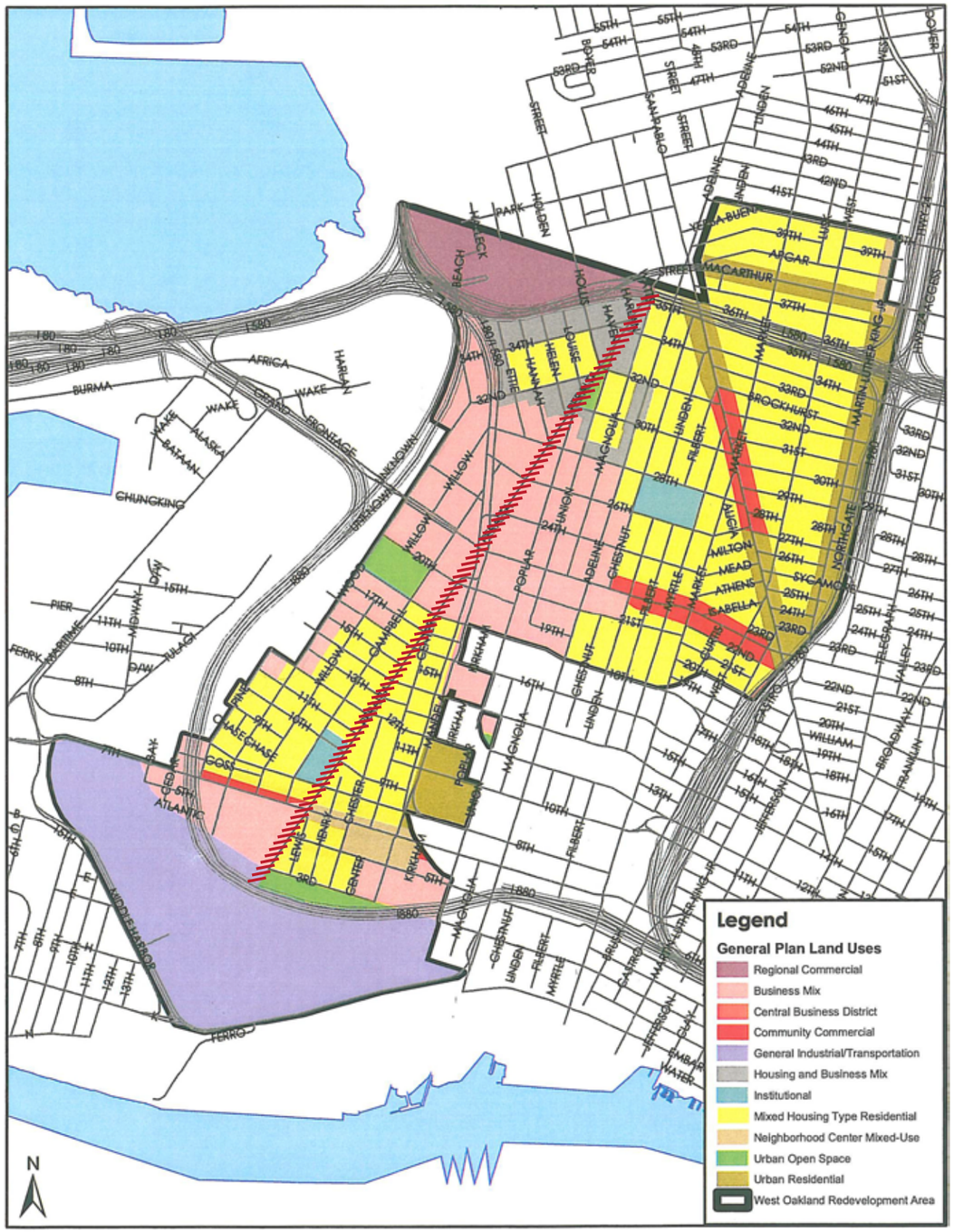
PERALTA STREET

Peralta's Three Zones

Peralta Street, almost 2 miles in length, passes through several distinct zones with different attributes and character. The southern zone is predominantly residential in character, although mixed with other uses, including the U.S. Postal Service Processing and Distribution Center, Prescott Elementary School, churches, and commercial properties at 7th Street. In this zone, Peralta Street has consistent pedestrian activity, and the street has a stable residential feel. The central zone is predominantly industrial, although the area along West Grand Avenue and Mandela Parkway is designated as a future commercial corridor. Currently, there is little pedestrian activity in this area. The northern zone passes through a mix of businesses and housing, and includes segments where public open space (e.g. Poplar and Fitzgerald Parks) define the character and feel of the street.

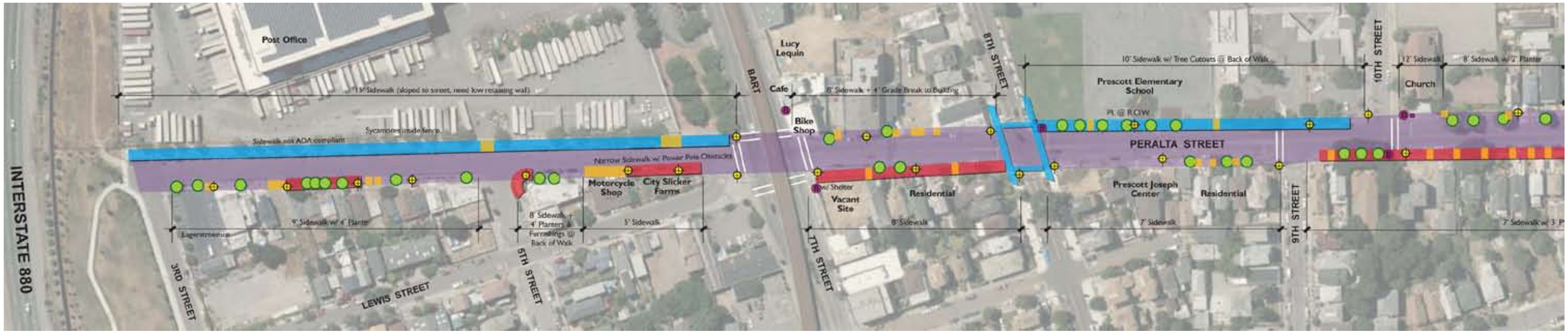


Land Uses and Frontages

The southern portion of Peralta Street passes through a historic, lower density residential neighborhood, home to many artists. Peralta Street's southernmost section, between 3rd and 7th Streets, is marked by green or open space on either end - by a park which lies between 3rd Street and the I-880 freeway to the south, and by the Post Office Plaza and WOW Garden operated by City Slicker Farms at 7th Street. In this area, the Postal Service Processing and Distribution Center's perimeter fence and truck parking effectively make Peralta Street a one-sided street. The eastern side of the street is fronted by mostly Victorian era residential structures and a small vehicle repair business and a church.

