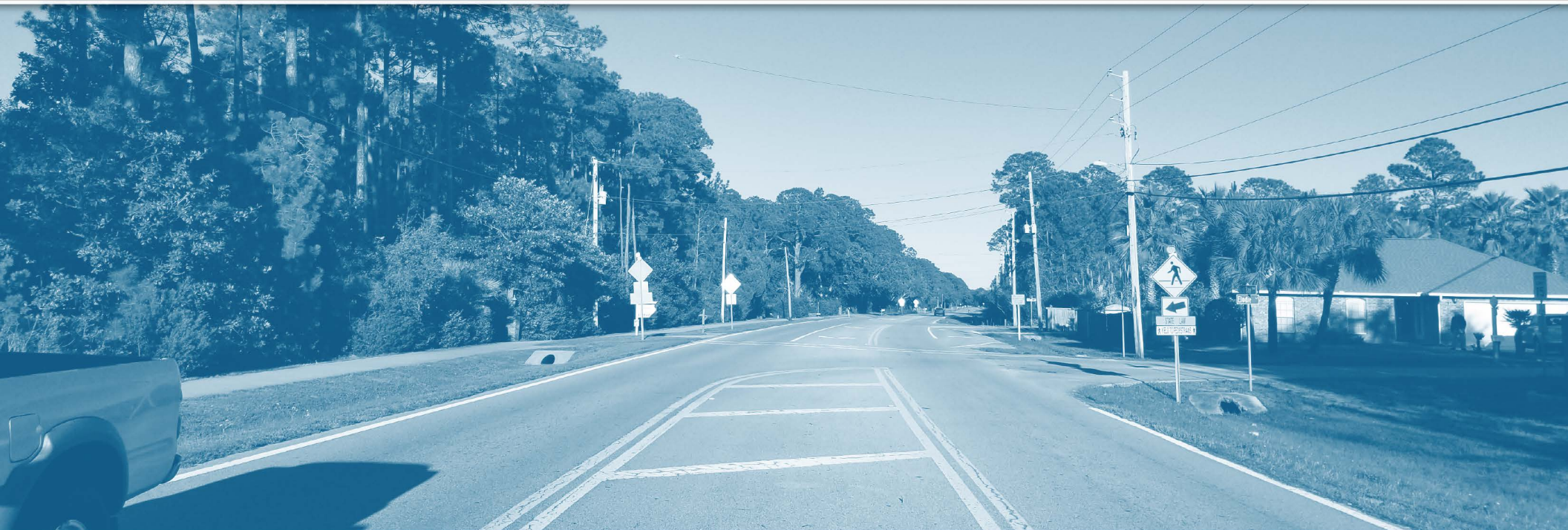




East Bay Boulevard | Corridor Management Plan



RESOLUTION FL-AL 20-16

A RESOLUTION OF THE FLORIDA-ALABAMA TRANSPORTATION PLANNING ORGANIZATION ADOPTING THE EAST BAY BOULEVARD CORRIDOR MANAGEMENT PLAN

WHEREAS, the Florida-Alabama Transportation Planning Organization (TPO) is the organization designated by the governors of Florida and Alabama as being responsible, together with the states of Florida and Alabama, for carrying out the continuing, cooperative and comprehensive transportation planning process for the Florida-Alabama TPO planning area; and

WHEREAS, the Florida-Alabama TPO Unified Planning Work Program (UPWP) includes tasks for development of a Corridor Management Plan (CMP) for each fiscal year; and

WHEREAS, the TPO selected East Bay Boulevard, from US 98 to SR 87 for a CMP; and

WHEREAS, the TPO Long Range Transportation Plan (LRTP) includes \$1,500,000 per year for implementation of projects identified in CMPs, which are plans for low cost strategies and projects to improve traffic flow and safety for all modes of travel along a corridor; and

WHEREAS, the East Bay Boulevard CMP identifies strategies and projects to improve traffic flow and safety for all modes of travel along the corridor, based on a study process that included an analysis of existing and future safety and travel capacity needs, and local stakeholder review and recommendations;

NOW, THEREFORE, BE IT RESOLVED BY THE FLORIDA-ALABAMA TRANSPORTATION PLANNING ORGANIZATION THAT:

The TPO adopts the East Bay Boulevard CMP and endorses implementation of transportation strategies and projects identified in the plan.

Passed and duly adopted by the Florida-Alabama Transportation Planning Organization on this 8th day of July 2020.



