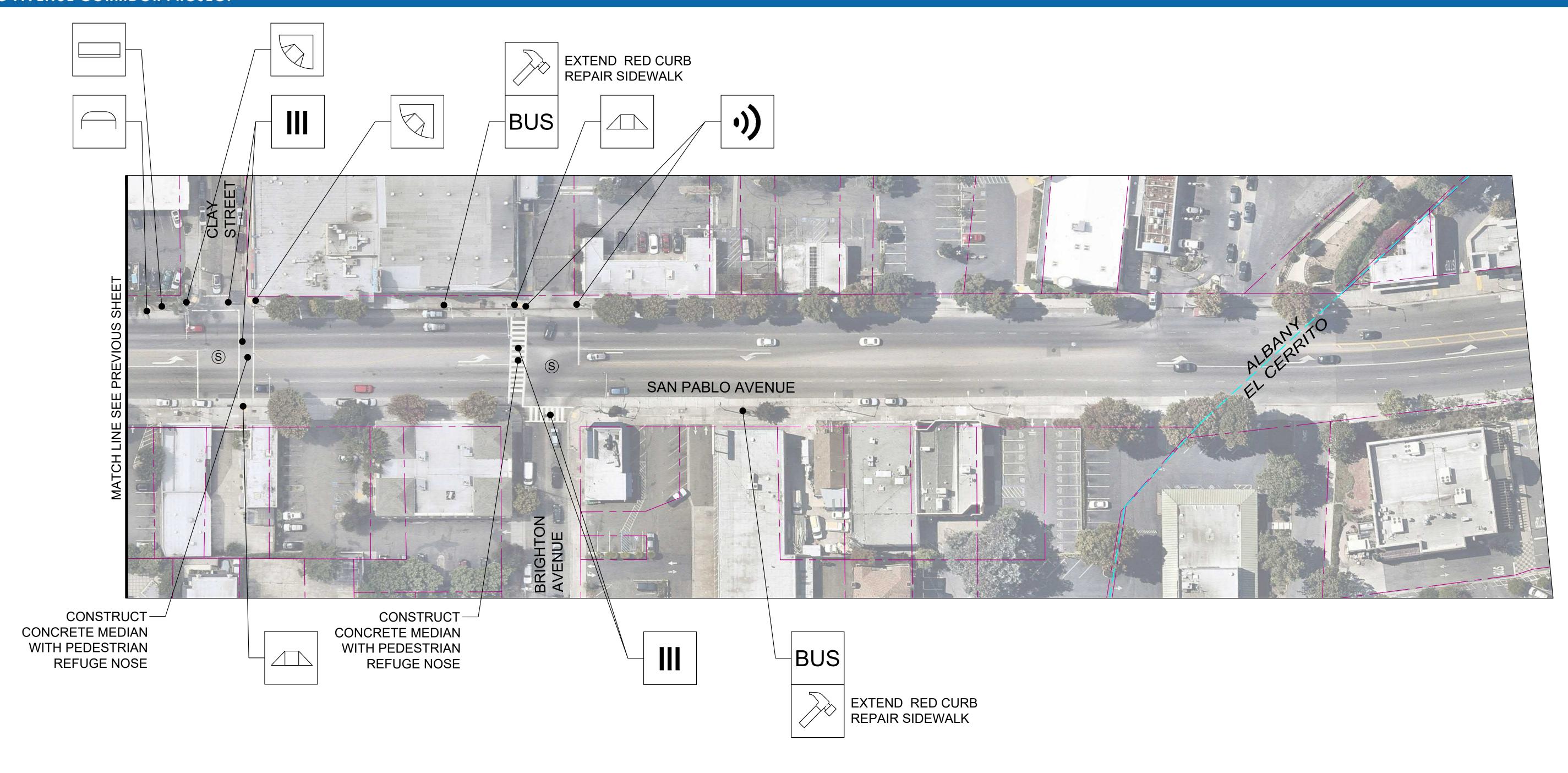
SIGNALIZED INTERSECTION

(IMPROVEMENTS NOTED ON PLAN)

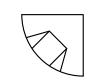


SHEET 31 OF 32

SAN PABLO AVENUE CORRIDOR PROJECT







RECONSTRUCT RETURN AND RAMP(S)



1111111

ALAMEDA

County Transportation
Commission

RECONSTRUCT PORK CHOP/ MEDIAN ISLANDS TO MEET ADA



INSTALL COUNTDOWN

PEDESTRIAN HEADS

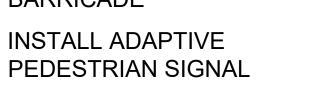


INSTALL PEDESTRIAN BARRICADE

DETERMINED BY WARRANT

INSTALL WAYFINDING SIGN

INSTALL PHB AS





INSTALL PEDESTRIAN SIGN

REMOVE CROSSWALK

CONTINENTAL STRIPING

REPLACE CROSSWALK WITH



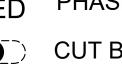
RECONSTRUCT SIDEWALK



RELOCATE PEDESTRIAN **PUSH BUTTON**



INSTALL LEADING PEDESTRIAN PHASE



CUT BACK MEDIAN NOSE CONSTRUCT PEDESTRIAN REFUGE MEDIAN NOSE



INSTALL AUDIBLE PEDESTRIAN SIGNAL

IMPROVE EXISTING BUS STOP

(IMPROVEMENTS NOTED ON PLAN)

RECONSTRUCT RETURN AND

RAMP(S) WITH A BULB-OUT

CONSTRUCT CURB RAMP



EXISTING BUS STOP TO REMAIN

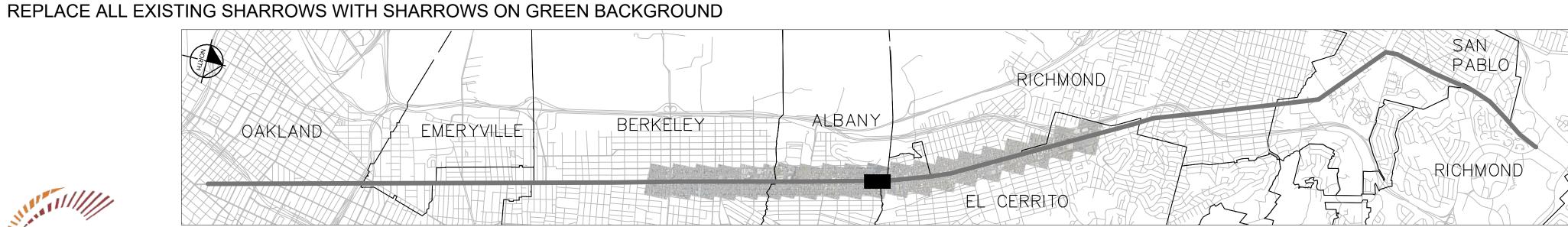


EXISTING BUS STOP TO BE RELOCATED



RELOCATED (BUS) **BUS STOP**

① WHERE INSTALLING CONTINENTAL CROSSWALK, STRIPE ADVANCED STOP BAR AND YIELD PAVEMENT MARKINGS WHERE UNCONTROLLED.

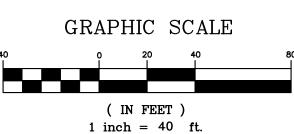


LEGEND

PARCEL BOUNDARY/PROPERTY LINE







BASE MAP MARCH 2019

SIGNALIZED INTERSECTION



APPENDIX D

VERY NEAR-TERM AND NEAR-TERM COST ESTIMATES

San Pablo Avenue Corridor Project - Very Near-Term Berkeley & Albany Concept Level Estimate-Unit Prices

Diablo Engineering Group

3-Feb-20

Prepared By: JAH

	Group	T	I	Prepared By: JAH
ITEM	DESCRIPTION	UNIT	UNIT PRICE	ASSUMPTIONS
	MOBILIZATION/ TRAFFIC CONTROL			
1	Mobilization/ De-mobilization	LS	10% of Construction	Approximately 10% of Construction Cost
2	Traffic Control	LS		Approximately 8% of Construction Cost
3	Develop and Implement SWPPP	LS	0.5% of Constructio	Approximately 0.5% of Construction Cost
4	Construction Survey	LS	0.8% of Constructio	Approximately 0.8% of Construction Cost
5	Utility Protection/ potholing by Contractor	LS	3% of Construction	Approximately 3% of Construction Cost
	DEMOLITION			
6	Clearing and Grubbing	LS	2% of Construction	Approximately 2% of Construction Cost
7	Demolition	LS		Approximately 3% of Construction Cost
			070 Of Constituetion	Approximately 670 of Contention Cook
	STREET IMPROVEMENTS			Compatible to DCC points and the DCC points are the
8	Reconstruct Return and Ramp(s)	EA	\$20,000.00	Construct PCC curb, gutter, ADA ramp(s), sidewalk, AC Plug, Install DWS (estimate \$50/SF @ 400SF)
9	Construct/Reconstruct Mid-block Curb Ramp	EA		Construct PCC curb, gutter, ADA ramp, sidewalk, AC Plug, Install DWS (up to 400 SF of concrete with 1 ramp) 400 SF x \$30/SF + \$5,000 ramp
10	Reconstruct Driveway	SF		Construct PCC curb, gutter, driveway slope, sidewalk, AC Plug
	Relocate/Adjust to grade Utility Boxes	EA		At curb returns and median areas
12	Relocate/Adjust to grade Utility Vault	EA		At curb returns
13	Adjust MH Lid to grade	EA	\$2,000.00	At curb returns
14	Reconstruct Return and Ramp(s) with a Bulb-out	SF		Construct PCC curb, gutter, ADA ramp(s), sidewalk, AC Plug, Install DWS \$30/SF+\$20/SF ramps and other forming, box adjustments
15	Storm Drain Improvements at bulb-out	EA	\$50,000.00	One manhole, one inlet, 80 LF pipe, 20% misc.
16	Reconstruct Sidewalk	SF	\$30.00	
17	Widen sidewalk	SF	\$30.00	Very minor landscape/irrigation repair needed
		EA		Construct PCC curb, AC Plug, Repair median
	Construct Pedestrian Refuge Median Nose			hardscape/landscape/irrigation
19	Relocate Post with Signs at Median	EA	\$400.00	At median areas
20	Re-construct Pedestrian Passageway	SF	\$45.00	Construct PCC curb, AC Plug, Repair median hardscape/landscape/irrigation, ADA passageway
21	Close median opening	SF	\$40.00	Construct PCC curb, AC Plug, Repair median hardscape/landscape/irrigation
	Construct Raised concrete median with pedestrian		Ψ10.00	Construct PCC curb, AC Plug, Repair median
22	refuge	SF	\$45.00	hardscape/landscape/irrigation, ADA passageway
23	Construct bus stop concrete pad	SF	\$40.00	1 0 7
24	Install pedestrian barricade	EA	\$2,000.00	
	SIGNING AND STRIPING			
25	Remove crosswalk	SF	¢2 00	Fog Seal over removed crosswalk
20	TOTIO OF OTOGOWAIN		Ψ2.00	24" @ 2' spacing, 10' wide center to center with 3'
26	Replace crosswalk with continental striping	SF	\$5.00	gap per other's recently constructed
	Install bicycle crosstrack adjacent to existing crosswalk	SF		Assumes green pavement skipped, so only half the area would be green. Unit cost was halved.
	Miscellaneous striping	SF		green pavement
	Install wayfinding sign	EA	\$500.00	,
-	Install pedestrian sign	EA	\$500.00	
31	Install miscellaneous signs	EA	\$500.00	
	SIGNALS & LIGHTING		,	
32	Install countdown pedestrian heads	EA	¢1 000 00	Locations noted on plan
33	Install adaptive pedestrian signal	EA	, ,	Locations noted on plan
34	Install PHB as determined by warrant	EA		Locations noted on plan
	Relocate pedestrian push button	EA		assembly post per Caltrans standard plan ES-7A
-	Install leading pedestrian phase	EA		Locations noted on plan
	Install leading pedestrian priase Install audible pedestrian signal	EA		Locations noted on plan
38	Install Pedestrian Lighting @ Bus Stops	EA		Two lights/ bus stop
39	Install Pedestrian Lighting @ Crosswalks	EA		Two lights/ bus stop Two lights/ unsignalized intersection
วฮ	matan i edeathan Lighting W ClossWalks		φ15,000.00	Two lights/ unsignalized littersection

San Pablo Avenue Corridor Project - Very Near-Term
Berkeley & Albany Concept Level Estimate



2/3/2020

	2/3/2020	l amp																	Oua	ntity &	Fetimate	hv			
Item	Item Description	Unit	Unit Price	Quantity & Estimate by Page Number																					
l nom	item Besonption		Oille Fride		16		17		18		19		20		21		22		23	. ugc	24		25		26
	MOBILIZATION/ TRAFFIC CONTROL				1															Ī					
1	Mobilization/ De-mobilization	LS	10% of Construciton	1	\$45,340	1	\$77,728	1	\$81,452	1	\$48,305	1	\$51,405	1	\$49,430	1	\$62,615	1	\$50,675	1	\$88,166	1	\$64,279	1	\$36,323
2	Traffic Control	LS	8% of Construciton	1	\$36,272	1	\$62,182	1	\$65,162	1	\$38,644	1	\$41,124	1	\$39,544	1	\$50,092	1	\$40,540	1	\$70,533	1	\$51,423	1	\$29,058
3	Develop and Implement SWPPP	LS	0.5% of Construciton	1	\$2,267	1	\$3,886	1	\$4,073	1	\$2,415	1	\$2,570	1	\$2,472	1	\$3,131	1	\$2,534	1	\$4,408	1	\$3,214	1	\$1,816
4	Construction Survey	LS	0.8% of Construciton	1	\$3,627	1	\$6,218	1	\$6,516	1	\$3,864	1	\$4,112	1	\$3,954	1	\$5,009	1	\$4,054	1	\$7,053	1	\$5,142	1	\$2,906
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$13,602	1	\$23,318	1	\$24,436	1	\$14,491	1	\$15,421	1	\$14,829	1	\$18,785	1	\$15,203	1	\$26,450	1	\$19,284	1	\$10,897
	Subtotal				\$101,108		\$173,333		\$181,638		\$107,719		\$114,632		\$110,229		\$139,632		\$113,005		\$196,611		\$143,342	<u> </u>	\$81,000
	DEMOLITION																								
6	Clearing and Grubbing	LS	2% of Construction	1	\$9,068	1	\$15,546	1	\$16,290	1	\$9,661	1	\$10,281	1	\$9,886	1	\$12,523	1	\$10,135	1	\$17,633	1	\$12,856	1	\$7,265
7	Demolition	LS	3% of Construction	1	\$13,602	1	\$23,318	1	\$24,436	1	\$14,491	1	\$15,421	1	\$14,829	1	\$18,785	1	\$15,203	1	\$26,450	1	\$19,284	1	\$10,897
	Subtotal				\$22,670		\$38,864		\$40,726		\$24,152		\$25,702		\$24,715		\$31,308		\$25,338		\$44,083		\$32,139	L	\$18,162
_	STREET IMPROVEMENTS																								<u> </u>
8	Reconstruct Return and Ramp(s)	EA	\$20,000.00	5	\$100,000	5	\$100,000	11	\$220,000	8	\$160,000	4	\$80,000	8	\$160,000	8	\$160,000	9	\$180,000	2	\$40,000	8	\$160,000	6	\$120,000
9	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	0	\$0	4	\$68,000	4	\$68,000	1	\$17,000	1	\$17,000	0	\$0	3	\$51,000	1	\$17,000	0	\$0	0	\$0		\$0
10	Reconstruct Driveway	SF	\$40.00	0	\$0	0	\$0	250	\$10,000	0	\$0	250	\$10,000	0	\$0	0	\$0	442	\$17,680	0	\$0	0	\$0	_	\$0
11 12	Relocate/Adjust to grade Utility Boxes	EA EA	\$3,000.00 \$4,000.00	17	\$51,000 \$0	23 0	\$69,000 \$0	48 0	\$144,000 \$0	24	\$72,000	14 0	\$42,000	31 0	\$93,000 \$0	37 0	\$111,000 \$0	34	\$102,000	9	\$27,000	25	\$75,000		\$93,000
	Relocate/Adjust to grade Utility Vault Adjust MH Lid to grade	EA	\$4,000.00	0	\$0 \$0	0	\$0 \$0	0	\$0 \$0	0	\$8,000	0	\$0 \$0	0	\$0 \$0	0	\$0 \$0		\$4,000 \$4,000	0	\$0 \$0	0	\$4,000 \$0		\$4,000
14	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00	0	\$0	0	\$0	0	\$0 \$0	0	\$0 \$0	0	\$0 \$0	0	\$0	0	\$0 \$0	0		5343	\$267,150	0	\$0	-	\$0 \$0
15	Storm Drain Improvements at bulb-out	EA	\$50,000.00	0	\$0	0	\$0	0	\$0	0	\$0 \$0	0	\$0	0	\$0 \$0	0	\$0	0	\$0	3	\$150,000	0	\$0	_	\$0
16	Reconstruct Sidewalk	SF	\$30.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$150,000	0	\$0		\$0
17	Widen Sidewalk	SF	\$30.00	2198	\$65,940	6369	\$191,070	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	-	\$0
18	Construct Pedestrian Refuge Median Nose	EA	\$5,000.00	1	\$5,000	3	\$15,000	4	\$20,000	2	\$10,000	1	\$5,000	0	\$0	1	\$5,000	1	\$5,000	0	\$0	2	\$10,000	0	\$0
19	Relocate Post with Signs at Median	EA	\$400.00	3	\$1,200	5	\$2,000	9	\$3,600	4	\$1,600	2	\$800	0	\$0	1	\$400	0	\$0	1	\$400	2	\$800		\$0
20	Re-construct Pedestrian Passageway	SF	\$45.00	0	\$0	270	\$12,150	0	\$0	0	\$0	0	\$0	0	\$0	180	\$8,100	0	\$0	0	\$0	0	\$0	0	\$0
21	Close median opening	SF	\$40.00	98	\$3,920	0	\$0	1283	\$51,320	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	580	\$23,200
22	Construct Raised concrete median with pedestrian refuge	SF	\$45.00	0	\$0	0	\$0	0	\$0	960	\$43,200	1480	\$66,600	0	\$0	0	\$0	0	\$0	3841	\$172,845	0	\$0	0	\$0
23	Construct bus stop concrete pad	SF	\$40.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	600	\$24,000
24	Install pedestrian barricade	EA	\$2,000.00	0	\$0	0	\$0	0	\$0	0	\$0	2	\$4,000	0	\$0	1	\$2,000	0	\$0	2	\$4,000	4	\$8,000	0	\$0
	Subtotal				\$227,060		\$457,220		\$516,920		\$311,800		\$225,400		\$253,000		\$337,500		\$329,680		\$661,395		\$257,800	<u> </u>	\$264,200
	SIGNING AND STRIPING																								
25	Remove crosswalk	SF	\$2.00	0	\$0	0	\$0	0	\$0	0	\$0	332	\$664	0	\$0	332	\$664	0	\$0	332	\$664	664	\$1,328		\$0
26	Replace crosswalk with continental striping	SF	\$5.00	1468	\$7,340	1139	\$5,695	2020	\$10,100	549	\$2,745	549	\$2,745	2060	\$10,300		\$3,490	1614	\$8,070	332	\$1,660	732	\$3,660		\$1,830
27	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	0	\$0	322	\$3,864	0	\$0	0	\$0 40	353	\$4,236	0	\$0	0	\$0	0	\$0	412	\$4,944	0	\$0		\$0
	Miscellaneous striping	SF	\$16.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0		\$3,200
29 30	Install wayfinding sign Install pedestrian sign	EA EA	\$500.00 \$500.00	3	\$1,500 \$0	0	\$0 \$500	0	\$0 \$0	3	\$1,500	0	\$0 \$0	0	\$0 \$0		\$2,000 \$500	0	\$0 \$0	0	\$0 \$0	0	\$0 \$0		\$2,000
	Install miscellaneous signs	EA	\$500.00	1	\$500	0	\$500	1	\$500	0	\$0 \$0	2	\$1,000	0	\$0 \$0	0	\$500 \$0	0	\$0	3	\$1,500	0	\$0 \$0		\$0 \$0
- 01	Subtotal	LA	ψ300.00		\$9,340	0	\$10,059		\$10,600	- 0	\$4,245	2	\$8,645	- 0	\$10,300	U	\$6,654	- 0	\$8,070	3	\$8,768	0	\$4,988		\$7,030
	SIGNALS & LIGHTING				75,540		710,033		\$10,000		74,243		70,043		710,300		70,034		30,070		70,700		Ş4,500		\$7,030
32	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	Śn
33	Install adaptive pedestrian signal	EA	\$20,000.00	0	\$0		\$0	0	\$0		\$0		\$0	2	\$40,000		\$100,000	0	\$0	0	\$0		\$0		\$0
34	Install PHB as determined by warrant	EA	\$100,000.00	0	\$0	1	\$100,000	0	\$0		\$0		\$100,000	0	\$0		\$100,000	0	\$0	0	\$0		\$200,000		\$0
	Relocate pedestrian push button	EA	\$5,000.00	1	\$5,000	0	\$0	0	\$0		\$0		\$0	1	\$5,000	0	\$0	0	\$0	0	\$0	0	\$0		\$0
36	Install leading pedestrian phase	EA	\$500.00	4	\$2,000	0	\$0	0	\$0	4	\$2,000	0	\$0	4	\$2,000	2	\$1,000	4	\$2,000	3	\$1,500	0	\$0		\$2,000
37	Install audible pedestrian signal	EA	\$1,000.00	0	\$0	0	\$0	2	\$2,000	0	\$0	0	\$0	4	\$4,000	1	\$1,000	2	\$2,000	0	\$0	0	\$0	0	\$0
38	Install Pedestrian Lighting @ Bus Stops	EA	\$15,000.00	4	\$60,000	4	\$60,000	4	\$60,000	4	\$60,000	5	\$75,000	8	\$120,000	6	\$90,000	4	\$60,000	8	\$120,000	4	\$60,000	2	\$30,000
39	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	10	\$150,000	10	\$150,000	15	\$225,000	7	\$105,000	7	\$105,000	4	\$60,000	6	\$90,000	7	\$105,000	6	\$90,000	8	\$120,000	4	\$60,000
	Subtotal				\$217,000		\$310,000		\$287,000		\$167,000		\$280,000		\$231,000		\$282,000		\$169,000		\$211,500		\$380,000		\$92,000
	TOTAL				\$577,178		\$989,476		\$1,036,884		\$614,916		\$654,379		\$629,244		\$797,094		\$645,093		\$1,122,357		\$818,269		\$462,392
	30% Contingency				\$173,153		\$296,843		\$311,065		\$184,475		\$196,314		\$188,773		\$239,128		\$193,528		\$336,707		\$245,481	<u> </u>	\$138,718
	Construction Total (2020 Year)				\$750,332		\$1,286,319		\$1,347,949		\$799,391		\$850,693		\$818,017		\$1,036,222		\$838,621		\$1,459,064		\$1,063,750	i i	\$601,109
	PA/ED/PS&E/ Soft Costs (40%)				\$300,133		\$514,528		\$539,180		\$319,756		\$340,277		\$327,207		\$414,489		\$335,448		\$583,626		\$425,500		\$240,444
	GRAND TOTAL				\$1,050,464		\$1,800,847		\$1,887,129		\$1,119,148		\$1,190,970		\$1,145,224		\$1,450,711		\$1,174,069		\$2,042,690		\$1,489,250		\$841,553