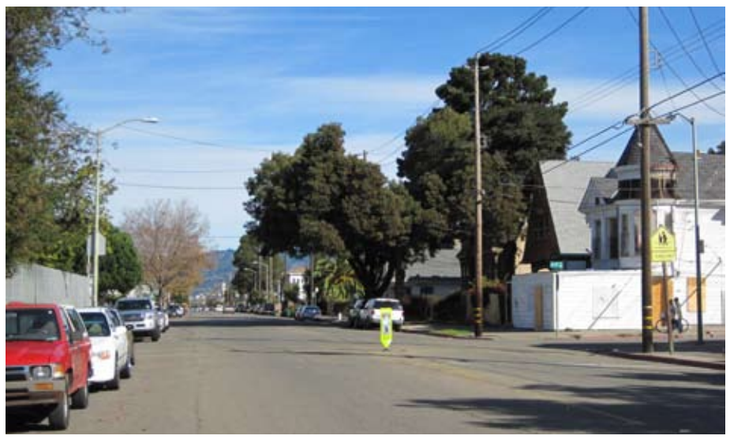
Passing under the BART tracks, Peralta Street intersects with 7th Street's Historic District, where improvements are being made as part of the West Oakland Transit Village project. Continuing north, Peralta Street is fronted a mix of single family and duplex homes, multi-family residences, corner stores, churches and Prescott Elementary School. Most homes along this stretch of Peralta Street date from the Victorian era. Many are set back from the street, with porches and/or front yards, and some buildings face the street at an angle. Throughout the area, there are also buildings with no setbacks from the sidewalk. As one approaches 18th Street, the mix of uses and building types begins to transition to more industrial, including some buildings with attractive brick facades.

The central portion of Peralta Street is characterized by larger scale uses and industrial sites, and also includes some attractive brick buildings. At the intersection of West Grand Avenue, Peralta Street traffic is routed around the Mandela Parkway open space. This area is a designated commercial corridor, where uses will likely change in the near future. Some large industrial uses are screened by walls painted with murals.



LEGEND

- GOOD SIDEWALK
- BAD / OR NO SIDEWALK / OR WITH OBSTACLES
- BUS STOP
- STREET LIGHT
- PLANTER / BENCH
- BIKE RACK
- DRAINAGE ISSUE
- DRIVEWAY
- EXISTING STREET TREE

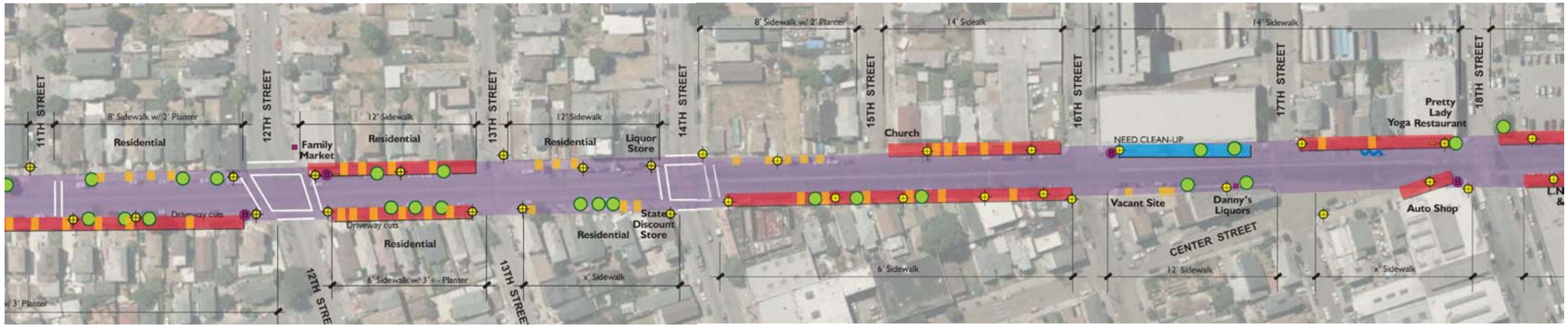


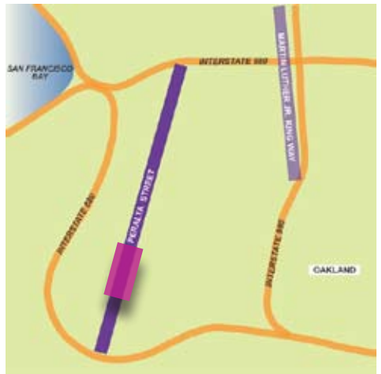
North of 28th Street, frontages along Peralta Street's northern segment become smaller in scale, although the uses are primarily business. Although the neighborhood is a mix of housing types and business uses, homes do not front onto Peralta Street in this segment. Three blocks of existing parks along Peralta Street will soon be joined by the City Slicker urban farm and park project. The shifting street grid pattern in this area has created a number of small, angular unbuildable parcels, as well as intersections with large "leftover" paved areas. Along the existing parks, large sycamores help to scale the street. The project area terminates at the elevated I-580 freeway and Emeryville border.

Street and sidewalk

Peralta Street generally consists of one very wide travel lane in each direction, with un-striped parallel parking on both sides of the street. The street width is typically 52' from curb face to curb face, within an 80' right of way. In the central and northern zones, on street parking appears to be generally available. In the Prescott and South Prescott neighborhoods, there appears to be much higher demand for street parking. Two-hour parking limits and residential permit parking apply between 3rd Street and 11th Street.

Peralta Street is at the juncture of two street grid networks, resulting in many intersections that are offset, that create acute angles and left-over spaces, or that involve odd numbers of intersection legs. At its intersection with West Grand Avenue and Mandela Parkway, Peralta Street breaks into two block-long, discontinuous one way segments. Additionally, in the central and northern portions of Peralta Street, the legacy of industrial uses has left a number of awkwardly aligned intersections and odd-shaped parcels that were shaped by the industrial railway spurs.





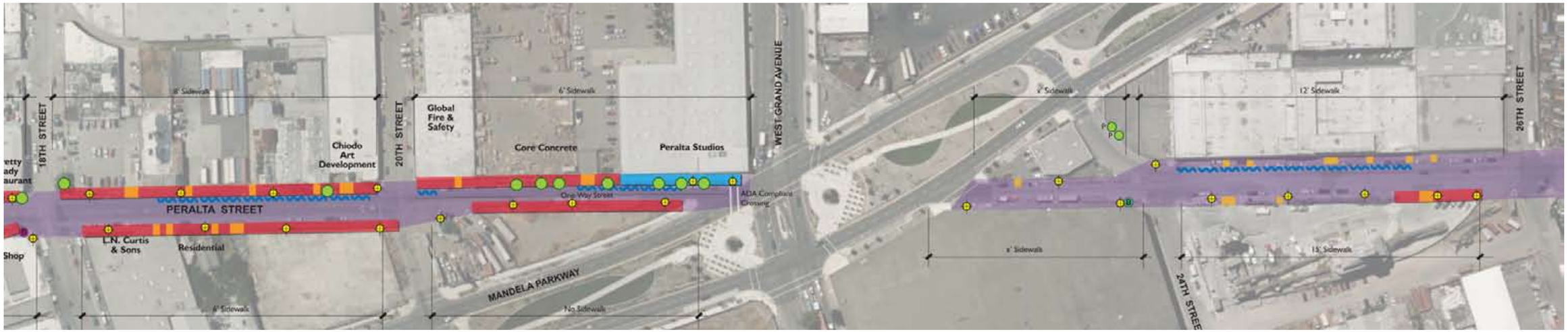
LEGEND

- GOOD SIDEWALK
- BAD / OR NO SIDEWALK / OR WITH OBSTACLES
- BUS STOP
- STREET LIGHT
- PLANTER / BENCH
- BIKE RACK
- DRAINAGE ISSUE
- DRIVEWAY
- EXISTING STREET TREE

Peralta Street's roadway paving shows localized cracks and rutting, with some areas in fairly poor shape. Abandoned railroad tracks cross the street in several locations, including at 18th, 20th and 26th Streets. Peralta Street has a crowned cross-section -- generally 1-2% at the center two lanes, then 2-8% at the parking lane. Segments of Peralta Street have very flat crowns. Peralta Street is slated for repaving from West Grand Avenue to Hollis Street, under the City's Five Year Paving Plan.

