FINAL REPORT
FOR THE
OXNARD SIDEWALK SURVEY

OXNARD, CALIFORNIA

NOVEMBER 2015

PREPARED FOR

THE CITY OF OXNARD

PREPARED BY

FEHR PEERS

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INTRODUCTION

This report documents the process undertaken for the City of Oxnard Sidewalk Survey project conducted by Fehr & Peers and Sally Swanson Architects, Inc. This project was identified as a recommended priority within section 8.2.2 of the 2012 *Bicycle and Pedestrian Facilities Master Plan* (BPFMP) adopted by the City of Oxnard.

The scope of work for this project included the following major tasks:

1. Perform a video inventory of sidewalks, signs, curb ramps, and traffic calming devices within the entire City of Oxnard (within parcels built pre-1992) to determine gaps and condition of the existing sidewalks provided.
2. Estimate existing pedestrian volumes and demands across the city.
3. Complete field surveys of areas determined to have the highest concentration of pedestrian activity as estimated previously, including areas such as downtown, specific city parks, schools, and public buildings. The field surveys assessed features within intersections and public rights of way in compliance with Americans with Disabilities Act (ADA) codes and guidelines.
4. Perform public outreach within the City of Oxnard to help identify and prioritize locations within the city for future improvements.
5. Create a Geographic Information System (GIS) database for the City of Oxnard to identify and prioritize current and future projects as funding sources to be allocated for repairs to parts of the city's sidewalks and public rights of way.
6. Prepare final reports that include:
    a. Conceptual plans including recommendations for identified high-priority areas.
    b. Tables listing location and estimated cost of construction to repair features within identified high-priority areas.
    c. Recommend education, encouragement, and enforcement programs.

Each of the following sections of this report represents a stage of the analysis in the project, including the assessment, results, and recommendations.

- First, the segments that are anticipated to have the highest number of pedestrians were identified using a GIS-based pedestrian demand model, taking into account demographic variables as well as land use variables. This process is documented in the Pedestrian Demand Model Memorandum.
- Second, the highest demand segments were assessed for compliance with ADA requirements and prioritized based on an ADA Severity Average score comprised of various deficiencies such as curb cuts, sidewalk running slope, cross slope, pedestrian push buttons and bus stops. This process is documented in the Oxnard ADA Narrative: High Pedestrian Demand Areas.
- Third, policies and programs were recommended that could be implemented in tandem with infrastructure improvements in order to further expand pedestrian safety and access. These recommendations include an assessment of policies and programs that the City of Oxnard already has in place. These recommendations are documented in the Policies & Programs Memorandum.

- Finally, conceptual plans and graphics were developed for inclusion into project sheets for the top ten highest demand areas, prioritized based on their ADA Severity Average score as determined in the second section of this report. The recommended treatments address the ADA deficiencies as well as improve the general pedestrian environment through treatments designed to increase safety and comfort for people walking. These concepts and graphics for the top ten highest demand areas, along with relevant design standards and crash reduction factors (where applicable) are shown in the Project Sheets section of this report.
- Attachment A details the assumptions and per-unit costs used to derive the planning level cost estimates in the Project Sheets.

In addition to these memoranda and this final report, all data related to the demand model and the ADA survey has been provided to the City of Oxnard and is available upon request via CD-ROM.

PEDESTRIAN DEMAND MODEL MEMORANDUM

MEMORANDUM

Date: November 11, 2015

To: City of Oxnard and Sally Swanson Architects

From: Fehr & Peers

Subject: ***Oxnard Sidewalk Survey – Pedestrian Demand Model (Final)***

Ref: LA14-2716

INTRODUCTION

This report describes the pedestrian demand model methodology used to estimate relative demand for pedestrian facilities in Oxnard. The pedestrian demand model is one component of the Oxnard Sidewalk Survey project which identifies deficiencies in the pedestrian environment and develops a prioritization plan to address those deficiencies in the areas where they are needed most. This memo serves as the deliverable for Phase II A: Technical Memorandum including GIS-based graphics documenting results of the model process and showing pedestrian demand levels.

The pedestrian demand model utilizes physical and socioeconomic variables to predict where the demand for pedestrian activity will be highest. The Oxnard model uses variables which have been found to have a statistically significant effect on pedestrian demand based on a fully-validated statistical model developed by Fehr & Peers.

This report includes the following sections:

- Methodology and approach
- Maps of variables included in the model
- Results of the pedestrian demand model
- Summary and conclusion

METHODOLOGY AND APPROACH

This section describes the approach towards developing a pedestrian demand model and the methodology used for the City of Oxnard. This analysis produced estimates of relative pedestrian activity at the street segment level. After aggregating seven key variables, the values associated with each variable were assigned to the closest street segment. Then, the model results were calculated using a regression equation with weighted coefficients for each variable based on the result of previous Fehr & Peers research on pedestrian demand modeling.

The variables listed in Table 1, below, are based on research Fehr & Peers conducted for the US Environmental Protection Agency (EPA) on the relationship between the built environment and travel patterns. Seven key variables were selected from this set for use in the Oxnard pedestrian demand model. Five variables were included based on statistical significance in a fully-validated pedestrian demand model conducted by Fehr & Peers for a different Southern California coastal city, and two additional variables were included at the request of City of Oxnard staff.

Table 1: Variables Related to Pedestrian Demand

Variable	Source	Status
Statistically Significant Variables		
Employment Density	2010 Longitudinal Employer-Household Dynamics data (via US Census Bureau)	*Included in pedestrian demand model*
Transit Frequency (# of transit vehicles stopping in PM Peak period – 4pm-7pm – in one direction)	City of Oxnard, Gold Coast Transit	*Included in pedestrian demand model*
Commercial Districts	City of Oxnard	*Included in pedestrian demand model as a "Special Attractor" using the same weight as schools, parks, and coastal areas*
Proximity to Coast	US Census – TIGER file	*Included in pedestrian demand model as a "Special Attractor" using the same weight as schools, parks, and commercial areas*
Speed Limit	City of Oxnard, Ventura County Fire Department	*Included in pedestrian demand model*
Additional Variables – Not Statistically Significant		
Population Density	2010 US Census	Not included in pedestrian demand model
Transit Proximity (Bus & rail stop /station locations)	City of Oxnard, Gold Coast Transit, MetroLink	Not included in pedestrian demand model
Student Presence	City of Oxnard, Oxnard School Districts, 2012	*Included at the request of City of Oxnard staff as a "Special Attractor" using the same weight as parks, commercial areas, and coastal areas*
Proximity to Parks	City of Oxnard	*Included at the request of City of Oxnard staff as a "Special Attractor" using the same weight as schools, commercial areas, and coastal areas*
Age (% under 16 and 65+)	US Census – ACS 2013 5-Year Estimates	Not included in pedestrian demand model
Income (Median Household Income)	US Census – ACS 2013 5-Year Estimates	Not included in pedestrian demand model
Vehicle Ownership	US Census – ACS 2013 5-Year Estimates	Not included in pedestrian demand model
Commute (% walking to work)	US Census – ACS 2013 5-Year Estimates	Not included in pedestrian demand model
Street Segment Length	City of Oxnard, Ventura County	Not included in pedestrian demand model
Intersection Density	City of Oxnard, Ventura County	Not included in pedestrian demand model
Street Slope	City of Oxnard	Not included in pedestrian demand model
Land Use Mix	EPA Smart Location Database, 2010	Not included in pedestrian demand model
Pedestrian Facilities	City of Oxnard	Not included in pedestrian demand model
Bicycle Facilities	City of Oxnard	Not included in pedestrian demand model
Pedestrian Collisions	SWITRS / TIMS	Not included in pedestrian demand model

The exclusion of variables listed in the table above from the pedestrian demand model should not be cause for concern. In a statistical regression, many variables are "collinear" – or so highly correlated such that including both variables would not increase the accuracy of the model. Five of the seven variables that were ultimately included are the result of a fully-validated, statistically significant model using the variables that produce an effect on pedestrian demand. Two additional variables were included at the request of City of Oxnard staff to capture the local importance of parks and schools within Oxnard communities.

The values for each of the variables used in the model were joined to the street segments that were closest to the feature which contained the data. This process of operationalizing the data, along with any manual adjustments made during the process, is summarized in Table 2.

Table 2: Operationalizing the Variables

Variable	Join/Merge Method	Manual Adjustments
Speed	Default speed already assigned to each street segment in the data file.	Manually corrected street segments where the default speed should be 10 mph but was coded as 1 mph in the data (Palm, Aspen Glen, Orange Mall, and Cedar Cove). Manually adjusted street segments representing gates to be the same speed as the adjacent segments, rather than 0 mph as they were coded in the data. Manually adjusted street segments to reflect 85th percentile speed instead of posted speed, where data were provided by City of Oxnard.
Bus Frequency	Bus stops assigned the value of the sum of the number of buses between 4pm-7pm, for all lines stopping at that site. Street segments took the value of the closest bus stop within a 100 ft radius, which only captures one direction of transit activity.	Manually adjusted street segments 3864 and 6378 (4th St) to take bus frequency attributes of Stop ID 10001 (Oxnard Transit Center) which was >100 feet from the street segment. Manually corrected spatially overlapping bus stops at C St near Centerpoint Mall to reflect the sum of all lines at that stop. Manually removed buses from the bus yard at 3rd and Hayes, which is not a stop that generates pedestrian traffic. Manually added VISTA bus lines to respective bus stops.
Commercial Zoning	Areas zoned Central Business District, Neighborhood Commercial, Commercial, Office, Shopping Center, Business Research Park, or Coastal Visitor-serving Commercial took value of 1; all else took 0. Street segment took the value of 1 if any overlying or adjacent parcels were coded 1; otherwise took 0.	Manually added several parcels that were absent from the zoning shapefile. Manually added commercial parcels in Ventura County and City of Port Hueneme that fell within ½ mile of the City of Oxnard border.
Employment Density	Street segment took the value of the overlying census block. Where the street segment was on the border of two or more census blocks, street segment took the average of them.	Manually corrected employment data assigned to Justin Way to reflect fewer jobs per square mile. Manually divided Census tract near Bubbling Springs Park into commercial segment and park segment; assigned jobs per square mile to commercial segment only.
Distance to Coast	Area within 2000 feet of coast and/or harbor assigned a value of 1. Street segment took the value of 1 if within 2000 ft coastal area.	None
Schools	School parcels assigned a value of 1. Street segments within 100 feet of a school took the value of 1.	None
Parks	Park parcels assigned a value of 1. Street segments within 100 feet of a park took the value of 1.	Manually added linear parks near Sea Bridge, manually removed golf course near northern city boundary.

Once the variables were attached to street segments, the regression equation from Fehr & Peers' previous pedestrian demand modeling was applied. A regression equation correlates independent variables to a dependent variable, allowing us to investigate how much of an effect, for example, speed (independent variable) has on pedestrian demand (dependent variable). The regression equation has an "R^2 value" which represents how much of the effect is caused by the independent variable.

To investigate the effect of multiple variables, the equation simply includes a different coefficient for each variable, based on the relative impact of that particular variable on the cumulative effect produced. The equation also includes a constant, which is used to place the regression equation onto a graph – it represents the place where the regression line would cross the y-axis.

Regression equations are produced in the following format:

$Y= C + X_1B_1 + X_2B_2 + X_3B_3 + X_4B_4...$

Where:

Y = Dependent variable (Pedestrian Demand)
C = Constant
X_1 = Variable 1
B_1 = Coefficient 1

The regression equation used for the pedestrian demand model is as follows:

Y = 222 + [Employment Density] (0.003217) + [Transit Frequency] (3.675) + [Special Attractors] (82.695) + [Speed] (-5.699)

Where:

Y = Relative Pedestrian Demand
C = 222
Employment Density = Jobs per Square Mile
Transit Frequency = Number of buses arriving between 4pm and 7pm, by bus stop in a single direction
Special Attractors = Coastal/Harbor Area, Schools, Parks, and Commercial Areas
Speed = Default Speed or 85th Percentile Speed, where available

This equation uses the same coefficients and the same constant as the original regression model. The R^2 value of the equation for the original regression model was 0.584, and we assume that it would be similar in this context. As noted earlier, the R^2 value signifies how much of an interaction is explained by the variables included in the model, and values can range from 0 to 1. Therefore, this model, as originally applied, explained roughly 58% of the observed pedestrian activity. As a predictive tool, we can assume it explains roughly 58% of the pedestrian activity expected in Oxnard. The original model tested numerous additional variables, with the highest R^2 value obtained using the five variables referenced above. These variables formed the basis for the Oxnard model, supplemented by two additional variables included at the request of the City of Oxnard staff.

MAPS OF VARIABLES

This section includes maps of the variables included in the pedestrian demand model. As discussed in the section above, these variables include:

- Speed
- Bus frequency during afternoon peak (4pm-7pm)
- Employment density
- Commercial zoning
- Coastal/Harbor Areas
- Schools
- Parks

Figures 1-6 illustrate the spatial distribution of the individual variables across the City of Oxnard.

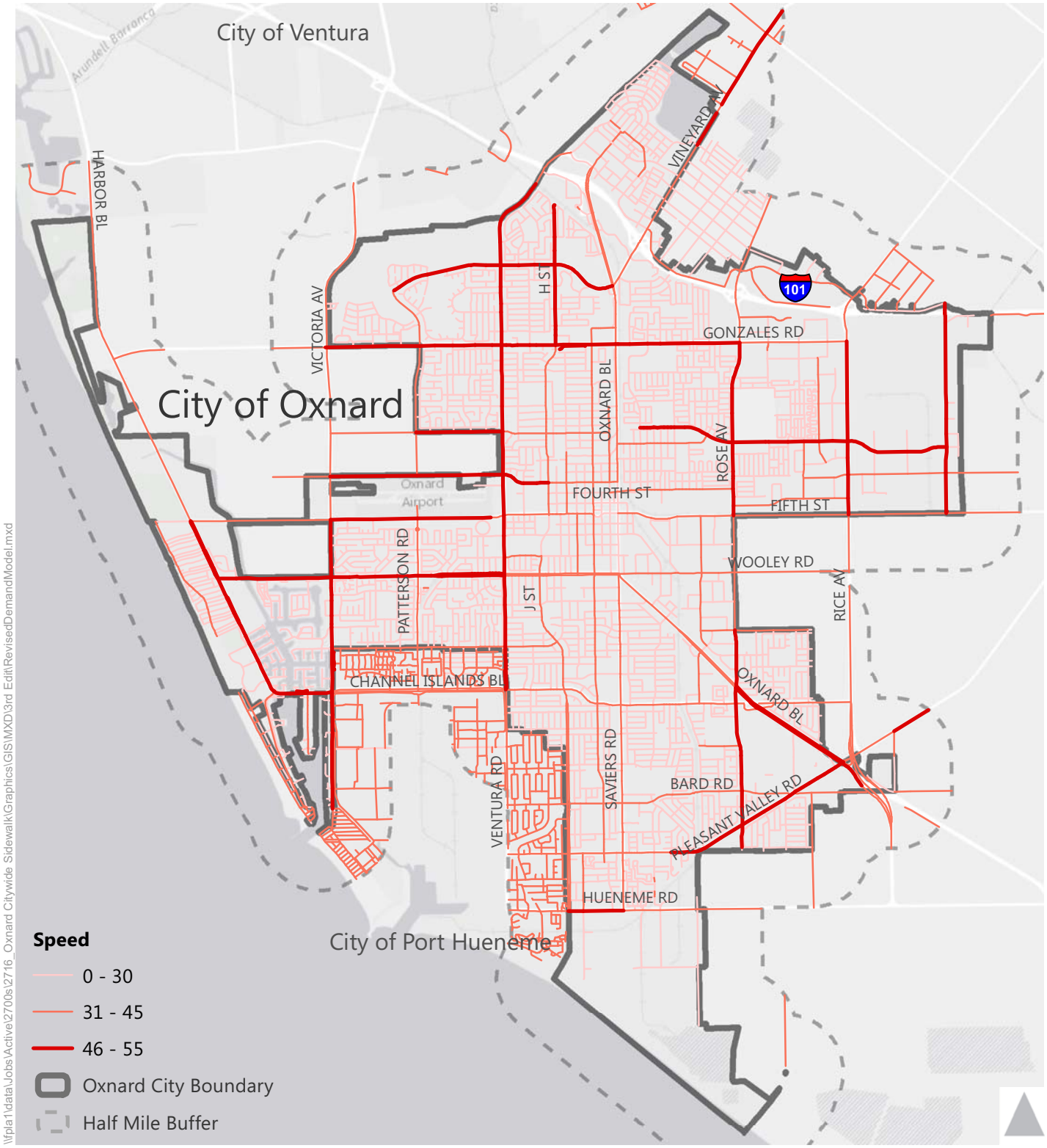
In Figure 1, speeds reflect the 85th percentile speed where available, or the default speed where no data were available for operating speeds. Local roads in the City of Port Hueneme have a default speed of 35 mph while local roads in the City of Oxnard primarily have a default speed of 25 mph or less. This difference accounts for the stark contrast in the majority of the roads shown in Port Hueneme.

Figure 2 displays the number of buses arriving at a given stop, in one direction, in the peak period of 4 PM – 7 PM. The data include bus arrivals from Gold Coast Transit and Ventura County Transportation Commission's VISTA Bus (Conejo Connection, Coastal Express, and CSUCI – Oxnard).

Figure 3 displays the number of jobs per square mile by census block, where available. Employment data was unavailable for some census blocks, since some blocks are entirely residential or otherwise employ no people, and therefore some census blocks lack data in Figure 3.

Figure 4 illustrates the commercial areas used in the Special Attractor variable, within the City of Oxnard, the City of Port Hueneme, and Ventura County. This map includes a planned commercial parcel at Rose Avenue and Camino Del Sol, as identified in the Northeast Community Specific Plan. This parcel was included at the request of City of Oxnard staff.

Figures 5 and 6 display the additional categories included within the Special Attractor variable – coastal/harbor areas (Figure 5), and schools and parks (Figure 6), Linear parks were added near the Sea Bridge development in the southwest part of Oxnard, and the golf course near the northern boundary of the city was manually removed based on discussions with City of Oxnard staff.



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Note: The default speed on local streets in the City of Port Hueneme is 35 mph, while the default speed of many local streets in the City of Oxnard is 25 mph or less, which explains the contrast in color despite similar types of roads. The default speeds have been used in the Pedestrian Demand Model, though the operating speeds may be similar.

Figure 1

Speed (Default Speed or 85th Percentile Speed, where available)

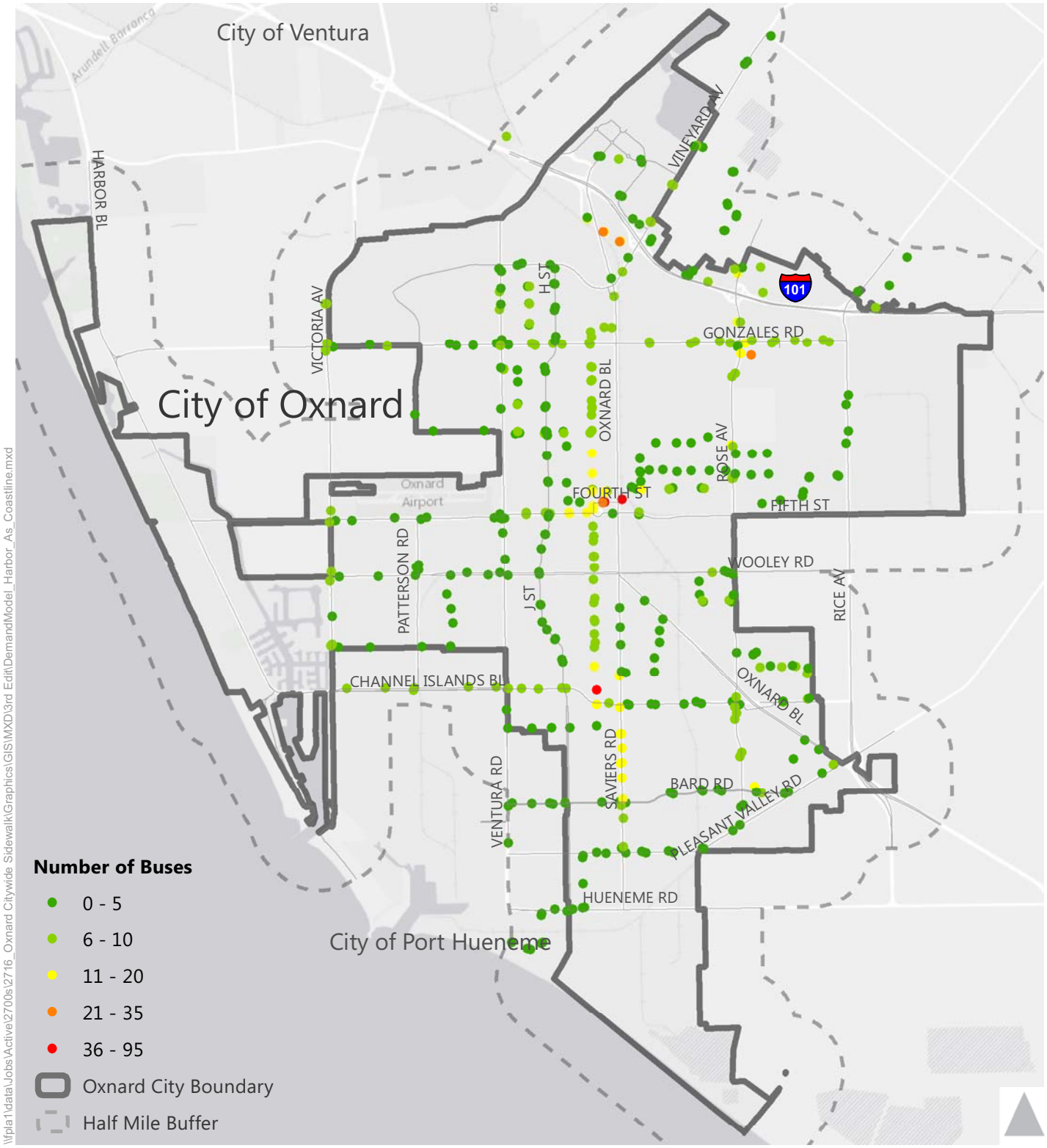

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Figure 2

Total Number of Bus Arrivals by Bus Stop
Between 4 PM - 7 PM, in One-Way Direction

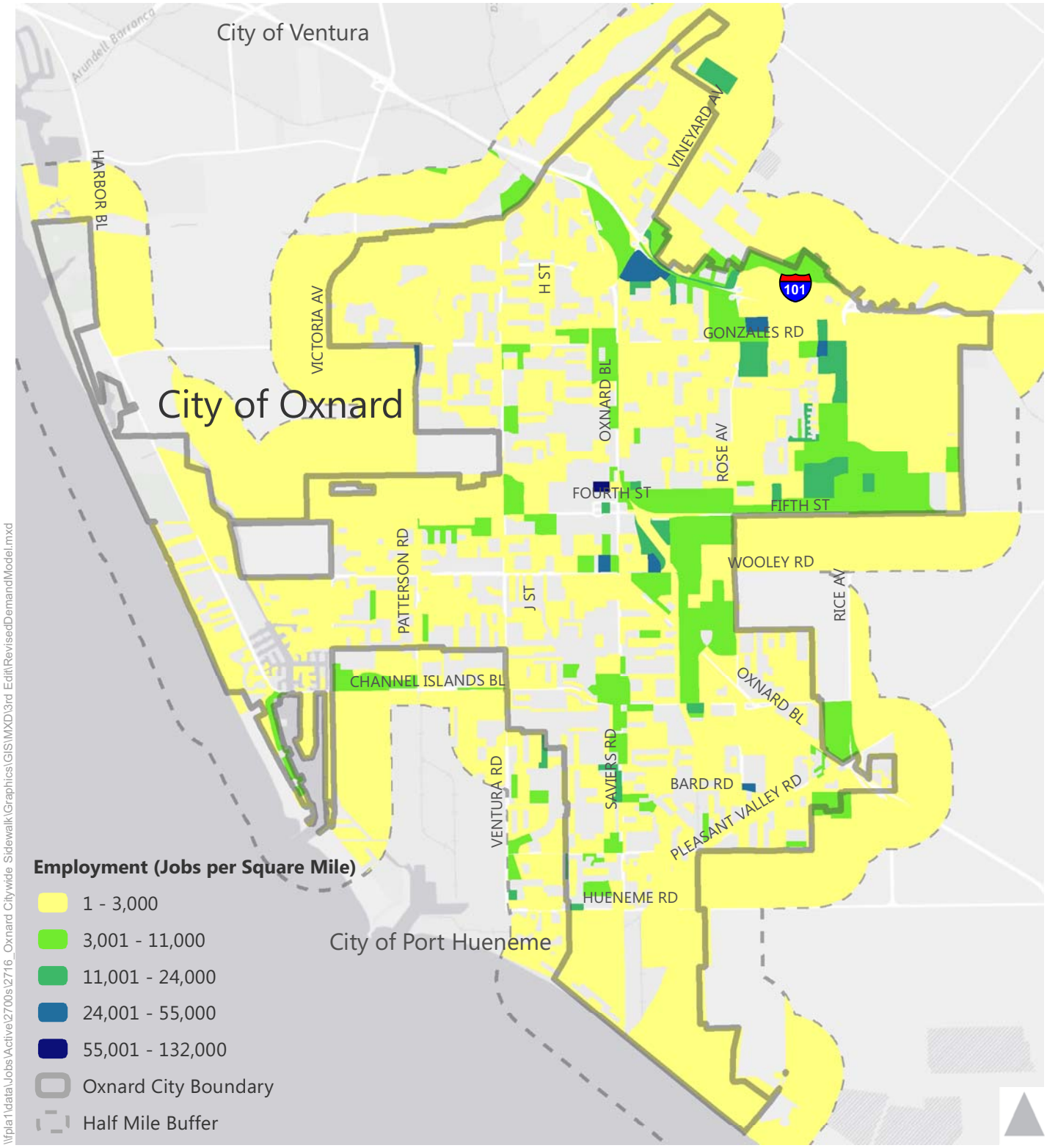

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Figure 3

Employment Density
(Longitudinal Employer-Household Dynamics data, 2010)