San Pablo Avenue Corridor Project - Very Near-Term
Berkeley & Albany Concept Level Estimate



2/3/2020

	2/3/2020															Quantity	Estimate
Item	Item Description	Unit	Unit Price														
					27		28		29		30		31		32	TOTAL	\$ TOTAL
4	MOBILIZATION/ TRAFFIC CONTROL	1.0	100/ 10 1 11	_	440.000		40	_	4.00=1		4=0=04		455.555		400 400		4000.40
2	Mobilization/ De-mobilization Traffic Control	LS	10% of Construciton	1	\$43,936	1	\$37,707	1	\$16,351	1	\$59,721	1	\$60,293	1	\$28,409	17	\$902,13
	Develop and Implement SWPPP	LS LS	8% of Construciton 0.5% of Construciton	1	\$35,149 \$2,197	1	\$30,166	1	\$13,081	1	\$47,776	1	\$48,234	1	\$22,727	17 17	\$721,70
4	Construction Survey	LS	0.8% of Construction	1	\$2,197	1	\$1,885 \$3,017	1	\$818 \$1,308	1	\$2,986 \$4,778	1	\$3,015 \$4,823	1	\$1,420 \$2,273	17	\$45,10 \$72,17
	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$13,181	1	\$11,312	1	\$4,905	1	\$17,916	1	\$18,088	1	\$8,523	17	\$270,64
	Subtotal		070 Of Contaction		\$97,978		\$84,087	-	\$36,463		\$133,177	-	\$134,452		\$63,351	17	\$2,011,75
	DEMOLITION				351,510		70-7,007		730,403		7133,177		7134,432		703,331		\$2,011,73
	Clearing and Grubbing	LS	2% of Construction	1	\$8,787	1	\$7,541	1	\$3,270	1	\$11,944	1	\$12,059	1	\$5,682	17	\$180,42
7	Demolition	LS	3% of Construction	1	\$13,181	1	\$11,312	1	\$4,905	1	\$17,916	1	\$18,088	1	\$8,523	17	\$270,64
	Subtotal		070 OF CONDUCTOR	-	\$21,968		\$18,854		\$8,176		\$29,860	-	\$30,146	-	\$14,204	1,	\$451,06
	STREET IMPROVEMENTS				721,500		710,054		30,170		723,000		730,140		717,207		\$431,00°
8	Reconstruct Return and Ramp(s)	EA	\$20,000.00	4	\$80,000	2	\$40,000	1	\$20,000	3	\$60,000	3	\$60,000	2	\$40,000	89	\$1,780,000
9	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	0	\$00,000	2	\$34,000	1	\$17,000	1	\$17,000	3	\$51,000	2	\$34,000	23	\$391,000
10	Reconstruct Driveway	SF	\$40.00	0	\$0	0	\$0	0	\$17,000	0	\$17,000	0	\$0	0	\$54,000	942	\$37,680
	Relocate/Adjust to grade Utility Boxes	EA	\$3,000.00	10	\$30,000	10	\$30,000	3	\$9,000	11	\$33,000	10	\$30,000	10	\$30,000	347	\$1,041,000
	Relocate/Adjust to grade Utility Vault	EA	\$4,000.00	0	\$30,000	0	\$30,000	1	\$4,000	0	\$33,000	10	\$4,000	10	\$4,000	8	\$32,000
	Adjust MH Lid to grade	EA	\$2,000.00	0	\$0	2	\$4,000	0	\$4,000	0	\$0 \$0	0	\$4,000	0	\$4,000	4	\$8,000
	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00	0	\$0	889	\$44,450	0	\$0	3248	\$162,400	0	\$0	0	\$0	9480	\$474,000
	Storm Drain Improvements at bulb-out	EA	\$50,000.00	0	\$0	1	\$50,000	0	\$0	2	\$100,000	0	\$0	0	\$0	6	\$300,000
16	Reconstruct Sidewalk	SF	\$30.00	0	\$0	0	\$0	225	\$6,750	0	\$0	240	\$7,200	0	\$0	465	\$13,950
17	Widen Sidewalk	SF	\$30.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8567	\$257,010
18	Construct Pedestrian Refuge Median Nose	EA	\$5,000.00	1	\$5,000	0	\$0	0	\$0	_	\$0	0	\$0	0	\$0	16	\$80,000
19	Relocate Post with Signs at Median	EA	\$400.00	3	\$1,200	0	\$0	0	\$0		\$0	0	\$0	0	\$0	30	\$12,000
	Re-construct Pedestrian Passageway	SF	\$45.00	0	\$0	0	\$0	0	\$0		\$0	0	\$0	0	\$0	450	\$20,250
	Close median opening	SF	\$40.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	1961	\$78,440
	Construct Raised concrete median with pedestrian refuge	SF	\$45.00	0	\$0	0	\$0	0	\$0	0	\$0	3293	\$148,185	2478	\$111,510	12052	\$542,340
	Construct bus stop concrete pad	SF	\$40.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	600	\$24,000
24	Install pedestrian barricade	EA	\$2,000.00	3	\$6,000	0	\$0	2	\$4,000	1	\$2,000	0	\$0	0	\$0	15	\$30,000
	Subtotal				\$122,200		\$202,450		\$60,750		\$374,400		\$300,385		\$219,510		\$5,121,670
	SIGNING AND STRIPING																
25	Remove crosswalk	SF	\$2.00	332	\$664	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	1992	\$3,984
26	Replace crosswalk with continental striping	SF	\$5.00	366	\$1,830	332	\$1,660	552	\$2,760	661	\$3,305	1508	\$7,540	515	\$2,575	15461	\$77,305
27	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	389	\$4,668	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	1476	\$17,712
28	Miscellaneous striping	SF	\$16.00	0	\$0	60	\$960	0	\$0	0	\$0	0	\$0	0	\$0	260	\$4,160
29	Install wayfinding sign	EA	\$500.00	0	\$0	0	\$0	2	\$1,000	1	\$500	0	\$0	0	\$0	17	\$8,500
30	Install pedestrian sign	EA	\$500.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$1,000
31	Install miscellaneous signs	EA	\$500.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	7	\$3,500
	Subtotal				\$7,162		\$2,620		\$3,760		\$3,805		\$7,540		\$2,575		\$116,161
	SIGNALS & LIGHTING																
32	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0	0	\$0	2	\$2,000	0	\$0	0	\$0	0	\$0	2	\$2,000
33	Install adaptive pedestrian signal	EA	\$20,000.00	0	\$0	4	\$80,000	1	\$20,000	2	\$40,000	0	\$0	0	\$0	14	\$280,000
34	Install PHB as determined by warrant	EA	\$100,000.00	1	\$100,000	0	\$0	0	\$0	1	\$100,000	1	\$100,000	0	\$0	7	\$700,000
	Relocate pedestrian push button	EA	\$5,000.00	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$10,000
36	Install leading pedestrian phase	EA	\$500.00	0	\$0	0	\$0	0	\$0	4	\$2,000	0	\$0	0	\$0	29	\$14,500
37	Install audible pedestrian signal	EA	\$1,000.00	0	\$0	2	\$2,000	2	\$2,000	2	\$2,000	0	\$0	2	\$2,000	17	\$17,000
38	Install Pedestrian Lighting @ Bus Stops	EA	\$15,000.00	6	\$90,000	6	\$90,000	5	\$75,000	2	\$30,000	4	\$60,000	4	\$60,000	80	\$1,200,000
39	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	8	\$120,000	0	\$0	0	\$0	3	\$45,000	9	\$135,000	0	\$0	104	\$1,560,000
	Subtotal				\$310,000		\$172,000		\$99,000		\$219,000	_	\$295,000		\$62,000		\$3,783,500
	TOTAL				\$559,308		\$480,010		\$208,148		\$760,242		\$767,524		\$361,640		\$11,484,15
	30% Contingency				\$167,792		\$144,003		\$62,444		\$228,073		\$230,257		\$108,492		\$3,445,24
	Construction Total (2020 Year)				\$727,100		\$624,013		\$270,593		\$988,315		\$997,781		\$470,132		\$14,929,40
	PA/ED/PS&E/ Soft Costs (40%)				\$290,840		\$249,605		\$108,237		\$395,326		\$399,112		\$188,053		\$5,971,760
	GRAND TOTAL				\$1,017,940		\$873,618		\$378,830		\$1,383,640		\$1,396,893		\$658,185		\$20,900,000

Table 1: Near-term Cost Estimates

Item	Option 2	Option 4
Mobilization/ Traffic Control	\$15,640,000	\$18,100,000
Demolition	\$4,150,000	\$4,800,000
Utilities	\$0	\$1,660,000
Street Improvements	\$51,740,000	\$37,720,000
Signing and Striping	\$3,260,000	\$3,500,000
Signals and Lighting	\$15,120,000	\$14,190,000
Landscape and Site Furnishings	\$7,370,000	\$5,240,000
AC Transit BRT Bus Fleet	\$0	\$3,480,000
Total	\$97,270,000	\$106,690,000
10% Utility Relocations	\$0	\$10,670,000
30% Contingency	\$29,180,000	\$32,010,000
Construction Total	\$126,450,000	\$149,370,000
PA/ED/PS&E/ Soft costs	\$50,580,000	\$59,750,000
GRAND TOTAL	\$177,000,000	\$209,000,000

San Pablo Avenue Corridor Project - Near-Term Alt 2 Oakland and Emeryville Concept Level Estimate-Unit Prices



10-Mar-20 Prepared By: JAH

Montilation Permittation 1.5 Montilation Permittation Permittation 1.5 Montilation Permittation Permi	ITEM	DESCRIPTION	LINUT	LINIT DDICE	Prepared By: JAH
Debut Debu	ITEM	DESCRIPTION MOBIL IZATION/ TRAFFIC CONTROL	UNIT	UNIT PRICE	ASSUMPTIONS
Person Control Develop and Ingilitarian SWPPP 1.5 38% of Control and Procession Code	-		LS	10% of Construction	Approximately 10% of Construction Cost
3 Develop and Improvement SPAPP	-				
Section Sect					
Content of the Cont		,			
Bottoming Committed Control Contro	5	Utility Protection/ potholing by Contractor	LS	3% of Construction	Approximately 3% of Construction Cost
Discharacified Execution		DEMOLITION			
STREET IMPROVEMENTS	6	Clearing and Grubbing			1
STREET IMPROVEMENTS Construct PECCurity galler, ADA rampps), selemetal, AC Plag, Install DWS (retinate Construct Peccurity Character Country galler, ADA ramps), selemetal, AC Plag, Install DWS (retinate Country Country Character Country Character Country Character Country Character Country Character Country Character Char					
Reconstruct Return and Rentyles A S000000 SSSOR'S # 408071 Construct-Reconstruct Michael Curb Remple B S000000 A curb returns Construct-Reconstruct Michael Curb Remple B S000000 A curb returns Construct-Reconstruct Michael Curb Remple B S000000 A curb returns Construct-Reconstruct Michael Curb Remple B S000000 A curb returns Construct-Reconstruct Reconstruct Remple B S000000 A curb returns Construct-Reconstruct Reconstruct Remple B S000000 A curb returns Construct-Reconstruct Reconstruct Remple B S000000 A curb returns Construct-Reconstruct Remple B S000000 A curb returns Construct-Reconstruct Reconstruct Remple Construct-Reconstruct Reconstruct Remple B S00000000000000000000000000000000000	8	Unclassified Excavation	CY	\$120.00	2,000 CY per mile transit stations or islands
9 Reconstruct Return and Rampojs) (EA \$20,000.00 (\$1,000 of control with 1 ramp) (\$1,000 of x 300 of		STREET IMPROVEMENTS			
Construct PCC curb, gather, ADA ramp, slowest, AC Plug, Install DVVS (up to 400 SF 17 000.00 pol of curcentine with ramply 400 SF 12.555 = 3.00 no. 10 pol of curcentine with ramply 400 SF 12.555 = 3.00 no. 10 pol of curcentine with ramply 400 SF 12.555 = 3.00 no. 10 pol of curcentine with ramply 400 SF 12.555 = 3.00 no. 10 pol of current remains and revision areas and residual revisions. AC Plug install DVVS (up to 400 SF 17 000.00 pol of current remains and residual revisions. AC Plug install DVVS (up to 400 SF 18.50 000.00 pol of current remains and residual revisions. AC Plug install DVVS (up to 400 SF 18.50 000.00 pol of current remains the policy of cur		December 19 Petrone and December 19		#00 000 00	
10 Construct/Reconstruct Methods Curb Ramp EA \$17,000.00 of converted with 1 mining 1400 SF a 3300/SF = 5,000 cman	9	Reconstruct Return and Ramp(s)	EA	\$20,000.00	
18 Reconstruct Driveway Services (1987) (198	10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	
13 Reconstruct Return and Ramp(c) with a Bulb-out EA \$4,000.00 A cuth returns	11	Reconstruct Driveway	SF	\$40.00	Construct PCC curb, gutter, driveway slope, sidewalk, AC Plug
14 Alguer Mert List or grades			EA	\$3,000.00	At curb returns and median areas
Reconstruct Return and Ramp(s) with a Bulb-out EA \$20,000,000 As some outh return bulbs Construct PCC curb, voter. AD ramp(s), sidewalls, AC Plug, Install DWS \$0,000 \$30,000 Feb. 200 Fer sample and other forming, box adjustments \$0,000 \$30,000 Feb. 200 Fer sample (some voter to gg/41 00 it 8 \$0,000 \$30,000 Feb. 200 Fer sample (some viter to gg/41 00 it 8 \$0,000 \$30,000 Fer sample (some viter to gg/41 00 it 8 \$0,000 \$1,000 Fer sample (some viter to gg/41 00 it 8 \$0,000 \$1,000 Fer sample (some viter to gg/41 00 it 8 \$0,000 \$1,000 Fer sample (some viter to gg/41 00 it 8 \$0,000 Fer sample (some vit		, <u> </u>			
Reconstruct Return and Ramp(s) with a Bulls-out	-			' '	
Some Data Improvements in bulb-out SA	15	Relocate fire hydrant	EA	\$20,000.00	
17 Skorm Drain Improvements at bulb-out E.A. \$55,000,000 One manifer, 80 LF, page, 20% misc. 18 Reconstruct Sidewalk. 19 Median hardscape 19 Kelian hardscape 20 Construct Pedecistian Refuge Median Nose 21 Construct Pedecistian Refuge Median Nose 22 Reconstruct pork chapmage is a second of the se	16	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00	
18 Reconstruct Sidewalk SF \$3,000 Assume 250 SF per new street tree @4.0 FBT (includes center and side mediums)		Storm Drain Improvements at bulb-out	EA		
Mailan hardscape SF \$20.00 Per sample layout, estimated 6 SPF LF 0 RRT (includes center and side medians)					
20 Construct Pedestran Refuge Median Nose PA \$5,000.00 cut back median nose quantity for side streets) The Reconstruct pork chop/median island to meet ADA \$5 \$45.00 Construct PCC curb. AC Plug. Repair median hardscape, ADA passageway \$5,000.00 Section \$5,000.00	19	Median hardscape	SF	\$20.00	,
21 Install pedestrian barroade		Overton A.B. Jostina Bufano Mallina Nova	EA	# F 000 00	
Reconstruct ports chopymedian island to meet ADA SF \$45,00 Construct PCC curb. AC Plug, Repair median hardscape, ADA passageway					
Steed closure	$\overline{}$				
See East By BRT Bit results +15% inflation since April 2016, 2 per stop location includes concrete part platform with apperenances Concrete BRT platform with apperenances Concrete BRT platform with apperenances Construct Median Curb LF Construct Median Curb LF Construct Median Curb LF Construct Median Curb Construct Median Curb LF Construct Median Curb					
EA Includes concrete platform, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platform, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platforms, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platforms, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platforms, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platforms, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platforms, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platform, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platforms, but should be platform, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platform, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platform, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platform, bus stop sheller, bench ; rash, handralis, electrical, CCTV, and platform, bus shorts, and platforms, bus shorts, and platform, and platform, bus shorts, and platforms,				ψ.ο,σσσ.σσ	
SONs of BRT length assumed to have median, times 2 for each side of the median 2 strong of the median = 3 x BRT length assumed to have median for bike protection, times 2 for each side of the median = 3 x BRT length			EA		
Le Soo,00 of the median = 3 x BRT length assumed to have median for bike protection, times 2 for each side \$50,00 of the median = 3 x BRT length This is a placeholder as each will vary and will be analyzed further in the next stage. Assumes full signal and accessibility upgrades, may impact right of way at some locations. SIGNING AND STRPING SIGNING AND STRPING AND STRP	24	Concrete BRT platform with apperenances		\$600,000.00	ticketing, and signage (some overlap w/ bulbouts, cost reduced from median platforms)
Construct Median Curb LF \$50,00 of the median = 3 x BRT length This is a placeholder a seach will vary and will be analyzed further in the next stage. Assumes full signal and accessibility upgrades, may impact right of way at some locations. SIGNING AND STRIPING 28 Replace crosswalk with continental striping 29 Install bicycle crosstrack adjacent to existing crosswalk 30 Red Bus Only Roadway Signing and Striping 31 Green bike lane 32 Purple paint bulbout with bollards 32 Purple paint bulbout with bollards 33 Miscellaneous striping 34 Install wayfinding sign 35 \$5.00 locations noted on plan 36 Install miscellaneous signs 36 Install miscellaneous signs 37 Install docuntdown pedestrian signal 38 Install materialneous signs 39 EAC \$50,000 locations noted on plan 30 Install miscellaneous signs 40 Signal and accessibility upgrades, may impact right of way at some locations. ST \$5.00 locations noted on plan 40 Relocate pedestrian signal 41 Install adaptive pedestrian signal 42 EAC \$50,000 locations noted on plan 43 Install adaptive pedestrian signal 44 Replace striping 45 Signal pedestrian signal 46 Signal pedestrian signal 47 EAC \$5.000 locations noted on plan 48 Install adaptive pedestrian signal 49 Replace striping 40 Relocate pedestrian signal 41 Relocate pedestrian signal 42 EAC \$5.000.000 locations noted on plan 43 Install adaptive pedestrian signal 44 Relocate pedestrian signal 45 EAC \$5.000.000 locations noted on plan 46 Relocate pedestrian signal 47 EAC \$5.000.000 locations noted on plan 48 Install adaptive pedestrian signal 49 Corridor lighting 40 Crosswalks 41 EAC \$5.000.000 locations noted on plan 41 Install audible pedestrian signal 42 EAC \$5.000.000 locations noted on plan 43 Install Bedestrian signal 44 Rev signal 45 Signal maximum destriping & Crosswalks 46 Street Tree in tree well 47 Sateway Features Public AT 48 Sign					
this is a placeholder as each will vary and will be analyzed further in the next stage. Assumes full signal and accessibility upgrades, may impact right of way at some locations. 27 Asphalt concrete pavement rehab 28 Replace crosswalk with continental striping 29 Replace crosswalk with continental striping 29 Install bicycle crosstrack adjacent to existing crosswalk 20 Install bicycle crosstrack adjacent to existing crosswalk 30 Red Bus Only Roadway Signing and Striping 31 Green bike lane 32 Purple paint bulbout with bollards 33 Miscellaneous striping 34 Install expression signal 35 Install predestrian sign 36 Install miscellaneous signs 37 EAC SOULD ASSUME SIGNOLOUS Control on plan 38 Install addrive pedestrian signal 39 Install daybrey pedestrian signal 40 Relocate pedestrian publishout on Park Signal (Park Signal) 41 Install adaptive pedestrian signal 42 EAC SSOULOUS Coations noted on plan 43 Install adaptive pedestrian signal 44 Signal modification 45 Signal modification 46 Relocate pedestrian signal 47 EAC SSOULOUS Cladens noted on plan 48 Install adaptive pedestrian signal 49 Corridor Ighting 40 Signal modification 40 Signal modification 41 Install adaptive pedestrian signal 44 Signal modification 45 Signal modification 46 Signal modification 47 Signal modification 48 Signal modification 49 Corridor Street Trees 40 Signal modification 40 Signal modification 41 Corridor Landscaping 40 Signal modification 41 Corridor Landscaping 41 Signal modification 42 Signal modification 43 Signal modification 44 Signal modification 45 Signal modification 46 Signal modification 47 Signal modification 48 Signal modification 49 Corridor Street Trees 40 Signal modification 40 Signal modification 41 Signal modification 42 Signal modification 43 Signal modification 44 Signal modification 45 Signal modification 46 Signal modification 47 Signal modification 48 Signal modification 49 Corridor Landscaping 40 Signal modification 41 Signal modification 42 Signal modifica					
Assumes full signal and accessibility upgrades, may impact right of way at some \$1,000,000,000,000 locations. \$1,000,000,000 locations. \$1,000,000 locations. \$1,000,0	25	Construct Median Curb	LF	\$50.00	
Intersection Reconstruction and Realignment EA \$1,000,000,000 locations.					
Signature Sign	26	Intersection Reconstruction and Realignment	FA	\$1,000,000,00	
Special Concrete pavement rehab Signing AND STRIPING				+ 1,222,222	
Replace crosswalk with continental striping SF \$5.00 24" @ 2" spacing, 10" vide center to center with 3" gap per other's recently constructed Assumes green pavement skipped, so only half the area would be green. Unit cost was 12.00 halved. Assumes green pavement skipped, so only half the area would be green. Unit cost was 12.00 halved. 4 strippes (\$5/LF each), sign (\$500) and "Bus Only" (42 SF@\$15/SF) every 300 LF-red 13.1 Green bike lane SF \$16.00 lanes are green) 13.2 Purple paint bulbout with bollards SF \$20.00 lincludes thermoplastic pavement markings & green pavement (assume 20% of bike 13.3 Miscellaneous striping SF \$5.00 loncludes thermoplastic pavement markings & striping 13.4 linstall wayfinding sign SF \$5.00 loncludes thermoplastic pavement markings & striping 13.5 linstall pedestrian sign EA \$500.00 SIGNALS & LIGHTING 37 Install countdown pedestrian heads SF \$1,000.00 locations noted on plan 14.0 Relocate pedestrian signal EA \$20,000.00 locations noted on plan 14.0 Relocate pedestrian signal EA \$150,000.00 locations noted on plan 14.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 15.0 locations noted on plan 16.0 lanes are speen) 17.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 18.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 19.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 19.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 29.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 29.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 29.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 29.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 29.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 29.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 29.0 Relocate pedestrian signal EA \$1,000.00 locations noted on plan 20.0 Relocate pedestrian signal EA \$1	27	Asphalt concrete pavement rehab	SY	\$100.00	
Assumes green pavement skipped, so only half the area would be green. Unit cost was \$12.00 halved. Assumes green pavement skipped, so only half the area would be green. Unit cost was \$12.00 halved. 4 stripes (\$5/LF each), sign (\$500) and "Bus Only" (42 SF@\$15/SF) every 300 LF+red \$174.00 pvmt Assumes green pavement markings & green pavement (assume 20% of bike \$16.00 lanes are green) 30 Red Bus Only Roadway Signing and Striping 31 Green bike lane 32 Purple paint bulbout with bollards 33 Miscellaneous striping 34 Install wayfinding sign 55 \$5.00 Includes thermoplastic pavement markings & striping 34 Install wayfinding sign 56 \$500.00 Includes thermoplastic pavement markings & striping 36 Install pedestrian sign 57 \$5.00 Includes thermoplastic pavement markings & striping 38 Install miscellaneous signs 58 \$500.00 Includes thermoplastic pavement markings & striping 49 Install countdown pedestrian heads 59 \$5.00 Includes thermoplastic pavement markings & striping 40 \$1500.00 Includes thermoplastic pavement markings & striping 50 Install miscellaneous signs 50 Install miscellaneous signs 51 \$5.00 Includes thermoplastic pavement markings & striping 52 \$100.00 Includes thermoplastic pavement markings & striping 53 Install countdown pedestrian sign 54 \$1500.00 Includes thermoplastic pavement markings & striping 55 \$10 Install miscellaneous signs 55 \$10 Install miscellaneous signs 56 \$10 Install miscellaneous signs 57 \$10 Install countdown pedestrian signal 58 Install adaptive pedestrian signal 59 Install adaptive pedestrian signal 50 Install adaptive pedestrian signal 50 Install miscellaneous signs 60 Install		SIGNING AND STRIPING			
Install bicycle crosstrack adjacent to existing crosswalk St. St. A stripes (\$5fLF each), sign (\$500) and "Bus Only" (\$42 SF@\$15/SF) every 300 LF+red	28	Replace crosswalk with continental striping	SF	\$5.00	
Install picycle crosstrack adjacent to existing crosswalk S12.00 Install picycle crosswark S12.00 Includes thermoplastic pavement markings & green pavement (assume 20% of bike S174.00 Junt S174.			SF		
Seed Bus Only Roadway Signing and Striping	29	Install bicycle crosstrack adjacent to existing crosswalk		\$12.00	
Includes thermoplastic pavement markings & green pavement (assume 20% of bike 31 2 2 2 2 2 2 2 3 3 2 2	30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	
Green bite late Sh.00 Includes purple paint and bollards SF \$20,00 Includes thermoplastic pavement markings & striping SF \$5.00 Includes thermoplastic pavement markings & striping Includes thermoplastic pavement markings & striping Includes thermoplastic pavement markings & striping Includes Includes thermoplastic pavement markings & striping Includes Includes Includes thermoplastic pavement markings & striping & striping & striping & stripi				*********	
33 Miscellaneous striping			SF		- '
Install wayfinding sign EA \$500.00 Install pedestrian sign EA \$500.00 SIGNALS & LIGHTING SIGNALS & LIGHTING Install countdown pedestrian heads EA \$1,000.00 Locations noted on plan Install countdown pedestrian signal EA \$20,000.00 Locations noted on plan Install adaptive pedestrian signal EA \$1,000.00 Locations noted on plan Relocate pedestrian push button EA \$1,000.00 Locations noted on plan Install pHB as determined by warrant EA \$1,000.00 Locations noted on plan BRI corridor lighting BRT corridor lighting MILE \$2,100.000.00 Spacing assumed between 60' and 100' on each side of the street because of existing lighting, average spacing of 85' and assuming each light is \$20,000 43 Install pedestrian Lighting @ Crosswalks EA \$15,000.00 Two lights/ unsignalized intersection 44 New signal EA \$400,000.00 Locations noted previously from F&P. Detection included. 45 Signal modification EA \$20,000.00 All signals where there is BRT. LANDSCAPE AND SITE FURNISHINGS EA \$2,000.00 Fer station location with iron tree grate 47 Gateway Features/ Public Art MILE \$60,000.00 Estimated, all alternatives have the same assumption 48 Corridor Landscaping MILE \$10,000.00 Simmated, minor enhancements to bulb areas Trees with tree grate every 40 feet on both sides of the street, 264 trees per mile x 80% Corridor Street Trees MILE \$1,050,000.00 Fer station location For Grate EA \$3,000.00 Fer area identified EA \$2,000.00 Fer area identified EA \$3,000.00 Fer area identified EA \$3,000.00 Fer area identified	32	Purple paint bulbout with bollards	SF	\$20.00	Includes purple paint and bollards
Install pedestrian sign					
Install miscellaneous signs					
SIGNALS & LIGHTING	-		_	*	
Install countdown pedestrian heads		,	EA	\$500.00	
Install adaptive pedestrian signal Install PHB as determined by warrant EA \$15,000.00 Locations noted on plan Relocate pedestrian push button EA \$5,000.00 plan ES-7A Install audible pedestrian signal EA \$1,000.00 Locations noted on plan Spacing assumed between 60' and 100' on each side of the street because of existing BRT corridor lighting MILE \$2,100,000.00 lighting, average spacing of 85' and assuming each light is \$20,000 Install Pedestrian Lighting @ Crosswalks EA \$15,000.00 Two lights/ unsignalized intersection Wew signal EA \$400,000.00 Locations noted on plan Spacing assumed between 60' and 100' on each side of the street because of existing Install Pedestrian Lighting @ Crosswalks EA \$15,000.00 Two lights/ unsignalized intersection Wew signal EA \$400,000.00 Locations noted previously from F&P. Detection included. EA \$20,000.00 All signals where there is BRT. LANDSCAPE AND SITE FURNISHINGS LANDSCAPE AND SITE FURNISHINGS Street Tree in tree well EA \$2,500.00 Estimated, all alternatives have the same assumption WILE \$60,000.00 Estimated, all alternatives have the same assumption WILE \$100,000.00 Estimated, minor enhancements to bulb areas Trees with tree grate every 40 feet on both sides of the street, 264 trees per mile x 80% MILE \$1,050,000.00 of length, 210 trees per mile, \$5000 each EA \$3,000.00 Feer station location EA \$3,000.00 Feer station location In on Tree Grate EA \$3,000.00 Feer station location EA \$3,000.00 Feer station location EA \$3,000.00 Feer station location FEA \$3,000.00 Feer station location	$\overline{}$				
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46 Street Tree in tree well 47 Gateway Features/ Public Art 48 Corridor Landscaping 49 Corridor Street Trees 49 Bike Rack/Corral Accommodations 40 EA 51,050,000.00 5 per station location with iron tree grate 52 Irrigation/Hose Bibs 53 Electrical Outlets at Trees w/ conduit 54 Street Tree well 55 Street Trees 56 Street Trees (FA) 56 Street Trees (FA) 57 Sper station location with iron tree grate 58 Street Tree station location with iron tree grate 59 Set station location with iron tree grate 50 Street Trees (FA) 50 Street Trees 50 Street Trees 51 Iron Tree Grate 52 Street Trees 53 Electrical Outlets at Trees w/ conduit 54 Street Trees 55 Street Trees (FA) 56 Street Trees (FA) 57 Set station location (FA) 58 Street Trees (FA) 59 Set station location 59 Street Trees (FA) 50 Street Trees (FA) 50 Set station location 50 Set station location 51 Iron Tree Grate 52 Stringation/Hose Bibs 53 Street Trees (FA) 54 Street Trees (FA) 55 Street Trees (FA) 56 Set station location 57 Set station location 58 Street Trees (FA) 59 Set station location 59 Set station location 50 Set station location 50 Set station location 50 Set station location 51 Iron Tree Grate 52 Stringation/Hose Bibs 53 Set street Trees (FA) 54 Street Trees (FA) 55 Set station location 56 Set station location 57 Set station location 58 Set station location 59 Set station location 50 Set station location 50 Set station location 50 Set station location 50 Set station location 51 Set station location 52 Set station location 53 Set station location 54 Set station location 55 Set station location 56 Set station location 57 Set station location 58 Set station location 59 Set station location 50 Set station location 50 Set station location 50 Set station location 50 Set station location 51 Set station location 52 Set station location 53 Set station location 54 Set station location 55 Set station location 56 Set station location 57 Set station location 58 Set station location 59 Set station location 50 Set station location 50 Set station location 50 Set station locat			EA	\$200,000.00	All signals where there is BRT.
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53 Electrical Outlets at Trees w/ conduit EA \$2,500.00 1 per tree				\$3,600.00	5 per station location
	52	Irrigation/Hose Bibs	LS		· ·
54 BRT Buses and Layover MILE \$1,200,000.00 30 bus upgrades @\$200K for 12 miles of BRT, \$8M layover improvements.	53	Electrical Outlets at Trees w/ conduit			·
	54	BRT Buses and Layover	MILE	\$1,200,000.00	30 bus upgrades @\$200K for 12 miles of BRT, \$8M layover improvements.