At Peralta Street and 8th Street, improvements have been made, including crosswalks with special paving, new sidewalk paving and curb ramps, and bulbouts and planting along 8th Street. Additional improvements are being constructed at Peralta Street and 7th Street, as part of the West Oakland Transit Village project.

Sidewalk widths along Peralta Street vary widely, from 15' on some blocks, to non-existent on others. Sidewalk conditions vary as well – some in good shape and some areas extremely damaged. Power poles for overhead utilities are set in the sidewalks, often creating obstacles and unsightly conditions. For most of the street, site furniture is lacking, although in the Prescott Neighborhood, wooden planters, benches and tables have been provided in some locations. There are benches at only a couple of bus stops and almost no trash receptacles.



LEGEND

- GOOD SIDEWALK
- BAD / OR NO SIDEWALK / OR WITH OBSTACLES
- BUS STOP
- STREET LIGHT
- PLANTER / BENCH
- BIKE RACK
- DRAINAGE ISSUE
- DRIVEWAY
- EXISTING STREET TREE

There is a wide mix of street tree species along Peralta Street. Although some portions of the Prescott neighborhood and some frontages in the northern zone have large, mature street trees which help to scale the street, many stretches of Peralta Street lack street trees altogether. Sycamores are the most common species, and generally the largest.

Peralta Street is designated as a “District” Pedestrian Route in the City of Oakland Pedestrian Master Plan, which calls for 10’ wide sidewalks. It is a proposed Class 2 bicycle route from the Emeryville border to 7th Street. The northern portion, between 35th Street and West Grand Avenue is a designated truck route, while the trucks are prohibited on southern residential portion, between 14th and 3rd Streets.

Utilities and Drainage

Unsightly overhead power lines run the length of Peralta Street. Numerous longitudinal underground utilities exist under Peralta Street. A sanitary sewer system runs the entire length of Peralta Street Street at about the center line of the street.

On Peralta Street, drainage either travels in the gutter or collects to catch basins at intersections, and travels westerly. Segments throughout Peralta Street have storm drainage pipes in the northbound travel lanes. Local ponding has been observed, particularly in intersection areas.

LEGEND

- GOOD SIDEWALK
- BAD / OR NO SIDEWALK / OR WITH OBSTACLES
- BUS STOP
- STREET LIGHT
- PLANTER / BENCH
- BIKE RACK
- DRAINAGE ISSUE
- DRIVEWAY
- EXISTING STREET TREE

Lighting

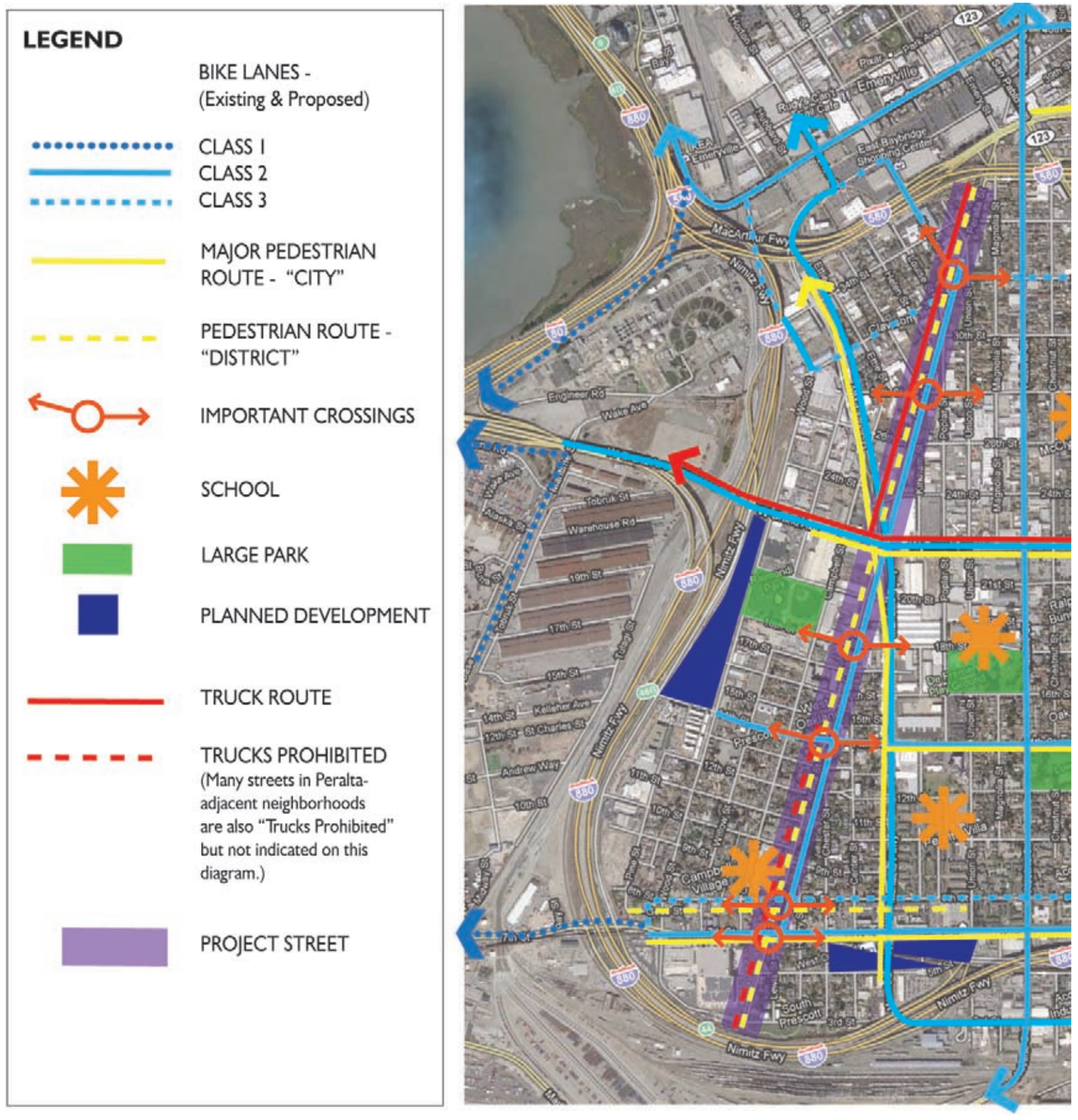
Street and sidewalk lighting is typically provided from high pressure sodium (HPS) lamps in cobra-head luminaires mounted on wooden utility poles, or occasionally on dedicated poles. Spacing varies, with some areas lighted on alternating sides of the street, and some areas on only one side. Consequently, light levels also vary widely, especially on sidewalks and at pedestrian crossings. In some of the industrial areas, pedestrian lighting is virtually absent, and in areas where lighting is presently on only one side of the street (e.g. at the northern end, where the lights are typically on the eastern side of the street) the opposite sidewalk often does not meet the 0.6 footcandle level proposed in the City of Oakland Pedestrian Master Plan.

Transit

AC Transit's Route 31 bus travels the length of Peralta Street. It is a well used route, important to the community. Bus stops are typically nearside stops. In the Prescott neighborhood, they are located approximately 400 to 600 feet apart, but north of 18th Street, the stops are much less frequent. Bus lines that cross Peralta Street include Route NL at West Grand Avenue, and Route 26 at 7th Street and 14th Street. The West Oakland BART station is three short blocks east of Peralta Street at 7th Street.