ATTEST: Mary Perlasma

**FLORIDA- ALABAMA TRANSPORTATION
PLANNING ORGANIZATION**

BY: Steven Barry

Steven Barry, Chairman



Acknowledgments



Florida-Alabama Transportation Planning Organization Board Members

Commissioner Sam Parker, TPO Chairman, Santa Rosa County
Commissioner Steven Barry, TPO Vice Chairman, Escambia County
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Commissioner Lumon May, Escambia County
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Commissioner David Piech, Santa Rosa County
Mayor Cherry Fitch, City of Gulf Breeze
Commissioner Charles “Skip” Gruber, Baldwin County, Alabama
Councilman Jerry Johnson, City of Orange Beach Alabama

Emerald Coast Regional Council Staff

Caitlin Cerame, AICP
Mary Beth Washnock
Cameron Smith
Jill Lavender
Tiffany Bates
Annie Walthall

Other Contributing Departments

Santa Rosa County
Florida Department of Transportation

Prepared By:



Consultant Staff:

Wiley Page, AICP
Philip Shad, AICP
Rebecca Dennis, AICP



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1.0 Introduction

In 2019, the Florida-Alabama Transportation Planning Organization (TPO) contracted with Atkins to develop a corridor management plan (CMP) for East Bay Boulevard located in Santa Rosa County, Florida from US 98 (SR 30) to SR 87. Corridor management plans evaluate roadways to identify relatively short-term improvements to improve safety and enhance mobility. In comparison, the TPO's Long-Range Transportation Plan identifies roadway capacity projects for a 20 year planning horizon.

This plan evaluated various features and characteristics of the roadway and the surrounding area including: traffic data, land use data, crash data, intersection geometries, and bicycle and pedestrian facilities. By evaluating these corridor conditions, the project team was able to design a plan to increase safety and enhance multi-modal transportation along the corridor, including bicycle and pedestrian modes.

This plan evaluates the current state of several aspects of the corridor, such as the urban design context of the area, traffic and transportation elements, and safety concerns in the area. Additionally, this plan provides a baseline to understand the impacts of the proposed improvements that were developed for the corridor. This plan incorporates Complete Streets concepts into the recommended design elements to ensure adequate space for all users and modes of transportation in a way that creates a more livable community and sense of place. The term "complete streets" is often used to define roadways that function in a multi-modal fashion, safely accommodating automobiles, transit vehicles and riders, bicyclists, and pedestrians. Streets are not just for moving people and vehicles, but also often serve as places for commerce and recreation. Complete streets also are compatible with the surrounding community, and support adjacent land uses and activities, in a contextually appropriate manner.

Through analysis, on-site reviews, and discussions with stakeholders, proposed recommendations have been developed to help mitigate some of the corridor's most pressing issues. The proposed recommendations put forth in this plan are intended to provide a robust menu of improvements that can be constructed over time when funding becomes available.



View of East Bay Boulevard at Elodie Lane



View of East Bay Boulevard at SR 87

2.1 Study Corridor Description

East Bay Boulevard is an east-west roadway located in Santa Rosa County, Florida. It is functionally classified by the Florida Department of Transportation (FDOT) as an urban collector and is approximately 9.8 miles long. The local jurisdictions for East Bay Boulevard are Santa Rosa County Commission Districts 4 and 5. See Figure 1 for the project study area limits.



Figure 1. East Bay Boulevard Project Area



2.2 General Roadway Characteristics

The following list summarizes the existing roadway characteristics for the East Bay Boulevard study corridor:

- East Bay Boulevard is functionally classified as an urban collector.
- The posted speed limit along the corridor is 45 mph.
- There are no school zones located along the corridor.
- A shared-use path is located on the north side of the roadway along portions of East Bay Boulevard. There are limited connections to the south side of East Bay Boulevard.
- There is no consistent street lighting along the corridor.

2.3 East Bay Boulevard Typical Section

The existing roadway configuration consists of a two-lane rural road with 11-foot travel lanes in each direction and no paved shoulders. Approximate right of way width along the majority of the corridor is 120 feet (See Figure 2).