San Pablo Avenue Corridor Project - Near-Term Alt 2 Oakland and Emeryville Concept Level Estimate



						E	stimate by l				
Item	Item Description	Unit	Unit Price		1		Oakland	City R/\			4
	MOBILIZATION/ TRAFFIC CONTROL				1		2		3 I		4
	Mobilization/ De-mobilization	LS	10% of Construciton	1	\$517,745	1	\$514,762	1	\$372,327	1	\$796,605
2	Traffic Control	LS	8% of Construciton	1	\$414,196	1	\$411,809	1	\$297,861	1	\$637,284
3	Develop and Implement SWPPP	LS	0.5% of Construciton	1	\$25,887	1	\$25,738	1	\$18,616	1	\$39,830
	Construction Survey	LS	0.8% of Construciton	1	\$41,420	1	\$41,181	1	\$29,786	1	\$63,728
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$155,324	1	\$154,429	1	\$111,698		\$238,982
	Subtotal				\$1,154,572		\$1,147,919		\$830,289		\$1,776,430
	DEMOLITION Clearing and Grubbing	LS	2% of Construction	1	\$103,549	1	\$102,952	1	\$74,465	1	\$159,321
	Demolition	LS	3% of Construction	1	\$155,324	1	\$102,932	1	\$111,698		\$238,982
8	Unclassified Excavation	CY	\$120.00	425	\$51,000	348	\$41,727	309	\$37,091	386	\$46,364
	Subtotal				\$309,873		\$299,108		\$223,254		\$444,666
	STREET IMPROVEMENTS										
	Reconstruct Return and Ramp(s)	EA	\$20,000.00	5	\$100,000	3	\$60,000	1	\$20,000		\$0
10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	0	\$0	0	\$0	0	\$0		\$51,000
	Reconstruct Driveway Relocate/Adjust to grade Utility Boxes	SF EA	\$40.00 \$3,000.00	7	\$0 \$21,000	5	\$0 \$15,000	9	\$0 \$27,000		\$100,000 \$78,000
	Relocate/Adjust to grade Utility Vault	EA	\$4.000.00	0	\$21,000	6	\$13,000	0	\$27,000		\$4,000
	Adjust MH Lid to grade	EA	\$2,000.00	3	\$6,000	2	\$4,000	1	\$2,000		\$10,000
	Relocate fire hydrant	EA	\$20,000.00	2	\$40,000	1	\$20,000	1	\$20,000		\$100,000
	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00		\$137,100	8720	\$436,000	4090	\$204,500		\$941,300
	Storm Drain Improvements at bulb-out	EA	\$50,000.00	3	\$150,000	3	\$150,000	5	\$250,000		\$750,000
	Reconstruct Sidewalk	SF	\$30.00		\$396,000	10800	\$324,000	9900	\$297,000		\$378,000
	Median hardscape Construct Pedestrian Refuge Median Nose	SF EA	\$20.00 \$5,000.00	2000	\$40,000 \$0	2000	\$40,000 \$0	2000	\$40,000 \$10,000	2000	\$40,000 \$10,000
	Install pedestrian barricade	EA	\$5,000.00	0	\$0	0	\$0	0	\$10,000		\$10,000
	Reconstruct pork chop/median island to meet ADA	SF	\$45.00	546	\$24,570	0	\$0	0	\$0		\$0
23	Street closure	EA	\$15,000.00	0	\$0	0	\$0	0	\$0		\$15,000
24	Concrete BRT platform with apperenances	EA	\$600,000.00	0	\$0	2	\$1,200,000	0	\$0	2	\$1,200,000
25	Construct Median Curb	LF	\$50.00	660	\$33,000	660	\$33,000	660	\$33,000	660	\$33,000
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	2	\$2,000,000	1	\$1,000,000	1	\$1,000,000		\$2,000,000
27	Asphalt concrete pavement rehab	SY	\$100.00	10080.6	\$1,008,056	8647	\$864,667	7048	\$704,778		\$887,111
	Subtotal SIGNING AND STRIPING				\$3,955,726		\$4,170,667		\$2,608,278		\$6,597,411
	Replace crosswalk with continental striping	SF	\$5.00	4530	\$22,650	2051	\$10,255	2922	\$14,610	2246	\$11,230
	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	0	\$22,030	0	\$10,255	500	\$6,000		\$6,000
I	Red Bus Only Roadway Signing and Striping	LF	\$174.00		\$195,228	918	\$159,732	816	\$141,984	1020	\$177,480
31	Green bike lane	SF	\$16.00	0	\$0	0	\$0	0	\$0	400	\$6,400
32	Purple paint bulbout with bollards	SF	\$20.00	0	\$0	0	\$0	8425	\$168,500	0	\$0
-	Miscellaneous striping	SF	\$5.00	820	\$4,100	670	\$3,350	670	\$3,350		\$3,350
	Install wayfinding sign	EA	\$500.00	0	\$0	0	\$0	0	\$0		\$0
	Install pedestrian sign Install miscellaneous signs	EA EA	\$500.00 \$500.00	2	\$1,000 \$500	0	\$0 \$500	0 2	\$0 \$1,000		\$0 \$2,500
30	Subtotal		ψ300.00		\$223,478	1	\$173,837		\$335,444		\$206,960
	SIGNALS & LIGHTING				\$225) 176		V170,007		\$555,111		\$200,500
37	Install countdown pedestrian heads	EA	\$1,000.00	2	\$2,000	3	\$3,000	0	\$0	0	\$0
	Install adaptive pedestrian signal	EA	\$20,000.00	0	\$0	0	\$0	0	\$0	2	\$40,000
	Install PHB as determined by warrant	EA	\$150,000.00	0	\$0	0	\$0	1	\$150,000		\$150,000
	Relocate pedestrian push button	EA	\$5,000.00	0	\$0	1	\$5,000	0	\$0		\$0
	Install audible pedestrian signal	EA	\$1,000.00	0	\$0	0	\$0	0	\$0		\$1,000
	BRT corridor lighting	MILE	\$2,100,000.00	0.21	\$446,250	0.17	\$365,114	0.15	\$324,545		\$405,682
43	Install Pedestrian Lighting @ Crosswalks New signal	EA EA	\$15,000.00 \$400,000.00	10 0	\$150,000 \$0	0	\$30,000 \$0	7	\$105,000 \$0		\$165,000 \$0
	New signal Signal modification	EA	\$200,000.00	2	\$400,000	2	\$400,000	1	\$200,000		\$400,000
10	Subtotal		Ψ200,000.00		\$998,250		\$803,114		\$779,545		\$1,161,682
	LANDSCAPE AND SITE FURNISHINGS				7.55,250		7.55,224		7.7.5,5.13		, =,===,002
46	Street Tree in tree well	EA	\$2,500.00	0	\$0	10	\$25,000	0	\$0	10	\$25,000
47	Gateway Features/ Public Art	MILE	\$60,000.00	0.21	\$12,750	0.17	\$10,432	0.15	\$9,273		\$11,591
	Corridor Landscaping	MILE	\$100,000.00	0.21	\$21,250	0.17	\$17,386	0.15	\$15,455		\$19,318
49	Corridor Street Trees	MILE	\$1,050,000.00	0.21	\$223,125	0.17	\$182,557	0.15	\$162,273	0.19	\$202,841
	Bike Rack/Corral Accommodations	EA	\$5,000.00	0	\$0	2	\$10,000	0	\$0		\$10,000
	Iron Tree Grate	EA	\$3,600.00	0	\$0 \$0	10	\$36,000	0	\$0 \$0		\$36,000
52 53	Irrigation/Hose Bibs Electrical Outlets at Trees w/ conduit	LS EA	\$20,000.00 \$2,500.00	0	\$0 \$0	10	\$20,000 \$25,000	0	\$0 \$0		\$25,000
	BRT Buses and Layover	MILE	\$1,200,000.00	0.21	\$255,000	0.17	\$25,000	0.15	\$185,455	0.19	\$25,000 \$231,818
J4	Subtotal	IVIILE	ψ1,200,000.00	0.21	\$255,000 \$ 512,125	0.1/	\$535,011	0.13	\$185,455		\$231,818 \$561,568
	TOTAL				\$7,154,023		\$7,129,655		\$5,149,265	_	\$10,748,717
	30% Contingency				\$2,146,207		\$2,138,897		\$1,544,779	-	\$3,224,615
	Construction Total (2020 Year)				\$9,300,230		\$9,268,552		\$6,694,044		\$13,973,332
	PA/ED/PS&E/ Soft Costs (40%)				\$3,720,092		\$3,707,421		\$2,677,618		\$5,589,333
	GRAND TOTAL				\$13,020,323		\$12,975,973		\$9,371,662		\$19,562,665

San Pablo Avenue Corridor Project - Near-Term Alt 2 Oakland and Emeryville Concept Level Estimate