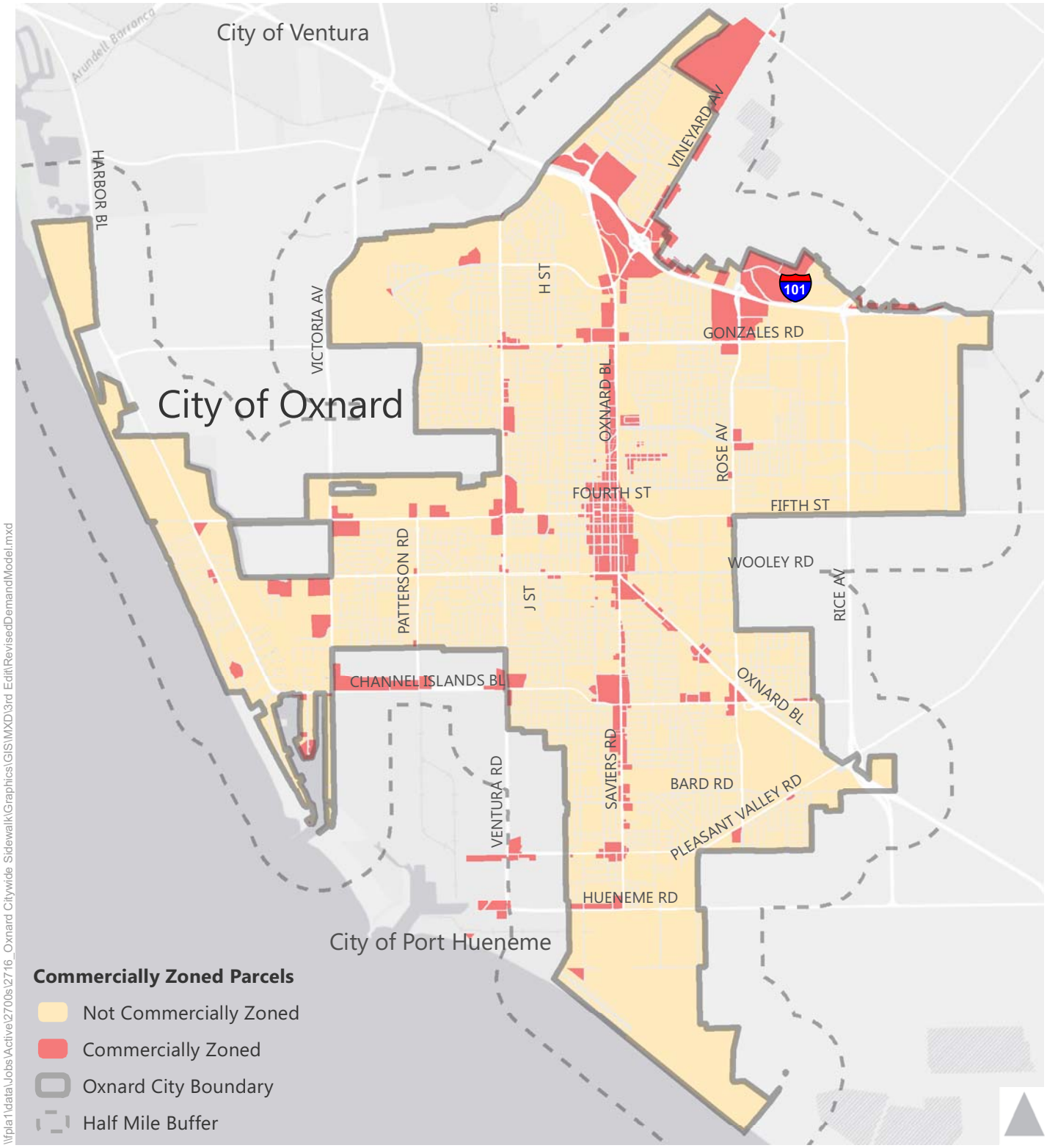

Figure 4

Commercially Zoned Parcels
Cities of Oxnard and Port Hueneme; Ventura County

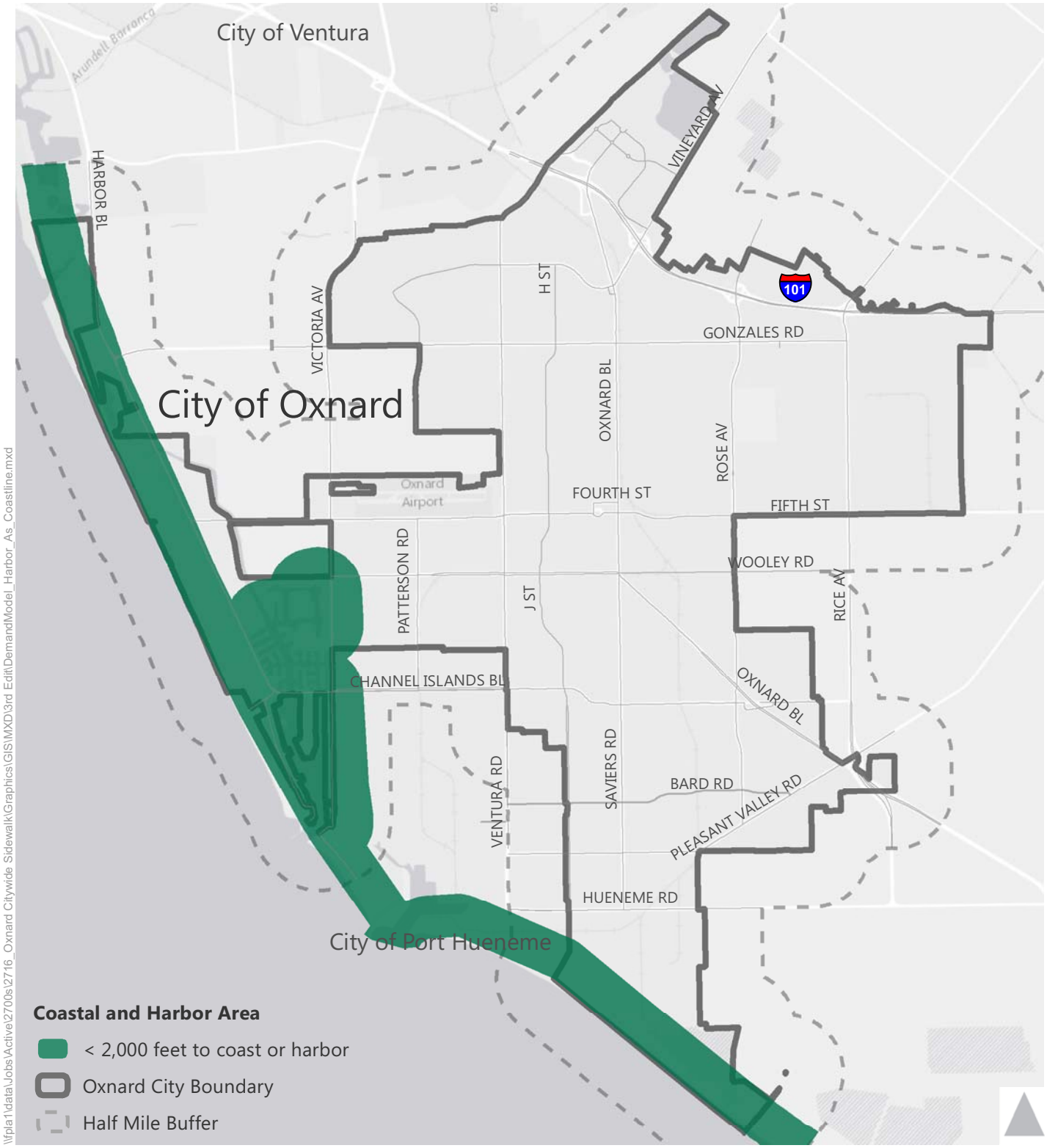

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Figure 5

Coastal and Harbor Area

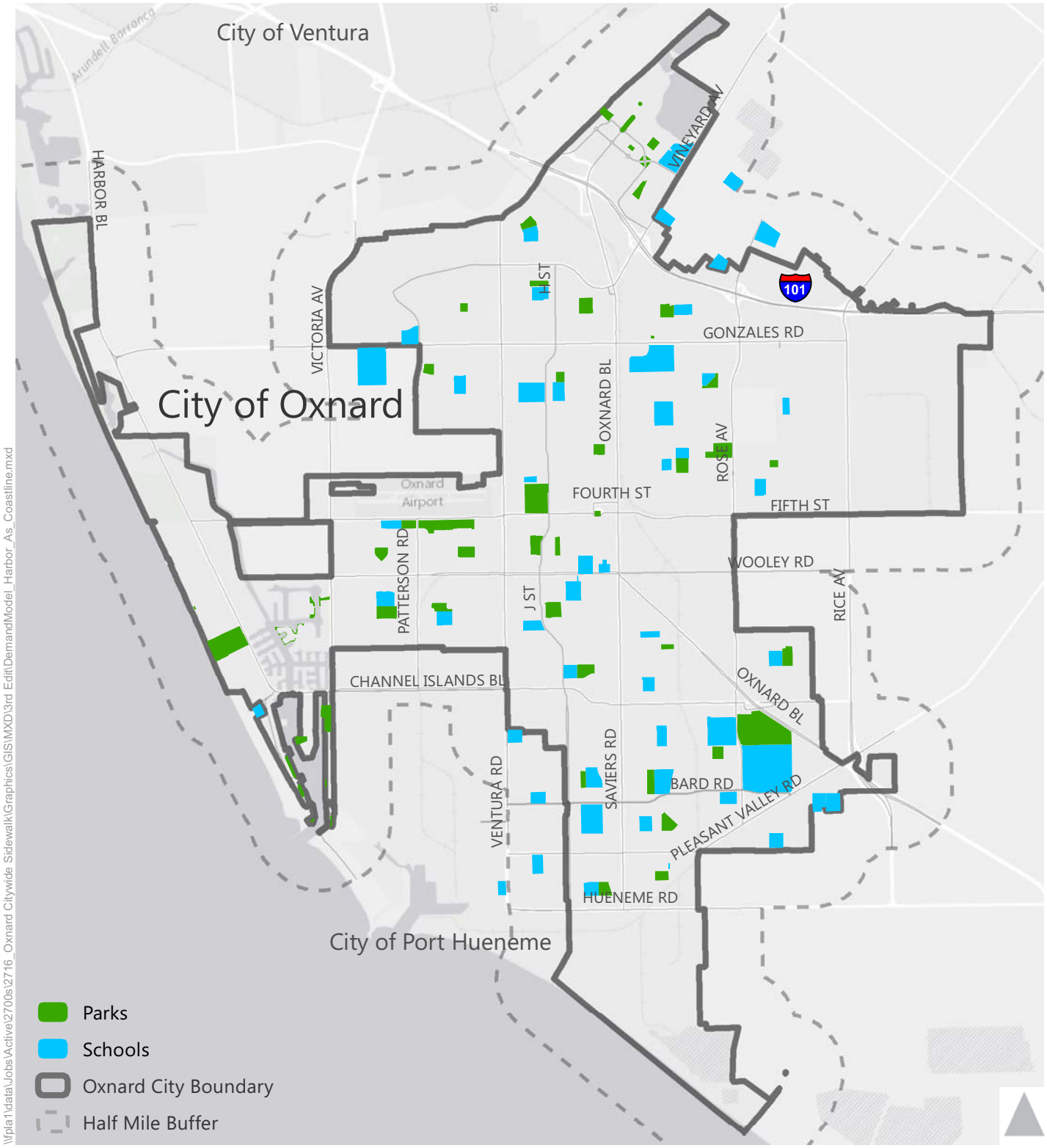

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Figure 6

Schools and Parks

RESULTS OF THE PEDESTRIAN DEMAND MODEL

This section presents the results of the pedestrian demand model, including the final map showing the street segments with highest anticipated pedestrian activity. After processing the variables through the regression equation as described in the methodology section above, street segments representing the US-101 freeway, freeway on-ramps, and two unpaved access roads (through the River Ridge Golf Club and parallel to Almond Drive) were removed. Figure 7 shows the results of the pedestrian demand model.

Overall, pockets of high demand for walking are predicted to exist in a few key areas: Downtown Oxnard, near the Oxnard Transit Center, along Saviers Rd south of Channel Islands Boulevard, near the Centerpoint Mall, along Esplanade Dr at the Esplanade Shopping Center, and along some street segments near the harbor and coast. Additionally, areas of moderate pedestrian demand are predicted near Special Attractors including the coast or harbor, schools, parks, and commercial areas, as well as along walkways in the Channel Islands Harbor, and in areas where there are bus stops. Areas of low pedestrian demand are predicted to exist primarily along high-speed arterials and in exclusively residential developments.

The fourteen highest demand areas based on the results of the pedestrian demand model are as follows, starting with the highest demand segments and decreasing in order:

1. C Street & Second Street
2. B Street & Third Street
3. B Street & Fourth Street
4. Fourth Street at Oxnard Boulevard
5. Esplanade Drive
6. C Street from Linden Drive to Maywood Way
7. Ninth Street & C Street
8. Saviers Road from Thomas Ave to Yucca Street
9. Raiders Way from Dallas Drive to Rose Ave
10. Via Marina Avenue from Victoria Ave to Bayview Drive
11. Harbor Island Lane from Farralon Way to Aleutian Way
12. Fifth Street from B Street to C Street
13. Mandalay Beach Road from Falkirk Ave to Costa de Oro Ave
14. Palm Drive from A Street to C Street

Figures 8 through 12 show the locations of the above high demand street segments within the City of Oxnard.