LEGEND

- GOOD SIDEWALK
- BAD / OR NO SIDEWALK / OR WITH OBSTACLES
- BUS STOP
- STREET LIGHT
- PLANTER / BENCH
- BIKE RACK
- DRAINAGE ISSUE
- DRIVEWAY
- EXISTING STREET TREE



Gateways and Focal Points

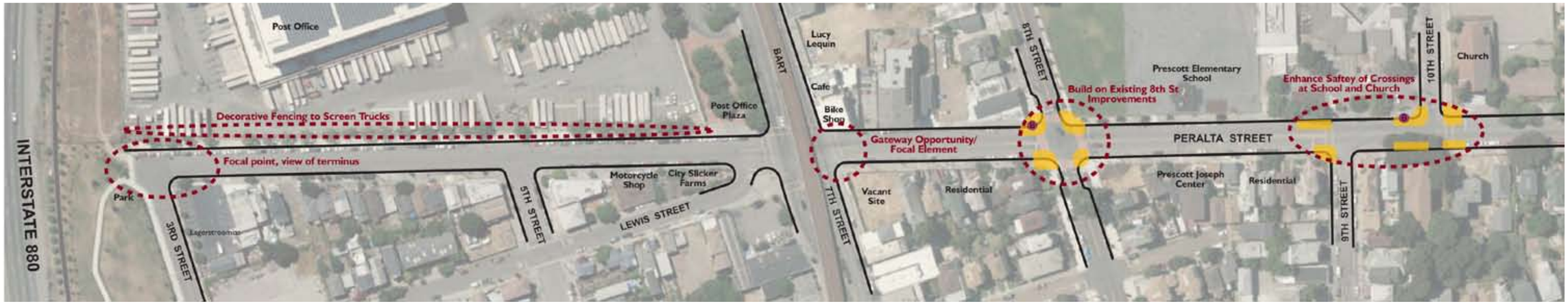
As Peralta Street passes through several distinct neighborhoods, there are opportunities to mark the transitions with gateways or other focal points. Focal points could include vertical elements such as monoliths or banner poles, landscape treatments, public art, or special paving. At its southern end, Peralta Street terminates at a park, where the view could be enhanced with art or landmark planting. A transition occurs at 7th Street, the historic commercial corridor. The streetscape improvements on 7th Street could be enhanced with vertical gateway elements. A major intersection leading to Oakland's downtown, 14th Street is also an appropriate location for special focal treatment, such as a potential mini roundabout combined with vertical elements. The edge of the Prescott neighborhood occurs roughly at 18th Street, which is an appropriate location for a gateway treatment to mark the transition. A roundabout combined with art or other vertical elements could also be appropriate here. At 28th Street, where the industrial zone transitions to a mixed residential neighborhood, the 5-legged intersection could mark the transition with a larger roundabout including vertical elements.

The core of the northern zone is a series of green spaces, a focal area in and of itself. Suggested adjustments to the road alignments could allow for expansion of the green open spaces and/or plazas along and across Peralta Street. Gateway elements could be located at Harlan Street, the beginning of the green core, or at 35th Street as one emerges from under the elevated freeway.

Pedestrian Activity Nodes and Parking

Within the existing roadway, Peralta can accommodate two travel lanes and Class II bicycle lanes, with 18 feet remaining for parking or other uses. In locations where parallel parking is not necessary on both sides of the street, some of this space could be used to expand the sidewalk width, or possibly to accommodate diagonal parking on one side of the street (with parking prohibited on the other side). Curb extensions ("bulb-outs') could be considered at all intersections and potential crossing points to shorten the crossing distance for pedestrians. In most instances, this would occur where curbs are already painted red, thus minimizing potential loss of parking.

Several constraints would influence the choice of approaches in any given location. Whenever a curb line is relocated or created in the case of sidewalk bulb-outs, curbed medians, or sidewalk widening, a detailed analysis, including possibly performing vacuum extraction potholing to determine the exact location of utilities will need to



be considered. Curbs installed over a utility present the risk of damage to that utility during construction as well as increased difficulties for future maintenance of the utility. Similar detailed analysis would be required for proposed trees, street light foundations, installed art foundations, utility vaults, and other items requiring excavation.

A sanitary sewer system runs the entire length of Peralta Street at about the center line. If a median were proposed, any trees and lights would need to be offset from the centerline.

Storm Drainage systems are commonly constraints at intersection corners and need to be analyzed on a case by case basis. There are many ways to design work-arounds or modifications to inlets and piping.

Other longitudinal utilities may be close to the existing curb, but in general, the utilities are more than 8 feet away from the existing curb. Short interruptions such as sidewalk bulbouts or parking islands may be acceptable to the utility owner. However, construction of foundations for street lighting or trees may not be feasible.

In residential areas with many driveways, neither widening the sidewalk nor proposing diagonal parking would be practical. Diagonal parking may be desirable at commercial nodes, at parks, or other places where people gather.

Unifying the Street, Distinguishing the Neighborhoods

Existing overhead utilities are unsightly and distracting. They are currently a constraint to developing unobstructed, uncluttered sidewalks. Undergrounding those utilities would make it much easier to develop a palette of street furnishings that could visually unify the street and distinguish the identity of the individual neighborhoods. Attractive, pedestrian scaled street lights could replace the existing cobra head lights mounted on the utility poles. Banners could add an identity element.

While portions of Peralta Street have mature street trees, infilling areas where they are currently lacking would also help to visually unify the street. Street tree species could be varied by street segment to distinguish the neighborhoods, or a single specie could create continuity for the length of the street.

Neighborhoods along Peralta Street are home to many artists, whose work and/or ideas could be incorporated into the streetscape not only as focal or gateway elements, but as thematic elements such as decorative fencing, artistic or historic pavers in the sidewalk, banners, or elements of site furnishings such as benches or bollards. Distinctive benches, trash receptacles and bike racks throughout the project area would improve pedestrian comfort as well as contributing to the neighborhood image. Decorative crosswalks across Peralta Street and across the side streets could further define the street and distinguish the neighborhoods. High-visibility crosswalks would be required at non-controlled intersections.

Functional Improvements

Importantly, this streetscape project presents the opportunity to improve the basic appearance and function of Peralta Street. As noted in the Existing Conditions section, portions of the street surface, sidewalks and curbs are in poor condition - potholed, broken, cracked or heaved. Repair of the existing sidewalks, completion of discontinuous portions of sidewalk, repair of existing curbs, ADA ramps and street surface throughout the project area would constitute a significant enhancement, and is a foundation upon which future improvements could be built. As a portion of the street is slated for repaving within the next five years, re-striping of the street to accommodate Class II Bike Lanes could occur concurrently. Drainage problems resulting from inadequate grading or storm drain maintenance issues could also be addressed in the process. A uniform, well maintained pedestrian realm conveys neighborhood pride.

Traffic Opportunities and Constraints

One or more of the following measures are suggested for consideration along Peralta Street:

- Remove Signals at 12th and 14th Street
- Install roundabouts at 12th, 14th, 18th, and 28th Streets
- Install curb extensions or other traffic calming features
- Eliminate some side street connections that intersect Peralta Street at acute angles
- Relocate or remove some bus stops and crosswalks

The measures suggested for Peralta Street between 8th Street and Harlan Street are expected to significantly improve service for motorists, pedestrians, bicyclists, and transit users. Eliminating severely skewed intersections, providing traffic calming features, and relocating or removing some bus stops are expected to improve traffic safety and result in a more complete street that will better serve all users. Improving comfort and safety for walking and bicycling and should encourage more people to walk, bike, and use transit and thereby make a positive contribution to the reduction of greenhouse gases.