						E:		Page Number					
Item	Item Description	Unit	Unit Price		-		Oakland	City R/V			0		
	MODILIZATION/TDAFFIC CONTROL				5		6		7		8		
1	MOBILIZATION/ TRAFFIC CONTROL Mobilization/ De-mobilization	LS	10% of Construciton	1	\$532,520	1	\$403,862	1	\$584,690	1	\$57,249		
2	Traffic Control	LS	8% of Construciton	1	\$426,016	1	\$323,090	1	\$467,752	1	\$45,800		
3	Develop and Implement SWPPP	LS	0.5% of Construciton	1	\$26,626	1	\$20,193	1	\$29,234	1	\$2,862		
4	Construction Survey	LS	0.8% of Construciton	1	\$42,602	1	\$32,309	1	\$46,775	1	\$4,580		
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$159,756	1	\$121,159	1	\$175,407	1	\$17,175		
	Subtotal				\$1,187,519		\$900,613		\$1,303,858		\$127,666		
	DEMOLITION		201 52 11	_	4.00.00		400 ==0		4	_	411.150		
6	Clearing and Grubbing Demolition	LS LS	2% of Construction 3% of Construction	1	\$106,504 \$159,756	1	\$80,772 \$121,159	1	\$116,938 \$175,407	1	\$11,450 \$17,175		
8	Unclassified Excavation	CY	\$120.00	346	\$41,534	349	\$41,920	348	\$173,407	39	\$4,636		
	Subtotal		4.20.00		\$307,794		\$243,852		\$334,072		\$33,261		
	STREET IMPROVEMENTS												
9	Reconstruct Return and Ramp(s)	EA	\$20,000.00	4	\$80,000	2	\$40,000	5	\$100,000	1	\$20,000		
10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	3	\$51,000	2	\$34,000	1	\$17,000		\$0		
11	Reconstruct Driveway	SF	\$40.00	2500	\$100,000	2500	\$100,000	2500	\$100,000		\$0		
12 13	Relocate/Adjust to grade Utility Boxes Relocate/Adjust to grade Utility Vault	EA EA	\$3,000.00 \$4,000.00	9	\$27,000 \$0	0	\$3,000 \$0	11 0	\$33,000 \$0	2	\$6,000 \$0		
14	Adjust MH Lid to grade	EA	\$2,000.00	3	\$6,000	1	\$2,000	0	\$0		\$0 \$0		
15	Relocate fire hydrant	EA	\$20,000.00	2	\$40,000	0	\$0	3	\$60,000	0	\$0		
16	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00	6360	\$318,000	3925	\$196,250	13420	\$671,000	800	\$40,000		
17	Storm Drain Improvements at bulb-out	EA	\$50,000.00	7	\$350,000	2	\$100,000	5	\$250,000	1	\$50,000		
18	Reconstruct Sidewalk	SF	\$30.00	11050	\$331,500	10850	\$325,500	10800	\$324,000		\$36,000		
19	Median hardscape	SF	\$20.00	3500	\$70,000	3500	\$70,000	3500	\$70,000	400	\$8,000		
20	Construct Pedestrian Refuge Median Nose Install pedestrian barricade	EA EA	\$5,000.00 \$2,000.00	0	\$0 \$0	0	\$10,000	0	\$0 \$0		\$0 \$0		
22	Reconstruct pork chop/median island to meet ADA	SF	\$2,000.00 \$45.00	0	\$0 \$0	0	\$0 \$0	0	\$0 \$0		\$0 \$45		
23	Street closure	EA	\$15,000.00	0	\$0	0	\$0	0	\$0		\$0		
24	Concrete BRT platform with apperenances	EA	\$600,000.00	2	\$1,200,000	0	\$0	2	\$1,200,000	0	\$0		
25	Construct Median Curb	LF	\$50.00	1050	\$52,500	1050	\$52,500	1050	\$52,500	150	\$7,500		
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	1	\$1,000,000	1	\$1,000,000	1	\$1,000,000	0	\$0		
27	Asphalt concrete pavement rehab	SY	\$100.00	7853	\$785,333	7911	\$791,111	7744	\$774,444	918	\$91,833		
	Subtotal				\$4,411,333		\$2,724,361		\$4,651,944		\$259,378		
00	SIGNING AND STRIPING		A.		444.450		440.400		4= 00=	000	44.000		
28 29	Replace crosswalk with continental striping Install bicycle crosstrack adjacent to existing crosswalk	SF SF	\$5.00 \$12.00	2230 500	\$11,150 \$6,000	2637 0	\$13,185 \$0	1461 0	\$7,305 \$0	800 0	\$4,000 \$0		
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	914	\$158,993	922	\$160,472	918	\$159,732	102	\$17,748		
31	Green bike lane	SF	\$16.00	0	\$0	0	\$0	0	\$0		\$0		
32	Purple paint bulbout with bollards	SF	\$20.00	0	\$0	0	\$0	0	\$0	2350	\$47,000		
33	Miscellaneous striping	SF	\$5.00	560	\$2,800	560	\$2,800	560	\$2,800	560	\$2,800		
34	Install wayfinding sign	EA	\$500.00	4	\$2,000	0	\$0	0	\$0		\$0		
35	Install pedestrian sign	EA	\$500.00	2	\$1,000	1	\$500	0	\$0		\$0		
36	Install miscellaneous signs Subtotal	EA	\$500.00	5	\$2,500	1	\$500	0	\$0	0	\$0		
	SIGNALS & LIGHTING				\$184,443		\$177,457		\$169,837		\$71,548		
37	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0	0	\$0	0	\$0	0	\$0		
38	Install adaptive pedestrian signal	EA	\$20,000.00	0	\$0	0	\$0	0	\$0		\$0		
39	Install PHB as determined by warrant	EA	\$150,000.00	0	\$0	0	\$0	0	\$0		\$0		
40	Relocate pedestrian push button	EA	\$5,000.00	0	\$0	1	\$5,000	0	\$0	0	\$0		
41	Install audible pedestrian signal	EA	\$1,000.00	1	\$1,000	0	\$0	0	\$0		\$1,000		
42	BRT corridor lighting	MILE	\$2,100,000.00	0.17	\$363,423	0.17	\$366,804	0.17	\$365,114	0.02	\$40,568		
43	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	11	\$165,000	11	\$165,000	4	\$60,000	0	\$0		
44	New signal	EA	\$400,000.00	0	\$0	1	\$400,000	1	\$400,000		\$0		
45	Signal modification	EA	\$200,000.00	1	\$200,000	1	\$200,000	1	\$200,000		\$200,000		
	Subtotal				\$729,423		\$1,136,804		\$1,025,114		\$241,568		
46	LANDSCAPE AND SITE FURNISHINGS Street Tree in tree well	EA	\$2,500.00	10	\$25,000	0	\$0	10	\$25,000	0	\$0		
47	Gateway Features/ Public Art	MILE	\$60,000.00	0.17	\$10,384	0.17	\$10,480	0.17	\$10,432	0.02	\$1,159		
48	Corridor Landscaping	MILE	\$100,000.00	0.17	\$17,306	0.17	\$17,467	0.17	\$17,386	0.02	\$1,932		
49	Corridor Street Trees	MILE	\$1,050,000.00	0.17	\$181,712	0.17	\$183,402	0.17	\$182,557	0.02	\$20,284		
50	Bike Rack/Corral Accommodations	EA	\$5,000.00	2	\$10,000	0	\$0	2	\$10,000	0	\$0		
51	Iron Tree Grate	EA	\$3,600.00	10	\$36,000	0	\$0	10	\$36,000	0	\$0		
52	Irrigation/Hose Bibs	LS	\$20,000.00	0	\$0	0	\$0	0	\$0	0	\$0		
53	Electrical Outlets at Trees w/ conduit	EA	\$2,500.00	10	\$25,000	0	\$0	10	\$25,000	0	\$0		
54	BRT Buses and Layover	MILE	\$1,200,000.00	0.17	\$207,670	0.17	\$209,602	0.17	\$208,636	0.02	\$23,182		
	Subtotal				\$513,071		\$420,951		\$515,011		\$46,557		
	TOTAL				\$7,333,584		\$5,604,037		\$7,999,836		\$779,979		
	30% Contingency				\$2,200,075		\$1,681,211		\$2,399,951		\$233,994		
	Construction Total (2020 Year)				\$9,533,659		\$7,285,248		\$10,399,787		\$1,013,972		
	PA/ED/PS&E/ Soft Costs (40%)				\$3,813,464		\$2,914,099		\$4,159,915		\$405,589		
	GRAND TOTAL				\$13,347,123		\$10,199,347		\$14,559,702		\$1,419,561		

San Pablo Avenue Corridor Project - Near-Term Alt 2 Oakland and Emeryville Concept Level Estimate



Item	Item Description MOBILIZATION/ TRAFFIC CONTROL		Unit Price				stimate by F meryville C				
					8		9		10		11
4		1.0	100/ 50 11		4.07.010		4.00 = 10		4007.700		40.1.500
2	Mobilization/ De-mobilization Traffic Control	LS LS	10% of Construciton 8% of Construciton	1	\$487,842 \$390,273	1	\$460,710 \$368,568	1	\$227,532 \$182,025	1	\$311,690 \$249,352
3	Develop and Implement SWPPP	LS	0.5% of Construciton	1	\$24,392	1	\$23,036	1	\$11,377	1	\$15,584
4	Construction Survey	LS	0.8% of Construciton	1	\$39,027	1	\$36,857	1	\$18,203	1	\$24,935
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$146,353	1	\$138,213	1	\$68,259	1	\$93,507
	Subtotal				\$1,087,887		\$1,027,383		\$507,395		\$695,068
6	DEMOLITION Clearing and Grubbing	LS	2% of Construction	1	\$97,568	1	\$92,142	1	\$45,506	1	\$62,338
7	Demolition	LS	3% of Construction	1	\$146,353	1	\$138,213	1	\$68,259	1	\$93,507
8	Unclassified Excavation	CY	\$120.00	309	\$37,091	348	\$41,727	348	\$41,727	170	\$20,400
	Subtotal				\$281,012		\$272,082		\$155,493		\$176,245
	STREET IMPROVEMENTS		#00 000 00		4420.000		450,000		420.000		440,000
9	Reconstruct Return and Ramp(s) Construct/Reconstruct Mid-block Curb Ramp	EA EA	\$20,000.00 \$17,000.00	6 0	\$120,000 \$0	3 1	\$60,000 \$17,000	0	\$20,000 \$0	2 0	\$40,000 \$0
11	Reconstruct Driveway	SF	\$40.00	2500	\$100,000	2500	\$100,000	2500	\$100,000	2500	\$100,000
12	Relocate/Adjust to grade Utility Boxes	EA	\$3,000.00	6	\$18,000	16	\$48,000	2	\$6,000	9	\$27,000
13	Relocate/Adjust to grade Utility Vault	EA	\$4,000.00	0	\$0	1	\$4,000	0	\$0		\$0
14	Adjust MH Lid to grade	EA	\$2,000.00	0	\$0	0	\$0	0	\$0		\$0
15 16	Relocate fire hydrant Reconstruct Return and Ramp(s) with a Bulb-out	EA SF	\$20,000.00 \$50.00	3985	\$20,000 \$199,250	2200	\$20,000 \$110,000	0 800	\$0 \$40,000		\$20,000 \$80,000
17	Storm Drain Improvements at bulb-out	EA	\$50,000.00	4	\$200,000	3	\$150,000	1	\$50,000	2	\$100,000
18	Reconstruct Sidewalk	SF	\$30.00	9600	\$288,000	10800	\$324,000	10800	\$324,000	5280	\$158,400
19	Median hardscape	SF	\$20.00	3100	\$62,000	3500	\$70,000	3500	\$70,000	1700	\$34,000
20	Construct Pedestrian Refuge Median Nose	EA	\$5,000.00	0	\$0	2	\$10,000	1	\$5,000	0	\$0
21 22	Install pedestrian barricade Reconstruct pork chop/median island to meet ADA	EA SF	\$2,000.00 \$45.00	0	\$2,000 \$0	0	\$2,000 \$0	0	\$4,000 \$0	0	\$0 \$0
23	Street closure	EA	\$15,000.00	0	\$0 \$0	0	\$0 \$0	0	\$0 \$0	0	\$0 \$0
24	Concrete BRT platform with apperenances	EA	\$600,000.00	2	\$1,200,000	2	\$1,200,000	0	\$0		\$1,200,000
25	Construct Median Curb	LF	\$50.00	900	\$45,000	1050	\$52,500	1050	\$52,500	500	\$25,000
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	1	\$1,000,000	0	\$0	0	\$0	0	\$0
27	Asphalt concrete pavement rehab	SY	\$100.00	7553	\$755,278	8475	\$847,500	8014	\$801,444	4056	\$405,556
	Subtotal SIGNING AND STRIPING				\$4,009,528		\$3,015,000		\$1,472,944		\$2,189,956
28	Replace crosswalk with continental striping	SF	\$5.00	2712	\$13,560	2791	\$13,955	1545	\$7,725	1410	\$7,050
29	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	500	\$6,000	500	\$6,000	0	\$0		\$0
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	816	\$141,984	918	\$159,732	918	\$159,732	449	\$78,091
31	Green bike lane	SF	\$16.00	0	\$0	0	\$0	0	\$0		\$0
32	Purple paint bulbout with bollards	SF	\$20.00	0	\$0	0	\$0	0	\$0		\$0
33 34	Miscellaneous striping Install wayfinding sign	SF EA	\$5.00 \$500.00	560 0	\$2,800 \$0	560 4	\$2,800 \$2,000	560 0	\$2,800 \$0	560 0	\$2,800 \$0
35	Install pedestrian sign	EA	\$500.00	0	\$0	0	\$2,000	0	\$0		\$0
36	Install miscellaneous signs	EA	\$500.00	0	\$0	1	\$500	0	\$0		\$500
	Subtotal				\$164,344		\$184,987		\$170,257		\$88,441
07	SIGNALS & LIGHTING		#4.000.00		40		40		40		40
37 38	Install countdown pedestrian heads Install adaptive pedestrian signal	EA EA	\$1,000.00 \$20,000.00	0	\$0 \$0	0 6	\$0 \$120,000	0	\$0 \$20,000	3	\$0 \$60,000
39	Install PHB as determined by warrant	EA	\$150,000.00	0	\$0	0	\$120,000	0	\$20,000		\$00,000
40	Relocate pedestrian push button	EA	\$5,000.00	0	\$0	0	\$0	0	\$0		\$0
41	Install audible pedestrian signal	EA	\$1,000.00	0	\$0	2	\$2,000	2	\$2,000	0	\$0
42	BRT corridor lighting	MILE	\$2,100,000.00	0.15	\$324,545	0.17	\$365,114	0.17	\$365,114	0.09	\$178,500
43	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	12	\$180,000	8	\$120,000	3	\$45,000	0	\$0
44	New signal	EA	\$400,000.00	0	\$0	1	\$400,000	0	\$0		\$400,000
45	Signal modification Subtotal	EA	\$200,000.00	1	\$200,000	2	\$400,000	1	\$200,000	1	\$200,000
	LANDSCAPE AND SITE FURNISHINGS				\$704,545		\$1,407,114		\$632,114		\$838,500
46	Street Tree in tree well	EA	\$2,500.00	10	\$25,000	10	\$25,000	0	\$0	10	\$25,000
47	Gateway Features/ Public Art	MILE	\$60,000.00	0.15	\$9,273	0.17	\$10,432	0.17	\$10,432	0.09	\$5,100
48	Corridor Landscaping	MILE	\$100,000.00	0.15	\$15,455	0.17	\$17,386	0.17	\$17,386	0.09	\$8,500
49	Corridor Street Trees	MILE	\$1,050,000.00	0.15	\$162,273	0.17	\$182,557	0.17	\$182,557	0.09	\$89,250
50 51	Bike Rack/Corral Accommodations	EΑ	\$5,000.00	2	\$10,000	10	\$10,000	0	\$0 \$0	10	\$10,000
51 52	Iron Tree Grate Irrigation/Hose Bibs	EA LS	\$3,600.00 \$20,000.00	10 0	\$36,000 \$0	10	\$36,000 \$20,000	0	\$0 \$0	10 0	\$36,000 \$0
53	Electrical Outlets at Trees w/ conduit	EA	\$2,500.00	10	\$25,000	10	\$25,000	0	\$0 \$0		\$25,000
54	BRT Buses and Layover	MILE	\$1,200,000.00	0.15	\$185,455	0.17	\$208,636	0.17	\$208,636		\$102,000
	Subtotal				\$468,455		\$535,011		\$419,011		\$300,850
	TOTAL				\$6,715,771		\$6,441,578		\$3,357,215		\$4,289,060
	30% Contingency				\$2,014,731		\$1,932,473		\$1,007,164		\$1,286,718
	Construction Total (2020 Year)				\$8,730,502		\$8,374,051		\$4,364,379		\$5,575,777
	PA/ED/PS&E/ Soft Costs (40%) GRAND TOTAL				\$3,492,201		\$3,349,620		\$1,745,752		\$2,230,311
	GRAND ICIAL				\$12,222,702		\$11,723,671		\$6,110,131		\$7,806,088

San Pablo Avenue Corridor Project - Near-Term Alt 2 Oakland and Emeryville Concept Level Estimate



Item	Item Description	Unit	Unit Price			E:	stimate by F	age IN	Oakland C	altrans I	R/W
	Kom Bosonphon		Jim Fride		11		12		13		14
	MOBILIZATION/ TRAFFIC CONTROL										
1	Mobilization/ De-mobilization	LS	10% of Construciton	1	\$132,949	1	\$315,512	1	\$480,273	1	\$314,28
2	Traffic Control	LS	8% of Construciton	1	\$106,360	1	\$252,409	1	\$384,219		\$251,43
3	Develop and Implement SWPPP	LS	0.5% of Construciton	1	\$6,647	1	\$15,776	1	\$24,014		\$15,71
4	Construction Survey	LS	0.8% of Construciton	1	\$10,636	1	\$25,241	1	\$38,422	-	\$25,14
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$39,885	1	\$94,654	1	\$144,082		\$94,28
	DEMOLITION Subtota	1			\$296,477		\$703,591		\$1,071,010		\$700,86
6	Clearing and Grubbing	LS	2% of Construction	1	\$26,590	1	\$63,102	1	\$96,055	1	\$62,85
7	Demolition	LS	3% of Construction	1	\$39,885	1	\$94,654	1	\$144,082	1	\$94,28
8	Unclassified Excavation	CY	\$120.00	178	\$21,327	348	\$41,727	348	\$41,727	348	\$41,72
	Subtota	_	ψ120.00	27.5	\$87,802	0.0	\$199,483	0.0	\$281,864		\$198,87
	STREET IMPROVEMENTS	-			70.700		7=55,155		7=0=/001		+===
9	Reconstruct Return and Ramp(s)	EA	\$20,000.00	0	\$0	0	\$0	0	\$0	0	\$
10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	0	\$0	1	\$17,000	2	\$34,000	1	\$17,00
11	Reconstruct Driveway	SF	\$40.00	2500	\$100,000	2500	\$100,000	2500	\$100,000	2500	\$100,00
12	Relocate/Adjust to grade Utility Boxes	EA	\$3,000.00	0	\$0	26	\$78,000	19	\$57,000	8	\$24,00
13	Relocate/Adjust to grade Utility Vault	EA	\$4,000.00	0	\$0	2	\$8,000	0	\$0	0	\$
14	Adjust MH Lid to grade	EA	\$2,000.00	0	\$0	2	\$4,000	1	\$2,000	0	\$1
15	Relocate fire hydrant	EA	\$20,000.00	0	\$0	1	\$20,000	1	\$20,000		\$1
16	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00	0	\$0	4000	\$200,000	9600	\$480,000		\$200,00
17	Storm Drain Improvements at bulb-out	EA	\$50,000.00	0	\$0	5	\$250,000	10	\$500,000	-	\$250,00
18 19	Reconstruct Sidewalk	SF SF	\$30.00	5520	\$165,600	10800	\$324,000 \$70,000	10800	\$324,000		\$324,000
20	Median hardscape Construct Pedestrian Refuge Median Nose	EA	\$20.00 \$5,000.00	1800	\$36,000	3500		5700	\$114,000	3500 2	\$70,000
21	Install pedestrian barricade	EA	\$3,000.00	0	\$0 \$0	0	\$10,000 \$0	0	\$10,000 \$0		\$10,000
22	Reconstruct pork chop/median island to meet ADA	SF	\$45.00	0	\$0	0	\$0	0	\$0		\$(\$(
23	Street closure	EA	\$15,000.00	0	\$0	0	\$0	0	\$0		\$(
24	Concrete BRT platform with apperenances	EA	\$600,000.00	0	\$0	0	\$0	2	\$1,200,000	0	\$(
25	Construct Median Curb	LF	\$50.00	550	\$27,500	1050	\$52,500	1440	\$72,000		\$52,500
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	0	\$0	0	\$0	0	\$0		\$(
27	Asphalt concrete pavement rehab	SY	\$100.00		\$407,444	8126	\$812,611	8324	\$832,389		\$832,778
	Subtota	ı	·		\$736,544		\$1,946,111		\$3,745,389		\$1,880,278
	SIGNING AND STRIPING										
28	Replace crosswalk with continental striping	SF	\$5.00	1179	\$5,895	3172	\$15,860	1560	\$7,800	2290	\$11,450
29	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	500	\$6,000	0	\$0	0	\$0	0	\$(
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	469	\$81,641	918	\$159,732	918	\$159,732	918	\$159,732
31	Green bike lane	SF	\$16.00	0	\$0	0	\$0	0	\$0		\$0
32	Purple paint bulbout with bollards	SF	\$20.00	0	\$0	0	\$0	0	\$0		\$0
33	Miscellaneous striping	SF	\$5.00	560	\$2,800	560	\$2,800	440	\$2,200	560	\$2,800
34	Install wayfinding sign	EA	\$500.00	0	\$0	1	\$500	1	\$500		\$500
35 36	Install pedestrian sign Install miscellaneous signs	EA EA	\$500.00 \$500.00	0	\$0	0	\$0	1	\$500		\$(\$(
30	Install miscellaneous signs Subtota	_	\$500.00	0	\$9 6,336	0	\$0 \$178,892	3	\$1,500 \$172,232		\$174,482
	SIGNALS & LIGHTING	•			\$30,330		3170,032		31/2,232		3174,402
37	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0	0	\$0	0	\$0	0	\$(
38	Install adaptive pedestrian signal	EA	\$20,000.00	1	\$20,000	0	\$0	0	\$0		\$60,000
39	Install PHB as determined by warrant	EA	\$150,000.00	0	\$0	2	\$300,000	0	\$0		\$(
40	Relocate pedestrian push button	EA	\$5,000.00	0	\$0	0	\$0	0	\$0		\$(
41	Install audible pedestrian signal	EA	\$1,000.00	0	\$0	0	\$0	0	\$0		\$3,000
42	BRT corridor lighting	MILE	\$2,100,000.00	0.09	\$186,614	0.17	\$365,114	0.17	\$365,114	0.17	\$365,114
43	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	6	\$90,000	11	\$165,000	8	\$120,000	4	\$60,000
44	New signal	EA	\$400,000.00	0	\$0	0	\$0	1	\$400,000	0	\$(
45	Signal modification	EA	\$200,000.00	1	\$200,000	1	\$200,000	0	\$0	3	\$600,000
	Subtota	ı			\$496,614		\$1,030,114		\$885,114		\$1,088,114
	LANDSCAPE AND SITE FURNISHINGS										
46	Street Tree in tree well	EA	\$2,500.00	0	\$0	0	\$0	10	\$25,000	0	\$0
47	Gateway Features/ Public Art	MILE	\$60,000.00	0.09	\$5,332	0.17	\$10,432	0.17	\$10,432	0.17	\$10,432
48	Corridor Landscaping	MILE	\$100,000.00	0.09	\$8,886	0.17	\$17,386	0.17	\$17,386	0.17	\$17,386
49	Corridor Street Trees	MILE	\$1,050,000.00	0.09	\$93,307	0.17	\$182,557	0.17	\$182,557	0.17	\$182,55
50	Bike Rack/Corral Accommodations	EA	\$5,000.00	0	\$0	0	\$0	2	\$10,000	0	\$(
51	Iron Tree Grate	EA	\$3,600.00	0	\$0	0	\$0	10	\$36,000	0	\$(
52	Irrigation/Hose Bibs	LS	\$20,000.00	0	\$0	1	\$20,000	0	\$0	0	\$(
53	Electrical Outlets at Trees w/ conduit	EA	\$2,500.00	0	\$0	0	\$0	10	\$25,000	0	\$(
54	BRT Buses and Layover	MILE	\$1,200,000.00	0.09	\$106,636	0.17	\$208,636	0.17	\$208,636	0.17	\$208,636
	Subtota	ı			\$214,161		\$439,011		\$515,011		\$419,01
	TOTA	-			\$1,927,934		\$4,497,202		\$6,670,620		\$4,461,616
	30% Contingency				\$578,380		\$1,349,161		\$2,001,186		\$1,338,485
	Construction Total (2020 Year)				\$2,506,315		\$5,846,363		\$8,671,806		\$5,800,10
	PA/ED/PS&E/ Soft Costs (40%)	1			\$1,002,526		\$2,338,545		\$3,468,722	1	\$2,320,043
	1.7 VED/1 GGE/ GG/1 GG/1 (1070)				71,002,320		72,000,010		75,700,722		1 //-

San Pablo Avenue Corridor Project - Near-Term Alt 2 Oakland and Emeryville Concept Level Estimate