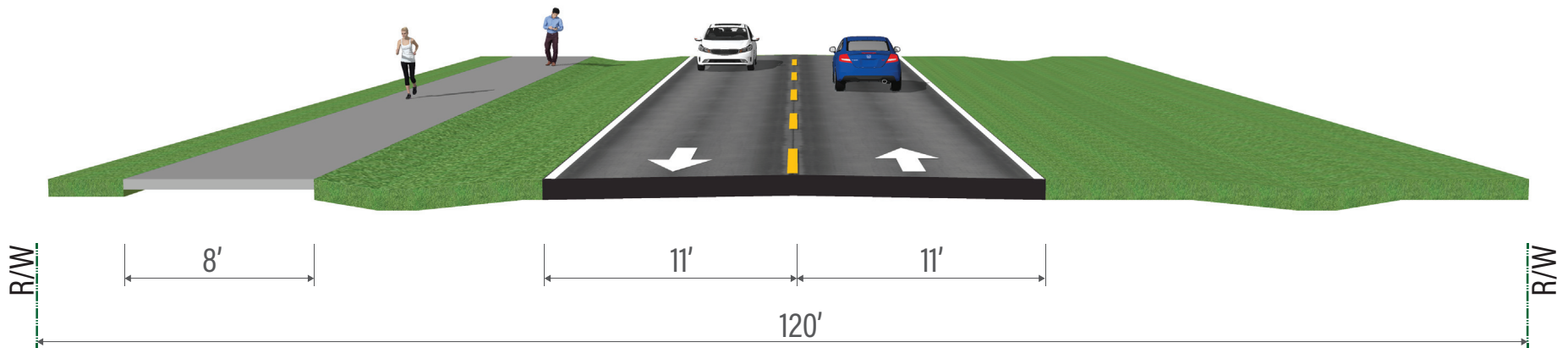


Figure 2. East Bay Boulevard Typical Section

2.4 Bicycle and Pedestrian Facilities

A shared-use path is present along much of the north side of East Bay Boulevard. The East Bay Boulevard shared-use path connects to the Florida Trail Connector along SR 87 providing connections to the Florida Scenic Trail. Missing portions of the East Bay Boulevard shared-use path currently under construction are shown on Figure 3. The pedestrian bridge over Tom King Bayou is currently under design. Figure 3 illustrates paths and trails that are near East Bay Boulevard. The shared-use path along East Bay Boulevard is part of the Florida Shared-Use Nonmotorized (SUN) Trail network as a priority trail as part of the Great Northwest Coastal Trail Corridor. The SUN Trail program provides funding to help communities develop the statewide system of high-priority (strategic) paved trail corridors for bicyclists and pedestrians. This SUN Trail network includes a combination of existing, planned and conceptual multiple-use trails.