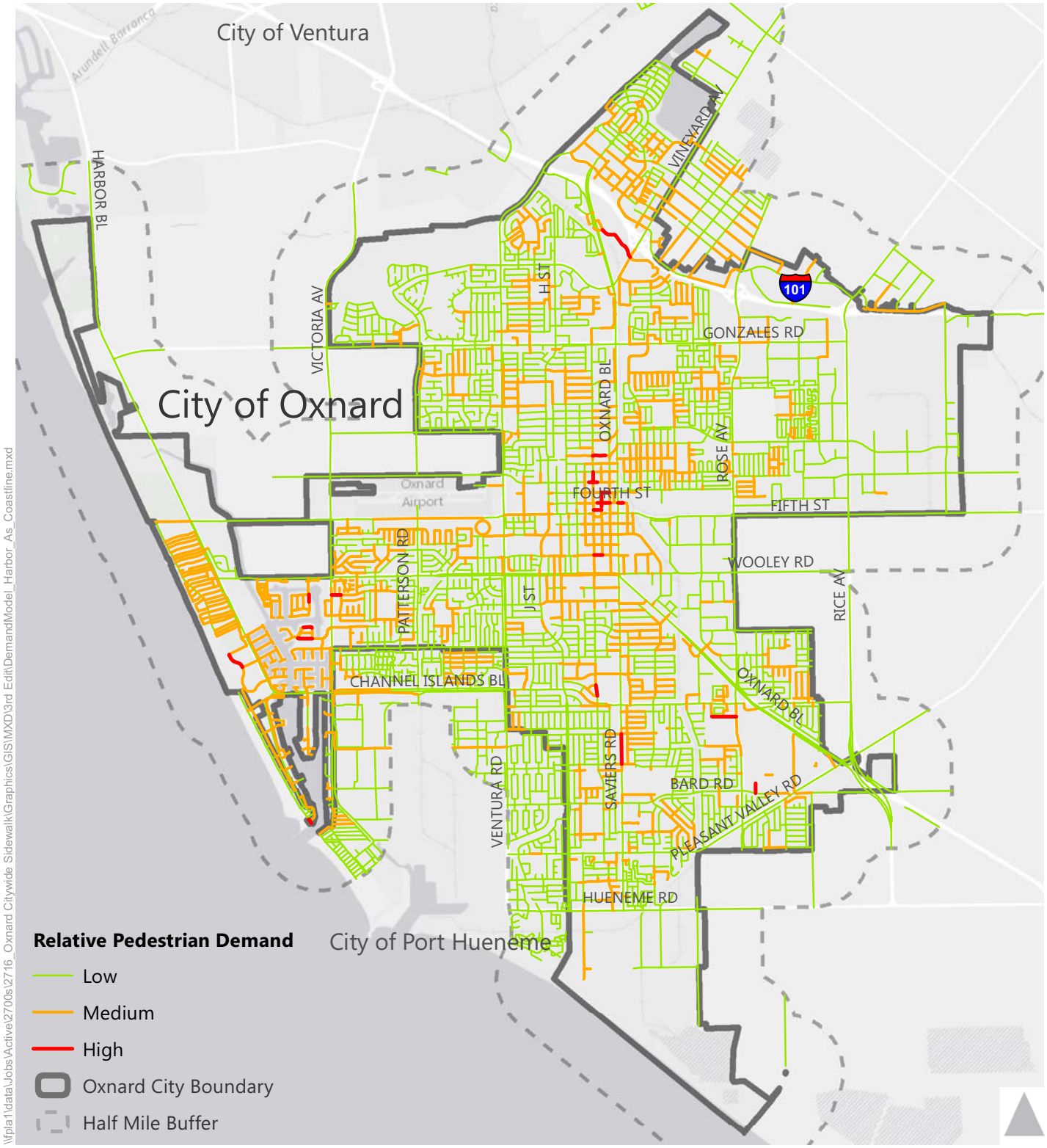

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Figure 7

Pedestrian Demand Model Results

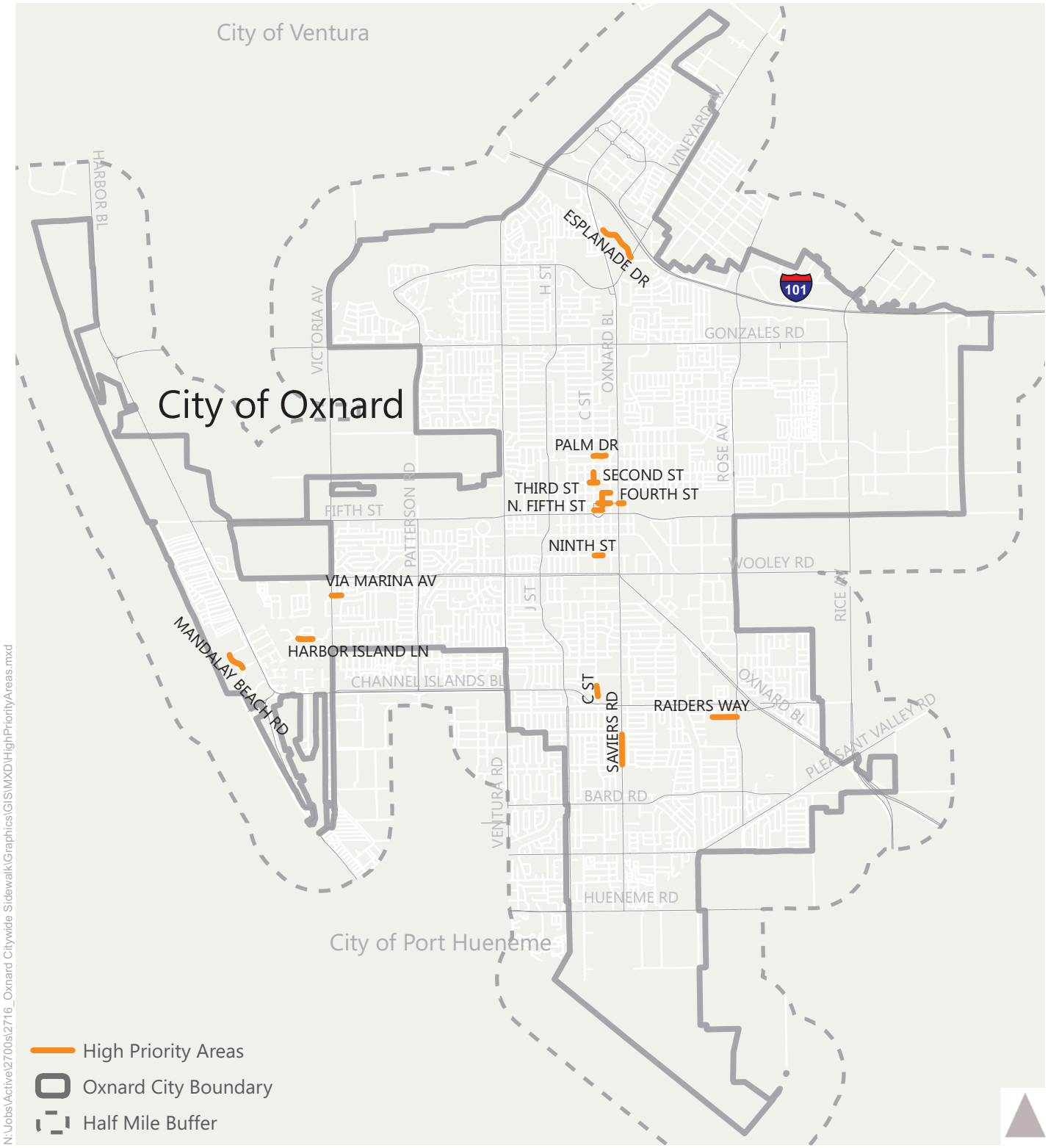

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Figure 8

High Priority Areas

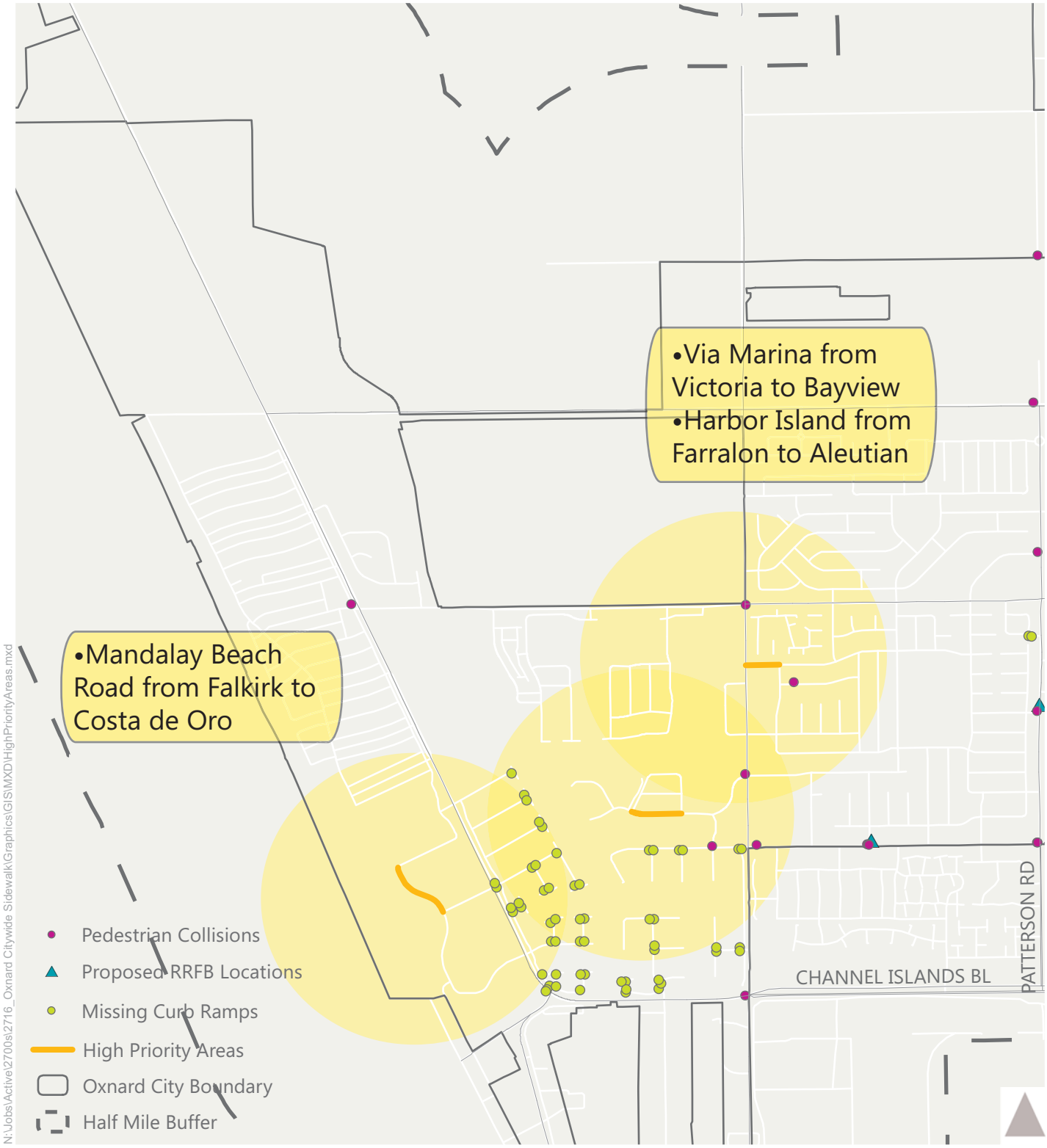


Figure 9

Coastal High Demand Areas

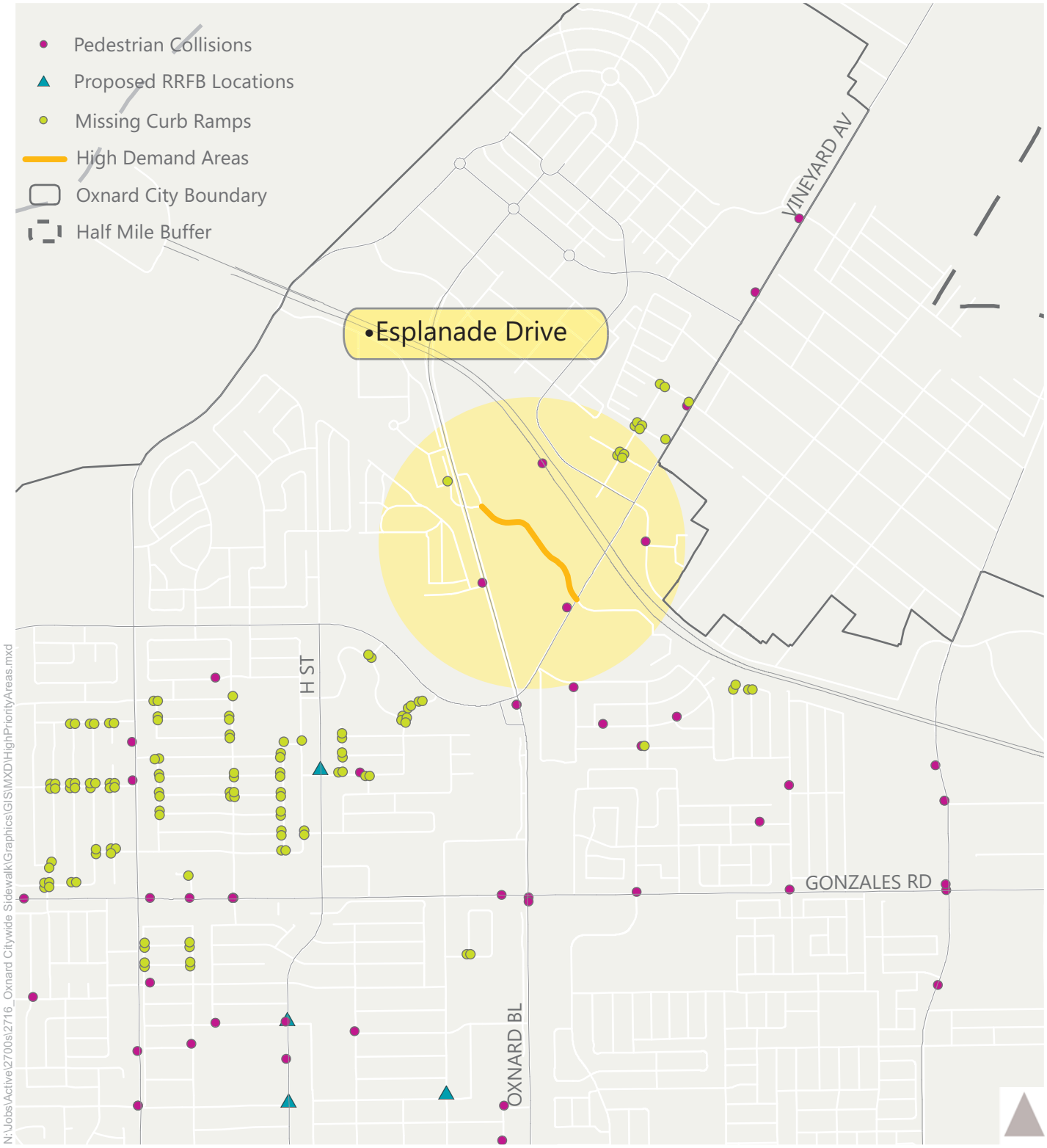


Figure 10

North Oxnard High Demand Areas

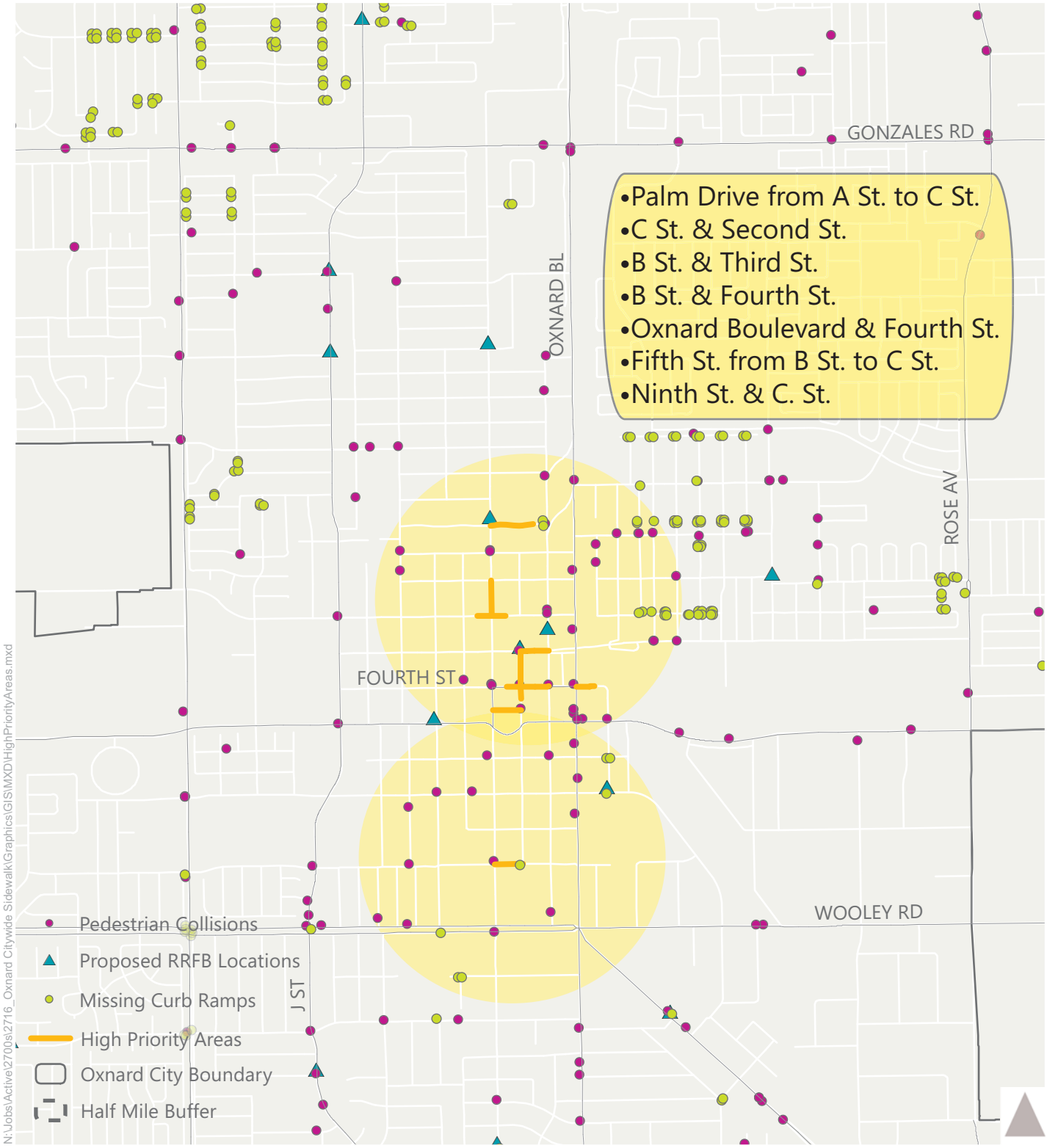


Figure 11

Downtown Oxnard High Demand Areas

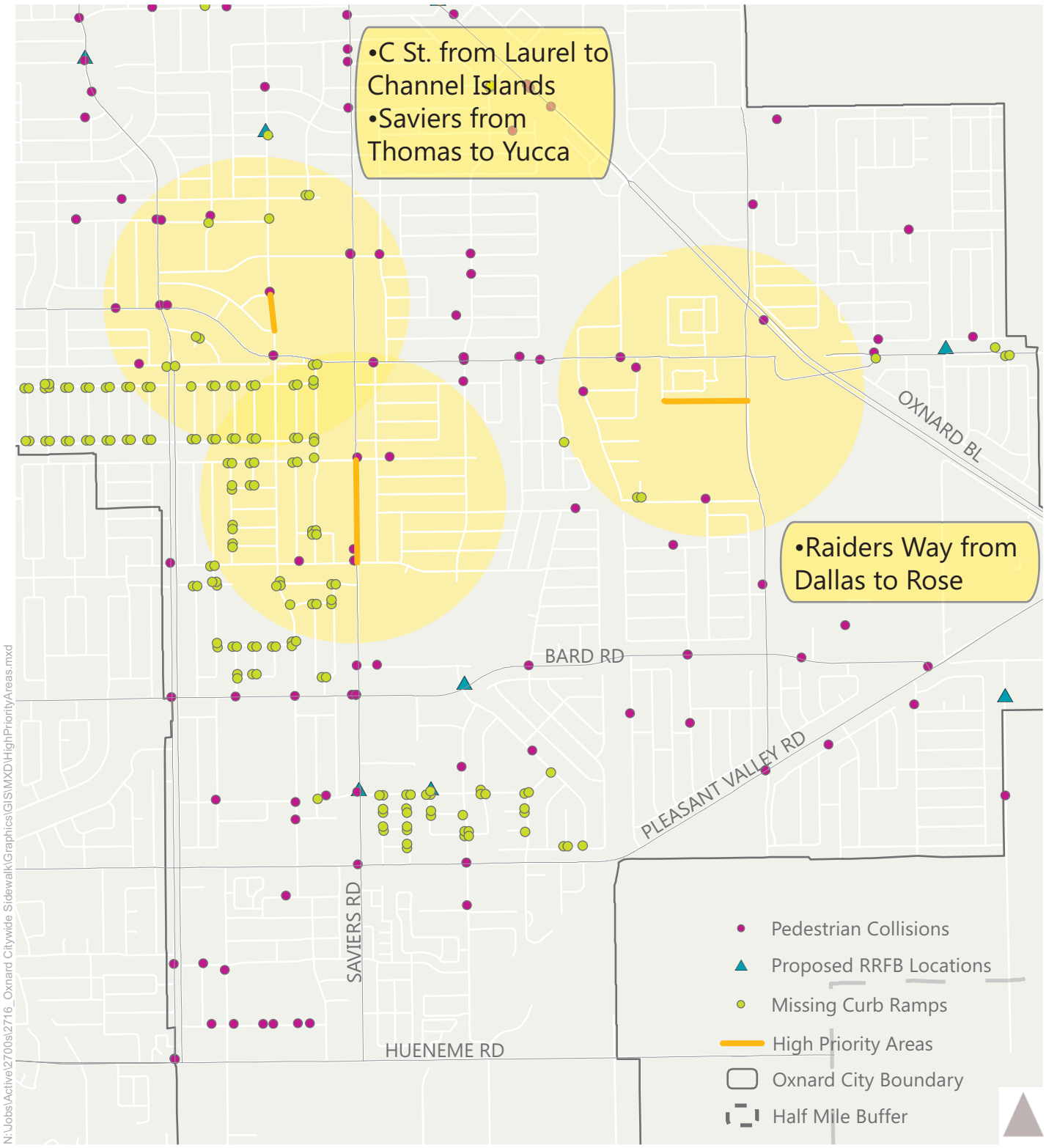


Figure 12

Central / Eastern Oxnard High Demand Areas

SUMMARY AND CONCLUSION

The development of this pedestrian demand model was based on previous research conducted by Fehr & Peers for the US EPA and other coastal communities in Southern California. Though the statistical model used for this memo was validated in a different context, it has not been validated for the City of Oxnard with observed pedestrian counts, and therefore can be used for estimation only.

The results of the model demonstrate logical pedestrian patterns based on land use, built environment factors, and natural geographic features. The areas with the highest predicted levels of pedestrian demand tended to be on streets in heavily commercial areas with higher relative employment density, adjacent to high frequency transit stops, on streets with lower relative speeds, or a combination of the above factors. Additional street segments near schools, parks, the coast line, or the harbor reflected moderate levels of predicted pedestrian demand. Street segments with only one of the above listed factors, such as low speeds in residential neighborhoods, registered with lower levels of predicted pedestrian demand.

The data files associated with this model are available as a shapefile and as a .kml file, with field names defined in Appendix A. The results have been manually adjusted based on local knowledge and discussion with City of Oxnard staff.

APPENDIX A

The regression equation used for the pedestrian demand model is as follows:

Y = 222 + [Employment Density] (0.003217) + [Transit Frequency] (3.675) + [Special Attractors] (82.695) + [Speed] (-5.699)

Table 3 associates the variables listed in the equation, above, with the field titles in the shapefile. The variables are the last five fields in the file; the final field is the model results which were calculated using the above equation. All preceding fields provide additional information about the street segment.

Table 3: Codebook

Shapefile Field Name	Variable	Unit
DefaultSpeed	Speed	Miles per hour
BusFrequencyPMArrivals	Transit Frequency	Total buses arriving at closest stop between 4PM-7PM, in one direction
JobsPerSqMile	Employment Density	Jobs per square mile
CommercialArea	Commercial Zoning	1/0, Yes/No
CoastalHarborArea	Distance to Ocean	Feet
School	School adjacent	1/0, Yes/No
Park	Park adjacent	1/0, Yes/No
ModelResults	Model Results	--

OXNARD ADA NARRATIVE MEMORANDUM

MEMORANDUM

Date: 11/11/2015

To: City of Oxnard

From: Sally Swanson Architects Inc.

Subject: ***Oxnard ADA Narrative: High Pedestrian Demand Areas (Final)***

INTRODUCTION

This report describes the overall perspective of the Americans with Disabilities Act (ADA) deficiencies at each of the 14 high pedestrian demand areas identified. The 14 high pedestrian demand areas being analyzed were identified from the results of Fehr & Peers' work in the Pedestrian Demand Model Memorandum section of this report. For detailed descriptions of each individual ADA barrier feature (including bus stops, curb ramps, mid-blocks and pedestrian signals) please see the "ACS Report City of Oxnard High Pedestrian Areas" produced by Sally Swanson Architects, Inc.

METHODOLOGY AND APPROACH

Each feature assessed was given a severity score based of the number of barriers found within each area and the amount they deviate from the codes. The codes are based on the standards provided in the Public Rights-of-Way Accessibility Guidelines (PROWAG), California Building Code (CBC), Manual on Uniform Traffic Control Devices (MUTCD) and the Americans with Disabilities Act (ADA). There were four feature types assessed in this assessment; these featured included: sidewalks, curb ramps, pedestrian push buttons and bus stops. The severity scores range from 0-100, with 100 being the most severe.

In order to look at each area objectively when some areas contain more features than others, the ADA Severity Average of each area was calculated, which is simply the average severity score of all individual barriers within an area.

RESULTS OF OXNARD ADA NARRATIVE

After the ADA Severity Average of the 14 high pedestrian demand areas was determined, the areas were re-ranked in accordance to areas with the highest to least ADA Severity Average (versus in the Pedestrian Demand Model Memorandum section which ranked the 14 areas by highest to least pedestrian demand). This ranking is provided in the following table.

Table 4: ADA Severity Average Breakdown

Rank	Name	Neighborhood	ADA Severity Average[1]
1	Palm Drive from A Street to C Street	Wilson	50.25
2	Raiders Way from Dallas Drive to Rose Avenue	College Estates	45.19
3	Mandalay Beach Road from Falkirk Avenue to Costa de Oro	Oxnard Shores	41.71
4	Saviers Road from Thomas Avenue to Yucca Street	Bryce Canyon North, Blackstock North & Blackstock South	33.53
5	Ninth Street & C Street	Hobson Park East	32.02
6	Via Marina Avenue from Victoria Avenue to Bayview Drive	Via Marina	29.12
7	Esplanade Drive	N/A	27.25
8	C Street & Second Street	Wilson	26.52
9	Harbor Island Lane from Farralon Way to Aleutian Way	Channel Islands	26.41
10	B Street & Third Street	Wilson	21.02
11	B Street & Fourth Street	Wilson	16.16
12	C Street from Linden Drive to Maywood Way	Kamala Park	14.7
13	Fifth Street from B Street to C Street	Wilson & Hobson Park East	12.62
14	Fourth Street at Oxnard Boulevard	Wilson & Five Points Northeast	6.98

Conceptual plans project sheets for the top 10 highest ADA Severity Average shown in the above table were developed which include design standards, projected cost estimates to repair the area, and potential funding sources. These project sheets can be found later in the report. The following pages of this section meanwhile, provide an overall description of the ADA deficiencies found within each of the 14 locations.

[1] ADA Severity Average is the average severity scores of all features (sidewalks, curb ramps, pedestrian push buttons and bus stops) within each location to objectively compare different locations which have an unequal amount of features.

Overall ADA Assessment

Palm Drive from A Street to C Street

The features in this area received the highest average severity score of all areas assessed. All of the curb ramps in this area had ramp running slopes greater than 14%. ADA standards set the maximum running slope for a curb ramp to be 8.3%. Every curb ramp provided also had a top landing area that was not deep enough to provide a turning space. At the intersection of Palm Drive and A Street there are no curb ramps provided. The sidewalks along Palm Drive had only a few small areas where the cross slope barriers occurred and a few vertical changes.

Raiders Way from Dallas Drive to Rose Avenue

The south side of Raiders Way is inaccessible to pedestrians using a wheelchair because there are no curb ramps provided along that entire stretch of sidewalk. The pedestrian push buttons located at the intersection of Rose Ave and Raiders Way are not equipped with accessible pedestrian push buttons that include a button locator tone, audible walk indication, vibrotactile indication and a button that contrasts with its surrounding casing.

Mandalay Beach Road from Falkirk Avenue to Costa de Oro

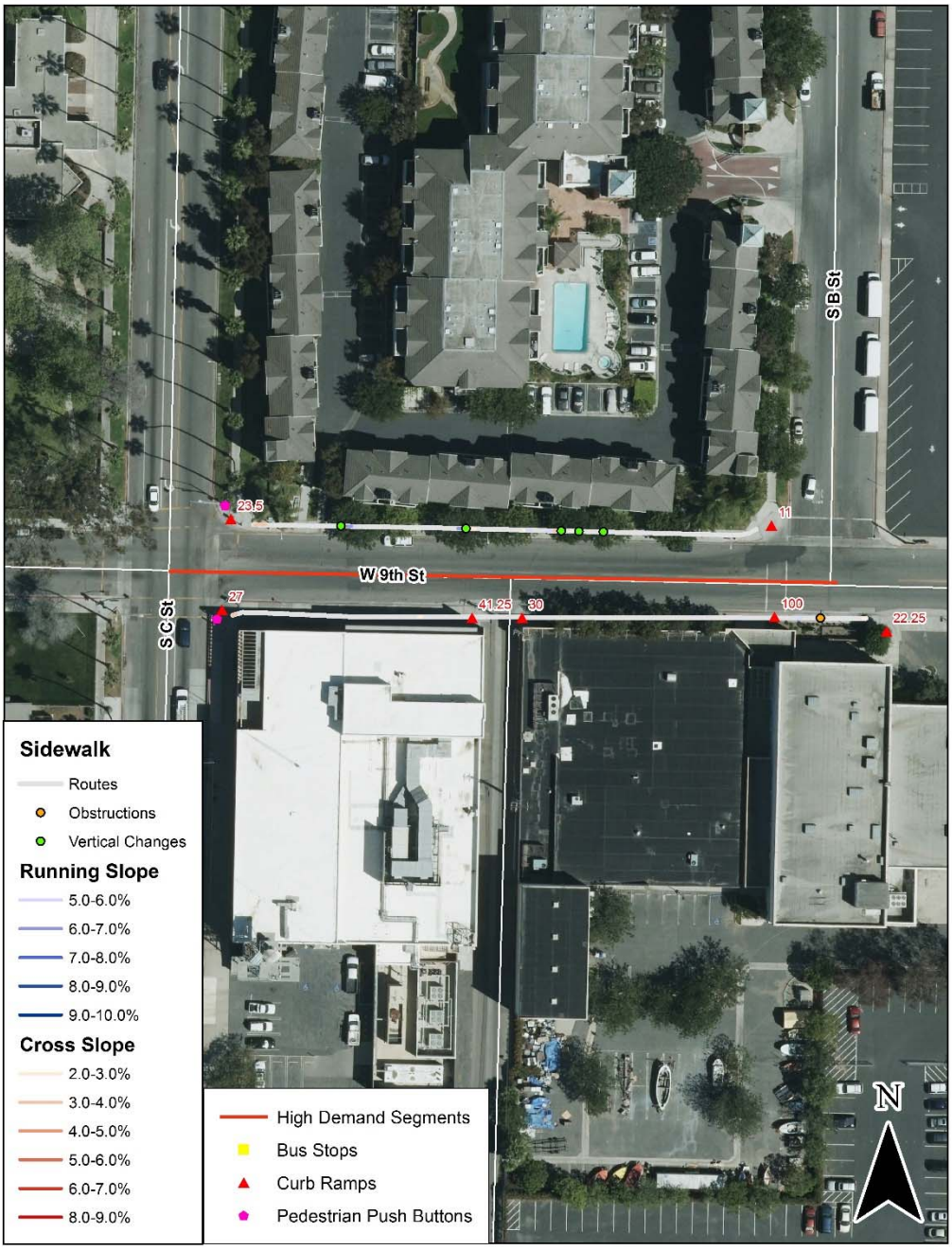
The curb ramp located at the intersection of Mandalay Beach Road and Falkirk Avenue has a steep running slope and is non-compliant. This ramp is low priority because it does not connect to another path of travel and is mainly used as a driveway for vehicles. The rest of the curb ramps in this area have high running slopes and do not provide a smooth transition from the ramp to the gutter area. None of the curb ramps in this area have detectible warnings. The sidewalks have slight cross slope and vertical change issues throughout.

Saviers Road from Thomas Avenue to Yucca Street

The sidewalks in this area were identified as some of the most severe examined. Both sides of the sidewalk had a lot of vertical change barriers. All four of the bus stops in this area had ADA deficiencies. All of the pedestrian push buttons in this area do not have a clear floor space with a slope under 2%. All of the pedestrian push buttons do not provide a button locator tone, audible walk indication, vibrotactile indication and a button that contrasts with its surrounding casing. All of the curb ramps in this area have ADA deficiencies that would require new ramps to be built in order to mitigate the barriers.

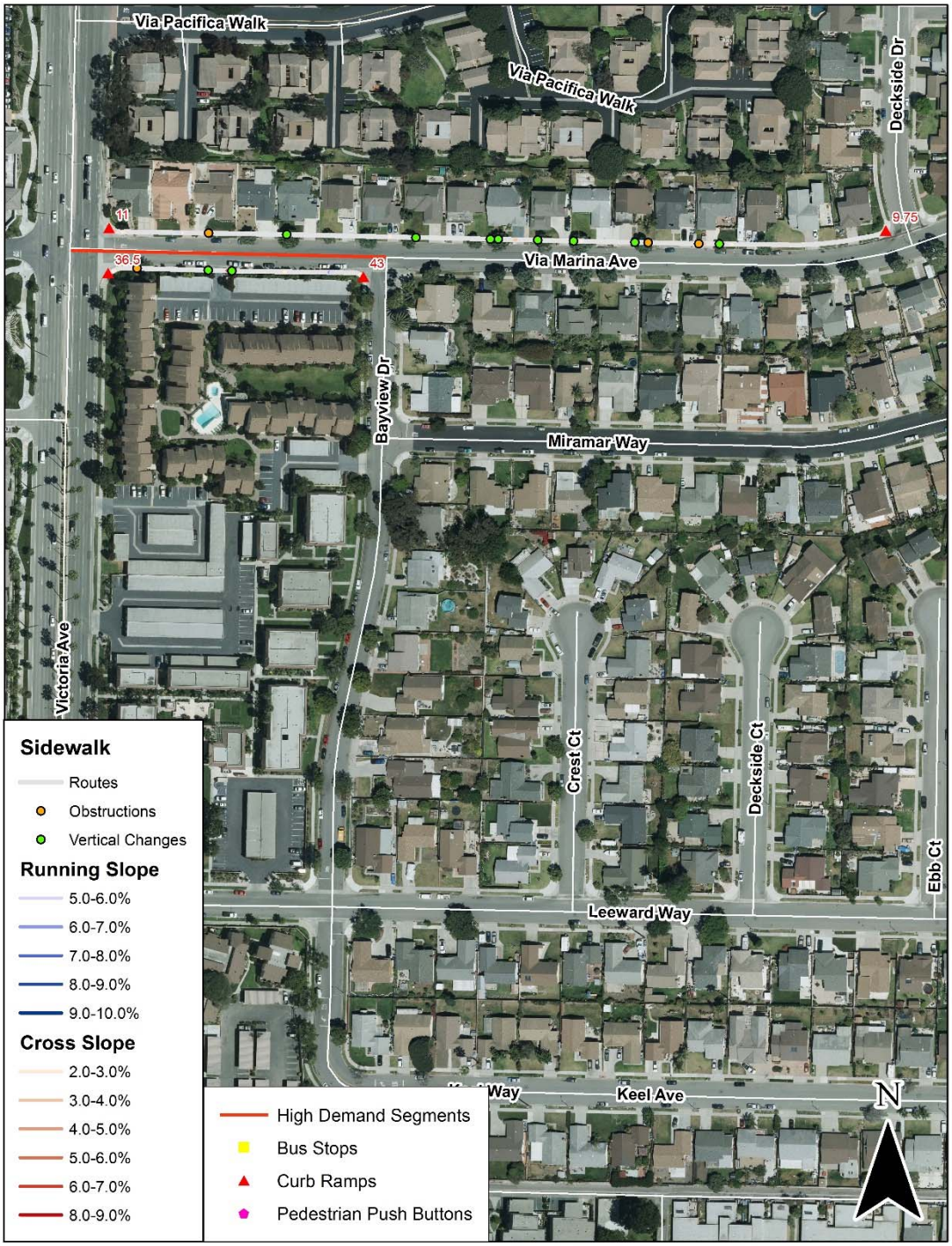
Ninth Street & C Street

The curb ramps in this area have medium to low severity scores. There is one exception where no curb ramp is provided at a marked crosswalk at the intersection of Ninth Street and B Street. All of the ramps in this area would need to be demolished and rebuilt to mitigate the barriers. The sidewalks on both the north and the south side have a low severity score. The pedestrian push buttons at the intersection of Ninth Street and C Street do not provide a button locator tone, audible walk indication, vibrotactile indication and a button that contrasts with its surrounding casing.



Via Marina Avenue from Victoria Avenue to Bayview Drive

The curb ramps on the north side of Via Marina Avenue are low priority and only require detectable warnings. The curb ramps on the south side of Via Marina Avenue have a high running slope on the ramps and both need to be demolished and rebuilt. The sidewalks on the north and south side both have vertical change issues throughout and small areas where the cross slope is greater than 2%.