Itom	Itam Deparintion	Unit	Unit Price	E	stimate by l	Page Nu	ımber	Quantity	Estimate
Item	Item Description	Unit	Unit Price		15		16	TOTAL	\$ TOTAL
	MOBILIZATION/ TRAFFIC CONTROL	1.0	100/ 50 1 1		6400.074	4	604.055	10	Å7.044.30.
	Mobilization/ De-mobilization Traffic Control	LS LS	10% of Construciton	1	\$408,874	1	\$91,965		\$7,011,394
	Develop and Implement SWPPP	LS	8% of Construciton 0.5% of Construciton	1	\$327,099 \$20,444	1	\$73,572		\$5,609,115 \$350,570
	Construction Survey	LS	0.8% of Construction	1	\$32,710	1	\$4,598 \$7,357	18	\$560,912
	Utility Protection/ potholing by Contractor	LS	3% of Construction	1	\$122,662	-	\$27,590		\$2,103,418
	Subtotal		070 OF GOTISTICOTOTI		\$911,788		\$205,083		\$15,635,408
	DEMOLITION				3311,700		7203,003		713,033,400
	Clearing and Grubbing	LS	2% of Construction	1	\$81,775	1	\$18,393	18	\$1,402,279
	Demolition	LS	3% of Construction	1	\$122,662	1	\$27,590		\$2,103,418
	Unclassified Excavation	CY	\$120.00	348	\$41,727	56	\$6,761	5350	\$641,943
	Subtotal		,		\$246,164		\$52,744		\$4,147,640
	STREET IMPROVEMENTS								
9	Reconstruct Return and Ramp(s)	EA	\$20,000.00	0	\$0	0	\$0	33	\$660,000
10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	0	\$0	0	\$0	14	\$238,000
11	Reconstruct Driveway	SF	\$40.00	2500	\$100,000	0	\$0	32500	\$1,300,000
12	Relocate/Adjust to grade Utility Boxes	EA	\$3,000.00	2	\$6,000	4	\$12,000	162	\$486,000
13	Relocate/Adjust to grade Utility Vault	EA	\$4,000.00	0	\$0	0	\$0	10	\$40,000
14	Adjust MH Lid to grade	EA	\$2,000.00	1	\$2,000	0	\$0	19	\$38,000
	Relocate fire hydrant	EA	\$20,000.00	2	\$40,000	1	\$20,000	22	\$440,000
16	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00	2400	\$120,000	1600	\$80,000	89068	\$4,453,400
	Storm Drain Improvements at bulb-out	EA	\$50,000.00	3	\$150,000	2	\$100,000	76	\$3,800,000
	Reconstruct Sidewalk	SF	\$30.00	11100	\$333,000	1750	\$52,500	167650	\$5,029,500
	Median hardscape	SF	\$20.00	3500	\$70,000	1050	\$21,000		\$995,000
	Construct Pedestrian Refuge Median Nose	EA	\$5,000.00	1	\$5,000	0	\$0	16	\$80,000
	Install pedestrian barricade	EA	\$2,000.00	0	\$0	0	\$0		\$8,000
	Reconstruct pork chop/median island to meet ADA	SF	\$45.00	0	\$0	0	\$0		\$24,615
	Street closure	EA	\$15,000.00	0	\$0	0	\$0		\$15,000
24	Concrete BRT platform with apperenances	EA	\$600,000.00	2	\$1,200,000	0	\$0	18	\$10,800,000
25	Construct Median Curb	LF	\$50.00	1050	\$52,500	525	\$26,250	15105	\$755,250
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	0	\$0	0	\$0	10	\$10,000,000
27	Asphalt concrete pavement rehab	SY	\$100.00	8554	\$855,444	1169	\$116,889	125747	\$12,574,667
	Subtotal				\$2,933,944		\$428,639		\$51,737,432
	SIGNING AND STRIPING								
	Replace crosswalk with continental striping	SF	\$5.00	2029	\$10,145		\$2,670		\$190,495
	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	0	\$0	0	\$0		\$36,000
	Red Bus Only Roadway Signing and Striping	LF	\$174.00	918	\$159,732	149	\$25,883		\$2,457,359
	Green bike lane	SF	\$16.00	0	\$0	-	\$0		\$6,400
	Purple paint bulbout with bollards	SF	\$20.00	0	\$0	0	\$0	10775	\$215,500
	Miscellaneous striping	SF	\$5.00	560	\$2,800	560	\$2,800	10550	\$52,750
	Install wayfinding sign	EA	\$500.00	560	\$280,000	0	\$0		\$285,500
	Install pedestrian sign	EA	\$500.00	0	\$0	0	\$0		\$3,000
36	Install miscellaneous signs	EA	\$500.00	0	\$0	1	\$500		\$10,500
	Subtotal			1	\$452,677		\$31,853		\$3,257,504
	SIGNALS & LIGHTING		4						<u> </u>
	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0		\$0		\$5,000
	Install adaptive pedestrian signal	EA	\$20,000.00	0	\$0		\$0		\$320,000
1	Install PHB as determined by warrant	EA	\$150,000.00	0	\$0	-	\$0		\$600,000
	Relocate pedestrian push button	EA	\$5,000.00	0	\$0		\$0		\$10,000
	Install audible pedestrian signal	EA	\$1,000.00	2	\$2,000	0	\$0		\$12,000
	BRT corridor lighting	MILE	\$2,100,000.00	0.17	\$365,114	0.03	\$59,162	3	\$5,617,003
	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	9	\$135,000	0	\$0		\$1,755,000
	New signal	EA	\$400,000.00	0	\$0		\$400,000		\$2,400,000
45	Signal modification	EA	\$200,000.00	1	\$200,000	0	\$0		\$4,400,000
	Subtotal				\$702,114		\$459,162		\$15,119,003
	LANDSCAPE AND SITE FURNISHINGS								
	Street Tree in tree well	EA	\$2,500.00	10	\$25,000	0	\$0		\$225,000
	Gateway Features/ Public Art	MILE	\$60,000.00	0.17	\$10,432	0.03	\$1,690	-	\$160,486
	Corridor Landscaping	MILE	\$100,000.00	0.17	\$17,386	0.03	\$2,817	3	\$267,476
	Corridor Street Trees	MILE	\$1,050,000.00	0.17	\$182,557	0.03	\$29,581	3	\$2,808,501
50	Bike Rack/Corral Accommodations	EA	\$5,000.00	2	\$10,000	0	\$0		\$90,000
51	Iron Tree Grate	EA	\$3,600.00	10	\$36,000	0	\$0		\$324,000
52	Irrigation/Hose Bibs	LS	\$20,000.00	0	\$0	0	\$0	3	\$60,000
53	Electrical Outlets at Trees w/ conduit	EA	\$2,500.00	10	\$25,000	0	\$0	90	\$225,000
54	BRT Buses and Layover	MILE	\$1,200,000.00	0.17	\$208,636	0.03	\$33,807	3	\$3,209,716
	Subtotal				\$515,011		\$67,895		\$7,370,179
	TOTAL				\$5,761,698		\$1,245,375		\$97,267,166
	30% Contingency				\$1,728,510		\$373,613		\$29,180,150
	Construction Total (2020 Year)				\$7,490,208		\$1,618,988		\$126,447,315
					.				
	PA/ED/PS&E/ Soft Costs (40%)				\$2,996,083		\$647,595		\$50,578,926
	GRAND TOTAL				\$10,486,291		\$2,266,583		\$177,026,242

OPINION OF PROBABLE COST San Pablo Avenue Corridor Project - Near-Term Oakland and Emeryville Concept Level Estimate-Unit Prices



2-Mar-20 Prepared By: JAH

		I	T	Prepared By: JAH
ITEM	DESCRIPTION	UNIT	UNIT PRICE	ASSUMPTIONS
	MOBILIZATION/ TRAFFIC CONTROL			
1	Mobilization/ De-mobilization	LS		Approximately 10% of Construction Cost
2	Traffic Control	LS		Approximately 8% of Construction Cost Approximately 0.5% of Construction Cost
3	Develop and Implement SWPPP	LS		Approximately 0.8% of Construction Cost Approximately 0.8% of Construction Cost
<u>4</u> 5	Construction Survey Utility Protection/ potholing by Contractor	LS LS	3% of Construction	Approximately 3% of Construction Cost
		LO	5% of Construction	Approximately 970 of Constitution Cost
	DEMOLITION			
6	Clearing and Grubbing	LS		Approximately 2% of Construction Cost
7	Demolition	LS		Approximately 3% of Construction Cost
8	Unclassified Excavation	CY	\$120.00	2,000 CY per mile transit stations or islands
	STREET IMPROVEMENTS			
		l		Construct PCC curb, gutter, ADA ramp(s), sidewalk, AC Plug, Install DWS (estimate
9	Reconstruct Return and Ramp(s)	EA	\$20,000.00	\$50/SF @ 400SF)
10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000,00	Construct PCC curb, gutter, ADA ramp, sidewalk, AC Plug, Install DWS (up to 400 SF of concrete with 1 ramp) 400 SF x \$30/SF + \$5,000 ramp
	Reconstruct Driveway	SF		Construct PCC curb, gutter, driveway slope, sidewalk, AC Plug
	Relocate/Adjust to grade Utility Boxes	EA		At curb returns and median areas
	Relocate/Adjust to grade Utility Vault	EA		At curb returns
	Adjust MH Lid to grade	EA		At curb returns
	Relocate fire hydrant	EA		At some curb return bulbs
	•		, 1,122.30	Construct PCC curb, gutter, ADA ramp(s), sidewalk, AC Plug, Install DWS
16	Reconstruct Return and Ramp(s) with a Bulb-out	SF		\$30/SF+\$20/SF ramps and other forming, box adjustments
17	Storm Drain Improvements at bulb-out	EA		One manhole, one inlet, 80 LF pipe, 20% misc.
18	Reconstruct Sidewalk	SF		Assume 250 SF per new street tree @4/ 100 ft
19	Median hardscape	SF	\$20.00	Per sample layout, estimated 6 SF/ LF of BRT (includes center and side medians)
20	Construct Pedestries Potuse Medica None	EA	\$5,000,000	Construct PCC curb, AC Plug, Repair median hardscape/landscape/irrigation
20	Construct Pedestrian Refuge Median Nose Install pedestrian barricade	EA	\$5,000.00	(includes cut back median nose quantity for side streets)
22	Reconstruct pork chop/median island to meet ADA	SF		Construct PCC curb, AC Plug, Repair median hardscape, ADA passageway
23	Street closure	EA		Depends upon closure method.
	otroct diodure		Ψ10,000.00	See East Bay BRT Bid results +15% inflation since April 2016, 2 per stop location.
		EA		Includes concrete platform, bus stop shelter, bench, trash, handrails, electrical, CCTV,
24	Concrete BRT platform with apperenances	- `	\$700.000.00	ticketing, and signage
			***************************************	60% of BRT length assumed to have median, times 2 for each side of the median +
				90% of BRT length assumed to have median for bike protection, times 2 for each side
25	Construct Median Curb	LF	\$50.00	of the median = 3 x BRT length
				This is a placeholder as each will vary and will be analyzed further in the next stage.
				Assumes full signal and accessibility upgrades, may impact right of way at some
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	
		SY		Minor base repairs, grind & overlay 0.2', assumes each agency has on-going rehab
27	Asphalt concrete pavement rehab		\$100.00	prior
	SIGNING AND STRIPING			
28	Replace crosswalk with continental striping	SF	\$5.00	24" @ 2' spacing, 10' wide center to center with 3' gap per other's recently constructed
		SF	#40.00	Assumes green pavement skipped, so only half the area would be green. Unit cost
29	Install bicycle crosstrack adjacent to existing crosswalk		\$12.00	was halved. 4 stripes (\$5/LF each), sign (\$500) and "Bus Only" (42 SF@\$15/SF) every 300
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	LF+red pvmt
-00	Thea Bas only readway orgining and outpung		ψ174.00	Includes thermoplastic pavement markings & green pavement (assume 20% of bike
31	Green bike lane	SF	\$16.00	lanes are green)
32	Purple paint bulbout with bollards	SF	\$20.00	Includes purple paint and bollards
33	Miscellaneous striping	SF	\$5.00	Includes thermoplastic pavement markings & striping
34	Install wayfinding sign	EA	\$500.00	, , , , , , , , , , , , , , , , , , , ,
35	Install pedestrian sign	EA	\$500.00	
36	Install miscellaneous signs	EA	\$500.00	
	SIGNALS & LIGHTING			
37	Install countdown pedestrian heads	EA	\$1.000.00	Locations noted on plan
	Install adaptive pedestrian signal	EA		Locations noted on plan
	Install PHB as determined by warrant	EA		Locations noted on plan
40	Relocate pedestrian push button	EA		plan ES-7A
41	Install audible pedestrian signal	EA		Locations noted on plan
	-			Spacing assumed between 60' and 100' on each side of the street because of existing
	BRT corridor lighting	MILE		lighting, average spacing of 85' and assuming each light is \$20,000
	Install Pedestrian Lighting @ Crosswalks	EA		Two lights/ unsignalized intersection
	New signal	EA		Locations noted previously from F&P. Detection included.
45	Signal modification	EA	\$200,000.00	All signals where there is BRT.
	LANDSCAPE AND SITE FURNISHINGS			
46	Street Tree in tree well	EA		5 per station location with iron tree grate
47	Gateway Features/ Public Art	MILE		Estimated, all alternatives have the same assumption
48	Corridor Landscaping	MILE	\$100,000.00	Estimated, minor enhancements to bulb areas
100	Corridor Street Trans	 	¢4 050 000 00	Trees with tree grate every 40 feet on both sides of the street, 264 trees per mile x
49	Corridor Street Trees	MILE		80% of length, 210 trees per mile, \$5000 each 1 bike rack/corral at each station
50	Bike Rack/Corral Accommodations Iron Tree Grate	EA		5 per station location
		EA LS		1 per station location 1 per area identified
	Irrigation/Hose Bibs Electrical Outlets at Trees w/ conduit	EA		1 per tree
	BRT Buses and Layover	MILE		30 bus upgrades @\$200K for 12 miles of BRT, \$8M layover improvements.
	DITT DUSCS and LayUVGI	IVIILL	ψ1,200,000.00	100 220 2F314400 @\$20011101 12 Illinoo of Ditt, \$000 14 yord Illiprovenients.

San Pablo Avenue Corridor Project - Near-Term Oakland and Emeryville Concept Level Estimate



3/2/2020

Item	Item Description	Unit	Unit Price			Es	stimate by I Oakland				
		•			1		2		3		4
	MOBILIZATION/ TRAFFIC CONTROL										
	Mobilization/ De-mobilization	LS	10% of Construciton	1	\$550,849	1	\$560,543	1	\$394,559	1	\$845,445
3	Traffic Control Develop and Implement SWPPP	LS LS	8% of Construciton 0.5% of Construciton	1	\$440,679 \$27,542	1	\$448,434 \$28,027	1	\$315,647	1	\$676,356 \$42,272
	Construction Survey	LS	0.8% of Construction	1	\$27,542	1	\$28,027	1	\$19,728 \$31,565	1	\$42,272
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$165,255	1	\$168,163	1	\$118,368	1	\$253,634
	Subtotal				\$1,228,394		\$1,250,010		\$879,866		\$1,885,343
	DEMOLITION										
6 7	Clearing and Grubbing	LS	2% of Construction	1	\$110,170	1	\$112,109	1	\$78,912	1	\$169,089
8	Demolition Unclassified Excavation	LS CY	3% of Construction \$120.00	425	\$165,255 \$51,000	1 348	\$168,163 \$41,727	1 309	\$118,368 \$37,091	1 386	\$253,634 \$46,364
	Subtotal	01	ψ120.00	423	\$326,425	348	\$321,999	303	\$234,370		\$469,086
	STREET IMPROVEMENTS				7020,120		7023,000		7=2 751 5		4 100,000
9	Reconstruct Return and Ramp(s)	EA	\$20,000.00	5	\$100,000	3	\$60,000	1	\$20,000	0	\$0
10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$17,000.00	0	\$0		\$0	0	\$0		\$51,000
11	Reconstruct Driveway	SF	\$40.00	0	\$0		\$0	0	\$0		\$100,000
13	Relocate/Adjust to grade Utility Boxes Relocate/Adjust to grade Utility Vault	EA EA	\$3,000.00 \$4,000.00	7	\$21,000 \$0	5 6	\$15,000 \$24,000	9	\$27,000 \$0	26 1	\$78,000 \$4,000
14	Adjust MH Lid to grade	EA	\$2,000.00	3	\$6,000	2	\$4,000	1	\$2,000	5	\$10,000
15	Relocate fire hydrant	EA	\$20,000.00	2	\$40,000	1	\$20,000	1	\$20,000	5	\$100,000
16	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00	2742	\$137,100	8720	\$436,000	4090	\$204,500		\$941,300
17	Storm Drain Improvements at bulb-out	EA	\$50,000.00	3	\$150,000	3	\$150,000	5	\$250,000	15	\$750,000
18 19	Reconstruct Sidewalk Median hardscape	SF SF	\$30.00 \$20.00	13200 7920	\$396,000 \$158,400	10800 6480	\$324,000 \$129,600	9900 5760	\$297,000 \$115,200	12600 7200	\$378,000 \$144,000
20	Construct Pedestrian Refuge Median Nose	EA	\$5,000.00	7920	\$158,400	0	\$129,600	2	\$115,200	2	\$144,000
21	Install pedestrian barricade	EA	\$2,000.00	0	\$0 \$0	0	\$0 \$0	0	\$10,000	0	\$10,000
22	Reconstruct pork chop/median island to meet ADA	SF	\$45.00	546	\$24,570	0	\$0	0	\$0	0	\$0
23	Street closure	EA	\$15,000.00	0	\$0	0	\$0	0	\$0	1	\$15,000
24	Concrete BRT platform with apperenances	EA	\$700,000.00	0	\$0	2	\$1,400,000	0	\$0	2	\$1,400,000
25	Construct Median Curb	LF	\$50.00	3960	\$198,000	3240	\$162,000	2880	\$144,000	3600	\$180,000
26 27	Intersection Reconstruction and Realignment	EA SY	\$1,000,000.00	2	\$2,000,000	1	\$1,000,000	7040	\$1,000,000	2	\$2,000,000
21	Asphalt concrete pavement rehab Subtotal	SY	\$100.00	10080.6	\$1,008,056 \$4,239,126	8647	\$864,667 \$4,589,267	7048	\$704,778 \$2,794,478	8871	\$887,111 \$7,048,411
	SIGNING AND STRIPING				Ş4,233,120		\$4,303,E01		\$2,734,470		77,040,411
28	Replace crosswalk with continental striping	SF	\$5.00	4530	\$22,650	2051	\$10,255	2922	\$14,610	2246	\$11,230
29	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	0	\$0	0	\$0	500	\$6,000	500	\$6,000
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	1122	\$195,228	918	\$159,732	816	\$141,984	1020	\$177,480
31	Green bike lane	SF	\$16.00	2640	\$42,240	2160	\$34,560	1920	\$30,720	2400	\$38,400
32	Purple paint bulbout with bollards Miscellaneous striping	SF SF	\$20.00 \$5.00	0 1900	\$0 \$9,500	0 1600	\$0 \$8,000	8425 1750	\$168,500 \$8,750	0 1750	\$0 \$8,750
34	Install wayfinding sign	EA	\$500.00	0	\$9,300	0	\$8,000	0	\$8,730	0	\$8,730
35	Install pedestrian sign	EA	\$500.00	2	\$1,000	0	\$0	0	\$0	0	\$0
36	Install miscellaneous signs	EA	\$500.00	1	\$500	1	\$500	2	\$1,000	5	\$2,500
	Subtotal				\$271,118		\$213,047		\$371,564		\$244,360
37	SIGNALS & LIGHTING	EA	¢1,000,00	2	¢2.000	2	¢2.000	0	ćo	0	ćo
38	Install countdown pedestrian heads Install adaptive pedestrian signal	EA	\$1,000.00 \$20,000.00	0	\$2,000 \$0	3 0	\$3,000 \$0	0	\$0 \$0	2	\$0 \$40,000
39	Install PHB as determined by warrant	EA	\$150,000.00	0	\$0 \$0		\$0	1	\$150,000	1	\$150,000
40	Relocate pedestrian push button	EA	\$5,000.00	0	\$0	1	\$5,000	0	\$0	0	\$0
41	Install audible pedestrian signal	EA	\$1,000.00	0	\$0	0	\$0	0	\$0	1	\$1,000
-	BRT corridor lighting	MILE	\$2,100,000.00	0.21	\$446,250	0.17	\$365,114	0.15	\$324,545	0.19	\$405,682
43	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	10	\$150,000	2	\$30,000	7	\$105,000	11	\$165,000
44	New signal	EA	\$400,000.00	0	\$0	0	\$0	0	\$0	0	\$0
45	Signal modification Subtotal	EA	\$200,000.00	2	\$400,000	2	\$400,000	1	\$200,000	2	\$400,000
	LANDSCAPE AND SITE FURNISHINGS				\$998,250		\$803,114		\$779,545		\$1,161,682
46	Street Tree in tree well	EA	\$2,500.00	0	\$0	10	\$25,000	0	\$0	10	\$25,000
47	Gateway Features/ Public Art	MILE	\$60,000.00	0.21	\$12,750	0.17	\$10,432	0.15	\$9,273	0.19	\$11,591
48	Corridor Landscaping	MILE	\$100,000.00	0.21	\$21,250	0.17	\$17,386	0.15	\$15,455	0.19	\$19,318
49	Corridor Street Trees	MILE	\$1,050,000.00	0.21	\$223,125	0.17	\$182,557	0.15	\$162,273	0.19	\$202,841
50	Bike Rack/Corral Accommodations	EA	\$5,000.00	0	\$0	2	\$10,000	0	\$0	2	\$10,000
51	Iron Tree Grate	EA	\$3,600.00	0	\$0		\$36,000	0	\$0	10	\$36,000
52 53	Irrigation/Hose Bibs Electrical Outlets at Trees w/ conduit	LS EA	\$20,000.00	0	\$0 \$0		\$20,000	0	\$0 \$0	10	\$0
53	BRT Buses and Layover	MILE	\$2,500.00 \$1,200,000.00		\$0 \$255,000	10 0.17	\$25,000 \$208,636	0.15	\$0 \$185,455	0.19	\$25,000 \$231,818
	Subtotal	IVIILL	ψ1,200,000.00	0.21	\$512,125	0.17	\$535,011	0.13	\$183,433 \$372,455	5.13	\$561,568
	TOTAL				\$7,575,437		\$7,712,448		\$5,432,278		\$11,370,450
	30% Contingency				\$2,272,631		\$2,313,734		\$1,629,683		\$3,411,135
	Construction Total (2020 Year)				\$9,848,068		\$10,026,182		\$7,061,961		\$14,781,586
	PA/ED/PS&E/ Soft Costs (40%)				\$3,939,227		\$4,010,473		\$2,824,785		\$5,912,634
	GRAND TOTAL				\$13,787,296		\$14,036,655		\$9,886,746		\$20,694,220