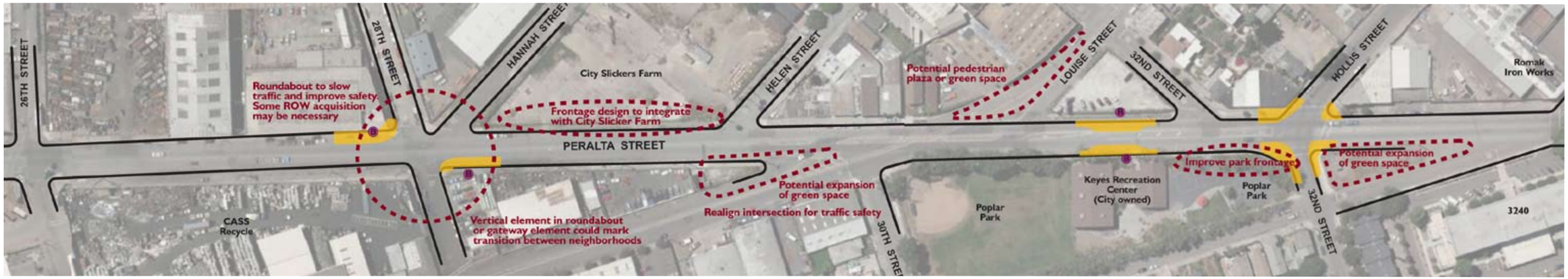
Pedestrian Service

Implementation of changes suggested for Peralta Street provides opportunities to improve pedestrian service and safety. Curb extensions (“bulb-outs”) will shorten the distances for pedestrians crossing Peralta Street and many of the cross streets.

Curb extensions may be added where parking is currently provided to further reduce the crossing distance for pedestrians. Installation of curb extensions would have little impact on the parking supply, would significantly improve the ability of motorists to see pedestrians getting ready to enter a crosswalk, and would improve the ability of pedestrians to see approaching motorists before they begin to cross the street. Curb extensions are most needed where marked crosswalks are provided.

Other features to improve pedestrian service might include:

- Speed feedback signs
- High-visibility fluorescent yellow green signs
- High-visibility pavement markings at uncontrolled crosswalks
- Improved street lighting
- Pedestrian countdown signals



- Signal timing modifications to ensure pedestrian accommodation
- Separated curb ramps at intersection corners
- Buffer between roadway and sidewalks
- Marked crosswalks and advance stop lines at controlled crosswalks
- ADA upgrades (audible pedestrian signals, accessible pushbuttons, truncated domes)
- Advance yield lines

Bicycle Service

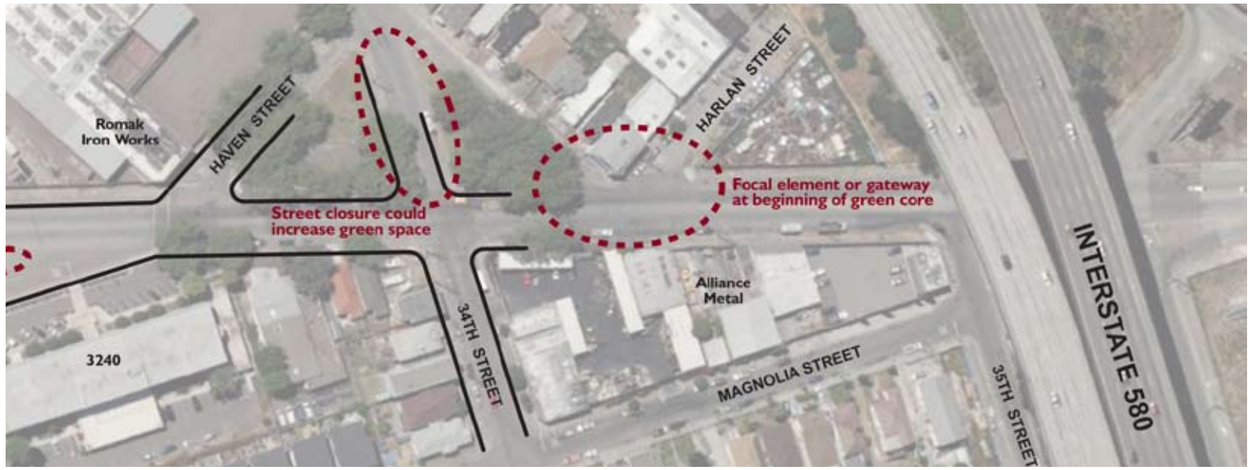
The City of Oakland Bicycle Master Plan (2007) proposes Class 2 bike lanes along Peralta Street from 7th Street to 32nd Street. The project provides an opportunity to implement this element of the Bicycle Master Plan.

Bus Service

Peralta Street serves Line 31 with 30-minute headway service on weekdays and weekends. Transit stops are closely spaced along the corridor. The suggested changes to Peralta Street have the potential to improve pedestrian access to transit along the corridor and potentially improve transit service if certain transit-friendly design features are incorporated into the plan. AC Transit generally prefers to provide bus stops:

- Along local bus routes at a frequency of approximately 1,000 feet of separation
- At signalized intersections
- At the far side of intersections
- Where there are marked crosswalks
- Where there is at least 20 feet of roadway width in the direction of bus travel

This last item could necessitate narrower bulb-outs, limiting the extension of curbs at transit stops. The suggested changes to improve transit performance would involve relocation of a number of bus stops along the corridor, as shown on the graphic on the next page.



Potential Traffic Design Features

Suggestions for improvements to make Peralta Street a more complete street serving primarily motorists, pedestrians, and transit are described below. Some of the specific treatments are shown in Peralta Traffic Exhibit Exhibit 1. Additional lists of suggested treatments are provided below. Some treatments that are not specifically listed would also be advisable if funding permits: specifically, curb extensions to shorten pedestrian crossing distances at all intersections.