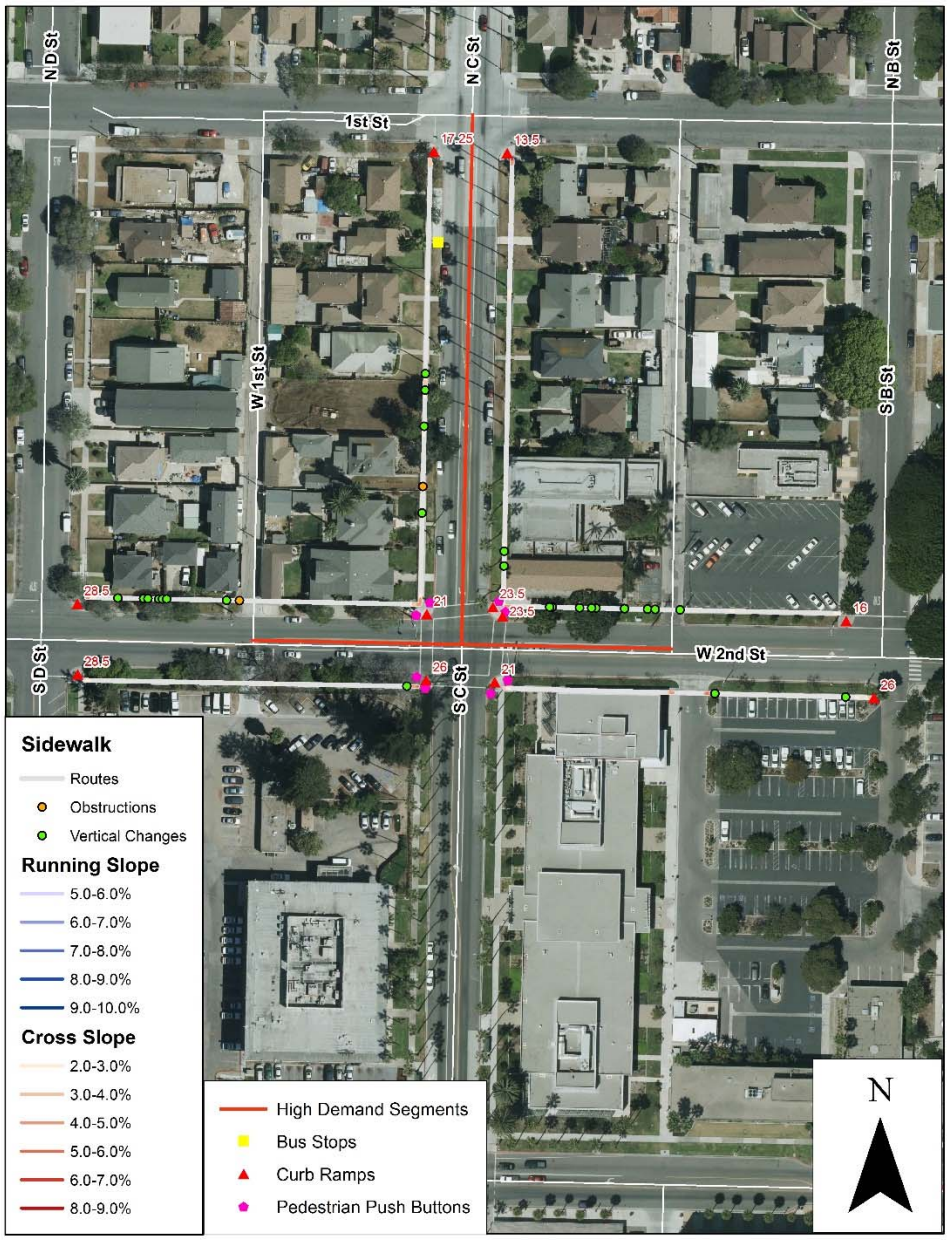


Esplanade Drive

The sidewalks along this area had a lower severity score. The most severe stretch of sidewalk was along the southwestern section, where there were a lot of vertical change and cross slope barriers. None of the four bus stops in this area are completely ADA compliant. All of the curb ramps in this area have a medium severity score. The severity score of the barriers found for the pedestrian push buttons was high. None of the pedestrian push buttons included a compliant clear floor space. These pedestrian push buttons also did not have all of the required features of an accessible pedestrian signal. There was construction blocking a section of the sidewalk on the west side of the street. The construction had also done damage to some of the surrounding sidewalks.

C Street & Second Street

None of the pedestrian push buttons in this area provide a button locator tone, audible walk indication, vibrotactile indication and a button that contrasts with its surrounding casing. Six of the eight pedestrian push buttons are located in areas where the reach distance is further than 10” from the clear floor space provided. The curb ramps in this area all had a low severity score. The sidewalk segments in this area also had a low overall severity score with occasional instances of cross slope and vertical changes. The bus stop by First Street and C Street has a cross slope greater than 2% along the south ramp which leads to the boarding area. There is also a 4% slope adjacent to the bench area.

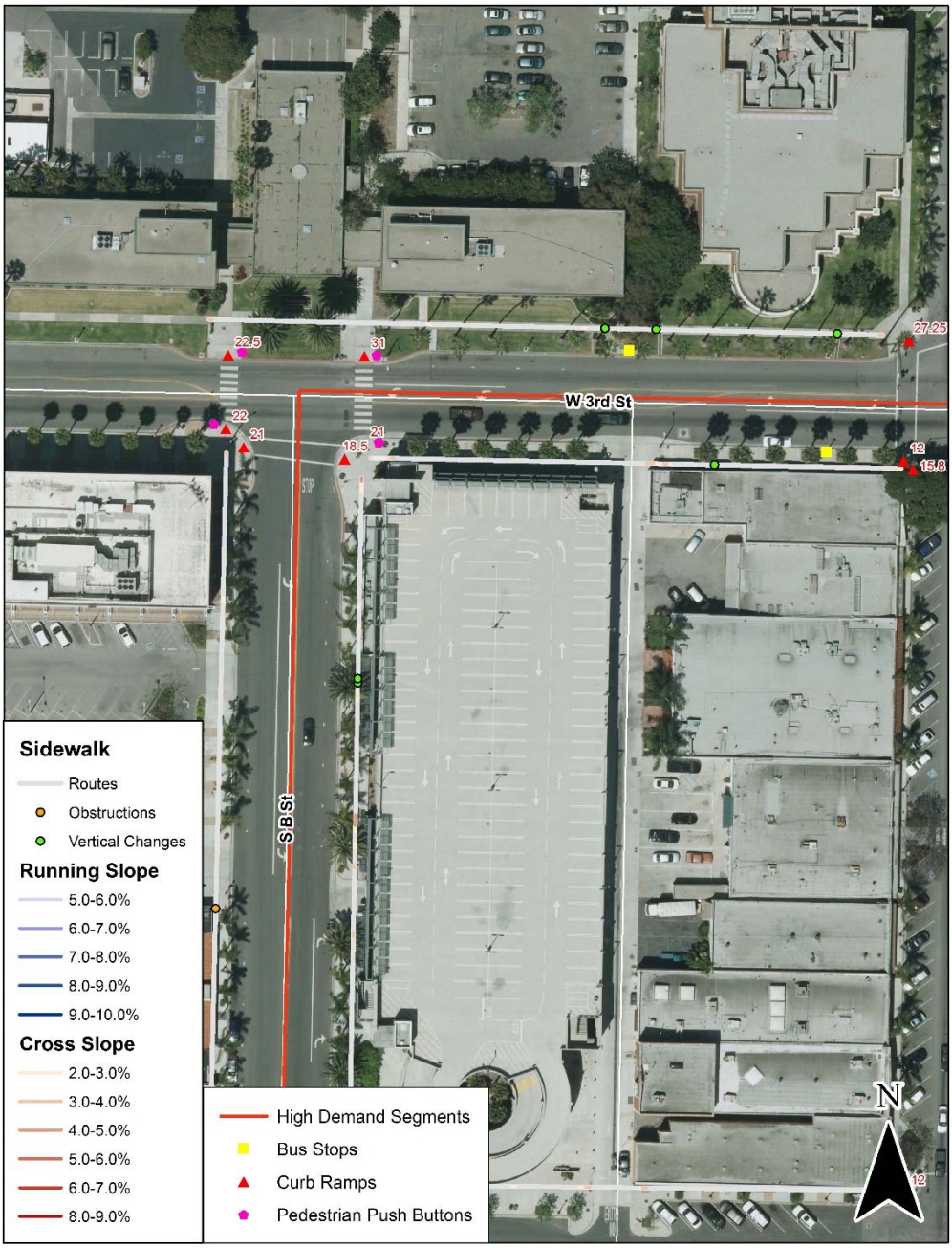


Harbor Island Lane from Farralon Way to Aleutian Way

The sidewalks along this area had a very low severity score. The curb ramps in this area only had slight ADA barriers that were typically related to the gutter portion of the ramps. This area appeared to be located in a fairly new development.

B Street & Third Street

The sidewalks in this area had a very low severity score. The majority of the curb ramps in this area had very slight barriers. The curb ramps on the north side of Third Street and B Street had very high running slopes. None of the pedestrian push buttons included all of the required features of an accessible pedestrian push button. The pedestrian push buttons located on the north side of the Third Street and B Street intersection are placed where the clear floor space is on the sloped ramp. The bus stop located at Third Street and A Street has a high slope running towards the street at the boarding area.



B Street & Fourth Street

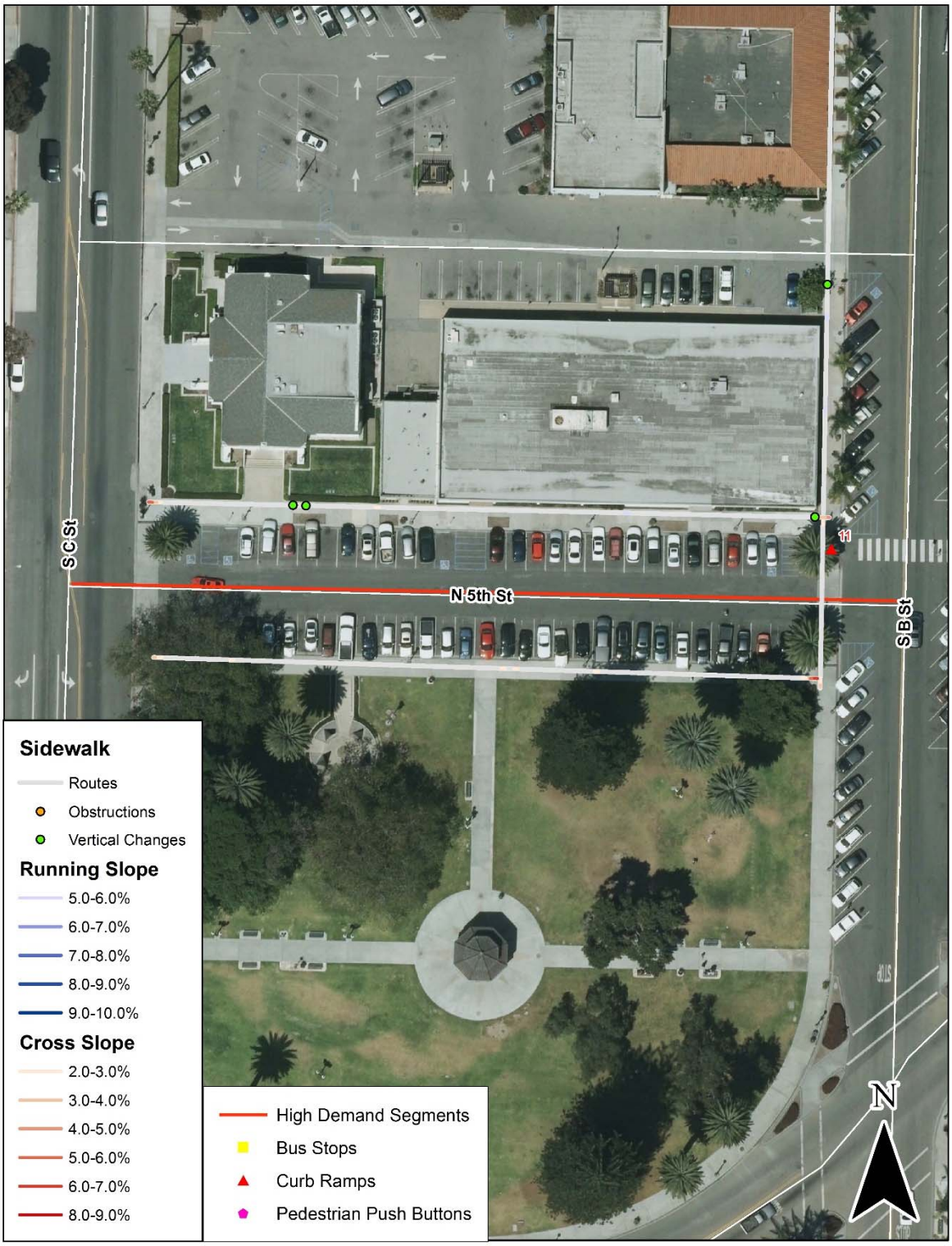
The sidewalks in this area had a very low severity score. The curb ramps at the intersection of B Street and Fourth Street all have steep gutter slopes greater than the maximum 5%. The curb ramp at the north part of the northeastern corner of the intersection at B Street and Fourth Street is not aligned with the adjacent crosswalks and does not directly lead to another path of travel. This ramp should be removed to prevent pedestrians from trying to cross at a location that does not connect to the adjacent crosswalk.

C Street from Maywood Way to Linden Drive

The sidewalks in this area have a very low severity score. There were only a few slight barriers along each side of the sidewalk. The curb ramps on the east side of C Street have one compliant ramp and the other two are very close. The curb ramps on the west side of C Street have high running slopes and require the ramps be demolished and rebuilt to mitigate the barriers. All of the bus stops in this area have slight ADA barriers. None of the bus stops provide a clear 30”x 48” space adjacent to the bench under the shelter area.

Fifth Street from B Street to C Street

The two sidewalk segments assessed had a very low severity score with a few cross slope and vertical change instances.



Fourth Street at Oxnard Boulevard

The small sidewalk segments in this area had a very low severity scores with a few gutter slope and top landing barriers at the curb ramps. There are 12 curb ramps in this small area. The curb ramps in this area all had very low severity scores. This area overall had the lowest severity score average among all the features assessed.

POLICIES & PROGRAMS MEMORANDUM

MEMORANDUM

Date: November 11, 2015

To: City of Oxnard and Sally Swanson Architects

From: Fehr & Peers

Subject: ***Oxnard Sidewalk Survey – Menu of Citywide Education and Enforcement Programs (FINAL)***

Ref: LA14-2716

INTRODUCTION

This memorandum provides a customized package of education, encouragement, enforcement and evaluation programs for the City of Oxnard. The attached worksheet in the section "Policies & Programs Matrix" summarizes all the programming options described in this memo, and highlights in yellow the draft priority programming efforts recommended for Oxnard based on best practices, local needs, and the capacity of the City and other involved agencies. The highlighted priority programs are discussed in the first section of this memo under "Recommended Education, Encouragement, Enforcement and Evaluation Efforts", and the remaining programs are discussed in the second section of this memo under "Additional Education, Encouragement, Enforcement, and Evaluation Efforts".

For all programs, the worksheet notes the key partners and stakeholders, timeline, and effectiveness, and whether the program was included in the 2012 Bicycle and Pedestrian Facilities Master Plan. For the priority programs, the worksheet identifies additional information: order of magnitude costs, potential funding sources, and links to case studies.

This memo and the accompanying worksheet serve as the deliverables for Phase III v, vi, and vii.

While engineering and infrastructure enhancements are critical elements for improving pedestrian safety, educational programming, encouragement campaigns and enforcement efforts are complementary to infrastructure investment and essential components of a city's fully-developed pedestrian safety strategy. Additionally, conducting evaluation efforts around all types of pedestrian improvements can help demonstrate the value of investing in a well-developed pedestrian strategy.

Education, encouragement and enforcement programs increase the safety, utility, and viability of infrastructure projects. They often include a combination of municipal support and volunteer engagement, which can have an exponential effect on the extent to which a community embraces a city's pedestrian safety efforts. Because of this community-supported model, support programming can have

very large effects while relying on small budgets. Education campaigns should include residents of all ages, especially emphasizing school-aged children where safe walking habits can be instilled as a life-long lesson. These types of support programs also ensure compliance with the criteria required by the Active Transportation Program (ATP) for an active transportation plan. The ATP provides funding for the implementation of pedestrian programs and infrastructure.

The first section of this memo provides detailed information on the draft priority program recommendations, highlighted in the accompanying Programs Matrix in yellow.

The second section of this memo provides brief explanatory information about the full portfolio of programming options. Both sections are organized by the "Four E's":

- **Education** programs help to inform residents – both those who primarily walk and those who do not often walk – about the rights, responsibilities, and resources available for pedestrians.
- **Encouragement** programs are similar to education programs, but focus more on addressing individual barriers to walking and encouraging people to try walking as a mode of transportation or recreationally.
- **Enforcement** programs involve efforts by the police department, and have been demonstrated to be very effective in improving safety for road users.
- **Evaluation** efforts can demonstrate the value and benefit of investing in pedestrian infrastructure and programming.

RECOMMENDED EDUCATION, ENCOURAGEMENT, ENFORCEMENT AND EVALUATION EFFORTS

Staff / Agency Training (Education)

Provide city staff and enforcement staff with training on new pedestrian design treatments in right of way. This also includes working with City maintenance and utility crews to ensure they understand the needs of pedestrians and follow standard procedures when working on or adjacent to roadways and walkways. Establishing internal understanding of the issues facing pedestrians in the city is a critical step to developing effective, implementable policies and infrastructure. Training for city staff should occur whenever a new policy is adopted or new set of guidelines is developed.

Safe Routes to School (SRTS) (Education)

This category refers to a variety of children's programs aimed at promoting both walking and bicycling to school and improving traffic safety around schools. The program takes a comprehensive "5 E" approach with specific engineering, education, encouragement, enforcement, and evaluation. The programs involve partnerships among school staff, parents, students, city staff, school districts, neighbors, and law enforcement. The National Center for Safe Routes to School has in-depth programming information.

Integrating educational messages into a comprehensive SRTS program can be a very effective way to kick-start a citywide program. Specific education tools include:

- Pedestrian skills training for 1st and 3rd graders
- Bicycle skills training for 3rd and 5th graders
- Messaging to parents about safe driving, walking and bicycling habits
- Creating drop-off and pick-up procedures
- Incorporating information about walking and bicycling into classroom subjects such as math or science (e.g., calculate average walking speeds or distances)
- Assemblies or classroom sessions about walking and biking safety

Targeted Events in High-Need Areas (Education, Encouragement, Enforcement)

In general, education, encouragement, and enforcement events and programs should be targeted in high-need areas first, if resources are limited and a city-wide program is not possible. The challenge is determining what constitutes "high need." Several metrics are available to set a threshold for need, including but not limited to income, health disparity, pollution exposure, injury risk, and age-related vulnerability (older adults or children). The CalEnviroScreen Tool developed by the California Office of Environmental Health Hazard Assessment is one robust method of measuring the combined impact of these disparities, and is used by state funding programs such as the Active Transportation Program to determine whether a project is located in a "high need" area. More information about CalEnviroScreen can be found at oehha.ca.gov/ej/ces2.html. This education strategy works well in conjunction with several of the evaluation strategies discussed below, which involve data collection, analysis, and performance evaluation.

Open Streets Events (Encouragement)

Explore opportunities to host an open streets event, such as Open Streets in Santa Barbara or CicLAvia in Los Angeles. These events are good opportunities not only to encourage walking and biking, but to distribute educational materials, and to engage with the public about future pedestrian facilities.

Pedestrian Training for Officers / Pedestrian Liaison Officer (Enforcement)

Law enforcement officers should receive training specifically focused on pedestrian safety and enforcement principles. As a cost-saving measure, the City of Oxnard may collaborate with surrounding jurisdictions and share resources as practical. Additionally, the Oxnard Police Department should consider appointing a pedestrian liaison officer who is a single point of contact for all matters concerning pedestrian safety.

Traffic Safety Grants (Enforcement)

Several grant sources exist specifically for traffic safety related efforts. The City of Oxnard has pursued California Office of Traffic Safety grants in past funding cycles. Grants can be used for outreach campaigns and to support the normal time budgeted for police officer duties. More information is available on the OTS website (http://www.ots.ca.gov/Grants/).

Activity Data Collection and Monitoring (Evaluation)

Partner with local schools and colleges to conduct annual pedestrian counts and an annual monitoring program that reviews and compares these counts. Additionally, Oxnard can require that all traffic study counts include bicycles and pedestrians to estimate activity levels and changes over time.

Collision Data and Monitoring (Evaluation)

The Statewide Integrated Traffic Records System and the Transportation Injury Mapping System are two state-wide resources that make it relatively easy to monitor collision data. However, the data can lag up to two years behind, which makes it challenging to evaluate improvements in a time-efficient manner along collision-related parameters. The City of Oxnard can work with the Oxnard Police Department, emergency responders, and health professionals to develop a more timely collision reporting and analysis practice.

Performance Measurement and Metrics (Evaluation)

Develop metrics to measure the impact of walking on public health, resident and merchant perceptions, environmental impact, amount of walking activity, and safety (note: it may not be possible to isolate the impact of walking alone on these variables). Some examples are provided below:

- Public Health – Partner with local schools to measure distance walked or calories burned during Walk to School Day/Month/Week.
- Resident and Merchant Perceptions – Survey questions such as "how frequently do you walk around town?" "What prevents you from walking?" and "What mode of travel do you use for short trips?" aim to understand attitudes toward walking and common concerns. These surveys, which should be available in English and Spanish, can be done citywide or as part of an SRTS program for parents.
- Environmental Impact – Measure reductions in vehicle miles traveled or vehicle emissions through surveys. The City of Oxnard engages in this practice.
- Amount of Walking – Partner with local schools to conduct counts, and/or require pedestrian counts with traffic studies so that changes in levels of walking can be measured over time.
- Safety – Review the number of pedestrian-involved collisions on a regular basis and develop collision rates as data on the number of pedestrians is collected over time. The City of Oxnard engages in this practice when applying for related grants.

ADDITIONAL EDUCATION, ENCOURAGEMENT, ENFORCEMENT AND EVALUATION PROGRAMS

EDUCATION

Education programs help to inform residents – both those who primarily walk and those who do not often walk – about the rights, responsibilities, and resources available for pedestrians. Education programs can be ongoing, in partnership with schools or the police department, or they can be one-time events in advance of pedestrian infrastructure installation.

Teen Pedestrian Safety Education

Teens benefit from different educational messages than adults or children. Many teens also already take drivers' education, health education, or other courses where walking curricula could be easily integrated. The City should work with local teen-organizations or schools to facilitate a participatory process whereby teens create educational messages. Youth Participatory Action Research (YPAR) is an effective way to assist youth to create visuals, videos, or campaigns for pedestrian safety among their peers. The California Department of Public Health has guides on YPAR and youth-led projects.

Safe Routes Ambassadors / Pedestrian Safety Education Team

A team of Safe Routes Ambassadors or Pedestrian Safety Educators can help implement direct Safe Routes to School programming, teen pedestrian safety education, and outreach to the community, parents, and school officials. They can act as the public face of pedestrian and bicycle safety efforts for the city. A successful example of this program is from Chicago, Illinois, where Safe Routes Ambassadors and Bicycle Ambassadors promote, educate, and inform students and the general public about pedestrian and bicycle safety issues.

Pedestrian Scale Signage and Wayfinding

Pedestrian scale signage can help people who are walking understand where they are, what is within walking distance, and what the best path is to get there. For example, simple street signs are often installed too high for pedestrians to see easily, and could be duplicated at pedestrian scale to help pedestrians navigate throughout the City of Oxnard. More expansive wayfinding efforts could include maps with key destinations and a 5-10 minute walking distance highlighted. These wayfinding efforts should be effectively branded and tied into any existing signage efforts in the Central Business District or coastal business districts.

Citywide Walking Maps

Attractive maps with walking routes, both in print and on city websites, can serve as an educational tool. These maps should highlight convenient routes for walking in Oxnard and include tips on safe walking practices. Maps should be distributed at public facilities throughout the City and at businesses that express interest in participating.

Web Presence

Via a website dedicated to pedestrian projects in Oxnard, city staff can provide overviews and updates on implementation of major projects and their related goals, design features, schedule of approval, design and construction, impacts to neighborhood, etc. The website should be hosted within the City's web domain. One example is the City of Los Angeles Pedestrian Safety Program (http://ladot.lacity.org/WhatWeDo/Safety/PedestrianSafety/index.htm). In addition to maintaining a website, city staff can increase presence on Twitter, Facebook, Instagram, Flickr, and other social media platforms as a way of communicating news, educating residents, and soliciting feedback and public input about future projects.

Billboards/Electronic Message Boards

Billboards and electronic message boards promote safety in the community, inform the public about pedestrian safety programs, and provide feedback on the program's effects. Messages can focus on safety and / or explain new design treatments in the public right-of-way. They can be changed regularly and the boards can be moved to maximize their impact. Signs can also be displayed on bus shelters.

Public Service Announcements

Radio and television public service announcements (PSAs) can provide accurate and current information to the public. PSAs are valuable as they are versatile and can reach a large audience about walking safety issues, education, and announcements. One challenge is that PSAs can be costly and may not reach the intended audience. A lower-cost alternative is to air PSAs only on public access channels; however, this low-cost approach may not be as effective as using a public relations firm and purchasing advertising time targeted to a specific audience.

Videos

Videos can be shown before Council Meetings, uploaded to YouTube, and embedded on the City's website to promote pedestrian safety projects and explain new design concepts for Oxnard's streets.

Flyers, Postcards, Brochures and Pamphlets

These print materials can be distributed to residents and businesses along the major streets affected by new pedestrian infrastructure projects, and made available at public buildings, public meetings, and other major activity centers. They can also be printed as an on-going effort to disseminate pedestrian safety messaging, including topics such as safe street crossing at various types of intersections, pedestrians' rights and responsibilities when crossing the street, and motorists' rights and responsibilities related to pedestrians. These materials should be provided in multiple languages, and can target specific populations such as children or older adults. Examples are available through the Federal Highway Administration (http://safety.fhwa.dot.gov/ped_bike/ped_bike_order), AAA (http://www.aaafoundation.org/products), and the National Highway Traffic Safety Administration (http://www.nhtsa.gov/Pedestrians).

Pedestrian and Alcohol Awareness Campaign

According to the Centers for Disease Control and Prevention, alcohol involvement for the driver or the pedestrian was reported in 48% of the traffic crashes that resulted in pedestrian death. This safety risk can be addressed through a targeted campaign to increase awareness of the problem, both for pedestrians and drivers. This campaign can be implemented in partnership with businesses, restaurants, bars, and local colleges to obtain a wide reach while retaining a targeted approach.

Safety Device Giveaway

At special events, the City of Oxnard can provide community members with pedestrian equipment such as walking/jogging lights and reflectors, pedometers, or water bottles. These giveaways help draw attention to safe walking throughout the city.

ENCOURAGEMENT PROGRAMS & POLICIES

Encouragement programs are similar to education programs, but focus more on addressing individual barriers to walking and encouraging people to try walking as a mode of transportation or recreationally. This category also includes overall policies that can help shape the pedestrian environment and encourage a safe, comfortable walking environment throughout the city.