San Pablo Avenue Corridor Project - Near-Term Oakland and Emeryville Concept Level Estimate 3/2/2020



Estimate by Page Number Item Description Unit Price Oakland City R/W Item Unit 5 6 8 MOBILIZATION/ TRAFFIC CONTROL 10% of Construciton Mobilization/ De-mobilization LS \$573,330 \$424,974 \$59,918 1 1 1 \$625,651 1 8% of Construciton 2 Traffic Control LS 1 \$458,664 \$339,979 1 \$500,520 1 1 \$47.93 3 Develop and Implement SWPPP LS 0.5% of Construciton 1 \$28,666 1 \$21,249 1 \$31,283 1 \$2,99 4 Construction Survey LS 1 \$45,866 1 \$33,998 1 1 \$4,793 0.8% of Construciton \$50,052 5 Utility Protection/ potholing by Contractor LS 3% of Construciton 1 \$127,492 1 1 \$171,999 1 \$187,695 \$17,97 Subtotal \$1,278,526 \$947,692 \$1,395,201 \$133,618 **DEMOLITION** 2% of Construction \$114,666 Clearing and Grubbing LS 1 \$84,995 \$125,130 \$11,984 6 1 Demolition LS 3% of Construction \$171,999 \$127,492 1 1 \$187,695 \$17,97 Unclassified Excavation 8 CY \$120.00 346 \$41,534 349 \$41,920 348 \$41,727 39 \$4,636 \$354,553 **Subtotal** \$328,199 \$254,408 \$34,596 STREET IMPROVEMENTS \$20,000.00 9 Reconstruct Return and Ramp(s) EΑ 4 \$80,000 2 \$40,000 5 \$100,000 \$20,000 1 10 Construct/Reconstruct Mid-block Curb Ramp EΑ \$17,000.00 \$34,000 3 \$51,000 2 1 \$17,000 0 ŚO 11 Reconstruct Driveway SF 2500 2500 \$100,000 2500 \$0 \$40.00 \$100,000 \$100,000 0 12 Relocate/Adjust to grade Utility Boxes EΑ \$3,000.00 \$33,000 \$6,000 9 \$27,000 1 \$3,000 11 2 \$4,000.00 13 Relocate/Adjust to grade Utility Vault EΑ 0 \$0 0 \$0 0 \$0 0 \$0 Adjust MH Lid to grade EΑ \$2,000.00 14 3 \$6,000 1 \$2,000 0 \$0 0 \$0 15 Relocate fire hydrant EΑ \$20,000.00 2 \$40,000 0 \$0 3 \$60,000 0 \$0 Reconstruct Return and Ramp(s) with a Bulb-out SF 16 \$50.00 6360 \$318,000 3925 \$196,250 13420 \$671,000 800 \$40,000 Storm Drain Improvements at bulb-out 17 \$50,000.00 EΑ 7 \$350,000 2 \$100,000 5 \$250,000 1 \$50,000 18 Reconstruct Sidewalk SF \$30.00 11050 \$331,500 10850 \$325,500 10800 \$324,000 1200 \$36,000 \$129,600 19 Median hardscape SF \$20.00 6450 \$129,000 6510 \$130,200 6480 720 \$14,400 Construct Pedestrian Refuge Median Nose \$5,000.00 20 EΑ 0 \$10,000 0 \$0 2 0 \$0 \$0 21 Install pedestrian barricade EΑ \$2,000.00 0 \$0 \$0 0 \$0 0 \$0 0 22 Reconstruct pork chop/median island to meet ADA SF \$45.00 0 \$0 0 \$0 0 \$0 \$45 23 Street closure EΑ \$15,000.00 \$0 0 \$0 0 \$0 0 \$0 0 \$700,000.00 \$1,400,000 24 Concrete BRT platform with apperenances EΑ \$1,400,000 \$0 2 0 \$0 2 0 \$161,250 25 Construct Median Curb LF \$50.00 3225 3255 \$162,750 3240 \$162,000 \$18,000 360 26 EΑ \$1,000,000.00 \$1,000,000 Intersection Reconstruction and Realignment \$1,000,000 \$1,000,000 \$0 27 Asphalt concrete pavement rehab SY \$100.00 7853 \$785,333 7744 \$774,444 \$91,833 7911 \$791,111 918 Subtotal \$4,779,083 \$2,894,811 \$5,021,044 \$276,278 SIGNING AND STRIPING 28 Replace crosswalk with continental striping SF \$5.00 2230 \$11,150 2637 \$13,185 1461 \$7,305 800 \$4,000 29 SF \$12.00 500 \$6,000 Install bicycle crosstrack adjacent to existing crosswalk Red Bus Only Roadway Signing and Striping \$17,748 30 \$174.00 \$158,993 \$160,472 918 \$159,732 LF 914 922 102 31 Green bike lane SF \$16.00 2150 \$34,400 2170 \$34,720 2160 \$34,560 240 \$3,840 \$47,000 32 Purple paint bulbout with bollards SF \$20.00 \$0 \$0 \$0 2350 0 0 0 \$8,750 \$8,750 33 SF \$5.00 1750 1750 \$8,750 1750 1750 \$8,750 Miscellaneous striping 34 Install wayfinding sign \$500.00 EΑ 4 \$2,000 0 ŚC 0 \$0 0 \$0 \$1,000 35 EΑ \$500.00 2 \$500 0 \$0 \$0 Install pedestrian sign 0 1 36 \$500.00 5 \$500 0 \$0 \$0 Install miscellaneous signs EΑ \$2,500 1 0 Subtotal \$224,793 \$218,127 \$210,347 \$81,338 SIGNALS & LIGHTING EΑ \$1,000.00 37 Install countdown pedestrian heads 0 \$0 0 \$0 0 \$0 0 \$0 38 Install adaptive pedestrian signal EΑ \$20,000.00 0 \$0 0 \$0 0 \$0 0 \$0 39 Install PHB as determined by warrant EΑ \$150,000.00 0 \$0 0 \$0 0 \$0 0 \$0 40 Relocate pedestrian push button EΑ \$5,000.00 0 \$0 1 \$5,000 0 \$0 0 \$0 41 Install audible pedestrian signal EΑ \$1,000.00 1 \$1,000 0 \$0 0 \$0 1 \$1,000 42 BRT corridor lighting MILE \$2,100,000.00 \$365,114 0.17 \$363,423 0.17 \$366,804 0.17 0.02 \$40,568 Install Pedestrian Lighting @ Crosswalks 43 EΑ \$15,000.00 11 \$165,000 11 \$165,000 4 \$60,000 0 New signal \$400,000 \$400,000 44 EΑ \$400,000.00 0 1 0 \$0 \$0 45 EΑ \$200,000.00 \$200,000 Signal modification 1 \$200,000 1 \$200,000 1 1 \$200,000 Subtotal \$729,423 \$1,136,804 \$1,025,114 \$241,568 LANDSCAPE AND SITE FURNISHINGS 46 Street Tree in tree well EΑ \$2,500.00 10 \$25,000 10 \$25,000 Gateway Features/ Public Art \$60,000.00 47 MILE 0.17 \$10,384 0.17 \$10,480 0.17 \$10,432 0.02 \$1,159 \$100,000.00 0.17 \$17,306 0.17 \$17,467 0.17 \$17,386 \$1,932 48 Corridor Landscaping MILE 0.02 \$1,050,000.00 \$181,712 \$183,402 \$182,557 \$20,284 MILE 0.17 0.17 0.17 0.02 49 Corridor Street Trees \$5,000.00 50 Bike Rack/Corral Accommodations EΑ \$10,000 0 \$0 2 \$10,000 0 \$0 51 Iron Tree Grate EΑ \$3,600.00 \$36,000 \$0 10 \$36,000 \$0 Irrigation/Hose Bibs \$20,000.00 0 \$2,500.00 53 Electrical Outlets at Trees w/ conduit EΑ 10 \$25,000 0 \$0 10 \$25,000 0 \$0 54 BRT Buses and Layover MILE \$1,200,000.00 \$23,182 \$207,670 \$209,602 0.17 \$208,636 0.02 Subtotal \$513,071 \$420,951 \$515,011 \$46,557 TOTAL \$7,853,095 \$5,872,793 \$8,521,270 \$813,955 30% Contingency \$1,761,838 \$2,355,929 \$2,556,381 \$244,187 Construction Total (2020 Year) \$1,058,142 \$10,209,024 \$7,634,631 \$11,077,650 PA/ED/PS&E/ Soft Costs (40%) \$4,083,610 \$3,053,852 \$4,431,060 \$423,257 **GRAND TOTAL** \$14,292,634 \$10,688,483 \$15,508,711 \$1,481,398

San Pablo Avenue Corridor Project - Near-Term Oakland and Emeryville Concept Level Estimate



3/2/2020

Item	Item Description	Unit	Unit Price	Estimate by Page Number Emeryville Caltrans R/W							
				8		9		10			11
1	MOBILIZATION/ TRAFFIC CONTROL Mobilization/ De-mobilization	LS	10% of Construciton	1	\$526,729	1	\$515,495	1	\$248,493	1	\$342,330
2	Traffic Control	LS	8% of Construciton	1	\$421,383	1	\$412,396	1	\$198,794	1	\$273,864
3	Develop and Implement SWPPP	LS	0.5% of Construciton	1	\$26,336	1	\$25,775	1	\$12,425	1	\$17,117
4	Construction Survey	LS	0.8% of Construciton	1	\$42,138		\$41,240	1	\$19,879	1	\$27,386
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$158,019	1	\$154,649	1	\$74,548	1	\$102,699
	Subtotal DEMOLITION				\$1,174,605		\$1,149,554		\$554,138		\$763,397
6	Clearing and Grubbing	LS	2% of Construction	1	\$105,346	1	\$103,099	1	\$49,699	1	\$68,466
7	Demolition	LS	3% of Construction	1	\$158,019	1	\$154,649	1	\$74,548	1	\$102,699
8	Unclassified Excavation	CY	\$120.00	309	\$37,091	348	\$41,727	348	\$41,727	170	\$20,400
	Subtotal				\$300,455		\$299,475		\$165,974		\$191,565
9	STREET IMPROVEMENTS	ΓΛ	¢20,000,00		¢120.000	2	¢c0,000	1	¢20,000	2	¢40,000
10	Reconstruct Return and Ramp(s) Construct/Reconstruct Mid-block Curb Ramp	EA EA	\$20,000.00 \$17,000.00	6 0	\$120,000 \$0	3	\$60,000 \$17,000	0	\$20,000 \$0	0	\$40,000 \$0
11	Reconstruct Driveway	SF	\$40.00	2500	\$100,000	2500	\$100,000		\$100,000	2500	\$100,000
12	Relocate/Adjust to grade Utility Boxes	EA	\$3,000.00	6	\$18,000	16	\$48,000	2	\$6,000	9	\$27,000
13	Relocate/Adjust to grade Utility Vault	EA	\$4,000.00	0	\$0		\$4,000	0	\$0	0	\$0
14	Adjust MH Lid to grade	EA	\$2,000.00	0	\$0		\$0	0	\$0	0	\$0
15 16	Relocate fire hydrant Reconstruct Return and Ramp(s) with a Bulb-out	EA SF	\$20,000.00 \$50.00	1 3985	\$20,000 \$199,250	1 2200	\$20,000 \$110,000	0 800	\$0 \$40,000	1600	\$20,000 \$80,000
17	Storm Drain Improvements at bulb-out	EA	\$50,000.00	3983	\$199,230	3	\$150,000	1	\$50,000	2	\$100,000
18	Reconstruct Sidewalk	SF	\$30.00	9600	\$288,000	10800	\$324,000		\$324,000	5280	\$158,400
19	Median hardscape	SF	\$20.00	5760	\$115,200	6480	\$129,600	6480	\$129,600	3168	\$63,360
20	Construct Pedestrian Refuge Median Nose	EA	\$5,000.00	0	\$0		\$10,000	1	\$5,000	0	\$0
21	Install pedestrian barricade	EA	\$2,000.00	1	\$2,000	1	\$2,000	2	\$4,000	0	\$0
22	Reconstruct pork chop/median island to meet ADA Street closure	SF EA	\$45.00 \$15,000.00	0	\$0 \$0		\$0 \$0	0	\$0 \$0	0	\$0 \$0
24	Concrete BRT platform with apperenances	EA	\$700,000.00	2	\$1,400,000	2	\$1,400,000	0	\$0 \$0	2	\$1,400,000
25	Construct Median Curb	LF	\$50.00	2880	\$144,000	3240	\$162,000	3240	\$162,000	1584	\$79,200
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	1	\$1,000,000	0	\$0	0	\$0	0	\$0
27	Asphalt concrete pavement rehab	SY	\$100.00	7553	\$755,278	8475	\$847,500	8014	\$801,444	4056	\$405,556
	Subtotal				\$4,361,728		\$3,384,100		\$1,642,044		\$2,473,516
28	SIGNING AND STRIPING	SF	ΦE 00	2712	¢12.500	2704	Ć12.0FF	1545	Ć7 72F	1410	Ć7.0F0
29	Replace crosswalk with continental striping Install bicycle crosstrack adjacent to existing crosswalk	SF	\$5.00 \$12.00	2712 500	\$13,560 \$6,000	2791 500	\$13,955 \$6,000	1545 0	\$7,725 \$0	1410 0	\$7,050 \$0
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	816	\$141,984	918	\$159,732	918	\$159,732	449	\$78,091
31	Green bike lane	SF	\$16.00	1920	\$30,720	10800	\$172,800	2160	\$34,560	1056	\$16,896
32	Purple paint bulbout with bollards	SF	\$20.00	0	\$0	0	\$0		\$0	0	\$0
33	Miscellaneous striping	SF	\$5.00	1750	\$8,750	1750	\$8,750		\$8,750	1750	\$8,750
34 35	Install wayfinding sign Install pedestrian sign	EA EA	\$500.00 \$500.00	0	\$0 \$0		\$2,000 \$0	0	\$0 \$0	0	\$0 \$0
36	Install miscellaneous signs	EA	\$500.00	0	\$0 \$0		\$500	0	\$0 \$0	1	\$500
	Subtotal		,		\$201,014		\$363,737		\$210,767		\$111,287
	SIGNALS & LIGHTING										
37	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0		\$0	0	\$0	0	\$0
38 39	Install adaptive pedestrian signal Install PHB as determined by warrant	EA EA	\$20,000.00 \$150,000.00	0	\$0 \$0		\$120,000 \$0	0	\$20,000 \$0	3	\$60,000 \$0
40	Relocate pedestrian push button	EA	\$130,000.00	0	\$0 \$0		\$0 \$0	0	\$0 \$0	0	\$0
41	Install audible pedestrian signal	EA	\$1,000.00	0	\$0		\$2,000	2	\$2,000	0	\$0
42	BRT corridor lighting	MILE	\$2,100,000.00	0.15	\$324,545	0.17	\$365,114	0.17	\$365,114	0.09	\$178,500
43	Install Pedestrian Lighting @ Crosswalks	EA	\$15,000.00	12	\$180,000	8	\$120,000	3	\$45,000	0	\$0
44	New signal	EA	\$400,000.00	0	\$0	1	\$400,000	0	\$0	1	\$400,000
45	Signal modification	EA	\$200,000.00	1	\$200,000	2	\$400,000	1	\$200,000	1	\$200,000
	Subtotal				\$704,545		\$1,407,114		\$632,114		\$838,500
46	LANDSCAPE AND SITE FURNISHINGS Street Tree in tree well	EA	\$2,500.00	10	\$25,000	10	\$25,000	0	\$0	10	\$25,000
47	Gateway Features/ Public Art	MILE	\$60,000.00	0.15	\$23,000	0.17	\$10,432	0.17	\$10,432	0.09	\$5,100
48	Corridor Landscaping	MILE	\$100,000.00	0.15	\$15,455	0.17	\$17,386	0.17	\$17,386	0.09	\$8,500
49	Corridor Street Trees	MILE	\$1,050,000.00	0.15	\$162,273	0.17	\$182,557	0.17	\$182,557	0.09	\$89,250
50	Bike Rack/Corral Accommodations	EA	\$5,000.00	2	\$10,000	2	\$10,000	0	\$0	2	\$10,000
51	Iron Tree Grate	EA	\$3,600.00	10	\$36,000	10	\$36,000	0	\$0	10	\$36,000
52	Irrigation/Hose Bibs	LS	\$20,000.00	0	\$0		\$20,000	0	\$0	0	\$0
53	Electrical Outlets at Trees w/ conduit	EA	\$2,500.00	10	\$25,000	10	\$25,000	0 17	\$0	10	\$25,000
54	BRT Buses and Layover Subtotal	MILE	\$1,200,000.00	0.15	\$185,455 \$468,455	0.17	\$208,636 \$535,011	0.17	\$208,636 \$419,011	0.09	\$102,000 \$300,850
	TOTAL				\$7,210,802		\$535,011		\$3,624,048		\$4,679,114
	30% Contingency				\$2,163,241		\$2,141,697		\$1,087,214		\$1,403,734
	Construction Total (2020 Year)				\$9,374,043		\$9,280,688		\$4,711,263		\$6,082,849
	PA/ED/PS&E/ Soft Costs (40%)				\$3,749,617		\$3,712,275		\$1,884,505		\$2,433,139
	GRAND TOTAL				\$13,123,660		\$12,992,963		\$6,595,768		\$8,515,988

San Pablo Avenue Corridor Project - Near-Term Oakland and Emeryville Concept Level Estimate