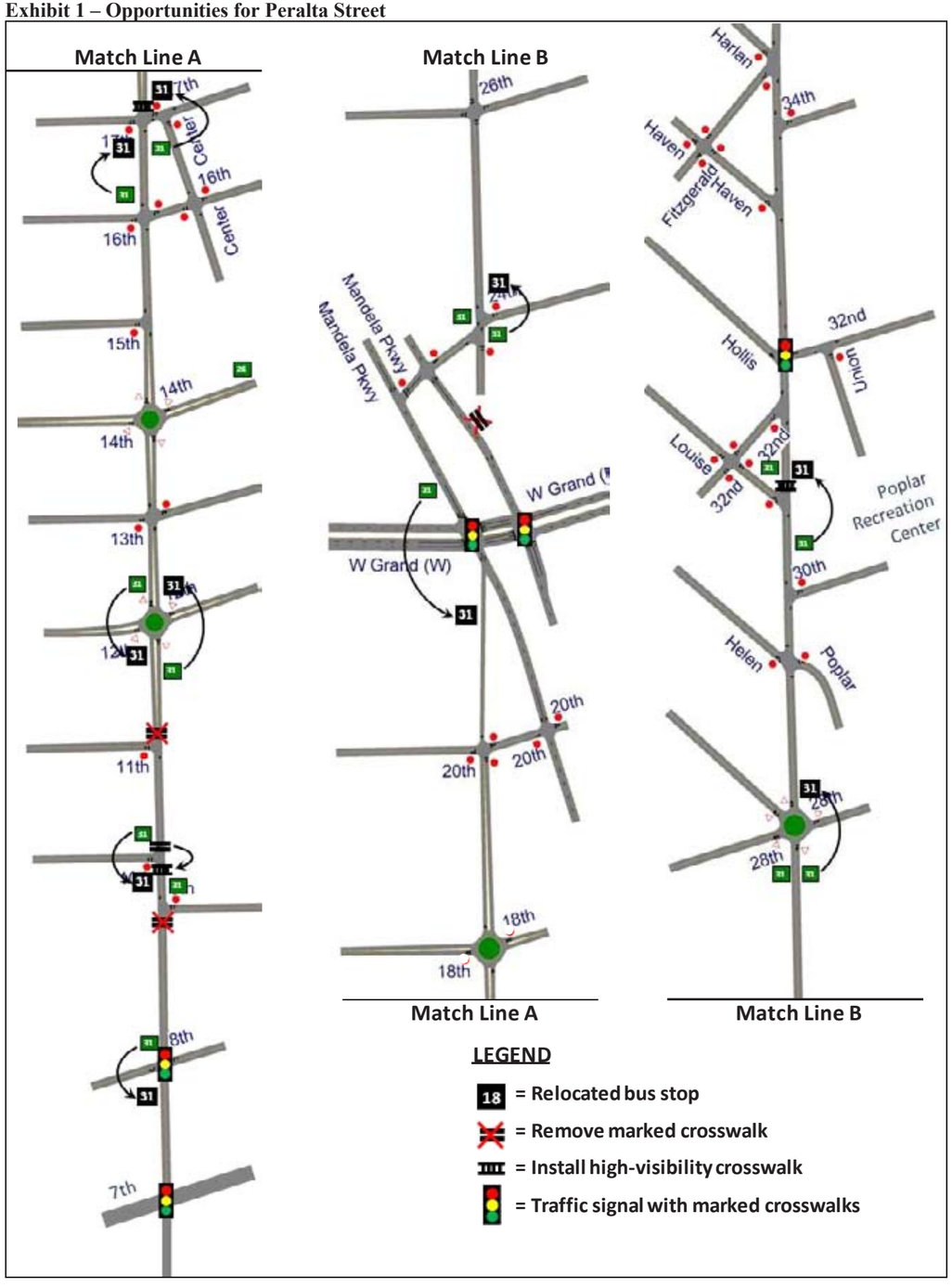
Crosswalks across streets that have no traffic controls (traffic signals or stop signs) should be high visibility with longitudinal markings (ladder, continental or other high-visibility style). Also, signing for crosswalks should be modified to be consistent with current standards specified in the California Manual on Uniform Traffic Control Devices.

8th Street

Opportunities

- Relocate southbound near-side bus stop to far side
- Install curb extensions on Peralta Street (Although this intersection was recently reconstructed, there may be an opportunity to install curb extensions on Peralta Street and reduce the crossing distance for pedestrians)

Exhibit 1 – Opportunities for Peralta Street



10th Street

Opportunities

- Relocate southbound near-side bus stop to far side
- Remove the low-visibility crosswalk on the northern leg of the intersection and install a high-visibility crosswalk on the south leg of the intersection
- Install curb extensions at south leg of the intersection

Constraints

- Curb extension is limited by need for 20-foot lanes at transit stops

One high-visibility crosswalk should provide adequate service for pedestrians and provide direct access to transit stops located between 9th and 10th Streets.

11th Street

The marked crosswalk on the north leg of this intersection may be removed as the modifications suggested at 10th Street would result in marked crosswalks two blocks apart between 8th Street and 12th Street. Marked crosswalks at two-block spacing should provide adequate pedestrian service.

12th Street

Opportunities

- Relocate northbound and southbound near-side bus stops to the far side
- Replace the existing signalized intersection with a mini-roundabout

The traffic volumes at this intersection are well below the number required to satisfy the peak hour volume warrant for a traffic signal. Even if 2035 traffic volumes at the intersection are doubled for all approaches, the intersection would still not satisfy the peak hour warrant. The opportunity to remove this traffic signal and replace it with a mini-roundabout is considered feasible because:

1. It is highly unlikely that a traffic signal would be needed within the next 25 years
2. Replacement of the traffic signal with a mini-roundabout is expected to maintain or improve, safety for all users due to its traffic calming effect.
3. Reduce greenhouse gas and auto exhaust emissions due to reduced delay for motor vehicles.

A mini-roundabout would fit within existing right-of-way and would have a mountable center island.

14th Street

Opportunities

- Replace the existing signalized intersection with a mini-roundabout

The traffic volumes at this intersection are well below the number required to satisfy the peak hour volume warrant for a traffic signal. Even if 2035 traffic volumes at the intersection are doubled for all approaches, the intersection would still not satisfy the peak hour warrant. The opportunity to remove this traffic signal and replace it with a mini-roundabout is considered feasible for the same reasons listed above for the 12th Street intersection.

17th Street

Opportunities

- Close Center Street between 17th Street and Peralta Street
- Relocate southbound near-side bus stop at 16th Street to the far side of 17th Street
- Relocate northbound near-side bus stop to the far side
- Install a high visibility crosswalk on the northern leg of the intersection
- Install curb extensions north of the intersection

Constraints

- Curb extension is limited by need for 20-foot lane at transit stop north of the intersection

18th Street

Opportunities

- Install modern roundabout at intersection

Constraints

- Right-of-way may be required to install a modern roundabout

W Grand Avenue and Mandela Parkway

Opportunities

- Relocate southbound near-side bus stop to far side along Peralta Street

Peralta Street, 24th Street, and Mandela Parkway

Opportunities

- Prohibit motor vehicle access to Peralta Street northbound from Mandela Parkway, diverting traffic to the Mandela Parkway & 24th Street intersection
- Relocate the northbound near-side bus stop at 24th Street to the far side
- Install curb extensions at north leg of the intersection

Constraints

- 24th Street will need to be converted to two-way operations between Mandela Parkway and Peralta Street
- The northbound right turning radius from northbound Mandela Parkway to eastbound 24th Street is tight. The turning radius and may need to be modified and right-of-way may need to be acquired to accommodate trucks.
- Peralta Street south of 24th Street will need to be converted to two-way operations
- Curb extension is limited by need for 20-foot lanes at transit stops

28th Street

Opportunities

- Install a modern roundabout to better accommodate this five-legged intersection
- Relocate the northbound near-side bus stop to the far side

Constraints

- Curb extension is limited by need for 20-foot lanes at transit stops
- Right-of-way may be required to install a modern roundabout

Poplar Street

Opportunities

- Relocate Poplar Street to connect to Peralta Street across from Helen Street
- Close Poplar Street north of 30th Street

Constraints

- Right-of-way acquisition will be required to relocate Poplar Street

Louise Street

Opportunities

- Reconfigure the southbound lane on Louise Street to be adjacent to the north-bound lane near the intersection
- Relocate northbound near-side bus stop to the far side
- Install a high visibility crosswalk on the northern approach to this intersection
- Install curb extensions at south leg of the intersection