Pedestrian-Oriented Speed Limits and Speed Surveys

Pedestrian fatality rates increase exponentially with vehicle speed. Thus, reducing vehicle speeds in pedestrian zones may be one of the most important strategies for enhancing pedestrian safety. A recent policy directive from the California Department of Transportation, pursuant to the California Vehicle Codes (CVC) and resulting in changes to the California Manual on Uniform Traffic Control Devices (MUTCD), provides state and local municipalities with the authority to reduce the posted speed limit if an engineering and traffic study demonstrates that a different (lower) speed limit may be a better fit based on local conditions. The allowable reduction is five miles per hour from what the posted speed limit needs to be based on the 85th percentile speed of free-flowing traffic. The city could explore the use of reduced speed limits in school zones or heavy pedestrian areas, and could consider pedestrian volumes when setting speed limits.

Pedestrian-Oriented Traffic Signal and Stop Sign Warrants

Providing all-way stop or signal control at an intersection may improve pedestrian safety by reducing speeds and controlling pedestrian-vehicle conflicts. The MUTCD defines warrants for installing signals and stop signs. The City may choose to define relaxed pedestrian criteria to encourage pedestrian safety. Best practices for stop-sign warrant application include:

- Requiring a crash history of three instead of five collisions based on routine underreporting
- Reducing traffic volume thresholds based on latent demand
- Providing consideration for school children, pedestrians and traffic speeds

Pedestrian-Friendly Traffic Signals

Pedestrian-friendly traffic signals can include Leading Pedestrian Intervals (LPIs), leading or lagging protected left turn phases, pedestrian crossing beacons (such as the Rectangular Rapid Flash Beacon or the High Intensity Activated Crosswalk, two FHWA-approved alternatives), and pedestrian scrambles.

An LPI gives pedestrians an advance walk signal before motorists get a green signal, giving the pedestrian several seconds to start walking in the crosswalk before a concurrent signal is provided to vehicles. This

makes pedestrians more visible to motorists and motorists more likely to yield to them. Typical LPI settings provide 3 to 6 seconds of advance walk time.

Leading or lagging protected left turn phases provide a green arrow for left turning vehicles while stopping both on-coming traffic and parallel pedestrian crossings to eliminate conflicts. Protected left turn phasing is particularly appropriate for locations with relatively high left turn volumes.

The pedestrian crossing beacon rests dark when not in use. When a pedestrian pushbutton or detector is actuated, the beacon begins with a flashing yellow light, followed by a solid yellow light, altering drivers to slow. A solid red light requires drivers to stop while pedestrians have the right-of-way to cross the street. The City of Oxnard has been working to install pedestrian crossing beacons to improve pedestrian safety at unsignalized intersections.

A pedestrian scramble phase, sometimes called a Barnes Dance, is a cycle which allows pedestrians to cross in all directions. Pedestrian scramble phases are appropriate for intersections with high pedestrian volumes. To improve safety, pedestrian scramble phases can be paired with a right-turn-on-red restriction. By introducing an exclusive phase for pedestrians, the total cycle length increases for all users.

Design Policies and Development Standards

Design policies and development standards can improve the pedestrian walking experience, encourage walking, enhance economic vitality, and offer funding opportunities for pedestrian improvements. The city can develop guidelines for façade design, urban art, open space, sidewalks, and gateways. City staff can also encourage pedestrian-oriented development through internal review of projects on a case-by-case basis. The City of Oxnard General Plan includes some recommendations that new development site design be oriented to pedestrian access. Additionally, some ordinances in the City Code address the importance of these elements and provide guidance.

Specific types of design policies and development standards that have an effect on the pedestrian environment include:

- Adoption of Street Tree Requirements: Street trees enhance the pedestrian environment by providing shade and a buffer from vehicles. Street trees may also enhance property values, especially in residential neighborhoods. However, street trees, when improperly selected, planted, or maintained, may cause damage to sidewalks and adjacent public utilities.

- Adoption of Open Space Requirements: Residents typically rate open space as among a jurisdiction's key assets and needs. Open space may encourage walking, especially for recreational trips. Landscaping requirements and lot building coverage limits result in open space provisions for residential and non-residential land uses. The Oxnard City Code includes open space requirements.

- Adoption of Newspaper Rack Ordinance: Newspaper racks may obstruct walkways and reduce accessibility and pedestrian visibility when ordinances are not in place. A

Newspaper Rack Ordinance improves the pedestrian realm by reducing clutter and organizing sidewalk zones. A Newspaper Rack Ordinance details size, location, and maintenance requirements. The Oxnard City Code includes a newspaper rack regulation.

- Adoption of Street Furniture Requirements: Street furniture encourages walking by accommodating pedestrians with benches to rest along the route or wait for transit; trash receptacles to maintain a clean environment; street trees for shade, etc. Uniform street furniture requirements also enhance the design of the pedestrian realm and may improve economic vitality. The City has established street furniture requirements.

- Adoption of Public Art Program: Public art enhances public space that is experienced by pedestrians. This could include public art in active pedestrian areas, like the Central Business District, or in places that otherwise feel uninviting to pedestrians, such as freeway underpasses. The City has a public art program.

- Adoption of a Temporary Use Program for Vacant Space in Business District: Temporary uses for vacant space in the business district can avoid the uninviting, unsafe, or unpleasant effects of business closures on a block-face, causing voids in activity level and eyes on the streets. Utilizing the space more creatively between tenants or uses can help bridge these gaps, and can provide ideal opportunities for temporary art installations, food trucks, or pop-up shops. The City has a temporary use program.

<u>Adoption of Complete Streets Policy</u>

Complete Streets Policies accommodate all modes of travel and travelers of all ages and abilities. The ten elements of a Complete Streets Policy are itemized by the National Complete Streets Coalition: (National Complete Streets Coalition, 2015)

1. Includes a vision for how and why the community wants to complete its streets.

2. Specifies that 'all users' includes pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles.

3. Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way.

4. Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.

5. Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.

6. Is adoptable by all agencies to cover all roads.

7. Directs the use of the latest and best design criteria and guidelines while recognizing the need for flexibility in balancing user needs.

8. Directs that Complete Streets solutions will complement the context of the community.

9. Establishes performance standards with measurable outcomes.

10. Includes specific next steps for implementation of the policy.

The City of Oxnard already includes many elements of a Complete Streets policy in the Circulation Element of the General Plan. The City could formalize these elements into an official Complete Streets Policy in order to institutionalize the practices associated with Complete Streets. More information can be found at http://www.smartgrowthamerica.org/complete-streets/changing-policy/policy-elements.

The following jurisdictions have established practices for Complete Streets, including implementation of these policies through multi-modal level of service thresholds, and may serve as models for Oxnard:

- Fort Collins, Colorado's Multi-Modal Level of Service Manual: www.fcgov.com/link-disclaimer.php?TABID=5andURL=http://www.co.larimer.co.us/engineering/GMARdStds/ApdxH%2010-01-02.pdf

- Charlotte, North Carolina's Urban Street Design Guidelines: www.charmeck.org/Departments/Transportation/Urban+Street+Design+Guidelines.htm

- Sacramento Transportation and Air Quality Collaborative Best Practices for Complete Streets: www.completestreets.org/documents/FinalReportII_BPCompleteStreets.pdf

- San Francisco, California, Department of Public Health's Pedestrian Quality Index: www.sfphes.org/HIA_Tools/PEQI.pdf

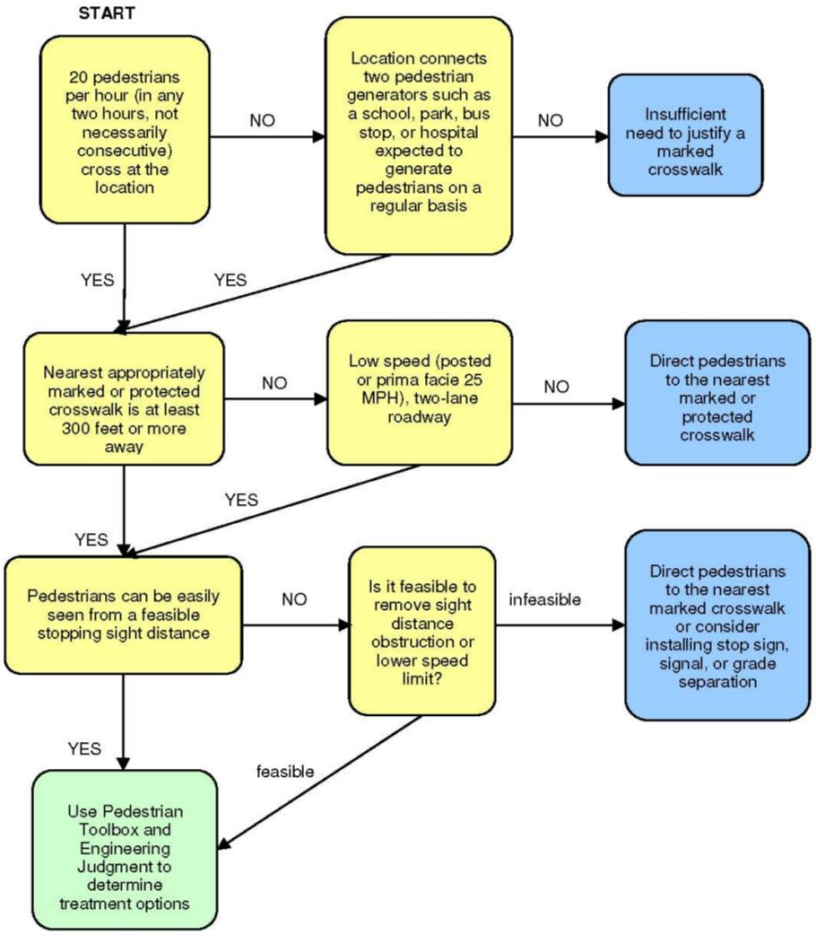
- San Francisco County Transportation Authority's Multi-modal Impact Criteria: www.sfcta.org/images/stories/Planning/CongestionManagementPlan/2007%20-%20appendix%2005%20-%20tia.pdf

Use of Neighborhood-Sized Schools

Neighborhood-sized schools, as opposed to mega schools on the periphery, are a key ingredient for encouraging walking and bicycling to school. Elementary schools within the City of Oxnard are already well-integrated into the fabric of the neighborhoods, and the Oxnard General Plan includes a policy related to bicycle and pedestrian access to schools. To implement this effort further, pedestrian and ADA improvements could be prioritized near schools. The City could further adopt a formal policy to encourage neighborhood-sized schools, work with the local school districts to also establish a policy on neighborhood-sized and -oriented schools as part of a Safe-Routes-to-School policy, and work with the school districts to establish suggested walking routes and address potential barriers to pedestrian or bicycle access.

Crosswalk Installation, Removal and Enhancement Policy

A formal policy for crosswalk installation, removal, and enhancement provides transparency in decision-making and adopts best practices in pedestrian safety and accommodation. The city could adopt a formal crosswalk policy, using research to inform the decisions to provide marked crossings at uncontrolled locations. The figure at right provides a sample crosswalk decision tool that can be employed to determine locations where marked uncontrolled crossings are appropriate. Once the decision to provide a marked crossing has been made, the decision on what type of crossing would be based on Table 1, below. This table provides guidance on the type of appropriate crossing and enhancement treatments that are appropriate based on that location's number of lanes, average daily traffic, posted speed limit, and presence of a raised median. These samples may be studied further before application to local conditions.



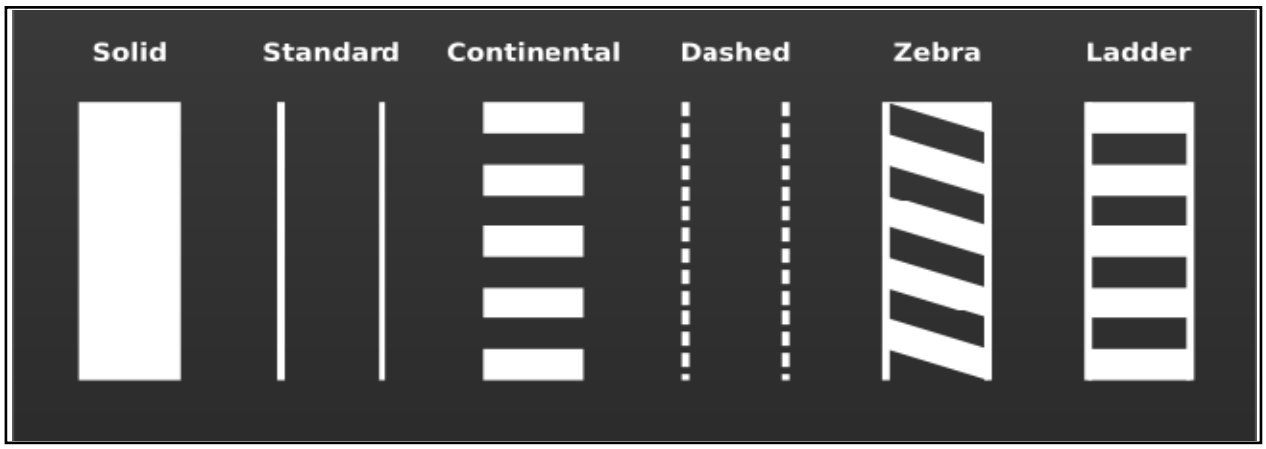
The crosswalk policy should reflect best practices and recent research with respect to the installation, removal, and enhancement of crosswalks, which includes removing crosswalks only as an option of last resort and providing safety-enhanced midblock crossings where pedestrians already demonstrate the desire to cross. This policy may consider adopting the "triple four" crosswalk striping treatment as used in Sacramento and other jurisdictions in California. Additionally, the policy should include criteria for

Triple-4 Crosswalk Style (Erik Fredericks via Flickr)

installing crosswalk enhancements, such as flashing beacons, in-roadway warning lights, or in-roadway pedestrian signs. The City of Oxnard already installs flashing beacons to upgrade crosswalks.

Additional crosswalk policy resources include:

- Sacramento Pedestrian Crossing Guidelines
  (Can be downloaded from: http://www.cityofsacramento.org/Public-Works/Transportation/Programs-and-Services/Pedestrian-Program)
- Stockton Crosswalk Policy
  (http://www.stocktongov.com/files/PedestrianSafetyAndCrosswalkInstallationGuidelines.pdf)
- Federal Highway Administration Study on Marked versus Unmarked Crosswalks
  (http://safety.fhwa.dot.gov/ped_bike/docs/cros.pdf)
- National Cooperative Highway Research Program Report on Crosswalks at Uncontrolled Locations
  (http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_562.pdf)
- Caltrans/UC Berkeley Study on Pedestrian/Driver Behavior at Marked versus Unmarked Crosswalks
  (http://repositories.cdlib.org/its/tsc/UCB-TSC-RR-2007-4)



Standard Crosswalk Marking Patterns
Image source: FHWA, Planning and Designing for Pedestrian Safety Course, 2008

Table 1, below, refers to Level 1, Level 2, and Level 3 devices, which are categorized based on the level of safety concern they are intended to address: Level 1 (all cases), Level 2 (enhancements), and Level 3 (advanced enhancements). These categories are cumulative; for example, a Level 2 device also includes appropriate Level 1 devices. Level 1 devices include pedestrian refuge islands, curb bulb-outs, high-visibility markings, advanced yield or stop lines, advanced warning signs, or in-street pedestrian crossing signs. Level 2 devices include raised crosswalks, overhead pedestrian crossing beacons, or rectangular rapid flashing beacons. Level 3 devices include pedestrian overpasses or underpasses, High Intensity Activated Crosswalk beacons, or pedestrian signals.

TABLE 1: SAMPLE SUMMARY OF CROSSING TREATMENTS FOR STREETS OF VARYING LANES, POSTED SPEED LIMITS, AND AVERAGE DAILY TRAFFIC

Level One: Two-Lane Streets			
Number of Cars	***Posted Speed***		
(average daily traffic)	***30 miles per hour or less***	***35 miles per hour***	***40 miles per hour or more***
Up to 15,000 cars per day	*Triple-four*	*Triple-four*	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*
15,000 cars or more per day		*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*	*Pedestrian signal or bridge (Level 3 device)*
Level Two: Three-Lane Streets			
Number of Cars	***Posted Speed***		
(average daily traffic)	***30 miles per hour or less***	***35 miles per hour***	***40 miles per hour or more***
9,000 cars or fewer per day	*Triple-four*	*Triple-four*	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*
9,000-12,000 cars per day		*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*	
12,000-15,000 cars per day	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*		*Pedestrian signal or bridge (Level 3 device)*
15,000 cars or more per day		*Pedestrian signal or bridge (Level 3 device)*	
Level Three: Four or More Lanes With a Raised Median			
Number of Cars	***Posted Speed***		
(average daily traffic)	***30 miles per hour or less***	***35 miles per hour***	***40 miles per hour or more***
9,000 cars or fewer per day	*Triple-four*	*Triple-four*	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*
9,000-12,000 cars per day		*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*	*Pedestrian signal or bridge (Level 3 device)*
12,000-15,000 cars per day	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and*		

TABLE 1: SAMPLE SUMMARY OF CROSSING TREATMENTS FOR STREETS OF VARYING LANES, POSTED SPEED LIMITS, AND AVERAGE DAILY TRAFFIC			
	2 devices		
15,000 cars or more per day	*Pedestrian signal or bridge (Level 3 device)*	*Pedestrian signal or bridge (Level 3 device)*	
Level Four: Four or More Lanes Without a Raised Median			
Number of Cars	***Posted Speed***		
(average daily traffic)	***30 miles per hour or less***	***35 miles per hour***	***40 miles per hour or more***
9,000 cars or fewer per day	*Triple-four*	*Triple-four*	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*
9,000-12,000 cars per day	*Triple-four plus a pedestrian refuge or other Level 1 device*	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*	*Pedestrian signal or bridge (Level 3 device)*
12,000-15,000 cars per day	*Triple-four plus a pedestrian refuge, overhead flashing beacons, or other Level 1 and 2 devices*		
15,000 cars or more per day	*Pedestrian signal or bridge (Level 3 device)*	*Pedestrian signal or bridge (Level 3 device)*	
Source: "Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations," 2005. Federal Highway Administration.			

Adoption of Vision Zero Policy

A Vision Zero policy sets the goal of reducing traffic-related fatalities to zero by a certain year. Though it is ambitious, it clearly articulates the idea that even one traffic-related fatality is unacceptable, and that the city is actively working to improve safety conditions for all road users – including vulnerable users like pedestrians and cyclists – throughout the city.

Adoption of Construction Access Standards

Construction access standards ensure pedestrians have an alternate path during construction projects that obstruct the sidewalk or shoulder. The most pedestrian-friendly option is to construct a temporary walkway protected from traffic with temporary ADA-compliant ramps where necessary. Establishing and

enforcing these standards can allow a city to maintain a pedestrian-oriented environment even in periods of heavy development.

Program Pedestrian Space

Programming pedestrian space requires a relatively low capital investment and can be done in partnership with businesses, non-profits, and community organizations. Existing spaces, including parks, plazas, sidewalks and even temporarily-closed streets can be activated by scheduling and promoting concerts, farmers markets, festivals, and other fun, exciting public uses. These temporary uses can be regularly scheduled or discreet events. In Oxnard, many of the downtown spaces are already programmed during summer months with great success. This idea could be further developed in other parts of the city, or implemented more permanently by closing down a street parking space, an alley, or a redundant street segment to install furniture, planters, or fitness equipment. The City of Oxnard closed A Street in Downtown Oxnard to traffic for several years as part of a redevelopment effort. The City reopened A Street in the 1980s after evaluating the effect on adjacent businesses, traffic flow, crime and pedestrian activity. It is possible that renewed support for this type of program may exist in Oxnard based on recent successes in other nearby jurisdictions, such as the People St program at the City of Los Angeles. More information on People St can be found at www.peoplest.lacity.org.

General Plan Updates

Planning principles contained in a city's General Plan can provide an important policy context for developing pedestrian-oriented, walkable areas. Transit-oriented development, higher densities, and mixed uses are important planning tools for pedestrian-oriented areas. The City of Oxnard has enhanced pedestrian-friendly goals, policies, and actions defined in the General Plan through the development of a Bicycle and Pedestrian Facilities Master Plan, adopted in 2012.

Additionally, the Circulation Element of the Plan assigns roadway typologies, which could include a layered network approach with prioritized corridors for transit, pedestrian, bicycle, and auto travel. Future updates to the General Plan could include pedestrian nodes, pedestrian-oriented guidelines, and sidewalk networks as part of the Circulation Element.

Pedestrian Master Plan Updates

This type of plan augments the Circulation Element in the General Plan, and typically includes a large menu of policy, program, and practice suggestions, as well as site-specific (and prototypical) engineering treatment suggestions. A Pedestrian Master Plan documents a jurisdiction's vision for improving walkability and pedestrian safety; establishes policies, programs, and practices; and outlines the prioritization and budgeting process for project implementation.

The 2002 Oxnard Bicycle and Pedestrian Master Plan was updated in 2012 with recommended facilities and policies through 2020. Another update to the plan would be appropriate for adoption in 2020, or sooner if the City's policies, vision, and priorities have changed since 2012.

Preparation of a Cultural or Historical Preservation Plan

A cultural or historical preservation plan can help identify some of the most valuable assets in a community, and can work to promote pedestrian access to these sites. Establishing goals and setting policies and programs to retain cultural and historical assets with attention to pedestrian access can increase economic vitality, tourism, and community engagement.

Walk to Work Day

Host and promote Walk to Work Day, an event often hosted by various cities around the country annually in April. This is a good opportunity to give away safety equipment, raise the visibility of walking and pedestrian safety in the City, and partner with local community groups and businesses to create a pedestrian advocacy community.

Pop-up Neighborhood Event

During the design development phase of pedestrian infrastructure, Oxnard can host a "pop-up" event with temporary in-street installations at the site of approved facilities. These events allow community members to try out, touch, and see the potential improvements in their future location. The event helps residents understand the benefits of sometimes unusual or untraditional neighborhood greenway treatments, such as traffic diverters, parklets, pavement markings and signage.

Rideshare Week

The City of Oxnard can promote and participate in Rideshare Week, a regional event sponsored by the Ventura County Air Pollution Control District and the Ventura County Transportation Commission in the month of October. It is also a good opportunity to distribute pedestrian education materials and work with local businesses to sponsor future pedestrian events.

Walking School Buses

Establish Walking School Buses to and from schools in Oxnard. Walking School Buses are organized walking groups where adults "pick up" kids along a specific route to school at specific locations. This way, children are supervised during their travel to school. These programs can be organized on a weekly or daily basis, or for special events like Walk to School Day.

Walking Mascot

A walking mascot helps generate excitement around walking to school, and can be used in conjunction with a Walk to School Day celebration, walking school buses, or Safe Routes to School programs. In Bellevue, WA, a walking mascot campaign at their elementary school was used in conjunction with roadway improvements. The mascot, called PedBee, is also featured on school safety signs and makes personal appearances at school safety days. Safety days include local staff from the City's Transportation and Police Departments. Children are taught walking and traffic safety basics, such as crossing the street safely. Children are also given traffic safety workbooks that provide guidance with hands-on activities such as coloring and safety procedure quizzes.

Corner Captains / Safe Passages Program

The Corner Captain program is effective in neighborhoods where lack of adult supervision is a barrier for children to walk to school. Neighbors or parents agree to stand at a corner of a route to school during the start or end of the school day to supervise kids as they walk to or from school. With clear sight lines, students will be seen the entire length of the block. Corner captains should wear reflective vests for safety and to demonstrate their official participation in the program. In Chicago, a similar program was implemented in partnership between Chicago Public Schools and the Chicago Police Department called Safe Passages, using paid community-hired staff to ensure students had adult supervision and a rapid connection to police, if necessary, on their walking commute to and from school.

Individualized Marketing

Individualized marketing programs encourage walking, carpooling, bicycling and transit use through information packets with personalized route selections and suggested organized activities that get people out in their neighborhoods or places of employment to shop, work, and discover how many trips they can easily, conveniently, and safely make without using a car. A successful example of an individualized marketing program is SmartTrips, developed in Portland, Oregon, which provides print and online materials to help individuals make the switch to other modes of transportation for some trips.

Transportation Demand Management Programs

Transportation Demand Management (TDM) programs encourage multi-modal travel by incentivizing non-auto options. As new development occurs, TDM programs can be expanded, formalized, and strengthened. The Oxnard General Plan references TDM in order to reduce vehicle trips, meet air quality goals, and reduce congestion. Further, the City of Oxnard adopted a TDM Plan in November 2015. As part of a comprehensive TDM program, the City of Oxnard can hire or identify a part-time TDM Coordinator, create a TDM program and accompanying website with separate pages for employees, residents, and visitors, and develop a TDM policy which formalizes the following actions, some of which already occur through the Ventura County Transportation Commission or the City of Oxnard:

- Incentivizes non-auto travel options (e.g., commuter checks, parking cash-out programs, transit passes, bicycling stipends, etc.)
- Creates support for major employers to implement a TDM program (e.g., emergency ride home programs, which is already available through Ventura County Transportation Commission)
- Involves the local transit provider(s) in major decisions

National Night Out

The city can distribute pedestrian safety education materials and/or equipment at neighborhood block parties or local police department events during National Night Out, typically held annually in August.

Neighborhood Pace Car

Residents can set the pace on streets in their neighborhood by driving no faster than the posted speed limit. On streets with only one lane in each direction, this will effectively force other motorists to drive slower. Many communities distribute stickers that say "Neighborhood Pace Car - Drive the Speed Limit," which residents can place on their rear windshield. Speeding can increase the risk of collisions, as well as the severity of collisions that involve pedestrians.

Develop Communications Strategy for Emergency Responders

Emergency responders can be vital partners in a city's effort to improve pedestrian safety. In particular, they can become compelling advocates for changes to infrastructure that improves pedestrian safety, but appears to interfere with emergency response time or maneuverability. Establishing early partnerships with emergency responders can avoid these perceived conflicts, and can offer insight and differing perspective into public safety. The City of Oxnard already engages in this practice.

ENFORCEMENT EFFORTS

Enforcement tools involve efforts by the police department, and have been demonstrated to be very effective in improving safety for road users. However, some programs can require a significant investment of staff time from local police departments or city agencies.

Increased Fines for Motor Vehicle Drivers

An increase in traffic fines for infractions that have particular safety implications for pedestrians, such as red-light running, speeding, and running stop signs, has been shown to discourage driver violations and improve safety. Variations on this include double fines in school zones and construction zones.