3/2/2020

	1			Estimate by Page Number							
Item	Item Description		Unit Price					Oakland Caltrans R/W			₹/W
	MODIL IZATION/ TRAFFIO CONTROL			11 12			13		14		
1	MOBILIZATION/ TRAFFIC CONTROL Mobilization/ De-mobilization	LS	10% of Construciton	1	\$143,865	1	\$336,473	1	\$514,944	1	\$335,248
2	Traffic Control	LS	8% of Construciton	1	\$145,805	1	\$269,178	1	\$411,956	1	\$268,199
3	Develop and Implement SWPPP	LS	0.5% of Construciton	1	\$7,193	1	\$16,824	1	\$25,747	1	\$16,762
4	Construction Survey	LS	0.8% of Construciton	1	\$11,509	1	\$26,918	1	\$41,196	1	\$26,820
5	Utility Protection/ potholing by Contractor	LS	3% of Construciton	1	\$43,159	1	\$100,942	1	\$154,483	1	\$100,575
	Subtotal DEMOLITION				\$320,818		\$750,334		\$1,148,326		\$747,604
6	Clearing and Grubbing	LS	2% of Construction	1	\$28,773	1	\$67,295	1	\$102,989	1	\$67,050
7	Demolition	LS	3% of Construction	1	\$43,159	1	\$100,942	1	\$154,483	1	\$100,575
8	Unclassified Excavation	CY	\$120.00	178	\$21,327	348	\$41,727	348	\$41,727	348	\$41,727
	Subtotal				\$93,260		\$209,964		\$299,199		\$209,351
9	STREET IMPROVEMENTS Reconstruct Return and Ramp(s)	EA	\$20,000.00	0	\$0	0	\$0	0	\$0	0	\$0
10	Construct/Reconstruct Mid-block Curb Ramp	EA	\$20,000.00	0	\$0 \$0	1	\$17,000	2	\$34,000	1	\$17,000
11	Reconstruct Driveway	SF	\$40.00	2500	\$100,000	2500	\$100,000	2500	\$100,000	2500	\$100,000
12	Relocate/Adjust to grade Utility Boxes	EA	\$3,000.00	0	\$0	26	\$78,000	19	\$57,000	8	\$24,000
13	Relocate/Adjust to grade Utility Vault	EA	\$4,000.00	0	\$0		\$8,000	0	\$0	0	\$0
14 15	Adjust MH Lid to grade	EΑ	\$2,000.00	0	\$0 \$0	2	\$4,000	1	\$2,000	0	\$0 \$0
16	Relocate fire hydrant Reconstruct Return and Ramp(s) with a Bulb-out	EA SF	\$20,000.00 \$50.00	0	\$0 \$0	4000	\$20,000 \$200,000	9600	\$20,000 \$480,000	4000	\$200,000
17	Storm Drain Improvements at bulb-out	EA	\$50,000.00	0	\$0	5	\$250,000	10	\$500,000	5	\$250,000
18	Reconstruct Sidewalk	SF	\$30.00	5520	\$165,600	10800	\$324,000	10800	\$324,000	10800	\$324,000
19	Median hardscape	SF	\$20.00	3312	\$66,240	6480	\$129,600	6480	\$129,600	6480	\$129,600
20	Construct Pedestrian Refuge Median Nose Install pedestrian barricade	EA EA	\$5,000.00 \$2,000.00	0	\$0 \$0	2	\$10,000	2	\$10,000 \$0	2	\$10,000
22	Reconstruct pork chop/median island to meet ADA	SF	\$2,000.00 \$45.00	0	\$0 \$0		\$0 \$0	0	\$0 \$0	0	\$0 \$0
23	Street closure	EA	\$15,000.00	0	\$0		\$0 \$0	0	\$0 \$0	0	\$0
24	Concrete BRT platform with apperenances	EA	\$700,000.00	0	\$0	0	\$0	2	\$1,400,000	0	\$0
25	Construct Median Curb	LF	\$50.00	1656	\$82,800	3240	\$162,000	3240	\$162,000	3240	\$162,000
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00	0	\$0	0	\$0	0	\$0	0	\$0
27	Asphalt concrete pavement rehab	SY	\$100.00	4074	\$407,444	8126	\$812,611	8324	\$832,389	8328	\$832,778
	Subtotal SIGNING AND STRIPING				\$822,084		\$2,115,211		\$4,050,989		\$2,049,378
28	Replace crosswalk with continental striping	SF	\$5.00	1179	\$5,895	3172	\$15,860	1560	\$7,800	2290	\$11,450
29	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	500	\$6,000	0	\$0	0	\$0	0	\$0
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	469	\$81,641	918	\$159,732	918	\$159,732	918	\$159,732
31	Green bike lane	SF SF	\$16.00 \$20.00	1104 0	\$17,664	2160	\$34,560	2160	\$34,560	2160	\$34,560
32	Purple paint bulbout with bollards Miscellaneous striping	SF	\$20.00 \$5.00	1750	\$0 \$8,750	0 1750	\$0 \$8,750	0 1750	\$0 \$8,750	0 1750	\$0 \$8,750
34	Install wayfinding sign	EA	\$500.00	0	\$0,730	1	\$500	1	\$500	1	\$500
35	Install pedestrian sign	EA	\$500.00	0	\$0	0	\$0	1	\$500	0	\$0
36	Install miscellaneous signs	EA	\$500.00	0	\$0	0	\$0	3	\$1,500	0	\$0
	Subtotal SIGNALS & LIGHTING				\$119,950		\$219,402		\$213,342		\$214,992
37	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0	0	\$0	0	\$0	0	\$0
38	Install adaptive pedestrian signal	EA	\$20,000.00	1	\$20,000	0	\$0	0	\$0	3	\$60,000
39	Install PHB as determined by warrant	EA	\$150,000.00	0	\$0	2	\$300,000	0	\$0	0	\$0
40	Relocate pedestrian push button	EA	\$5,000.00	0	\$0	0	\$0	0	\$0	0	\$0
41	Install audible pedestrian signal	EA	\$1,000.00	0	\$0	0	\$0	0	\$0	3	\$3,000
42	BRT corridor lighting	MILE	\$2,100,000.00	0.09	\$186,614	0.17	\$365,114	0.17	\$365,114	0.17	\$365,114
43	Install Pedestrian Lighting @ Crosswalks New signal	EA EA	\$15,000.00 \$400,000.00	6 0	\$90,000	11 0	\$165,000 \$0	8	\$120,000 \$400,000	0	\$60,000 \$0
44	Signal modification	EA	\$200,000.00	1	\$0 \$200,000	1	\$200,000	0	\$400,000	3	\$600,000
10	Subtotal		¥200,000.00		\$496,614		\$1,030,114		\$885,114	,	\$1,088,114
	LANDSCAPE AND SITE FURNISHINGS										
46	Street Tree in tree well	EA	\$2,500.00	0	\$0	0	\$0	10	\$25,000	0	\$0
47	Gateway Features/ Public Art	MILE	\$60,000.00	0.09	\$5,332	0.17	\$10,432	0.17	\$10,432	0.17	\$10,432
48	Corridor Landscaping Corridor Street Trees	MILE	\$100,000.00 \$1,050,000.00	0.09	\$8,886 \$93,307	0.17	\$17,386 \$182,557	0.17	\$17,386 \$182,557	0.17	\$17,386 \$182,557
49 50	Bike Rack/Corral Accommodations	MILE EA	\$1,050,000.00	0.09	\$93,307	0.17	\$182,557	0.17	\$182,557	0.17	\$182,557
51	Iron Tree Grate	EA	\$3,600.00	0	\$0 \$0	0	\$0	10	\$36,000	0	\$0 \$0
52	Irrigation/Hose Bibs	LS	\$20,000.00	0	\$0	1	\$20,000	0	\$0	0	\$0
53	Electrical Outlets at Trees w/ conduit	EA	\$2,500.00	0	\$0	0	\$0	10	\$25,000	0	\$0
54	BRT Buses and Layover	MILE	\$1,200,000.00	0.09	\$106,636	0.17	\$208,636	0.17	\$208,636	0.17	\$208,636
	Subtotal				\$214,161		\$439,011		\$515,011		\$419,011
	TOTAL				\$2,066,887		\$4,764,036		\$7,111,982		\$4,728,450
	30% Contingency				\$620,066		\$1,429,211		\$2,133,594		\$1,418,535
	Construction Total (2020 Year)				\$2,686,954		\$6,193,247		\$9,245,576		\$6,146,985
	PA/ED/PS&E/ Soft Costs (40%) GRAND TOTAL				\$1,074,781 \$3,761,735		\$2,477,299 \$8,670,545		\$3,698,230 \$12,943,806		\$2,458,794 \$8,605,779
	OLD HOLDE				۶۵,/۵۱,/35		70,070,545		416,545,806		70,005,779

San Pablo Avenue Corridor Project - Near-Term Oakland and Emeryville Concept Level Estimate 3/2/2020



Itama	Mana Danavintian	Unit	Unit Price	E	stimate by I	Page Nu	Quantity	Estimate	
Item	Item Description		Office Price	15		16		TOTAL	\$ TOTAL
	MOBILIZATION/ TRAFFIC CONTROL								·
1	Mobilization/ De-mobilization	LS	10% of Construciton	1	\$509,335	1	\$93,120	18	\$7,601,301
2	Traffic Control	LS	8% of Construciton	1	\$407,468	1	\$74,496	18	\$6,081,041
3	Develop and Implement SWPPP	LS LS	0.5% of Construciton	1	\$25,467	1	\$4,656	18	\$380,065
5	Construction Survey Utility Protection/ potholing by Contractor	LS	0.8% of Construciton 3% of Construciton	1	\$40,747 \$152,800	1	\$7,450 \$27,936	18 18	\$608,104 \$2,280,390
	Subtotal		070 Of Construction	1	\$1,135,816	-	\$207,658	10	\$16,950,901
	DEMOLITION				+ -,,		Ψ=01/000		4 20,000,002
6	Clearing and Grubbing	LS	2% of Construction	1	\$101,867	1	\$18,624	18	\$1,520,260
7	Demolition	LS	3% of Construction	1	\$152,800	1	\$27,936	18	\$2,280,390
8	Unclassified Excavation	CY	\$120.00	348	\$41,727	56	\$6,761	5350	\$641,943
	Subtotal				\$296,395		\$53,322		\$4,442,594
	STREET IMPROVEMENTS		400,000,00	_		_	4 -		4
9	Reconstruct Return and Ramp(s) Construct/Reconstruct Mid-block Curb Ramp	EA EA	\$20,000.00 \$17,000.00		\$0 \$0		\$0 \$0	33 14	\$660,000 \$238,000
11	Reconstruct Driveway	SF	\$40.00		\$100,000	0	\$0 \$0	32500	\$1,300,000
12	Relocate/Adjust to grade Utility Boxes	EA	\$3,000.00		\$6,000	4	\$12,000	162	\$486,000
13	Relocate/Adjust to grade Utility Vault	EA	\$4,000.00		\$0	0	\$0	10	\$40,000
14	Adjust MH Lid to grade	EA	\$2,000.00	1	\$2,000	0	\$0	19	\$38,000
15	Relocate fire hydrant	EA	\$20,000.00		\$40,000	1	\$20,000	22	\$440,000
16	Reconstruct Return and Ramp(s) with a Bulb-out	SF	\$50.00		\$120,000		\$80,000	89068	\$4,453,400
17 18	Storm Drain Improvements at bulb-out Reconstruct Sidewalk	EA SF	\$50,000.00		\$150,000	1750	\$100,000	76 167650	\$3,800,000
18	Median hardscape	SF SF	\$30.00 \$20.00		\$333,000 \$129,600	1750 1050	\$52,500 \$21,000	167650 99690	\$5,029,500 \$1,993,800
20	Construct Pedestrian Refuge Median Nose	EA	\$5,000.00		\$129,600	0	\$21,000	16	\$1,993,800
21	Install pedestrian barricade	EA	\$2,000.00		\$5,000	0	\$0	4	\$8,000
22	Reconstruct pork chop/median island to meet ADA	SF	\$45.00	0	\$0	0	\$0	547	\$24,615
23	Street closure	EA	\$15,000.00		\$0	0	\$0	1	\$15,000
24	Concrete BRT platform with apperenances	EA	\$700,000.00		\$1,400,000	0	\$0	18	\$12,600,000
25	Construct Median Curb	LF	\$50.00		\$162,000	525	\$26,250	49845	\$2,492,250
26	Intersection Reconstruction and Realignment	EA	\$1,000,000.00		\$0		\$0	10	\$10,000,000
27	Asphalt concrete pavement rehab Subtotal	SY	\$100.00	8554	\$855,444 \$3,303,044	1169	\$116,889 \$428,639	125747	\$12,574,667
	SIGNING AND STRIPING				\$3,303,044		\$428,639		\$56,273,232
28	Replace crosswalk with continental striping	SF	\$5.00	2029	\$10,145	534	\$2,670	38099	\$190,495
29	Install bicycle crosstrack adjacent to existing crosswalk	SF	\$12.00	0	\$0	0	\$0	3000	\$36,000
30	Red Bus Only Roadway Signing and Striping	LF	\$174.00	918	\$159,732	149	\$25,883	14123	\$2,457,359
31	Green bike lane	SF	\$16.00		\$34,560	350	\$5,600	41870	\$669,920
32	Purple paint bulbout with bollards	SF	\$20.00		\$0		\$0	10775	\$215,500
33	Miscellaneous striping	SF	\$5.00		\$8,750	1750	\$8,750	31500	\$157,500
34 35	Install wayfinding sign Install pedestrian sign	EA EA	\$500.00 \$500.00		\$875,000 \$0	0	\$0 \$0	1761 6	\$880,500 \$3,000
36	Install miscellaneous signs	EA	\$500.00		\$0 \$0		\$500	21	\$10,500
	Subtotal		ψοσο.σσ	1	\$1,088,187		\$43,403		\$4,620,774
	SIGNALS & LIGHTING								. , ,
37	Install countdown pedestrian heads	EA	\$1,000.00	0	\$0	0	\$0	5	\$5,000
38	Install adaptive pedestrian signal	EA	\$20,000.00		\$0		\$0	16	\$320,000
39	Install PHB as determined by warrant	EA	\$150,000.00		\$0		\$0	4	\$600,000
40	Relocate pedestrian push button	EA	\$5,000.00		\$0		\$0	2	\$10,000
41	Install audible pedestrian signal	EA	\$1,000.00		\$2,000	0	\$0	12	\$12,000
42	BRT corridor lighting Install Pedestrian Lighting @ Crosswalks	MILE EA	\$2,100,000.00		\$365,114	0.03	\$59,162 \$0	3 117	\$5,617,003 \$1,755,000
43	New signal	EA	\$15,000.00 \$400,000.00		\$135,000 \$0	_	\$400,000	117 6	\$1,755,000 \$2,400,000
44	Signal modification	EA	\$200,000.00		\$200,000	0	\$400,000	22	\$2,400,000
70	Subtotal		Ψ200,000.00	1	\$200,000 \$ 702,114	J	\$459,162		\$4,400,000 \$ 15,119,003
	LANDSCAPE AND SITE FURNISHINGS				7,02,114		Ţ-155,10Z		+13,113,003
46	Street Tree in tree well	EA	\$2,500.00	10	\$25,000	0	\$0	90	\$225,000
47	Gateway Features/ Public Art	MILE	\$60,000.00		\$10,432	0.03	\$1,690	3	\$160,486
48	Corridor Landscaping	MILE	\$100,000.00	0.17	\$17,386	0.03	\$2,817	3	\$267,476
49	Corridor Street Trees	MILE	\$1,050,000.00		\$182,557	0.03	\$29,581	3	\$2,808,501
50	Bike Rack/Corral Accommodations	EA	\$5,000.00		\$10,000	0	\$0	18	\$90,000
51	Iron Tree Grate	EA	\$3,600.00		\$36,000	0	\$0	90	\$324,000
52	Irrigation/Hose Bibs	LS	\$20,000.00		\$0		\$0	3	\$60,000
53	Electrical Outlets at Trees w/ conduit	EA	\$2,500.00		\$25,000	0	\$0	90	\$225,000
54	BRT Buses and Layover	MILE	\$1,200,000.00	0.17	\$208,636	0.03	\$33,807	3	\$3,209,716
	Subtotal TOTAL				\$515,011		\$67,895		\$7,370,179
-					\$ 7,040,567		\$1,260,079		\$104,776,682
<u> </u>	30% Contingency				\$2,112,170 \$9,152,737		\$378,024 \$1,638,103		\$31,433,005 \$136,209,686
-	Construction Total (2020 Year) PA/ED/PS&E/ Soft Costs (40%)				\$9,152,737 \$3,661,095		\$1,638,102 \$655,241		\$ 136,209,686 \$54,483,875
-	GRAND TOTAL								\$54,483,875 \$190,693,561
	STATE IVIAL				\$12,813,832		\$2,293,343		\$130,693,561

APPENDIX E

OAKLAND NEAR-TERM DESIGN CONCEPTS

Oakland Near-Term Alternatives

While San Pablo Avenue in northern Oakland contains standard grid intersections, San Pablo Avenue in southern Oakland has a number of skewed intersections, some of which contain up to five legs (star intersections) which create additional design challenges. The two segments selected in Oakland are 24th Street to 27th Street and Stanford Avenue to 61st Street. Future project phases will include concept development for the full extent of San Pablo Avenue in these cities.

- **Segment 1** (24th Street to 27th Street) was selected as it contains a handful of offset intersections, one major star intersection (West Street and Sycamore Street), and one major offset intersection (27th Street). This segment of Oakland also contains a mix of merchants and vacant properties with residential development located on neighboring streets.
- **Segment 2** (Stanford Avenue to 61st Avenue) was also selected for its mostly grid-like intersections, although several crossing streets have offset intersections where the side street legs do not align. Segment 2 differs from Segment 1 in that the area is almost exclusively residential except for a small handful of businesses near Stanford Avenue.

In this near-term improvement, the extents of the transit lane are assumed to be limited to part of the corridor; therefore, it is assumed that the hybrid transit service described in Section 2.5 would not yet be implemented and transit service along the corridor would remain similar to existing conditions, with a higher-quality Rapid or BRT-like service overlaid on a local service. Both BRT stations and local stops are provided in all options. The very near-term improvements for pedestrian safety described in the prior section, such as PHBs or RRFBs, enhanced lighting, installation of high-visibility crosswalks, bus bulbs, and pedestrian bulb-outs, are included as well.

As shown in **Table 4-1** in the body of this report, a bike lane is provided in two of the options and would be protected (Class IV) where feasible; however, a protected bicycle facility is not feasible in several segments of the corridor due to insufficient curb-to-curb width associated with auto turning lanes, BRT stations or bus stops, auto parking, or other facilities. The type of the bicycle protection (e.g., raised bike lane, bollards, planters, or raised islands) will be determined in future project phases.

Similar to the concepts described in Chapter 2, each of these near-term options requires complex trade-offs between preserving parking, bike facility comfort, transit

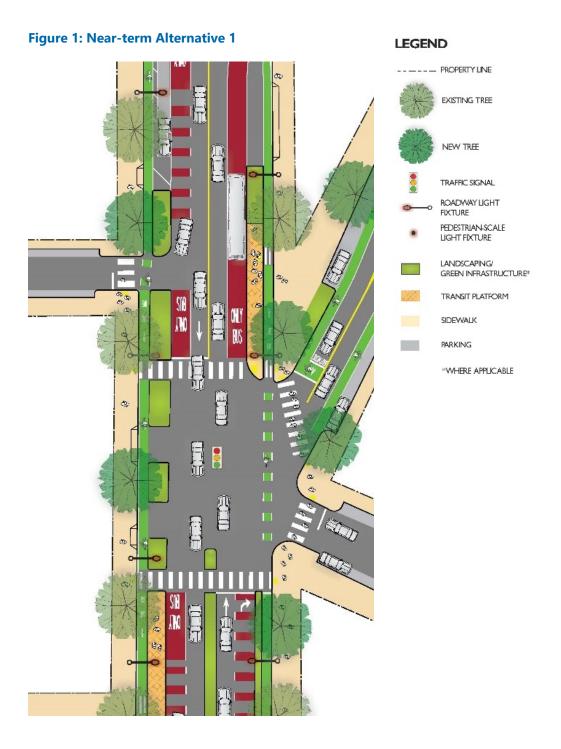
performance, and auto performance. Although no one of the alternatives is more beneficial in all respects than the others, a few key conclusions and takeaways are evident:

- Center-running bus options have the greatest potential to optimize transit performance, but they limit local access through median closures, as summarized in Chapter 2.
- Side-running bus options have lower construction costs and greater implementation flexibility and thus are more viable for near-term implementation.
- Bike travel on San Pablo Avenue has challenges in all configurations due to lack
 of continuous protection resulting from driveways/curb cuts and shared facilities
 at right turns. The limitations of bicycle facilities on San Pablo Avenue are
 summarized in Chapter 2.
- The options with no bike lanes have the least parking loss, while options that include a bike lane would require removal of nearly all on-street parking.
- The options with no bike lanes have the greatest potential to add bulb-outs to benefit pedestrian safety and comfort.

Alternative 1 - Side-running bus and bike lane

This alternative provides a dedicated side-running transit lane and buffered bike lane by eliminating a travel lane in each direction and removing a parking where necessary along the corridor. Bicycle facility improvements include buffered, striped, or raised bike lanes depending on available width and driveway placement. Where driveway access is provided and parking is maintained, striped buffers are utilized in lieu of raised bicycle protection. Due to the presence of driveways throughout the segment, a facility with continuous raised bicycle protection is not achievable. Medians would be reconstructed or removed to accommodate a transit lane, a bike facility, and turning movements. Left-turn and right-turn movements are preserved at all existing locations, although through bus and right-turning motorists would share a lane. This alternative has more conflicts between modes, with right-turning vehicles and transit vehicles interacting with bicycles at intersections.

See **Figure 1** for depiction of this alternative within Oakland Segments 1 and 2. The full concepts developed for the two segments are included later in **Appendix D**.



Alternative 2 - Side-running bus (parking preserved)

A dedicated transit lane is implemented while preserving existing parking. Bicycle facilities are improved on parallel routes, but are not provided on San Pablo Avenue itself. Although parallel corridor improvements were not specified as part of this analysis, this alternative assumes the implementation of improvements on, and encouraged use of, parallel bike routes. Of the alternatives presented, this alternative is anticipated to be the least expensive to implement with less disturbance to the built environment. A travel lane would be converted to a transit lane, restriped, and painted red. Additional amenities would be provided at bus stops, such as lighting, shelters, and bulb-outs. Similar to Alternative 1, existing auto-turning movements are preserved. In this alternative, right-turning vehicles and parking maneuvers are mixed with transit movements.

See **Figure 2** for depiction of this alternative within Oakland Segments 1 and 2. The full concepts developed for the two segments are included later in **Appendix D**.

LEGEND

PROPERTY LINE

EXISTING TREE

NEW TREE

TRAFFIC SIGNAL

ROADWAY LIGHT
FEXTURE

PIDESTRIANSCALE
LIGHT FEXTURE

LANDSCAPING
GREEN INFRASTRUCTUREP

TRANSIT PLATFORM

SIDEWALK

PARKING

"WHERE APPLICABLE

Figure 2: Near-term Alternative 2

Alternative 3 – Center-running bus (parking preserved)

A center-running bus lane alternative converts the middle travel lane to a transit lane and preserves most existing parking. Existing center-island medians are modified in a number of locations to provide sufficient width for bus operations and to preserve right-turn lanes where possible. Bicycle facilities are improved on parallel routes, but are not provided on San Pablo Avenue. Similar to Alternative 2, although this exercise did not specify the parallel bike network, implementation of parallel bike network improvements is assumed. This alternative has the least amount of mixing between modes with no autos entering the bus lanes and bicycle facilities not located on San Pablo Avenue. This alternative could have an additional sub-alternative, not illustrated, in which a second travel lane is preserved during the peak period in lieu of parking (see Concept B in Chapter 2).

See **Figure 3** for depiction of this alternative within Oakland Segments 1 and 2. The full concepts developed for the two segments are included later in **Appendix D**.