Constraints

- Curb extension is limited by need for 20-foot lanes at transit stops

Hollis Street

Opportunities

- Install curb extensions at all legs of the intersection

Union Street

Opportunities

- Close Union Street between 32nd Street and Peralta Street

34th Street

Opportunities

- Close 34th Street between Peralta Street and the Haven/Fitzgerald intersection

Exhibit 17 - Traffic Volumes on Peralta Street North of 10th Street

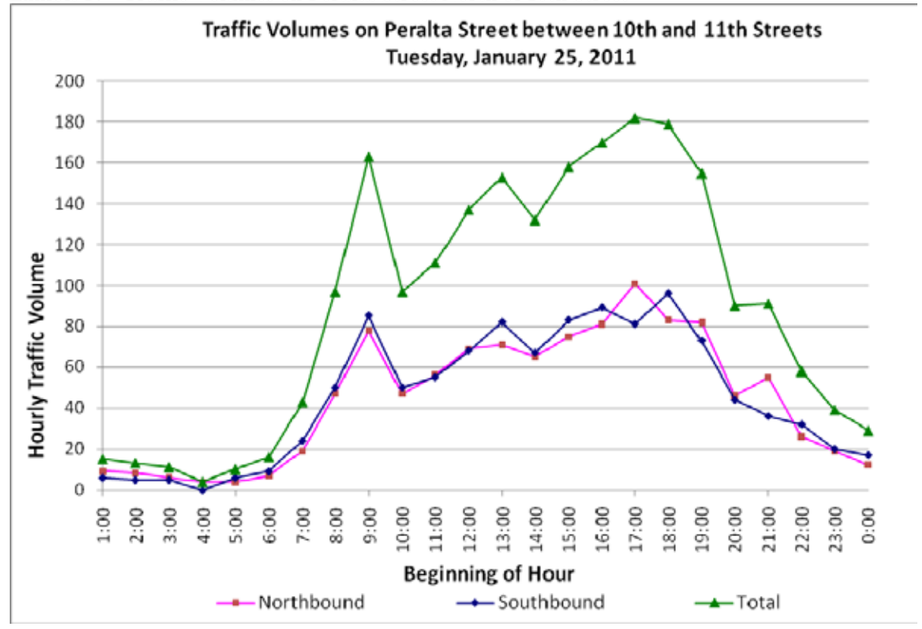


Exhibit 18 - Traffic Volumes on Peralta Street North of 18th Street

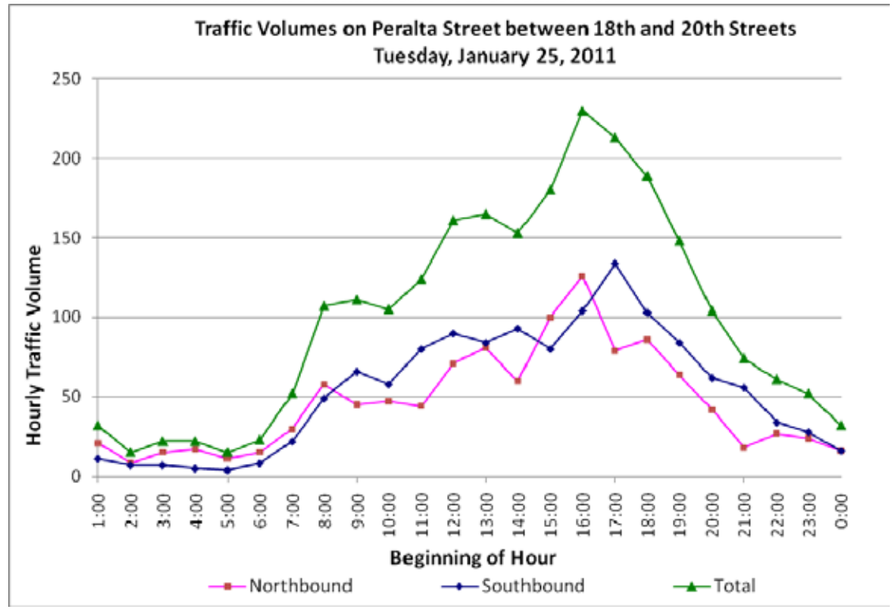
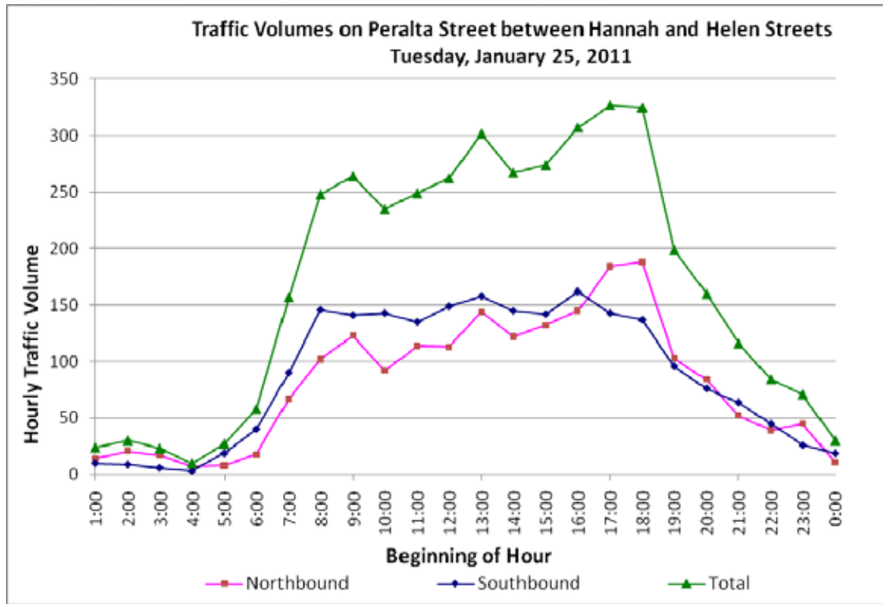


Exhibit 19 - Traffic Volumes on Peralta Street North of 28th Street



2035 Peak Hour Intersection Turning Volumes

Future traffic forecast volumes were estimated from the official version of Alameda Countywide travel demand model, which reflects land uses from ABAG Projection 2007. The future forecast year was estimated for cumulative long term 2035. Along the Peralta Street corridor, 2035 forecast estimated approximately 25% of growth for the minor streets. Larger streets like Mandela Parkway and West Grand Avenue had significantly higher growths, especially in the eastbound and westbound direction. Future intersection volumes were developed using these model growth factors. These future volume calculations for 2035 are shown in Exhibit 21