Police Bicycle Patrol

A police patrol conducted by bicycle helps to bring awareness and attention to the safety issues related to walking and bicycling within Oxnard. It also can improve the relationship between police officers and community members, pedestrians and bicyclists. The City of Oxnard has a police bicycle patrol. Areas with high pedestrian activity, such as Downtown Oxnard and around schools could be prioritized to receive more frequent bicycle patrols.

Speed Enforcement in School Zones

Strict enforcement of speed laws in school zones can improve the safety for children walking to school. A 'zero tolerance' policy for speeders in school zones, and an increase in fines for drivers who violate the posted school zone speed limit, are both potential approaches.

Speed Trailers and Active Speed Monitors

Speed trailers and active speed monitors display the speed of oncoming vehicles. Speed trailers are portable, whereas speed monitors are installed at permanent locations. Both devices help officers track motorist speed, display current speed to motorists, and create awareness of the posted speed limit.

Devices should be placed at known locations with reported speeding, and should be used in conjunction with random ticketing operations. The City of Oxnard utilizes these tools to discourage speeding.

Neighborhood Speed Watch/Radar Lending Program

If speeding is a problem, law enforcement officers can lend speed radar guns to students or residents to check speeds of passing vehicles. The student or resident records the license plate number of any speeding vehicles, and law enforcement will send a speeding notice warning to the motorist. A group of organized neighbors can also commit to periodically monitoring streets for speeding vehicles. The Oxnard Police Department already has an active Neighborhood Watch program that could develop and integrate a speed watch or radar lending initiative.

Tattletale Lights

To help law enforcement officers catch red-light runners safely and more effectively, a "rat box" is wired into the backside of a traffic signal controller and allows enforcement officers stationed downstream to identify, pursue, and cite red-light runners. Warning signs may be set up along with the box to warn drivers about the fine for red-light violations. Rat boxes are a low-cost initiative (approximately $100 to install the box), but do require police officers for enforcement.

Traffic Complaint Hotline

Oxnard residents can report non-emergency traffic violations to law enforcement through an established traffic complaint hotline. Officers can target problem areas more effectively with records of traffic complaints. This also allows the community to engage efficiently with officers.

Targeted Enforcement Efforts

Targeted enforcement efforts draw attention to specific issues, such as crosswalk violations, speeding, or driving under the influence, which can endanger pedestrians. These efforts often include both citations and educational materials that focus on safe and lawful behavior for all road users. Enforcement can be targeted at areas such as schools, public facilities, and locations with demonstrated collision history.

Sidewalk Riding Prohibition

Sidewalk bicycle riding can be dangerous for pedestrians, particularly in areas of high activity such as Downtown Oxnard. The City of Oxnard has a prohibition on sidewalk bicycle riding for bicyclists over 12 years old. The City can develop and post educational signage on the sidewalk to inform bicycle riders and pedestrians that riding in the bike lane is safer for everyone.

EVALUATION

Evaluation efforts can demonstrate the value of investing in pedestrian infrastructure and programming. These efforts can also help guide data collection, even if not to immediately work towards evaluation of particular projects or initiatives.

Inventory of Sidewalks, Informal Pathways, and Key Opportunity Areas

A GIS-based sidewalk inventory enables coordinated efforts between pedestrian improvements and development projects. An inventory allows project identification, prioritization, and coordination with new development, roadway resurfacing, and other city infrastructure projects. The Oxnard Sidewalk Survey project is a key element of this program. Future action could include ongoing re-assessment and maintenance of the GIS database, as well as expansion of the database to include the conditions of all street segments.

Inventory of Pedestrian Traffic Control Devices

The 2009 federal Manual of Uniform Traffic Control Devices (MUTCD) requires the installation of countdown pedestrian signals for all new signals. Replacing traffic signal bulbs with LED bulbs is also suggested to increase visibility and improve efficiency. In order to assist this process, and to prioritize future retrofits and infrastructure projects, the City should maintain an inventory of pedestrian signs, markings, and traffic control devices. The Oxnard Sidewalk Survey project began the process of inventorying these types of devices for all sidewalks adjacent to buildings constructed before 1992.

Coordination with Health Agencies

Involving non-traditional partners such as Emergency Medical Service (EMS) personnel, public health agencies, pediatricians, etc., in the planning or design of pedestrian facilities may create opportunities to be more proactive with pedestrian safety, identify pedestrian safety challenges and education venues, and secure funding. Additionally, under-reporting of pedestrian-vehicle collisions could be a problem that may be partially mitigated by involving the medical community in pedestrian safety planning.[1] The City of Oxnard could seek opportunities for technical collaboration and funding with first responders, public health and health care professionals.

Health Impact Assessments

Health Impact Assessments (HIA) are a tool borrowed from the field of public health to assess how healthy a community is, related to community design and public space. An HIA can help a city identify public health-related areas of improvement, utilize new data sources and analytic methods, and develop action items to improve the health of the community overall and mitigate disproportionate distribution of negative health effects across a population. This evaluation effort can be undertaken in conjunction with health professionals, as described above.

Walking Audits

Conduct walking audits as part of outreach strategies for new development projects or as a comprehensive SRTS program. A walking audit leads stakeholders on a set course to discuss pedestrian

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[1] Sciortino, S., Vassar, M., Radetsky, M. and M. Knudson, "San Francisco Pedestrian Injury Surveillance: Mapping, Underreporting, and Injury Severity in Police and Hospital Records," *Accident Analysis and Prevention*, Volume 37, Issue 6, November 2005, Pages 1102-1113

safety concerns and strategies to improve safety. Walking audits can be conducted as part of a Pedestrian Safety Assessment, offered through the Berkeley Tech Transfer Program, free to participating cities. More information about the Pedestrian Safety Assessments can be found at http://www.techtransfer.berkeley.edu/services/pedestrian-safety-assessments. The City of Oxnard has conducted Walking Audits in the past, and could continue the practice as part of an ongoing evaluation strategy.

POLICIES & PROGRAMS MATRIX

Program / Policy	Key Partners and Stakeholders	Timeline		Effectiveness			Cost			Recommended in Bicycle and Pedestrian Master Plan 2012	Some Action Already Taken by Oxnard	FTE Cost	Potential Funding Sources, Case Studies & Resources
				Low	Med	High	Low	Med	High				
Recommended Education Programs													
Staff / Agency Training	**City departments**	**Near-term**	**periodic**			**x**	**x**	**x**		**x**		**0.25 - 0.5 FTE**	**California Active Transportation Program; FHWA Pedestrian Focus Training (via PBIC): http://www.pedbikeinfo.org/training/webinars_FHWA.cfm Florida DOT Training: http://www.dot.state.fl.us/officeofdesign/Training/DfPST/Registration.html**
Safe Routes to School	**School districts**	**Mid-term**	**ongoing**		**x**	**x**			**x**	**x**	**x**	**0.5 - 1 FTE**	**California Active Transportation Program; Riverside County SRTS Program: http://saferoutescalifornia.org/2011/04/27/riversidecounty-srts/ Glendale SRTS Program: http://www.casaferoutestoschool.org/wp-content/uploads/2011/05/SRTS-Success-Story_Glendale_10-8-12.pdf**
Additional Education Programs													
Teen Traffic Safety Education	Oxnard Union High School District	Mid-term	ongoing		x			x		x			
Safe Routes Ambassadors / Pedestrian Safety Education Team	City departments, Oxnard School Districts	Near-term	ongoing		x			x		x			
Pedestrian-Scale Signage and Wayfinding	City departments	Mid-term	non-recurring		x			x		x			
Citywide Walking Maps	City departments	Near-term	periodic		x			x		x			
Web presence	City departments	Near-term	ongoing		x			x					
Billboards / Electronic Message Boards	City departments	Near-term	periodic		x			x					

Note: Yellow highlighting indicates a recommended program for the City of Oxnard.

Program / Policy	Key Partners and Stakeholders	Timeline		Effectiveness			Cost			Recommended in Bicycle and Pedestrian Master Plan 2012	Some Action Already Taken by Oxnard	FTE Cost	Potential Funding Sources, Case Studies & Resources
				Low	Med	High	Low	Med	High				
Public Service Announcements	City departments, Gold Line Transit, local radio and TV stations	Mid-term	periodic		x			x					
Videos	City departments, local TV stations	Mid-term	periodic		x			x					
Flyers, Postcards, Brochures and Pamphlets	City departments	Near-term	periodic	x			x			x			
Pedestrian and Alcohol Awareness Campaign	City departments, BID, bars & restaurants	Mid-term	periodic		x			x					
Safety Device Giveaway	City departments	Near-term	periodic	x			x			x			
Recommended Encouragement Programs													
Targeted Events in High-Need Areas	**City departments, public works**	**Mid-term**	**periodic**			**x**		**x**		**x**		**0.5 FTE**	**California Active Transportation Program; State standard for establishing "high needs areas" via the CalEnviroScreen Tool: oehha.ca.gov/ej/ces2.html**
Open Streets Events	**City departments**	**Mid-term**	**periodic**			**x**			**x**	**x**		**0.5 - 1 FTE**	**Santa Barbara Open Streets: http://sbopenstreets.org/**
Additional Encouragement Programs													
Pedestrian-Oriented Speed Limits and Speed Surveys					x		x						
Pedestrian-Oriented Traffic Signal and Stop Sign Warrants					x		x						
Pedestrian-Friendly Traffic Signals (LPIs, Lagging Lefts, Ped Scramble, Pedestrian Beacons)	Public Works, City Departments				x		x				x		
Design Policies and Development Standards						x			x		x		
Adoption of Street Tree Requirements					x		x						
Adoption of Open Space Requirements					x		x				x		

Note: Yellow highlighting indicates a recommended program for the City of Oxnard.

Program / Policy	Key Partners and Stakeholders	Timeline		Effectiveness			Cost			Recommended in Bicycle and Pedestrian Master Plan 2012	Some Action Already Taken by Oxnard	FTE Cost	Potential Funding Sources, Case Studies & Resources
				Low	Med	High	Low	Med	High				
Adoption of Newspaper Rack Ordinance					x		x				x		
Adoption of Street Furniture Requirements					x		x				x		
Adoption of Public Art Program	City departments, BID				x		x				x		
Adoption of a Temporary Use Program for Vacant Space in Business District	City departments, BID				x		x				x		
Adoption of Complete Streets Policy					x		x				x		
Use of Neighborhood-Sized Schools					x		x				x		
Crosswalk Installation, Removal and Enhancement Policy						x	x						
Adoption of Vision Zero Policy	City departments	Near term	non-recurring		x		x						
Adoption of Construction Access Standards	City departments				x		x						
Program Pedestrian Space	City departments, BID				x			x					
General Plan Updates					x				x		x		
Pedestrian Master Plan Updates					x				x		x		
Preparation of a Cultural or Historical Preservation Plan				x					x				
Walk to Work Day	City departments, advocacy organizations, community organizations, Oxnard Police Department, school districts, Downtown Oxnard PBID, Chamber of Commerce	Mid-term	periodic		x			x					
Pop-Up Neighborhood Event	City departments	Mid-term	periodic		x			x					
Rideshare Week	City departments	Mid-term	periodic		x		x						
Walking School Buses					x			x		x			

Note: Yellow highlighting indicates a recommended program for the City of Oxnard.

Program / Policy	Key Partners and Stakeholders	Timeline		Effectiveness			Cost			Recommended in Bicycle and Pedestrian Master Plan 2012	Some Action Already Taken by Oxnard	FTE Cost	Potential Funding Sources, Case Studies & Resources
				Low	Med	High	Low	Med	High				
Walking Mascot	City departments, school districts	Mid-term	ongoing	x			x						
Corner Captains / Safe Passages program	City departments, school districts	Mid-term	ongoing		x				x				
Individualized Marketing	City departments, advocacy organizations, community organizations	Mid-term	ongoing		x				x				
Transportation Demand Management Programs	City departments, Employers				x			x		x	x		
National Night Out	City departments, Oxnard Police Department	Near-term	periodic		x			x					
Neighborhood Pace Car	City departments	Near-term	ongoing		x		x						
Develop Communications Strategy for Emergency Responders	City departments	Mid-term	ongoing		x		x				x		
Recommended Enforcement Programs													
Pedestrian Training for Officers / Pedestrian Liaison Officer	**Oxnard Police Department**	**Near-term**	**periodic**			**x**		**x**				**0.25 - 0.5 FTE**	**California Office of Traffic Safety; PBIC Examples: http://www.pedbikeinfo.org/programs/enforcement_worklawenforce.cfm**
Traffic Safety Grants	**City departments, Oxnard Police Department**	**Mid-term**	**periodic**		**x**		**x**				**x**	**0.25 FTE**	**California Office of Traffic Safety; Los Angeles Police Department - Distracted Driving PSAs: https://www.youtube.com/watch?v=LN0vYpwKgw8**
Additional Enforcement Programs													
Increased Fines	City departments, Oxnard Police Department	Mid-term	ongoing			x	x						
Police Bicycle Patrol	Oxnard Police Department	Mid-term	ongoing		x			x		x	x		
Speed Enforcement in School Zones	Oxnard Police Department, school districts	Near-term	ongoing			x		x		x			

Note: Yellow highlighting indicates a recommended program for the City of Oxnard.

Program / Policy	Key Partners and Stakeholders	Timeline		Effectiveness			Cost			Recommended in Bicycle and Pedestrian Master Plan 2012	Some Action Already Taken by Oxnard	FTE Cost	Potential Funding Sources, Case Studies & Resources
				Low	Med	High	Low	Med	High				
Speed Trailers and Active Speed Monitors	Oxnard Police Department	Mid-term	ongoing		x			x		x	x		
Neighborhood Speed Watch / Radar Lending Program	Oxnard Police Department	Mid-term	ongoing		x			x			x		
Tattletale Lights	Oxnard Police Department	Long-term	ongoing			x		x					
Traffic Complaint Hotline	Oxnard Police Department	Mid-term	ongoing		x				x				
Targeted Enforcement Events	City departments, Oxnard Police Department	Mid-term	periodic			x			x				
Sidewalk Bicycle Riding Prohibition	Oxnard Police Department	Mid-term	non-recurring		x			x			x		
Recommended Evaluation Programs													
Activity Data Collection and Monitoring	**Advocacy organizations, Oxnard Community College, city departments**	**Near-term**	**ongoing**			**x**	**x**	**x**	**x**	**x**		**0.25 - 1 FTE**	**Cal State Long Beach - Bicyclist Counts: http://daf.csulb.edu/offices/ppfm/parking/program/rideshare/form_evolunteers.html**
Collision Data and Monitoring	**City departments, Oxnard Police Department**	**Near-term**	**periodic**			**x**		**x**				**0.25 - 0.5 FTE**	**FHWA Guidance on Timeliness in Crash Reporting, with examples: http://safety.fhwa.dot.gov/cdip/finalrpt04122010/ch2.cfm#tbl3**
Performance Measurement and Metrics	**City departments**	**Mid-term**	**ongoing**			**x**		**x**			**x**	**0.5 FTE**	**Seattle DOT Performance Measures for Pedestrian Safety: http://www.seattle.gov/transportation/pedestrian_masterplan/pmp_monitor.htm**
Additional Evaluation Programs													
Inventory of Sidewalks, Informal Pathways, and Key Opportunity Areas					x			x		x	x		
Inventory of Pedestrian Traffic Control Devices					x			x			x		
Coordination with Health Agencies					x		x						

Note: Yellow highlighting indicates a recommended program for the City of Oxnard.

Program / Policy	Key Partners and Stakeholders	Timeline		Effectiveness			Cost			Recommended in Bicycle and Pedestrian Master Plan 2012	Some Action Already Taken by Oxnard	FTE Cost	Potential Funding Sources, Case Studies & Resources
				Low	Med	High	Low	Med	High				
Use of Health Impact Assessments	City Departments				x			x					
Walking Audits	City departments, school districts	Mid-term	periodic		x		x	x			x		Berkeley Tech Transfer Pedestrian Safety Audit program; http://www.techtransfer.berkeley.edu/services/pedestrian-safety-assessments

Note: Yellow highlighting indicates a recommended program for the City of Oxnard.

PROJECT SHEETS – CONCEPTUAL PLANS AND GRAPHICS

MEMORANDUM

Date: 11/11/2015

To: City of Oxnard

From: Sally Swanson Architects Inc.
Fehr & Peers

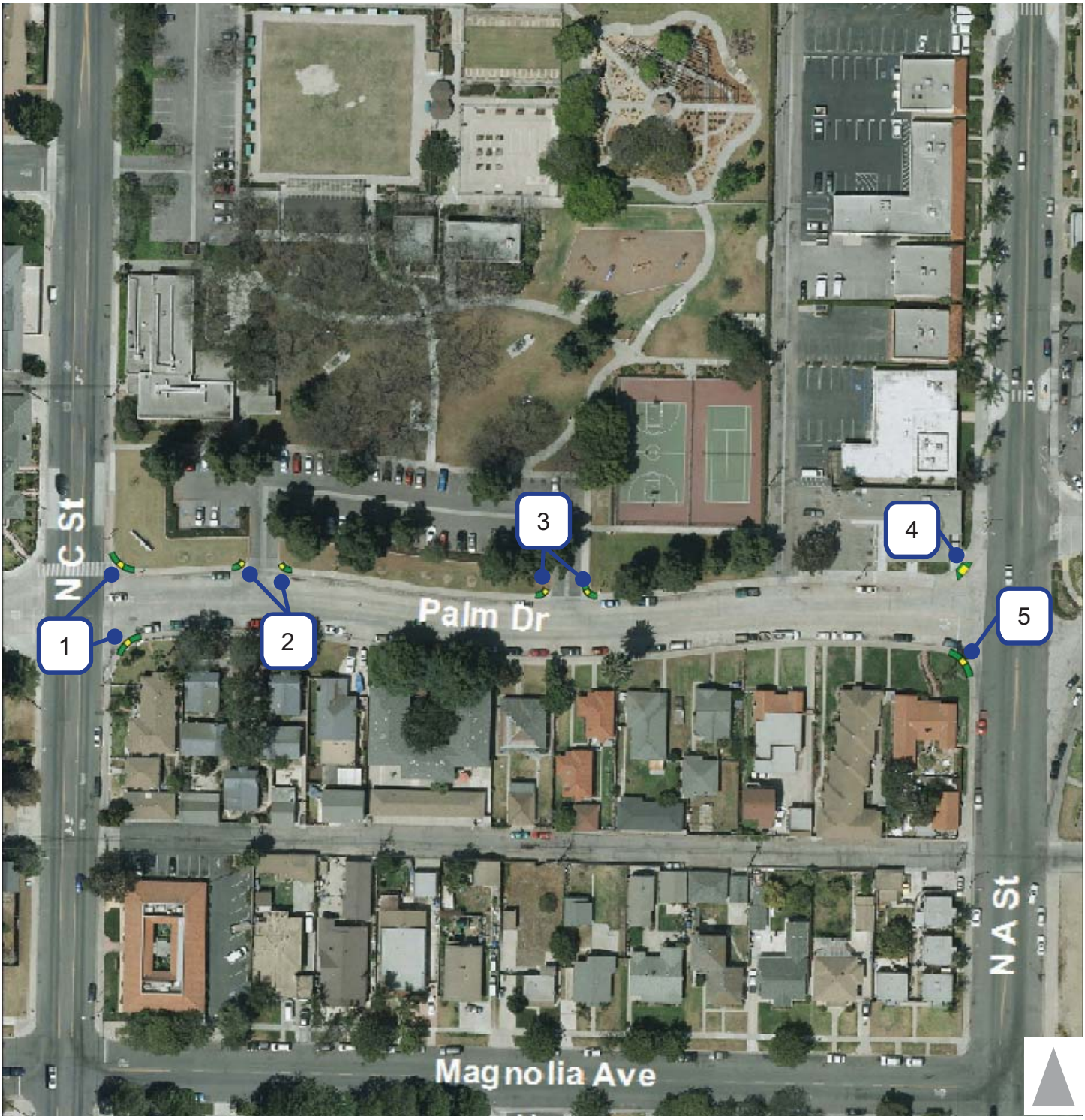
Subject: ***Project Sheets – Conceptual Plans & Graphics***

INTRODUCTION

This section provides conceptual planning for the top 10 areas out of the 14 identified areas in this report sorted by their ADA Severity Average. The conceptual plans provide recommendations to address ADA deficiencies at each location as well as improve general pedestrian environment by increasing safety and comfort for people walking. To supplement these recommendations, the conceptual plans cite relevant design standards, note potential funding sources and provide preliminary cost estimates to address all ADA deficiencies identified.

None of the 10 identified areas were specifically addressed in the 2012 Bicycle and Pedestrian Facilities Master Plan (BPFMP) thus no information from the BPFMP is included in the following project sheets.

Note: Refer to Appendix A for all assumptions and details used to development preliminary cost estimates for each area.



1	Install 2 new parallel curb ramps	3	Install 2 new parallel curb ramp	5	Install new parallel curb ramp
2	Install 2 new parallel curb ramps	4	Install new perpen-dicular curb ramp		

SALLY SWANSON ARCHITECTS, INC.

Area 1

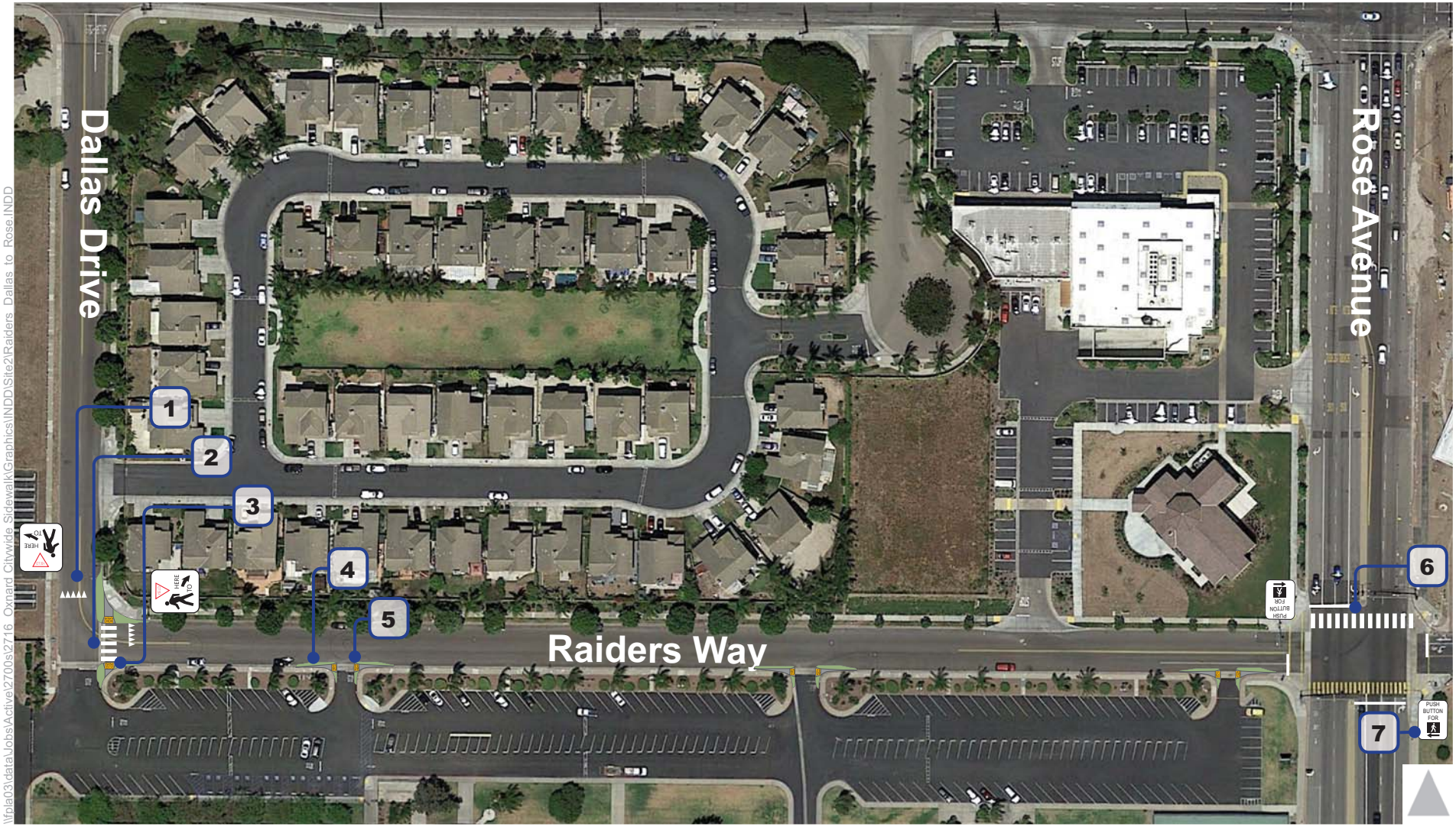
Palm Drive from A Street to C Street

1. Palm Drive from A Street to C Street

Recommendations for Palm Drive from A Street to C Street include:

- Reconstruct curb ramps along Palm Drive comply with ADA
- Install new curb ramps at Palm Drive and A Street
- Tighten curb radius as part of ramp reconstruction at Palm Drive and A Street (NW corner)

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $7,951 Medium - $13,032 High - $36,710 (See Appendix A for assumptions and detail.)	SCHEDULE



1 Yield limit lines

2 High visibility crosswalk

3 Truncated dome ramp surfaces

4 Curb ramps on southern side of Raiders Way

5 Curb extensions

6 High visibility crosswalk

7 Accessible push buttons

+ Repaired gutter lips

+ Repaired ramp slopes

Area 2

Raiders Way from Dallas Drive to Rose Avenue

2. Raiders Way from Dallas Drive to Rose Avenue

Recommendations for Raiders Way from Dallas Drive to Rose Avenue include:

- Construct curb ramps along south side at driveways to provide continuous access along the sidewalk
- Upgrade pedestrian push buttons at Rose Avenue to meet ADA compliance
- Install high visibility crosswalk across Rose Avenue (N) at Raiders Way
- Construct curb ramp at Dallas Drive and Raiders Way (SE corner) to provide direct access to Oxnard High School from the north and west
- Install high visibility crosswalk across Raiders Way at Dallas Drive in conjunction with curb ramp described above

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $37,183 Medium - $49,235 High - $79,060 (See Appendix A for assumptions and detail.)	SCHEDULE

\\fpla03\data\Jobs\Active\2700s\2716_Oxnard Citywide Sidewalk\Graphics\INDD\ Site3_Mandalay_Falkirk_to_CostadeOro.INDD