LEGEND --- PROPERTY LINE EXISTING TREE NEW TREE STOP TRAFFIC SIGNAL ROADWAY LIGHT FIXTURE 0 6 PEDESTRIAN-SCALE LIGHT FIXTURE 0 LANDSCAPING/ GREEN INFRASTRUCTURE® TRANSIT PLATFORM SIDEWALK PARKING *WHERE APPLICABLE

Figure 3: Near-term Alternative 3

BUS STOP

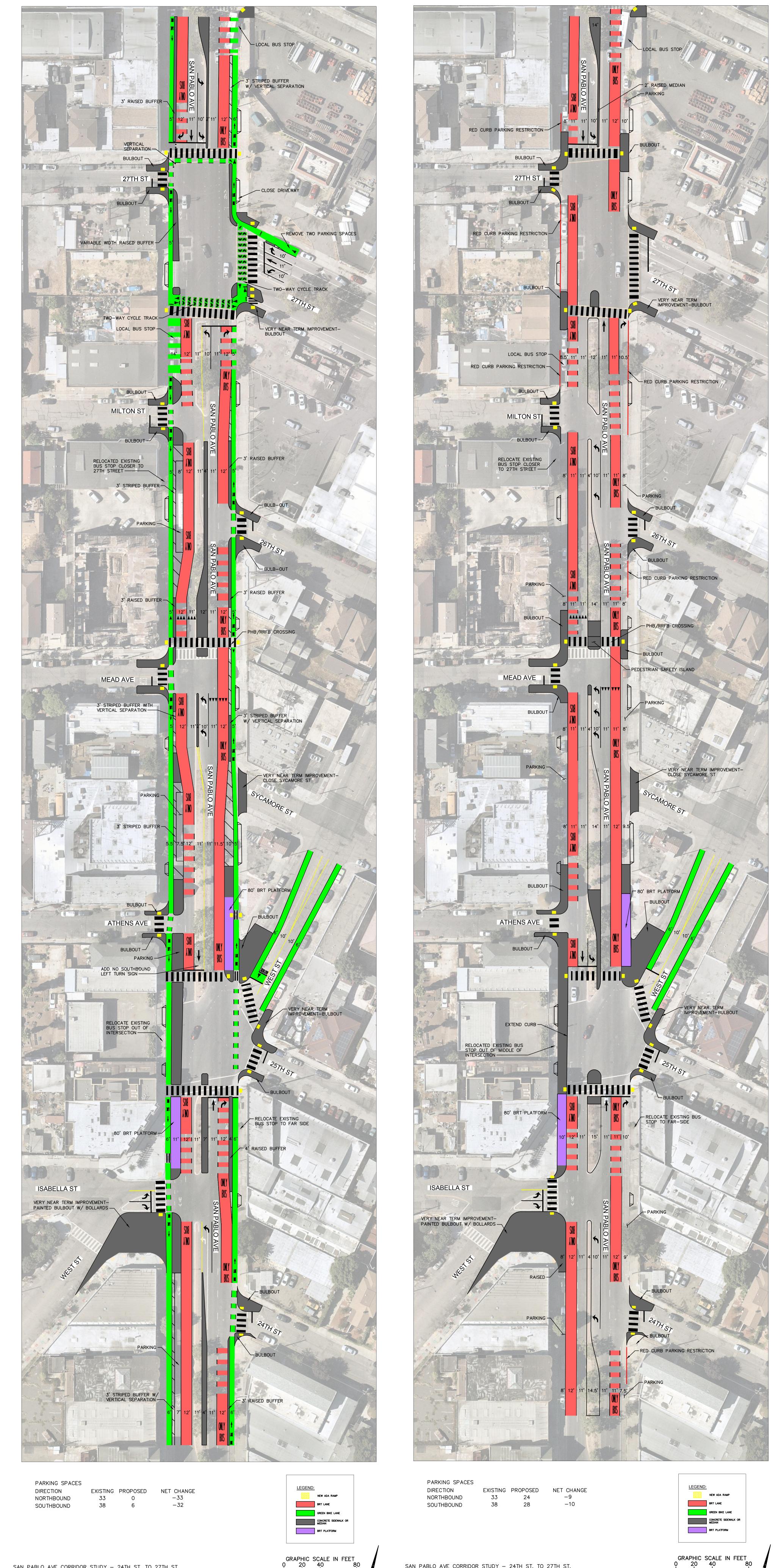
Alternative 4 - Center-running bus and bike lane

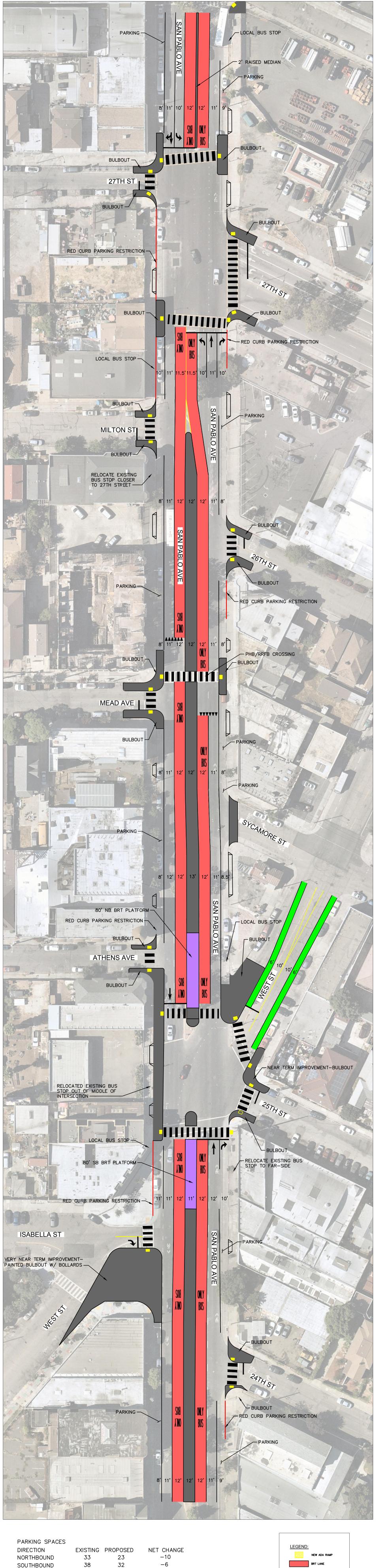
This alternative incorporates a bike facility into Alternative 3 which requires a significant amount of parking on the corridor to be removed and the most median modifications of all the alternatives. This is the most expensive and challenging alternative to implement as a result of the significant curb and median work required. Similar to Alternative 1, the nature of the bike lane separation has not yet been determined, although permeability across the separation is required at driveways and separation may not be feasible at many intersections and local bus stops.

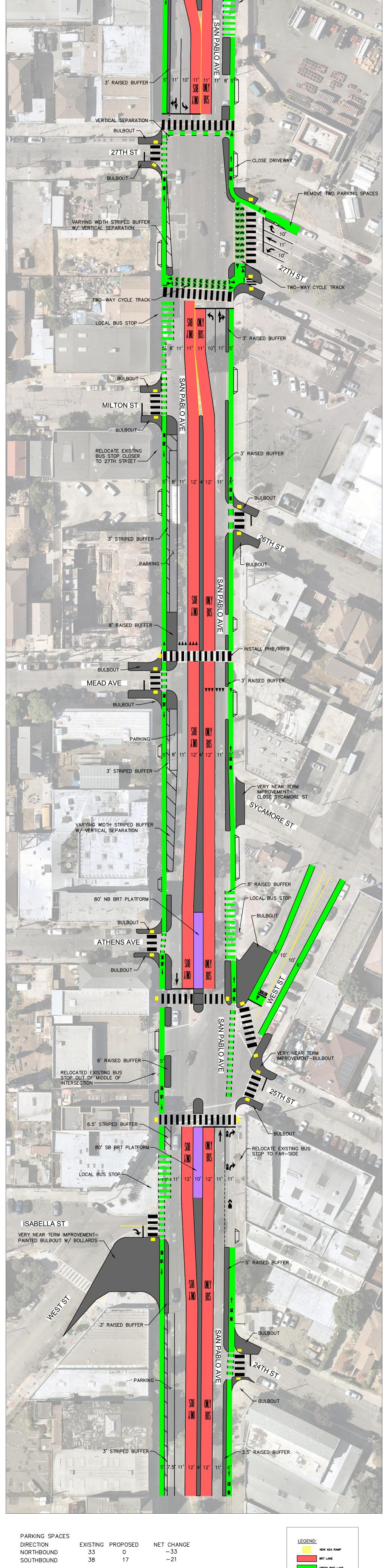
See **Figure 4** for depiction of this alternative within Oakland Segments 1 and 2. The full concepts developed for the two segments are included later in **Appendix D**.

LEGEND ----- PROPERTY LINE EXISTING TREE NEW TREE LOCAL BUS TRAFFIC SIGNAL ROADWAY LIGHT FIXTURE PEDESTRIAN-SCALE LIGHT FIXTURE LANDSCAPING/ GREEN INFRASTRUCTURE[®] TRANSIT PLATFORM SIDEWALK PARKING *WHERE APPLICABLE LOCAL **BUS STOP**

Figure 4: Near-term Alternative 4

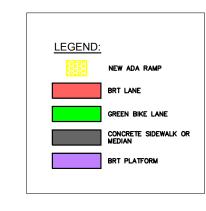






CONCRETE SIDEWALK OR MEDIAN BRT PLATFORM

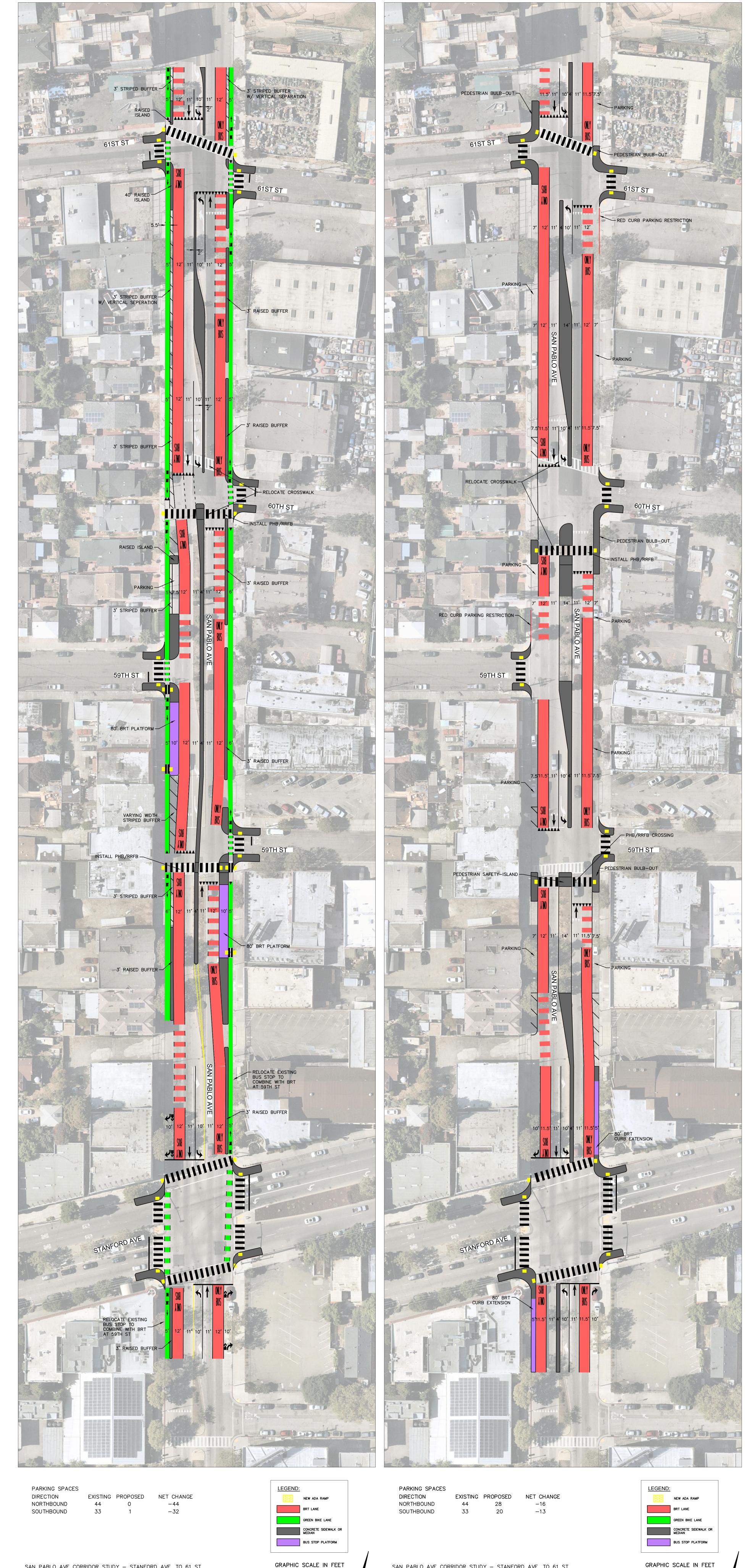
GRAPHIC SCALE IN FEET 20 40 8



GRAPHIC SCALE IN FEET

80

SOUTHBOUND



SAN PABLO AVE CORRIDOR STUDY - STANFORD AVE. TO 61 ST.

CONCEPT B2: SIDE-RUNNING BUS AND PARKING

ALTERNATIVE 2

DECEMBER 2019



SAN PABLO AVE CORRIDOR STUDY — STANFORD AVE. TO 61 ST. ALTERNATIVE 3 CONCEPT B1: CENTER-RUNNING BUS AND PARKING

DECEMBER 2019

GRAPHIC SCALE IN FEET

SAN PABLO AVE CORRIDOR STUDY - STANFORD AVE. TO 61 ST. ALTERNATIVE 4 CONCEPT A1: CENTER-RUNNING BUS AND BIKE DECEMBER 2019

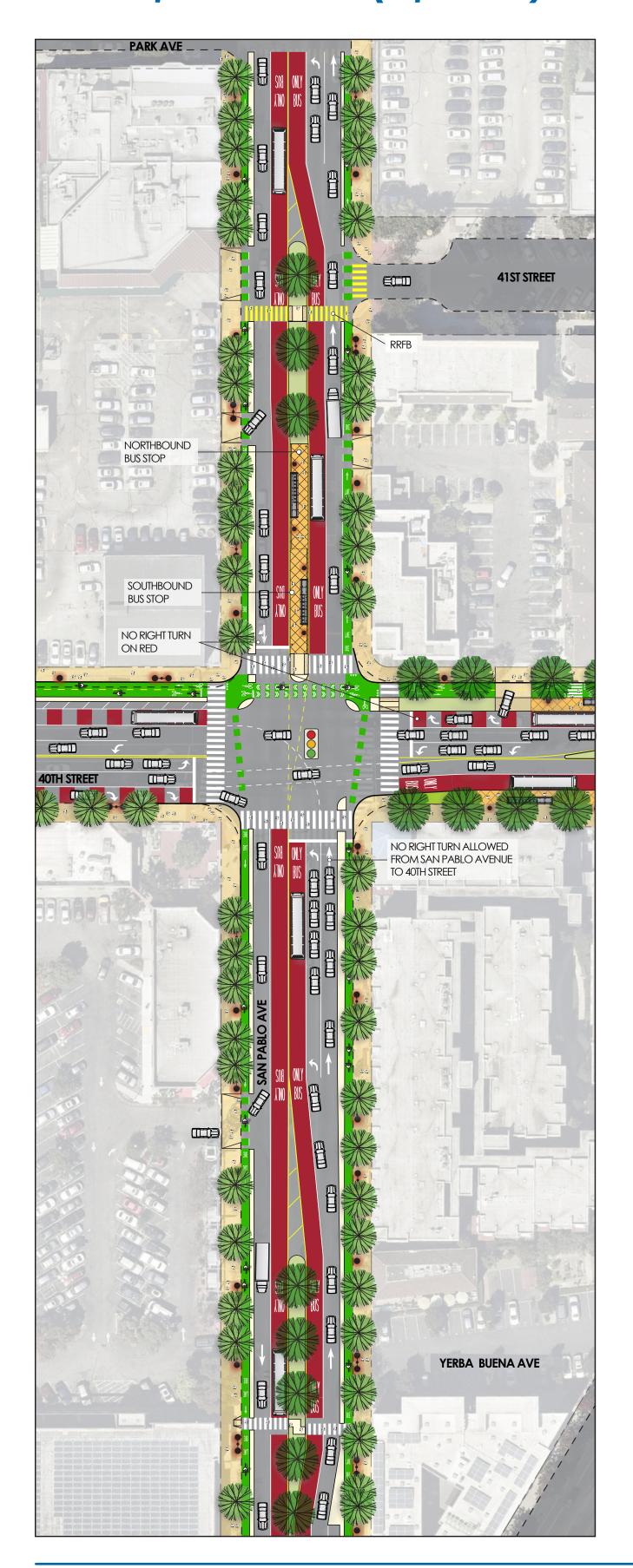
GRAPHIC SCALE IN FEET

APPENDIX F

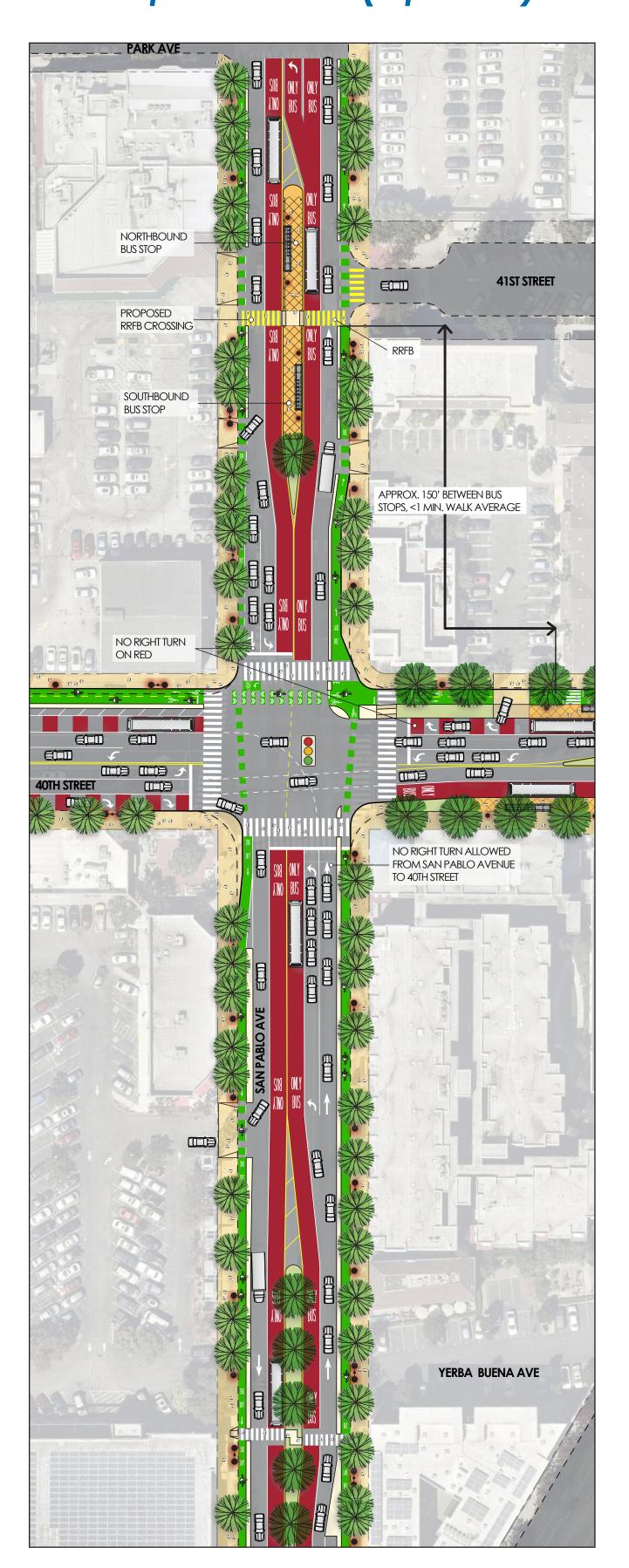
40TH STREET AND SAN PABLO AVENUE (EMERYVILLE) INTERSECTION CONCEPTS

San Pablo Avenue and 40th Street Intersection Options

Concept A Applied to San Pablo Near 40th St Bus Stops at 40th St (Option 1)

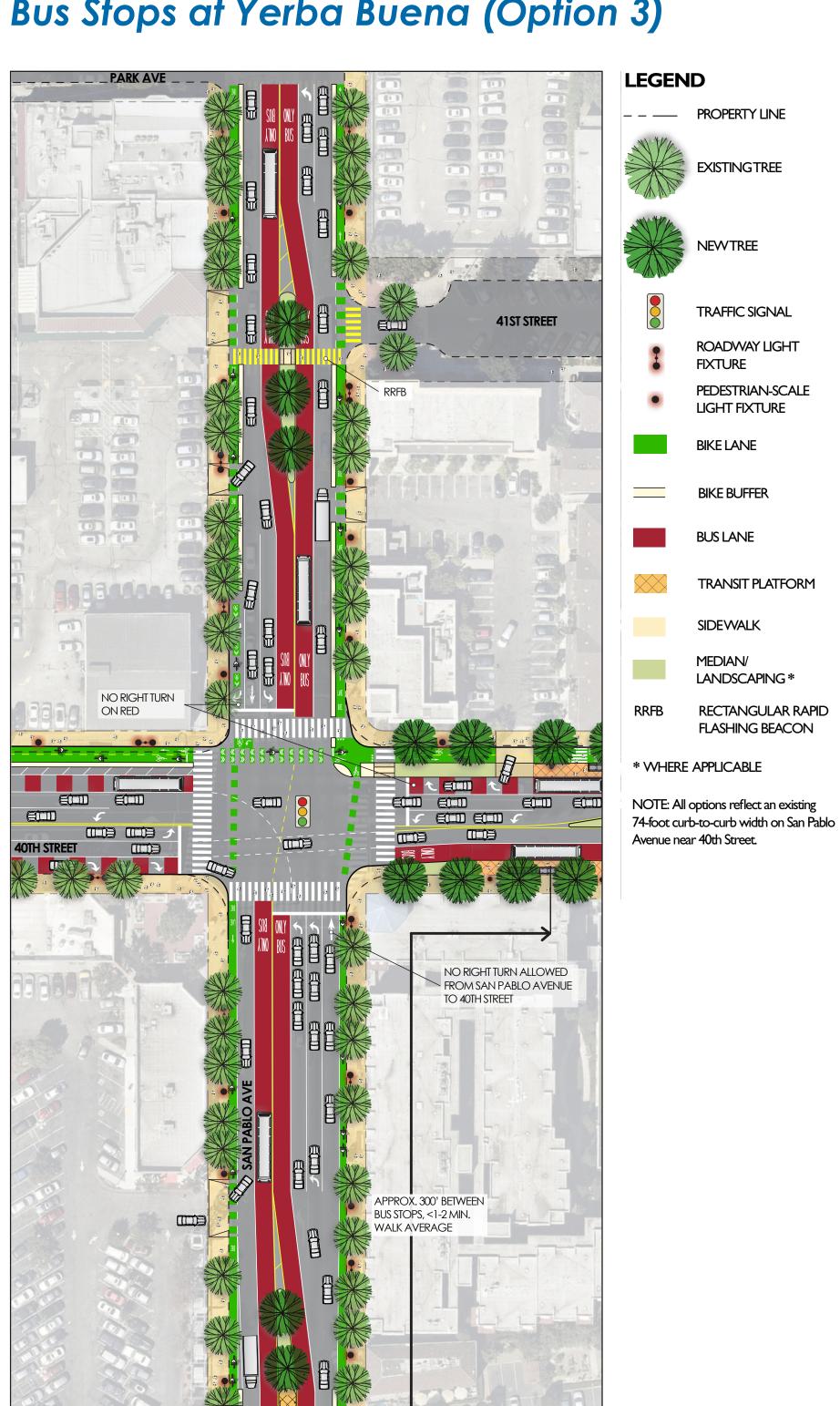


Concept A Applied to San Pablo Near 40th St Bus Stops at 41st St (Option 2)



Concept A Applied to San Pablo Near 40th St Bus Stops at Yerba Buena (Option 3)





YERBA BUENA AVE

NORTHBOUND BUS STOP

SOUTHBOUND

San Pablo Avenue Corridor Project