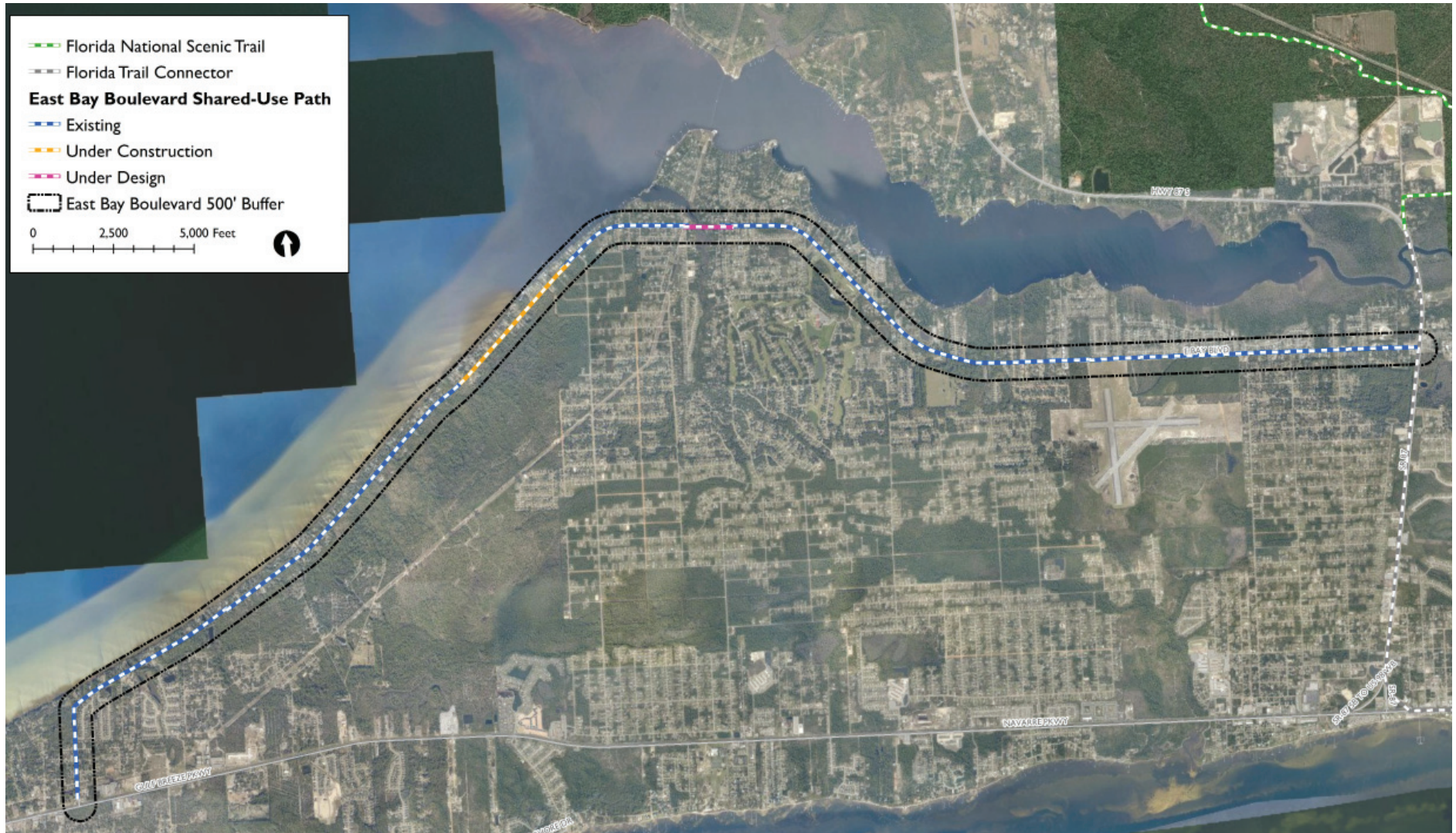


Figure 3. East Bay Bicycle and Pedestrian Facilities Map



2.5 Land Use

Land use along the East Bay Boulevard corridor was determined using the *Generalized Land Use Derived from 2018 Florida Parcels* dataset from the University of Florida's GeoPlan Center. The dataset was created for FDOT and generalizes 99 available land uses into 15 land use classifications. As displayed in Figure 4, the corridor primarily consists of Residential land use (yellow). There are some Commercial land uses (red) near US 98 and SR 87 and some Industrial uses (purple) north of Holley NOLF Airfield.



Figure 4. Generalized Land Use Map

2.6 Zoning

The Santa Rosa County Zoning dataset was used to determine the zoning for the project area displayed in Figure 5. The majority of the corridor is zoned as Single Family Residential (yellow), with some Commercial (red) districts near SR 87.



Figure 5. Zoning District

2.8 Neighborhood and Community Features

County offices, grocery stores, libraries, post offices, public schools, and county parks were identified neighborhood and community features near the project corridor, and are displayed in Figure 7.