1 Yield limit lines	**3** Curb extensions	**5** Reconstructed curb ramps	+ Repaired gutter lips
2 High visibility tapered crosswalk	**4** Truncated dome ramp surfaces	**A** Alternate crosswalk location	+ Repaired ramp slopes

Area 3

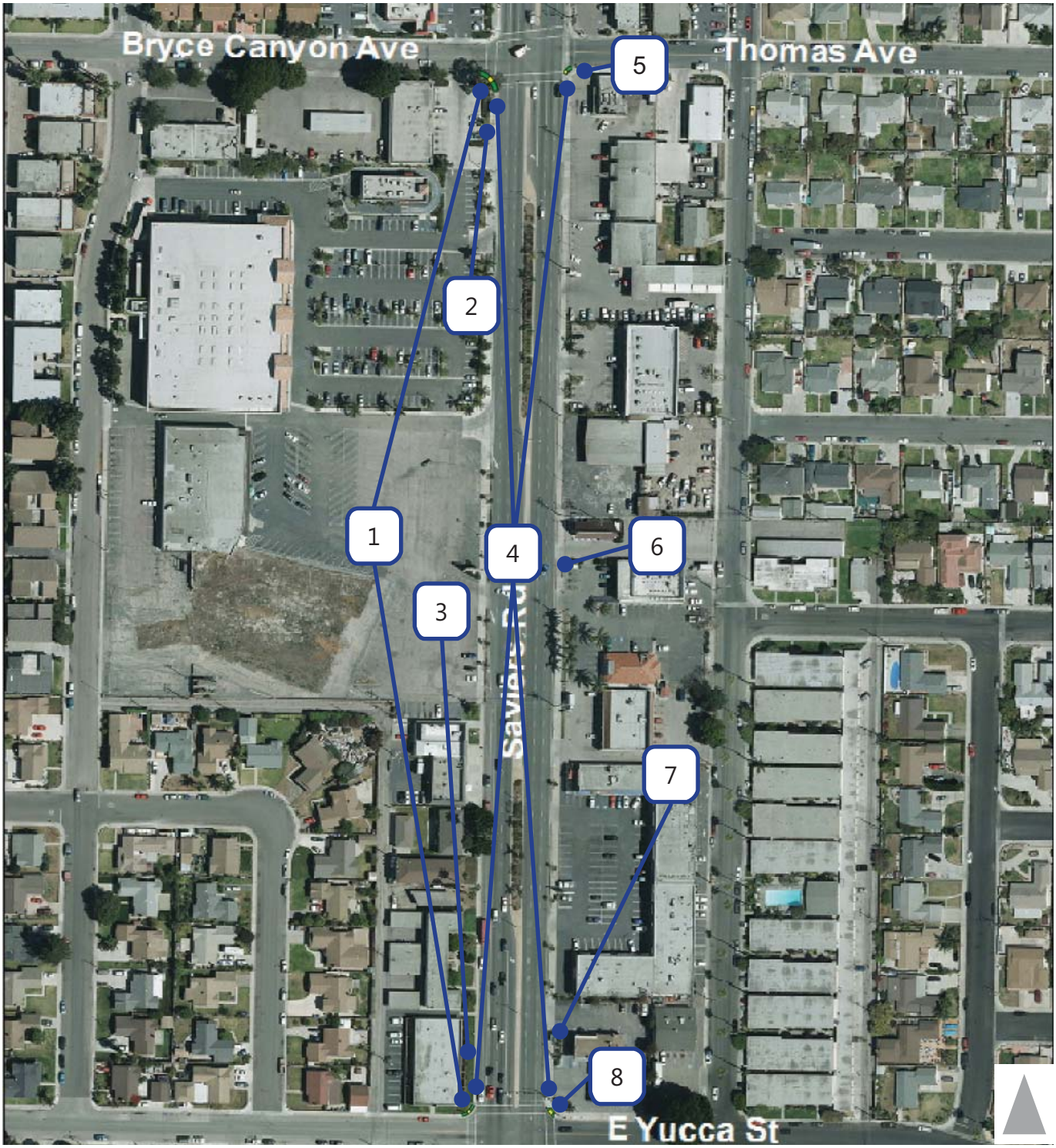
Mandalay Beach Road from Falkirk Avenue to Costa de Oro

3. Mandalay Beach Road from Falkirk Avenue to Costa de Oro

Recommendations for Mandalay Beach Road from Falkirk Avenue to Costa de Oro include:

- Reconstruct curb ramps at Mandalay Beach Road and Costa de Oro to meet ADA compliance
- Install curb extension and reconstruct curb ramp at mid-block crossing (NE) to provide additional visibility, shorten crossing distance, attain ADA compliance, and retain drainage
- Install high visibility crosswalk at mid-block crossing, including wider tapering continental striping with contrast markings
- Install yield markings in advance of the mid-block crossing

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $15,308 Medium - $21,184 High - $36,155 (See Appendix A for assumptions and detail.)	SCHEDULE



1	Install new parallel curb ramps	3	Install new perpendicular curb ramp	5	Install new blended transition	7	Provide new clear floor space at bus stop
2	Relocate bench under bus shelter	4	Install new pedestrian pushbuttons	6	Provide new bus stop boarding area	8	Provide new bus stop pad

SALLY SWANSON ARCHITECTS, INC.

Area 4

Saviers Road from Thomas Avenue to Yucca Street

4. Saviers Road from Thomas Avenue to Yucca Street

Recommendations for Saviers Road from Thomas Avenue to Yucca Street include:

- Upgrade bus stops to meet ADA compliance
- Reconstruct curb ramps to meet ADA compliance
- Upgrade pedestrian push buttons to meet ADA compliance
- Install curb extensions
- Install high-visibility crosswalks
- Increase crossing time

CRASH REDUCTION FACTORS

Between 2008 and 2014, eight pedestrian collisions were reported between Thomas Avenue and Yucca Street on Saviers Road. Five of these collisions occurred as a result of a violation of the pedestrian right of way, one occurred because of improper turning, one because of unsafe speed, and one because of driving under the influence of alcohol or drugs. Interventions that reduce collision risk should be prioritized, including curb extensions to shorten crossing distances, signal modifications to give pedestrians more time to cross and reduce conflicts with turning vehicles, or potentially a road diet to reduce the number of travel lanes to three (one in each direction plus a center turning lane).

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $24,825 Medium - $29,949 High - $35,072 (See Appendix A for assumptions and detail.)	SCHEDULE

1 High visibility crosswalk

2 Truncated dome ramp surfaces

3 Accessible push buttons

4 Curb extensions

5 New curb ramp

+ Repaired gutter lips

+ Repaired ramp slopes

Area 5

Ninth Street from C Street to B Street

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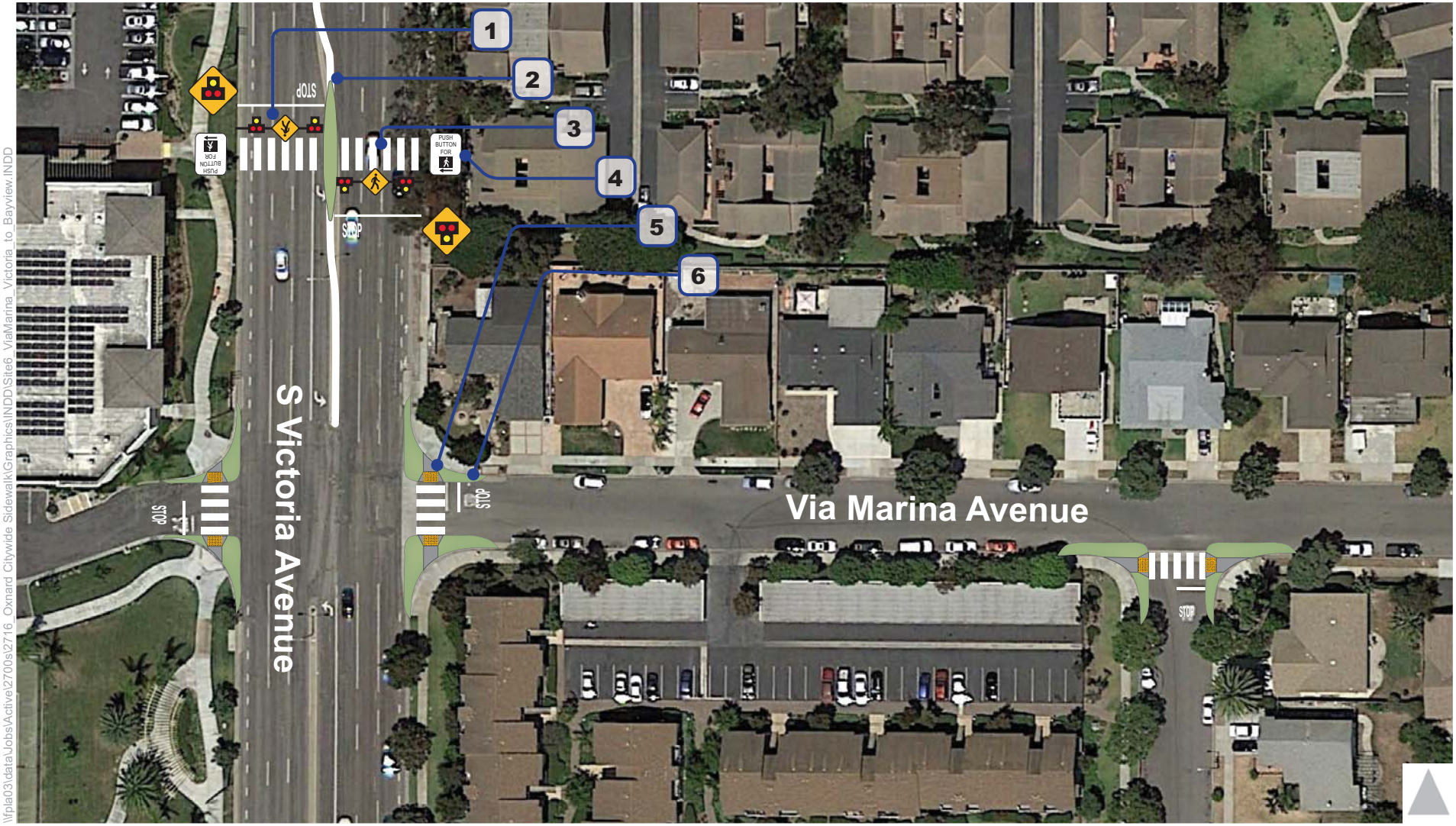
5. Ninth Street from C Street to B Street

Recommendations for Ninth Street from C Street to B Street include:

- Construct curb ramp at B Street (S)
- Construct curb extensions at B Street and Ninth Street
- Reconstruct curb ramp at B Street (N)
- Reconstruct curb ramps at Ninth Street and C Street
- Refresh all paint markings
- Upgrade pedestrian push buttons at Ninth Street and C Street

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $33,649 Medium - $45,176 High - $83,013 (See Appendix A for assumptions and detail.)	SCHEDULE



1 Pedestrian hybrid beacon

2 Realigned turn lane

3 High visibility crosswalk

4 Accessible push buttons

5 Truncated dome ramp surfaces

6 Curb extensions

+ Repaired gutter lips

+ Repaired ramp slopes

Area 6

Via Marina Avenue from Victoria Avenue to Bayview Drive

6. Via Marina Avenue from Victoria Avenue to Bayview Drive

Recommendations for Via Marina Avenue from Victoria Avenue to Bayview Drive include:

- Upgrade curb ramp on Via Marina Avenue and Victoria Avenue (N) to comply with ADA
- Reconstruct curb ramps on south side of Via Marina Avenue to meet ADA compliance
- Repair sidewalks to address vertical change issues
- Pending further study, consider Pedestrian Hybrid Beacon (PHB) in conjunction with high visibility mid-block crossing treatment and raised pedestrian median at Via Marina Avenue and Victoria Avenue to improve access to commercial development, recreational, and coastal facilities.
    - More information about the PHB and examples can be seen here:
        - FHWA Guidance: http://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa14014/
        - Memphis, TN Example: https://www.youtube.com/watch?v=KRWFKBH5s7c
        - Delaware Example: https://www.youtube.com/watch?v=6_rym0bYINU
        - Tuscon, AZ Example: https://www.youtube.com/watch?v=ReNk2T5ay1c

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $181,454 Medium - $230,858 High - $274,190 (See Appendix A for assumptions and detail.)	SCHEDULE

1	Install new parallel curb ramp	3	Install 3 new perpendicular curb ramps and 3 new accessible pedestrian signals	5	Install new sidewalk and install new perpendicular curb ramp at driveway	7	Install new perpendicular curb ramp and new accessible pedestrian signal
2	Install new bus stop pad	4	Provide ADA compliant benches.	6	Install new parallel curb ramp and new accessible pedestrian signal		

SALLY SWANSON ARCHITECTS, INC.

Area 7

Esplanade Drive

7. Esplanade Drive north of Vineyard Avenue

Recommendations for Esplanade Drive north of Vineyard Avenue include:

- Construct sidewalk on west side to complete pedestrian network from where it currently terminates to Vineyard Avenue, including ADA-compliant curb ramp, crosswalk, and push button.
- Monitor and re-assess driveway crossing location after construction is complete – should have high visibility crosswalks across all 4 legs of the intersection with the driveways to Food4Less and the Esplanade shopping center and ADA-compliant curb ramps at the completion of the construction on the east side of Esplanade Drive.
- Pending further observation of pedestrian and vehicle flows and additional study, changes to the signal timing may have benefits for pedestrian and vehicle operations.
    - If the driveway is currently pre-timed, automatic pedestrian recall would allow pedestrians to receive the "WALK" signal whenever a vehicle gets the green light, and would enable the removal of pedestrian push buttons.
    - If the driveway is currently actuated, automatic pedestrian recall would allow pedestrians to receive the "WALK" signal whenever a vehicle gets the green light, but pedestrian push buttons would still be necessary to allow a pedestrian to recall a "WALK" signal when no vehicles are present.
- Monitor and re-assess any additional un-signalized mid-block crossings to ensure high visibility crosswalks, yield markings, and ADA-compliant curb ramps.
- Upgrade curb ramps at Esplanade Drive and Vineyard.

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.

PLANNING LEVEL COST ESTIMATE	SCHEDULE
Low - $10,930 Medium - $13,823 High - $19,585 (See Appendix A for assumptions and detail.)	

1	Install 2 new perpendicular curb ramps	3	Install new perpendicular curb ramp	5	Install 4 new accessible pedestrian signals	7	Regrade 2 curb ramps with slope issues and no flares
2	Regrade ramp and boarding area to remove slope issues	4	Install 2 truncated dome surfaces at 2 blended transitions	6	Install 4 new accessible pedestrian signals	8	Install new perpendicular curb ramp

SALLY SWANSON ARCHITECTS, INC.

Area 8

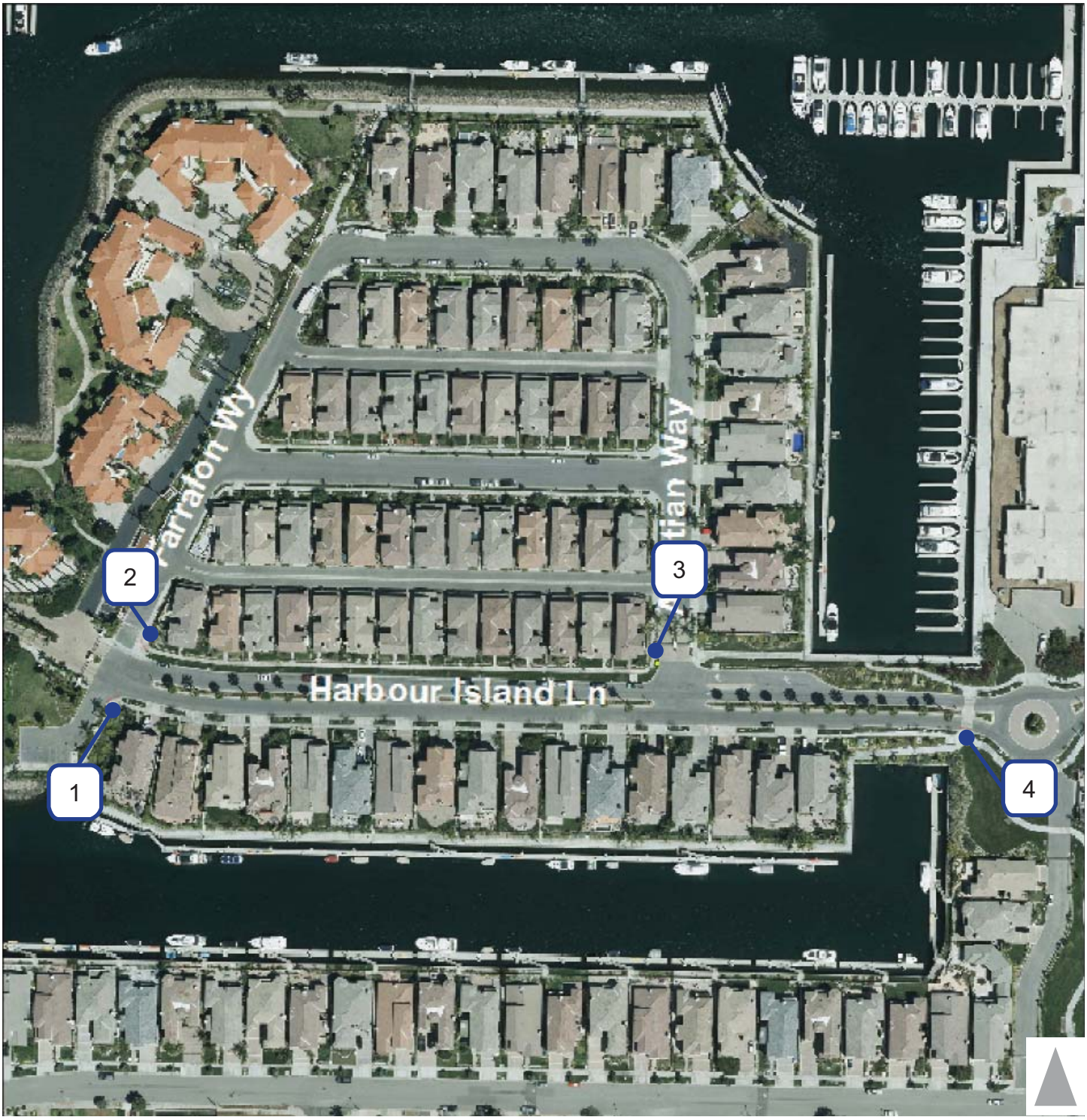
C Street & Second Street

8. C Street and Second Street

Recommendations for C Street and Second Street include:

- Upgrade curb ramps to meet ADA compliance
- Upgrade pedestrian push buttons to meet ADA compliance
- Upgrade bus stops to meet ADA compliance
- Repair sidewalks to address vertical change issues

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $8,212 Medium - $8,909 High - $9,970 (See Appendix A for assumptions and detail.)	SCHEDULE



1	**Provide a gutter landing area in front of the curb ramp**	3	**Install new perpendicular curb ramp**
2	**Provide flush transition from the curb ramp to the gutter area**	4	**Provide a gutter landing area in front of the curb ramp**

SALLY SWANSON ARCHITECTS, INC.

Area 9

Harbour Island Lane from Farralon Way to Aleutian Way

9. Harbour Island Lane from Farralon Way to Aleutian Way

Recommendations for Harbour Island Lane from Farralon Way to Aleutian Way include:

- Upgrade curb ramps to meet ADA compliance, including gutter landing area and flush transitions
- Install new curb ramp at Harbour Island Lane and Aleutian Way

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $1,096 Medium - $1,221 High - $1,346 (See Appendix A for assumptions and detail.)	SCHEDULE

1	Install 4 new perpendicular curb ramps	3	Install new accessible pedestrian signals	6	Repave and provide clear space and non-sloped boarding area	8	Install truncated dome surfaces at each curb ramp at intersection
2	Install new accessible pedestrian signals	4	Install 2 truncated dome surfaces at 2 perpendicular curb ramps	7	Install new perpendicular curb ramp	9	Demolish nonessential curb ramp
		5	Install new accessible pedestrian signals and repave area near it				

SALLY SWANSON ARCHITECTS, INC.

Area 10

B Street & Third Street

10. B Street from Third Street to Fourth Street

Recommendations for B Street from Third Street to Fourth Street include:

- Upgrade curb ramps to meet ADA compliance
- Upgrade pedestrian push buttons to meet ADA compliance
- Remove extra curb ramp at Fourth Street and B Street (NE)

DESIGN STANDARDS AND GUIDANCE	POTENTIAL FUNDING SOURCES
• NACTO Urban Street Design Guide – Curb Extensions (nacto.org/publication/urban-street-design-guide/) • ADA Best Practices Tool Kit for State and Local Governments – Chapter 6: Curb Ramps and Pedestrian Crossings (www.ada.gov/pcatoolkit/chap6toolkit.htm) • Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way – Chapter R3: Technical Requirements (www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapte-r3-technical-requirements)	• General Fund Capital Improvement Program • Transportation Development Act, Article 3 – Competitive Grants for Pedestrian and Bicycle Facilities and Improvements (VCTC) • Air Pollution Buy-down Fee Fund • Congestion Mitigation Air Quality Improvement (CMAQ) Grant • California Active Transportation Program • Federal Surface Transportation Funding Additional funding sources are detailed in Chapter 7 of the 2012 Bicycle and Pedestrian Facilities Master Plan.
PLANNING LEVEL COST ESTIMATE Low - $6,992 Medium - $11,687 High - $38,222 (See Appendix A for assumptions and detail.)	SCHEDULE

ATTACHMENT A – COST ESTIMATE DETAIL

Oxnard Sidewalk Survey
Planning Level Cost Estimate
Updated 11/20/15

#	Project	Segment/Intersection	Directional Location (if applicable)	Proposed Treatment	Units	Unit Cost (Low)	Unit Cost (Medium)	Unit Cost (High)	Total Estimated Cost (Low)	Total Estimated Cost (Medium)	Total Estimated Cost (High)
1	Palm Drive	A St to C St		Curb ramps (construct new)	8	$ 500	$ 563	$ 625	$ 4,000	$ 4,500	$ 5,000
				Truncated Dome Ramp Surfaces	96	$ 6	$ 42	$ 260	$ 576	$ 4,032	$ 24,960
				Tighten Curb Radius at NE corner - Palm & A St	75	$ 45	$ 60	$ 90	$ 3,375	$ 4,500	$ 6,750
								Project Total	$ 7,951	$ 13,032	$ 36,710
2	Raiders Way	Dallas Dr to Rose Ave		Curb ramps (construct new)	6	$ 500	$ 563	$ 625	$ 3,000	$ 3,375	$ 3,750
		Dallas Dr to Rose Ave		Curb extension	6	$ 3,333	$ 4,167	$ 5,000	$ 20,000	$ 25,000	$ 30,000
		Dallas Dr to Rose Ave		Truncated Dome Ramp Surfaces	72	$ 6	$ 42	$ 260	$ 432	$ 3,024	$ 18,720
		Raiders Way and Rose Ave		Ped push buttons (install new/upgrade)	4	$ 400	$ 400	$ 400	$ 1,600	$ 1,600	$ 1,600
		Raiders Way and Rose Ave	North	High-visability crosswalk (install)	900	$ 3.0	$ 4	$ 5	$ 2,700	$ 3,600	$ 4,500
		Dallas Dr/Raiders Way	Southeast corner	Curb ramps (construct new)	2	$ 500	$ 563	$ 625	$ 1,000	$ 1,125	$ 1,250
		Dallas Dr/Raiders Way		Curb extension	2	$ 3,333	$ 4,167	$ 5,000	$ 6,667	$ 8,333	$ 10,000
		Dallas Dr/Raiders Way		Yield markings	2	$ 100	$ 100	$ 100	$ 200	$ 200	$ 200
		Dallas Dr/Raiders Way		Yield to pedestrian signs	2	$ 150	$ 270	$ 450	$ 300	$ 540	$ 900
		Dallas Dr/Raiders Way		Truncated Dome Ramp Surfaces	24	$ 6	$ 42	$ 260	$ 144	$ 1,008	$ 6,240
		Raiders Way/Dallas Dr	Across Raiders Way	High-visability crosswalk (install)	380	$ 3.0	$ 4	$ 5	$ 1,140	$ 1,520	$ 1,900
								Project Total	$ 37,183	$ 49,325	$ 79,060
3	Mandalay Beach Rd	Falkirk Ave to Costa de Oro	Mid-block crossing, northeast side	Curb extension	1	$ 3,333	$ 4,167	$ 5,000	$ 3,333	$ 4,167	$ 5,000
		Falkirk Ave to Costa de Oro	Mid-block crossing, northeast side	Curb ramps (modify existing)	1	$ 500	$ 563	$ 625	$ 500	$ 563	$ 625
		Falkirk Ave to Costa de Oro		High-visability crosswalks (install) (2)	740	$ 3.0	$ 4	$ 5	$ 2,220	$ 2,960	$ 3,700
		Falkirk Ave to Costa de Oro		Yield markings	4	$ 100	$ 100	$ 100	$ 400	$ 400	$ 400
		Falkirk Ave to Costa de Oro		Truncated Dome Ramp Surfaces	24	$ 6	$ 42	$ 260	$ 144	$ 1,008	$ 6,240
		Falkirk Ave to Costa de Oro		Pedestrian signs	6	$ 150	$ 270	$ 450	$ 900	$ 1,620	$ 2,700
		Mandalay Beach Rd/Costa de Oro		Truncated Dome Ramp Surfaces	24	$ 6	$ 42	$ 260	$ 144	$ 1,008	$ 6,240
		Mandalay Beach Rd/Costa de Oro		Curb extension	2	$ 3,333	$ 4,167	$ 5,000	$ 6,667	$ 8,333	$ 10,000
		Mandalay Beach Rd/Costa de Oro		Curb ramps (modify existing)	2	$ 500	$ 563	$ 625	$ 1,000	$ 1,125	$ 1,250
								Project Total	$ 15,308	$ 21,184	$ 36,155
4	Saviers Rd	Thomas Ave to Yucca St		High-visability crosswalk (install)	4040	$ 3	$ 4	$ 5	$ 12,120	$ 16,160	$ 20,200
		Thomas Ave to Yucca St		Curb ramps (construct new)	4	$ 500	$ 563	$ 625	$ 2,000	$ 2,250	$ 2,500
		Thomas Ave to Yucca St		Ped push buttons (install new/upgrade)	16	$ 400	$ 400	$ 400	$ 6,400	$ 6,400	$ 6,400
		Thomas Ave to Yucca St		Curb extension	1	$ 3,333	$ 4,167	$ 5,000	$ 3,333	$ 4,167	$ 5,000
		Thomas Ave to Yucca St		New Bus Stop Pad	48	$ 20	$ 20	$ 20	$ 960	$ 960	$ 960
		Thomas Ave to Yucca St		Upgrade bus stops (clear space, move bench)	12	$ 1	$ 1	$ 1	$ 12	$ 12	$ 12
								Project Total	$ 24,825	$ 29,949	$ 35,072
5	Ninth St	C St to B St		Refresh paint markings	84	$ 1	$ 1	$ 2	$ 42	$ 84	$ 168
		Ninth St/B St	South	Curb ramps (construct new)	12	$ 500	$ 563	$ 625	$ 6,000	$ 6,750	$ 7,500
		Ninth St/B St		Curb extension	6	$ 3,333	$ 4,167	$ 5,000	$ 20,000	$ 25,000	$ 30,000
		Ninth St/C St		High-visability crosswalk (install)	431	$ 3	$ 4	$ 5	$ 1,293	$ 1,724	$ 2,155
		Ninth St/C St		Truncated Dome Ramp Surfaces	144	$ 6	$ 42	$ 260	$ 864	$ 6,048	$ 37,440
		Ninth St/C St		Yield to pedestrian signs	1	$ 150	$ 270	$ 450	$ 150	$ 270	$ 450
		Ninth St/C St		Yield markings	1	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100
		Ninth St/C St		Ped push buttons (install new/upgrade)	13	$ 400	$ 400	$ 400	$ 5,200	$ 5,200	$ 5,200
								Project Total	$ 33,649	$ 45,176	$ 83,013