Exhibit 20 - Intersection Turn Movement Volumes along Peralta Street

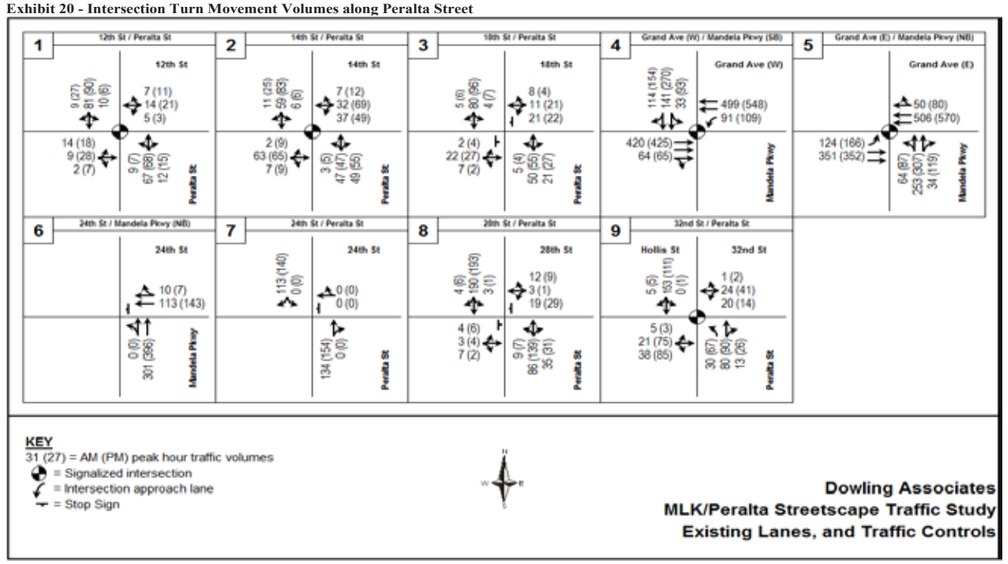


Exhibit 21 - Predicted 2035 Volumes along Peralta Street

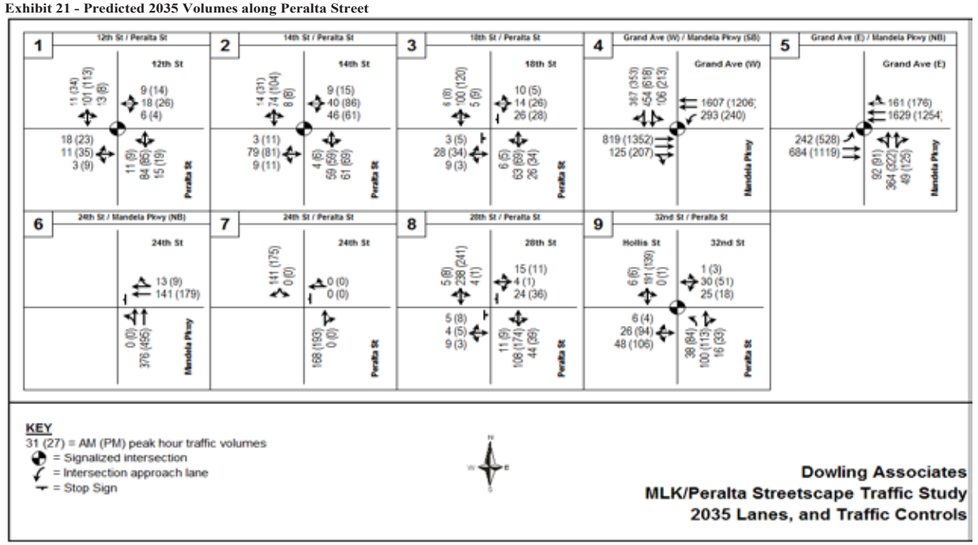


Exhibit 22 - Comparison of Existing Conditions and Existing Conditions with Opportunities along Peralta Street

			Existing				Existing + Opportunities			
			AM Peak		PM Peak		AM Peak		PM Peak	
	Intersection	Control	LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2] (V/C)[4]	LOS[1]	Delay[2] (V/C)[4]
1	12th St & Peralta St	Signal/Roundabout	A	8.5	A	9.4		(0.09 to 0.11)		(0.10 to 0.12)
2	14th St & Peralta St	Signal/Roundabout	A	9.0	A	9.1		(0.10 to 0.12)		(0.11 to 0.14)
3	18th St & Peralta St	TWSC/Roundabout	A (B)	3.7 (10.4)	A (B)	4.4 (11.2)		(0.08 to 0.10)		(0.09 to 0.11)
4	Grand Ave & Mandela Pkwy (W)	Signal	B	11.6	B	13.6	B	11.6	B	13.6
5	Grand Ave & Mandela Pkwy (E)	Signal	B	12.5	C	21.9	B	12.5	C	21.9
6	24th St & Mandela Pkwy	TWSC	A (B)	3.6 (12.0)	A (B)	3.8 (14.1)	A (B)	3.2 (13.8)	A (C)	3.8 (17.7)
7	24th St &Peralta St	TWSC	A (A)	1.0 (10.0)	A (B)	1.0 (10.7)	A (A)	1.0 (9.8)	A (B)	0.9 (10.1)
8	28th St & Paeralta St	TWSC/Roundabout	A (B)	1.8 (11.0)	A (B)	1.8 (12.8)		(0.17 to 0.20)		(0.17 to 0.21)
9	32nd St & Peralta St	Signal	A	8.1	A	8.7	A	8.2	A	9.0

Source: Dowling Associates, 2011

Notes:

Highlighted items indicates significant impact.

[1] LOS = Level of Service

[2] Average control delay in seconds per vehicle

[3] Stop-controlled intersections report both the intersection control delay/LOS and the worst approach control delay/LOS (in parenthesis)

[4] Roundabout V/C ratio using upper bound and lower bound values for critical gap and follow-up time

Exhibit 23 - Comparison of 2035 Conditions and 2035 Conditions with Opportunities along Peralta Street

			2035				2035 + Opportunities			
			AM Peak		PM Peak		AM Peak		PM Peak	
	Intersection	Control	LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2] (V/C)[4]	LOS[1]	Delay[2] (V/C)[4]
1	12th St & Peralta St	Signal/Roundabout	A	8.7	A	9.7		(0.12 to 0.14)		(0.13 to 0.16)
2	14th St & Peralta St	Signal/Roundabout	A	9.2	A	9.5		(0.13 to 0.16)		(0.14 to 0.17)
3	18th St & Peralta St	TWSC/Roundabout	A (B)	4.0 (11.1)	A (B)	4.8 (12.2)		(0.10 to 0.12)		(0.12 to 0.14)
4	Grand Ave & Mandela Pkwy (W)	Signal	D	48.8	F	86.1	B	17.5	C	29.0
5	Grand Ave & Mandela Pkwy (E)	Signal	F	158.7	F	527.4	C	30.8	D	45.8
6	24th St & Mandela Pkwy	TWSC	A (B)	4.0 (13.2)	A (C)	4.5 (16.5)	A (C)	4.1 (16.8)	B (B)	11.7 (12.1)
7	24th St &Peralta St	TWSC	A (A)	0.0 (0.0)	A (A)	0.0 (0.0)	A (A)	0.9 (9.9)	A (B)	0.8 (10.2)
8	28th St & Paeralta St	TWSC/Roundabout	A (B)	2.0 (12.0)	A (B)	2.1 (14.6)		(0.22 to 0.26)		(0.22 to 0.26)
9	32nd St & Peralta St	Signal	A	8.3	A	9.0	A	8.3	A	9.5

Source: Dowling Associates, 2011

Notes:

Highlighted items indicates significant impact.

[1] LOS = Level of Service

[2] Average control delay in seconds per vehicle

[3] Stop-controlled intersections report both the intersection control delay/LOS and the worst approach control delay/LOS (in parenthesis)

[4] Roundabout V/C ratio using upper bound and lower bound values for critical gap and follow-up time

Operational Analysis of Suggested Changes to Peralta Street

Intersection LOS was analyzed using the same criteria described in the Martin Luther King Jr. Way chapter which used Exhibit 8 and Exhibit 9. The proposed opportunities along Peralta Street that would impact traffic operations were all tested in SYNCHRO to determine the impact on existing and 2035 conditions. For the 2035 conditions it was assumed that signal timings would be optimized as a result of the construction of the proposed opportunities. A comparison of no project conditions with applying the suggested opportunities for existing and 2035 conditions are shown in Exhibit 22 and Exhibit 23, respectively. As these exhibits show, the proposed opportunities will not cause a significant impact and actually improve the Mandela Parkway and West Grand Avenue intersection in 2035 due to better signal timings.

The HCM 2000 methodology does not give and LOS score to roundabout operations but instead assigns a V/C ratio using both upper and lower bound numbers for critical gap and follow-up time. The four proposed roundabouts are all operating 30% volume to capacity ratio in the 2035 conditions so these roundabouts will function well.