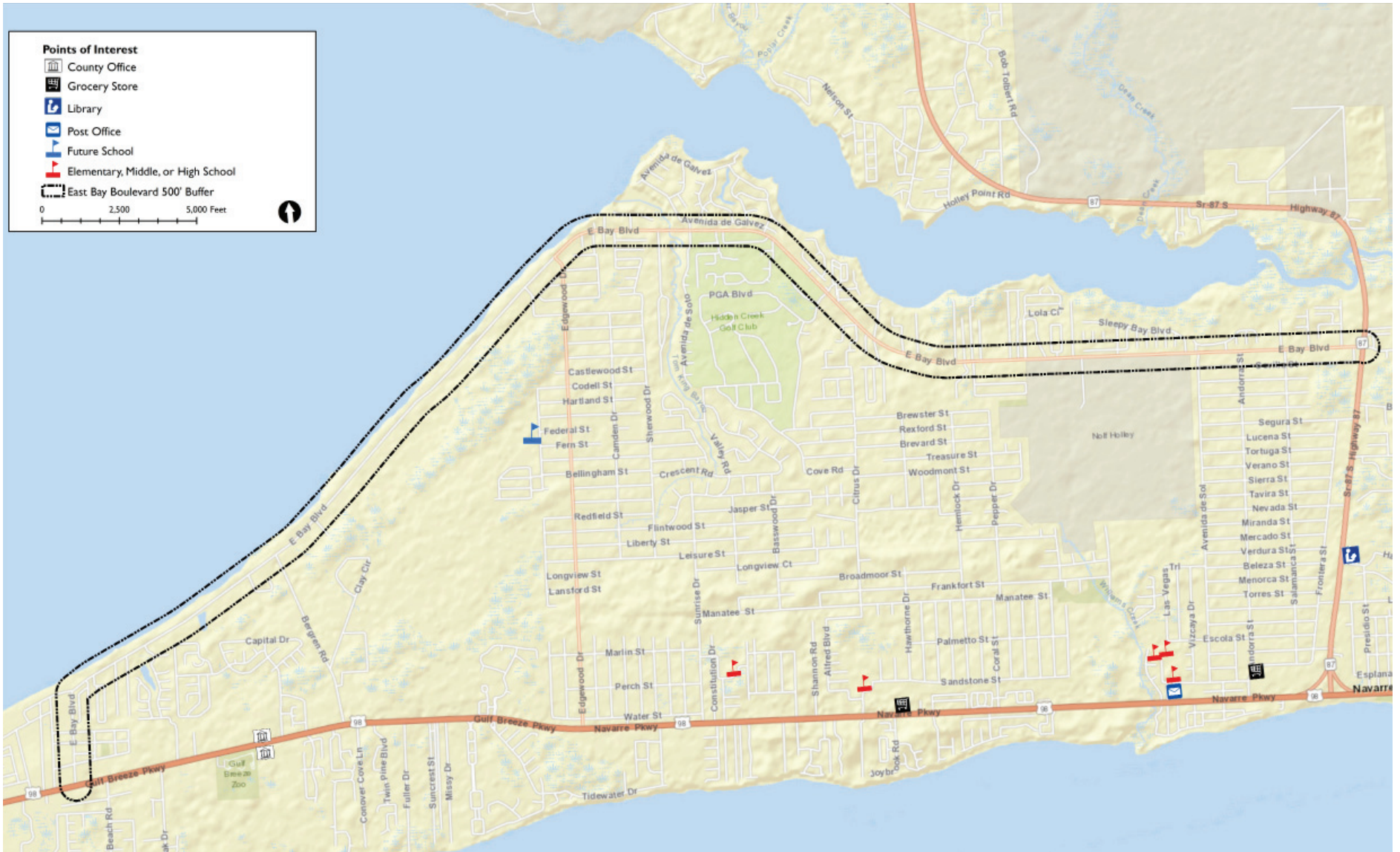


Figure 7. Points of Interest

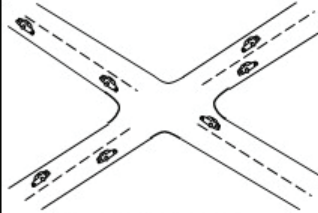
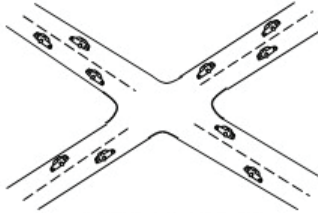
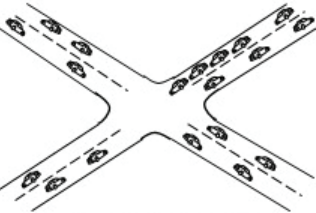
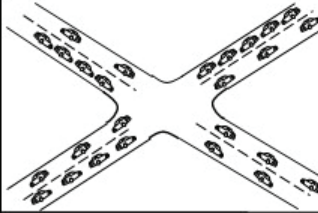
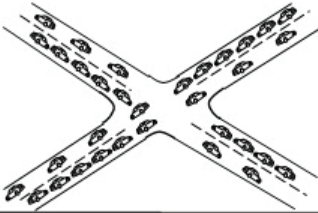
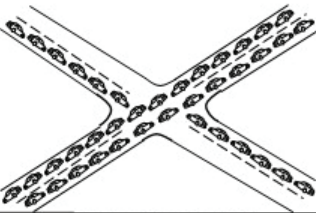


2.9 Traffic Operations

Traffic Operations

A traffic operational analysis was completed to gain an understanding of the traffic performance conditions motorists face while traveling along East Bay Boulevard. This analysis included the evaluation of the existing and future year level of service (LOS). LOS is a measurement of roadway congestion determined by the number of vehicles on a roadway in relation to the capacity of the roadway. LOS standards assign a grade of LOS A (least congestion) to LOS F (most congestion) to a roadway facility. While LOS F represents the theoretical capacity of a facility many local agencies have adopted a LOS D to represent the service volume maximum desirable capacity for routine peak hour traffic.