Oxnard Sidewalk Survey
Planning Level Cost Estimate
Updated 11/20/15

#	Project	Segment/Intersection	Directional Location (if applicable)	Proposed Treatment	Units	Unit Cost (Low)	Unit Cost (Medium)	Unit Cost (High)	Total Estimated Cost (Low)	Total Estimated Cost (Medium)	Total Estimated Cost (High)
6	Via Marina Ave	Via Marina Ave/Victoria Ave		High-visability crosswalk (install)	870	$ 3	$ 4	$ 5	$ 2,610	$ 3,480	$ 4,350
		Via Marina Ave/Victoria Ave		Truncated Dome Ramp Surfaces	4	$ 6	$ 42	$ 260	$ 24	$ 168	$ 1,040
		Victoria Ave to Bayview Dr	South	Curb ramps (modify existing)	4	$ 500	$ 563	$ 625	$ 2,000	$ 2,250	$ 2,500
		Victoria Midblock		High-visability crosswalk (install)	940	$ 3	$ 4	$ 5	$ 2,820	$ 3,760	$ 4,700
		Victoria Midblock		Refresh paint markings (realigned right turn lane)	400	$ 1	$ 1	$ 2	$ 200	$ 400	$ 800
		Victoria Midblock		Ped push buttons (install)	2	$ 400	$ 400	$ 400	$ 800	$ 800	$ 800
		Via Marina Ave/Victoria Ave		Pedestrian Hybrid Beacon	2	$ 86,500	$ 110,000	$ 130,000	$ 173,000	$ 220,000	$ 260,000
								Project Total	$ 181,454	$ 230,858	$ 274,190
7	Esplanade Dr	North of Vineyard Ave	West	Construct sidewalks	350	$ 7	$ 9	$ 10	$ 2,450	$ 2,975	$ 3,500
		North of Vineyard Ave	West	Curb ramps (construct new)	7	$ 500	$ 563	$ 625	$ 3,500	$ 3,938	$ 4,375
		North of Vineyard Ave	West	Ped push buttons (install new/upgrade)	5	$ 400	$ 400	$ 400	$ 2,000	$ 2,000	$ 2,000
		North of Vineyard Ave		New Bus Stop Pad	48	$ 20	$ 20	$ 20	$ 960	$ 960	$ 960
		North of Vineyard Ave		New bench	1	$ 220	$ 1,550	$ 5,750	$ 220	$ 1,550	$ 5,750
		At Driveway		High-visability crosswalk (install)	600	$ 3	$ 4	$ 5	$ 1,800	$ 2,400	$ 3,000
								Project Total	$ 10,930	$ 13,823	$ 19,585
8	C St and Second St	C St and Second St		Curb ramps (modify existing)	2	$ 500	$ 563	$ 625	$ 1,000	$ 1,125	$ 1,250
		C St and Second St		Curb ramps (construct new)	4	$ 500	$ 563	$ 625	$ 2,000	$ 2,250	$ 2,500
		C St and Second St		Ped push buttons (install new/upgrade)	8	$ 400	$ 400	$ 400	$ 3,200	$ 3,200	$ 3,200
		C St and Second St		Truncated Dome Ramp Surfaces	2	$ 6	$ 42	$ 260	$ 12	$ 84	$ 520
		B St and Second St		Curb ramps (modify existing)	1	$ 500	$ 563	$ 625	$ 500	$ 563	$ 625
		B St and Second St		Curb ramps (construct new)	1	$ 500	$ 563	$ 625	$ 500	$ 563	$ 625
		C St and First St		Curb ramps (construct new)	2	$ 500	$ 563	$ 625	$ 1,000	$ 1,125	$ 1,250
								Project Total	$ 8,212	$ 8,909	$ 9,970
9	Harbor Island Lane	Farralon Way to Aleutian Way		Curb ramps (construct new)	2	$ 500	$ 563	$ 625	$ 1,000	$ 1,125	$ 1,250
		Harbor Island Lane (south side)		New gutter landing area	24	$ 4	$ 4	$ 4	$ 96	$ 96	$ 96
								Project Total	$ 1,096	$ 1,221	$ 1,346
10	B St	Third St/B St		Ped push buttons (install new/upgrade)	8	$ 400	$ 400	$ 400	$ 3,200	$ 3,200	$ 3,200
		Third St/B St		Curb ramps (construct new)	4	$ 500	$ 563	$ 625	$ 2,000	$ 2,250	$ 2,500
		Third St/B St		Truncated Dome Ramp Surfaces	24	$ 6	$ 42	$ 260	$ 144	$ 1,008	$ 6,240
		Fourth St/A St		Curb ramps (construct new)	2	$ 500	$ 563	$ 625	$ 1,000	$ 1,125	$ 1,250
		Third St		Upgrade bus stops (clear space)	48	$ 1	$ 1	$ 1	$ 48	$ 48	$ 48
		Fourth St/B St		Remove curb ramp	12	$ 2	$ 2	$ 2	$ 24	$ 24	$ 24
		Fourth St/B St		Truncated Dome Ramp Surfaces	96	$ 6	$ 42	$ 260	$ 576	$ 4,032	$ 24,960
				New Bus Stop Pad	48	$ 20	$ 20	$ 20	$ 960	$ 960	$ 960
								Project Total	$ 6,992	$ 11,687	$ 38,222
								Grand Total	$ 327,600	$ 425,163	$ 613,323

Treatment Types and Unit Cost

Item:	Units	Unit Cost Low	Unit Cost Medium	Unit Cost High	Source
High-viz crosswalk (New or restripe)	Per SF	$ 3	$ 4	$ 5	BP EAP - SANDAG
Puffin signals	Each	$ 150	$ 150	$ 150	FP SRTS - SANDAG
Pedestrian Hybrid Beacon	Each	$ 86,500	$ 110,000	$ 130,000	BP EAP - SANDAG
Curb extensions	Per extension	$ 3,333	$ 4,167	$ 5,000	FP SRTS
Curb ramps (construct new)	Per ramp	$ 500	$ 563	$ 625	FP Civil Eng
Curb ramps (modify existing)	Per ramp	$ 500	$ 563	$ 625	FP Civil Eng
Repair sidewalks	Per SF	$ 9	$ 12	$ 15	FP Civil Eng
Ped push buttons (install new/upgrade)	Each	$ 400	$ 400	$ 400	ATP Network Cost Est
Upgrade bus stops (clear space)	Per SF	$ 1	$ 1	$ 1	FP ENG CIVIL - SANDAG
Refresh paint markings	Per LF	$ 0.50	$ 1.00	$ 2.00	BP EAP - SANDAG
Construct new sidewalks	Per SF	$ 7	$ 9	$ 10	FP Civil Eng
Yield markings	Each	$ 100	$ 100	$ 100	FP SRTS - SANDAG
Median Refuge Island	Per LF	$ 18	$ 25	$ 30	FP Civil Eng
Truncated Dome Ramp Surfaces	Per SF	$ 6	$ 42	$ 260	Zegeer
New Bus Stop Pad	Per SF	$ 20	$ 20	$ 20	FP ENG CIVIL - SANDAG
New bench	Each	$ 220	$ 1,550	$ 5,750	Zegeer
New gutter landing area	Per SF	$ 4	$ 4	$ 4	FP ENG CIVIL - SANDAG
Remove curb ramp	Per SF	$ 2	$ 2	$ 2	FP ENG CIVIL - SANDAG
Yield to pedestrian signs	Each	$ 150	$ 270	$ 450	FP SRTS - SANDAG

ATTACHMENT B – CITY MAP (PRE-1992)

Parcels with Buildings <= 1992

City of Ventura

County of Ventura

Santa Clara River

Oxnard Airport

Mandalay Beach

Oxnard Shores

PACIFIC OCEAN

Hollywood Beach

Channel Islands Harbor

Silver Strand

Port Hueneme Harbor

Ormond Beach

US Naval Base Ventura County Port Hueneme

City of Port Hueneme

Legend

- Parcels with Buildings <= 1992
- MOBILE HOME PARK

Streets

- PRIVATE
- PUBLIC

PUBLIC FACILITIES

FACILITYTYPE

- CITY FACILITY
- FIRE STATION
- HOSPITAL
- PARK
- SCHOOL

NUMBER - MOBILE HOME PARK NAME

1. WAGON WHEEL TRAILER LODGE
2. MEADOW LAKE MH COUNTRY CLUB
3. ROYAL DUKE MOBILE HOME ESTATES
4. EVERGREEN TRAILER PARK
5. PLAZA MHP
6. OWL MHP
7. SUNSHINE MANOR TRAILOR PARK
8. OXNARD SHORES MHP
9. ROYAL PALMS MHP
10. OXNARD MOBILE HOME LODGE
11. KONAKAI MOBILE ESTATES
12. CHANNEL ISLANDS MHP
13. IMPERIAL OXNARD MOBILE ESTATES
14. THE COLONY MHP
15. VILLA CAPRI MHP
16. PLEASANT VALLEY MHP
17. CYPRESS TRAILER PARK
18. COUNTRY CLUB MOBILE HOME ESTATES
19. OCEANAIRE MOBILE ESTATES
20. OXNARD PACIFIC MOBILE ESTATES
21. SILVER WHEEL RANCH MHP
22. SUNNY ACRES MHP
23. COUNTRY SQUIRE MHP

0 1,200 2,400 Feet

0 1 2 Miles

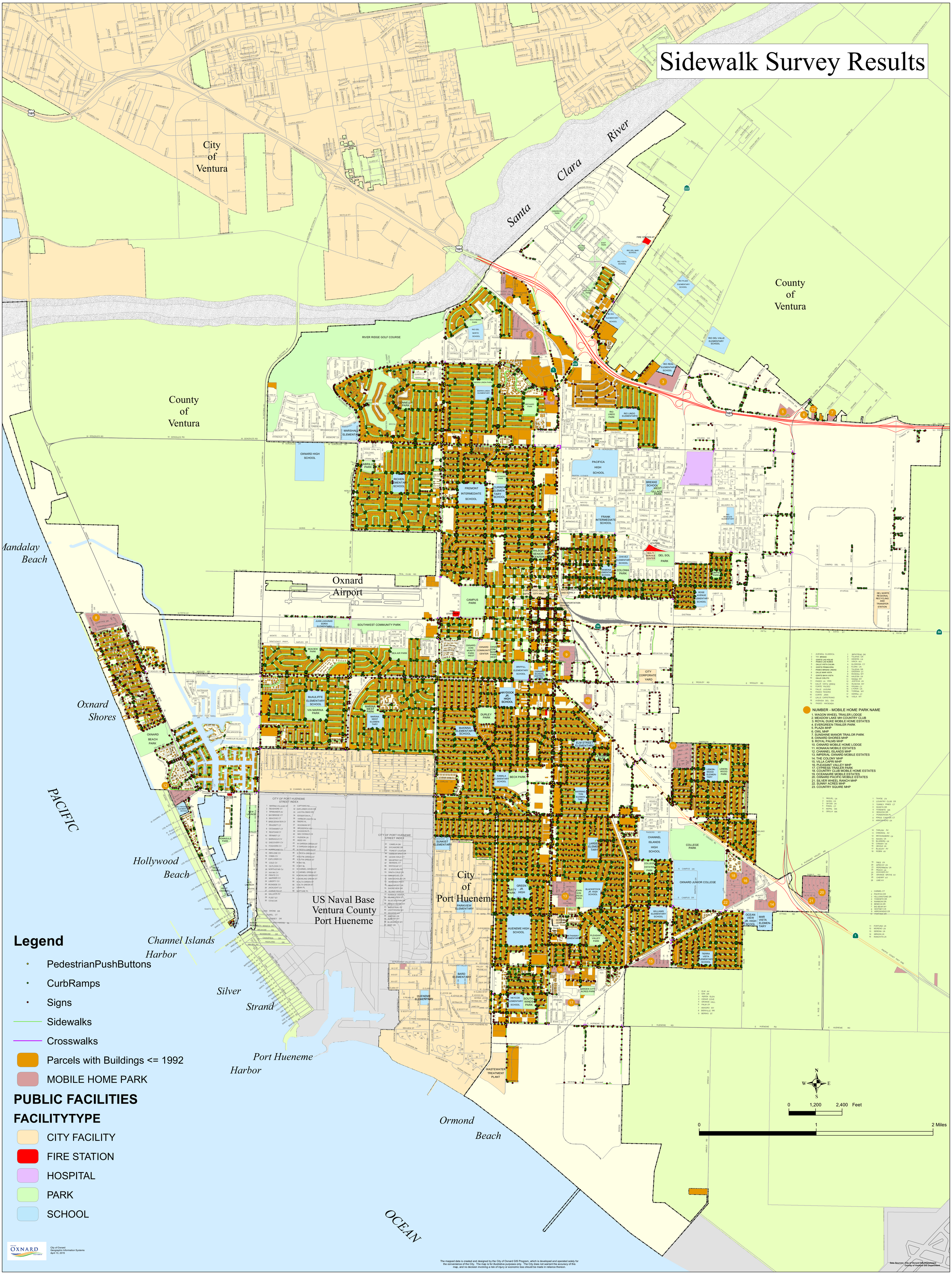
City of Oxnard
Geographic Information Systems
July 31, 2014

The mapped data is created and designed by the City of Oxnard GIS Program, which is developed and operated solely for the convenience of the City. The map is for illustrative purposes only. The City does not warrant the accuracy of this map, and no decision involving a risk of injury or economic loss should be made in reliance thereon.

Data Sources: City of Oxnard GIS Department
County of Ventura GIS Department

ATTACHMENT C – RESULTS MAP (INCLUDING ALL FEATURES)

Sidewalk Survey Results



ATTACHMENT D – PUBLIC COMMENT AND RESPONSE

MEMORANDUM

Date: 11/11/2015

To: City of Oxnard

From: Sally Swanson Architects Inc.
Fehr & Peers

Subject: ***Public Comment and Response***

INTRODUCTION

On October 7, 2015, the Inter-Neighborhood Council Organization (INCO) as part of their general meeting, met with the City of Oxnard, Sally Swanson Architects, Inc., and Fehr & Peers to discuss the Citywide Sidewalk Survey project. At this meeting, comments from the public were taken and additional comments were also taken from the public after the meeting via email. All comments were incorporated into the final report where applicable and relevant.

PUBLIC COMMENTS

The following are comments (not all inclusive) taken from the public at the INCO meeting that took place on October 7, 2015. Sally Swanson Architects' and Fehr & Peers' responses are highlighted in green.

- Longer countdown timers are needed for crossing Saviers Blvd
  - This comment has been incorporated into the report for Area 4 of the Project Sheets
- Sidewalk issues at Channel Islands and Knoll
- Long distance buses create lots of foot traffic at Oxnard Blvd and 5th St
- 9th and Driffel – north of the 5 points intersection – no marked crosswalk outside mobile home park by Oxnard Blvd
- Oxnard Blvd between 5th St and the 5 points intersection – sidewalk issues

- Ramps are in bad shape along Oxnard Blvd between 5 points intersection and 3rd St
- Sidewalk issues at Oxnard and 8th St
- 435 S. E Street has sidewalk issues
- Broken and missing sidewalks on E Street between 6th and 7th
- Sidewalk issues along 700 block of D Street

The following are comments taken from the public via email:

As a previous member of the City Planning Commission, I occasionally review projects and planned developments in the city, mostly for my own benefit.

While reviewing the draft report for the proposed City Sidewalk Report, I couldn't help but notice the extreme disparity in the anticipated budget costs. It's apparent the bulk of disparity stems from the installation of "High Visibility Crosswalks". According to the customary design criteria for these crosswalks I can only imagine the main reason for the enormous cost differential would only occur if special design features, ie: brick, stone, lighting strips, etc were incorporated into the design. Although the use of such features is aesthetically pleasing to the eye, the actual safety benefit of these features is highly questionable.

I would hope that the City Staff and Report Consultants take this into consideration and re-evaluate the actual costs for the installations of the noted improvements.

- Cost estimates for high visibility crosswalks have been modified in the report to be a square-footage based cost estimate rather than fixed costs. The resulting changes makes the resulting range between low to high not as disparate. These changes have modified the cost estimates for Areas 1-7 in the Project Sheets.

To save city sidewalks, choose appropriate street trees as mentioned in the report under Design Policies and Development Standards. Consider replacing many of the Magnolia trees that produce copious amounts of leaf and seed pod litter while, more importantly, lifting the nearby sidewalks. The same goes for any surface root tree.

Is it cheaper to replace the trees now or pay the inevitable maintenance cost and potential trip-and-fall claims? I'll vote for the former since it would reduce my maintenance labor.

- Typically, the costs to initiate preventative measures is overall cheaper than the inevitable costs later invoked by potential repairs and claims. For preventative measures to function efficiently though, require an infrastructure that can properly plan and allocate resources to maximize preventative care. As discussed under Design Policies and Development Standards, the City should develop guidelines, policies, and standards which work to target these issues.

Fifth Street between C Street and H Street is not wide enough to accommodate both on street parking and a bicycle lane. In order to install a bicycle lane parking on this roadway segment would have to be prohibited. I'm certain not all the residents living on Fifth Street would agree to that.

Pedestrian Sidewalk on 5th street North side between G and alley needs repair. The sidewalk is raised and is a trip hazard. It is also highly used by pedestrians and cyclists and disabled people on scooters and such.

Also highly recommended is a solid white line of striping on the street for parking (that is legal and utilized) and to give pedestrians and cyclists a protective lane from cars. The striping should be from H street to C street in both sides of 5th street. Vehicles hug the curb on 5th street (when there are no parked cars) making the single lane street into two lanes during rush hour and they travel faster than speed limit. Vehicles at stop sign on G Street and 5th street facing South are almost clipped by vehicles that make the single lane road into two lanes. Pedestrians and cyclists need to be protected.

I have just become aware of this project. I made an attempt to bring some problem curb-cuts, etc. to someone's attention once & no one knew who to call.

As an active handicapped person limited to an electric wheelchair, I get around many areas of Oxnard by sidewalk! I have encountered quite a few which are barely passable to completely impassable areas within a 0 - 3 mile area of my home. Some of which would be laughable if they were not so absolutely necessary for those of us who need to use them!

I would love to give input to the right people. I have transportation limitations, so getting to meetings, etc (especially after dark) is problematic.

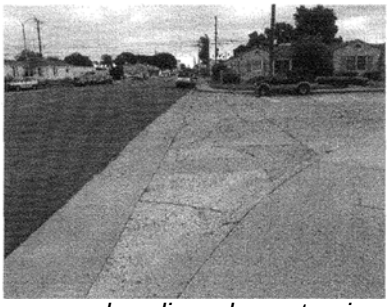
Kindly accept these comments on the city's Draft City Sidewalk Survey, which is currently available for public comment through November 5, 2015. I understand that the Draft Survey focuses on Americans with Disabilities (ADA) accommodations and sidewalk conditions. It is also my understanding (from our telephone conversation last week) that the Draft Survey is not, ironically enough, a study on "walkability" or the four main conditions normally associated with a good walking environment: convenience, safety, comfort and degree to which the walk is interesting. Nevertheless, the comments in this letter cannot avoid noting topics of "walkability" along with comments on specific items in the Draft Survey since sidewalks go together with walking and ADA concerns. Also, though my comments target specific areas noted in the Draft Survey, it is my hope that the observations can have broader consideration to other areas of the city.

North A Street at Palm
The Draft Survey notes the intersection of North A Street at Palm Drive. The intersection is in need of ADA curb ramps. This is true. But I am surprised that the report does not note the unusually wide curb radius of this intersection. The curb radius of North A at Palm is considerably wider than all other intersections on North A Street. This allows cars to turn onto Palm Drive at much higher speeds than at other intersections on A Street. The wider curb radius also means that people walking or using wheelchairs confront a wider intersection to cross

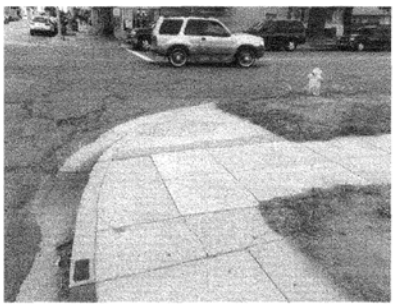
than others in this area. Because of these two factors, the intersection stands out as one that is markedly less safe for people on foot or in wheelchairs.

The following photos compare North A at Palm to North A at Magnolia, one block south, which is representative of other intersections on A Street.

North A Street at Palm Drive (wide curb radius, faster car speed, longer crossing)



North A Street at Magnolia Drive (sharper curb radius, slower turning, shorter crossing, typical of all other A Street intersections)



As an aside, if the city is going to the expense of building ADA curb ramps at this intersection, then perhaps it is money well spent to combine that effort with redoing the sidewalk to have a tighter curb radius.

Esplanade Drive
The Draft report notes several deficiencies on Esplanade Drive. Though many of those (not all) have been addressed with the completion of the new Food4Less grocery store, the Draft report does mention a need to monitor mid-block crossings.

Get rid of the "walk" button *at the new, three-way, signalized intersection of Esplanade and "Driveway." This is a shopping area bordered by parking lots, where it should be expected that people will walk. The intersection is also immediately next to two major bus stops for several busy Gold Coast and VISTA routes with people walking and using wheelchairs around the area. In short, Esplanade at Driveway is a pedestrian area in the highest degree. As such, I question the need for a pedestrian call button at all.*

The button forces people walking and those in wheelchairs to: first, reach the button - and to reach it in time for the next cycle of the light; second: perform an extra task to get across the street. If pedestrians and wheelchairs are known to be in this area of parking, shopping and public transportation, then the traffic light should anticipate pedestrians at each change of the light.

I urge the City in the strongest sense to take a lesson from downtown Oxnard and remove the "walk button" at Esplanade at Driveway. One of the things that makes downtown Oxnard such a walkable area is the fact that the signalized intersections do not use the walk button.

Images below show the Gold Coast and VISTA bus stops and pedestrian call buttons. Why are the buttons needed at these busy bus-stop locations?

Planning of pedestrian circulation could be better
The anticipated walking routes at this intersection could have been planned better. The approach to Food4Less at the intersection's east side delivers people walking or in wheelchairs directly into the path of cars exiting the parking lot.

From there, if one wants to walk to the store's entrance without walking in the car space, one must push a button, wait for the light, and use a 90-degree route rather than a straight diagonal route, similar to the pattern expected between the store's parking lot and entrance.

Left image: *People walking and in wheelchairs end up face-to-face with exiting cars at Food4Less (note the "don't walk" hand as I did not reach the button in time for the light to change; thus, had to wait an additional cycle of the light).*
Right image: *People walking and in wheelchairs face a poorly thought out route to the Food4Less entrance.*

- These comments have been incorporated into the report for Areas 1 and 7 of the Project Sheets. In regards to Esplanade Drive, an engineering study should be conducted to determine whether a passive/pre-timed pedestrian detection device is suitable for the proposed intersection in lieu of an actuated pedestrian push button. This study should be conducted when all construction is done and all stores in the area are up and running to observe the operational effects of these options to both pedestrians and vehicles.

Our traffic engineering staff commented that a mid-block crosswalk on a 45-50 mph roadway, with bike lanes and 6 lanes of traffic is not considered safe. I think this refers to the mid-block crossing for the Area 6 Victoria and Via Marina recommended improvements

- This comment has been incorporated into the report for Area 6 in the Project Sheets as a note for consideration when further studies are conducted. Clarification needs to be made that the crossing is recommended only in conjunction with a Pedestrian Hybrid Beacon. Further guidance/details and examples of this treatment used on similar high-speed and/or multi-lane roads have been provided in the Project Sheet for Area 6.

CREDITS

CREDITS

This completion of this report is from the collaboration of efforts taken by staff from the City of Oxnard, Sally Swanson Architects, Inc., and Fehr & Peers.

City staff from the City of Oxnard included:

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Cynthia Daniels, Project Manager, Transportation Planning/Transit Services
James Combs, Assistant Planner, Planning Division
Jason Samonte, Traffic Engineer
Earnel Bihis, Assistant Traffic Engineer
Daniel Rydberg, Interim Public Works Director, Public Works Department
Dave Endelman, Geographic Information Systems Coordinator
Seth Potter, Programmer Analyst, Geographic Information Systems Division

Staff from Sally Swanson Architects, Inc. included:

Sally Swanson, AIA, Principal-in-Charge
Brad Becker, GIS Specialist
Jasper Kirsch, Access Survey Leader
Technical Staff

Staff from Fehr & Peers included:

Matt Benjamin, AICP, Regional Manager
Miguel Nunez, AICP, Senior Transportation Planner
Emily Duchon, ASLA, LEED AP, Senior Designer
Alex Rixey, Demand Modeling
Chelsea Richer, AICP, Transportation Planner