LEVEL OF SERVICE	DESCRIPTION	SIGNALIZED INTERSECTION MAXIMUM DELAY (In Seconds)	UNSIGNALIZED INTERSECTION MAXIMUM DELAY (In Seconds)
A	LITTLE OR NO DELAY. At signalized intersections, no vehicle must wait longer than one signal in order to travel through the intersection.	10.0	10.0
B	SHORT DELAYS. At signalized intersections, a vehicle might have to wait through more than one signal indication to pass through the intersection on a rare occasion.	20.0	15.0
C	AVERAGE DELAYS. At signalized intersections, a vehicle would be required to wait through more than one signal indication to pass through the intersection on an intermittent basis, and occasionally backups could occur behind left turning vehicles.	35.0	25.0
D	LONG DELAYS. At signalized intersections, delays may become extensive with some vehicles requiring two or more signal indications to pass through the intersection. However, sufficient signal cycles with lower demand are available to permit the periodic clearance of the intersection.	55.0	35.0
E	VERY LONG DELAYS. At signalized intersections, very long queues and high levels of congestion are prevalent which result in lengthy delays.	80.0	50.0
F	EXCESSIVE LONG DELAYS. The capacity of the roadway or intersection has been exceeded resulting in extremely high levels of congestion.	>80.0	>50.0

 LEVEL OF SERVICE A	 LEVEL OF SERVICE B	 LEVEL OF SERVICE C
 LEVEL OF SERVICE D	 LEVEL OF SERVICE E	 LEVEL OF SERVICE F

NOTE: Level of Service Definitions and Criteria are based on HCM 2000

Description of Roadway Level of Service (LOS)

Intersection Analysis

The traffic analysis was conducted using Synchro10 traffic analysis software which utilizes the Highway Capacity Manual (HCM) 6 methodology to calculate intersection delay and resulting intersection Level of Service (LOS). The analysis assumes a 2025 planning horizon year. A two percent linear growth rate was used to convert 2019 existing traffic volumes to the 2025 planning horizon period. A peak seasonal correction factor was also applied to the raw data collection counts to convert the average daily count traffic to an annual average daily traffic value.

In the 2019 analysis, all signalized intersections functioned at a LOS D or better for

movements and LOS B or better for overall intersection LOS. HCM procedures do not define an overall intersection LOS for all minor stop-controlled intersections, such as Cedar Street at East Bay Boulevard, but does suggest these intersections be evaluated based on the delay of the stop controlled minor movement. All minor street stop-controlled intersections movements functioned at LOS C or better. The 2025 no build future year analysis showed that the overall signalized intersections stop-controlled movements continued to perform at LOS C or better. The results of the analysis are summarized in Table 1. In summary, all intersections are currently operating efficiently and at an acceptable LOS. Based on the future school planned on Edgewood Drive as well as the planned future development in that area, a westbound left turn lane would be appropriate at that intersection.

Table 1. Traffic Operational Analysis												
		2019 Analysis						2025 Analysis				
Analysis Period	Intersection	Approach Delay (LOS)						Approach Delay (LOS)				
		Eastbound	Westbound	Northbound	Southbound	Intersection		Eastbound	Westbound	Northbound	Southbound	Intersection
AM Peak	East Bay Blvd & SR 30	5.5 (A)	8.2 (A)	- -	37.6 (D)	9.3 (A)		5.9 (A)	9.7 (A)	- -	37.5 (D)	10.2 (B)
	East Bay Blvd & Edgewood Dr	- -	10.5 (B)	0.0 (A)	1.4 (A)	- -		- -	10.9 (B)	0.0 (A)	1.4 (A)	- -
	East Bay Blvd & PGA Blvd/ Majestic Blvd	0.0 (A)	1.5 (A)	14.8 (B)	15.8 (C)	- -		0.0 (A)	1.5 (A)	16.8 (C)	17.8 (C)	- -
	East Bay Blvd & Andorra St	0.0 (A)	0.1 (A)	15.7 (C)	- -	- -		0.0 (A)	0.2 (A)	17.6 (C)	0.7 (A)	- -
	East Bay Blvd & SR 87	39.7 (D)	37.7 (D)	9.3 (A)	11.4 (B)	19.3 (B)		39.9 (D)	38.0 (D)	10.2 (B)	12.8 (B)	20.2 (C)
PM Peak	East Bay Blvd & SR 30	7.1 (A)	6.2 (A)	- -	32.4 (C)	7.5 (A)		7.3 (A)	7.4 (A)	- -	32.6 (C)	8.1 (A)
	East Bay Blvd & Edgewood Dr	- -	11.1 (B)	0.0 (A)	2.5 (A)	- -		- -	11.7 (B)	0.0 (A)	2.5 (A)	- -
	East Bay Blvd & PGA Blvd/ Majestic Blvd	0.3 (A)	1.8 (A)	15.1 (C)	16.9 (C)	- -		0.3 (A)	1.8 (A)	17.3 (C)	19.7 (C)	- -
	East Bay Blvd & Andorra St	0.0 (A)	0.2 (A)	16.1 (C)	- -	- -		0.0 (A)	0.2 (A)	18.4 (C)	- -	- -
	East Bay Blvd & SR 87	39.1 (D)	47.4 (D)	8.1 (A)	11.2 (B)	15.4 (B)		38.8 (D)	48.0 (D)	9.2 (A)	13.0 (B)	16.6 (B)



2.10 Corridor Crash Summary

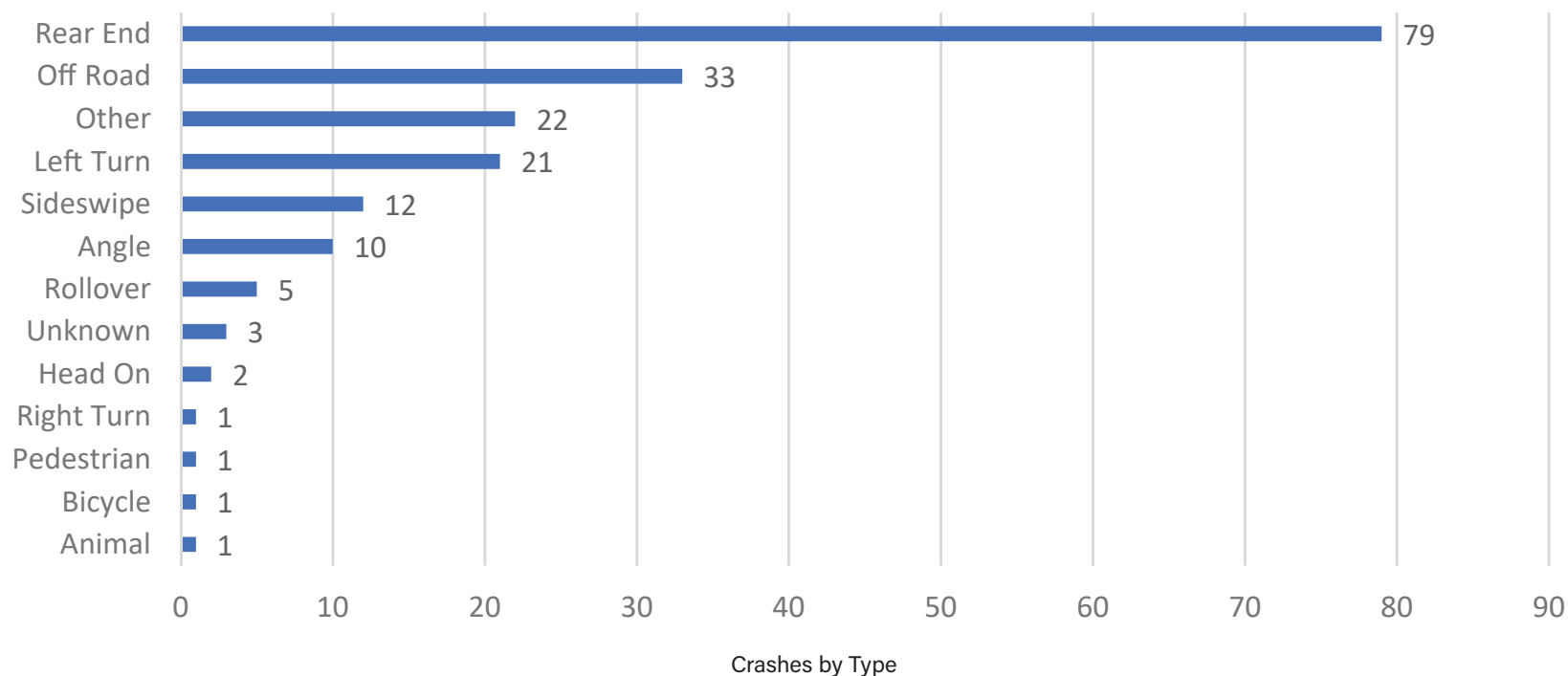
Crash data was obtained using the Signal 4 Analytics (S4) database for the five-year period from 2014 to 2018 along the project corridor. The S4 database was developed by the GeoPlan Center at the University of Florida using crash records provided by the Florida Department of Highway Safety and Motor Vehicles (DHSMV), and funded by the state of Florida through the Traffic Records Coordinating Committee. The results of the crash data analysis are summarized in this section.

Total Crashes

There were 191 total crashes along the corridor from 2014 to 2018. None of the crashes resulted in a fatality. However, injuries were reported in 92 of the crashes. There were clusters of crashes near East Bay Boulevard/US 98 and East Bay Boulevard/SR 87.

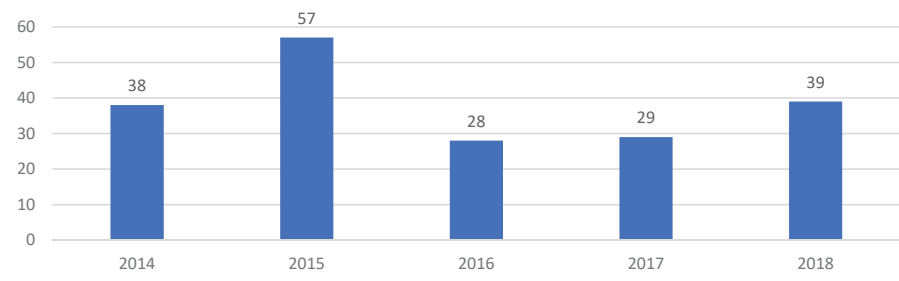
Crash Type

The most common crash type was Rear End, with 79 total crashes. Off-Road crashes were the second most frequent crash type, with 33 total crashes. There was one (1) Pedestrian crash and one (1) Bicycle crash. The Pedestrian crash occurred just east of Rusty Lane. The Bicycle crash occurred near the curve of East Bay just south of Cedar Street.



Crash Year

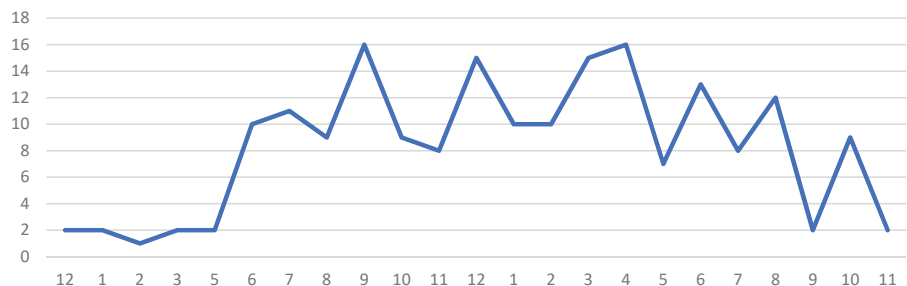
The year 2015 saw the highest number of crashes with 57 total crashes. The years 2016 and 2017 experienced the fewest crashes with 28 and 29 crashes, respectively.



Crashes by Year

Crash Time

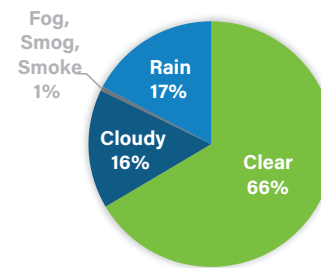
The number of crashes peaked in the morning hour of 9 AM (16 crashes), the lunch hour of 12 PM (15 crashes), and the early afternoon hours of 3 PM (15 crashes) and 4 PM (16 crashes).



Crashes by Time of Day

Crash Weather

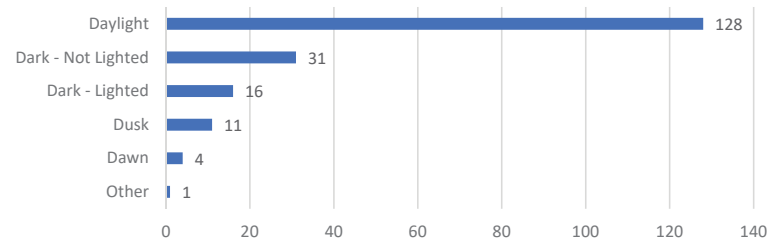
A majority of the crashes (66%) occurred during clear weather conditions. Approximately 17% of the crashes occurred during Rain conditions, and 16% occurred during Cloudy conditions. Less than 1% of the crashes occurred in Fog, Smog, or Smoke conditions.



Crashes by Weather Condition

Crash Lighting

A majority of the crashes (128 total crashes) occurred during Daylight conditions. 31 crashes occurred in Dark - Not Lighted conditions and 16 crashes occurred in Dark - Lighted conditions.

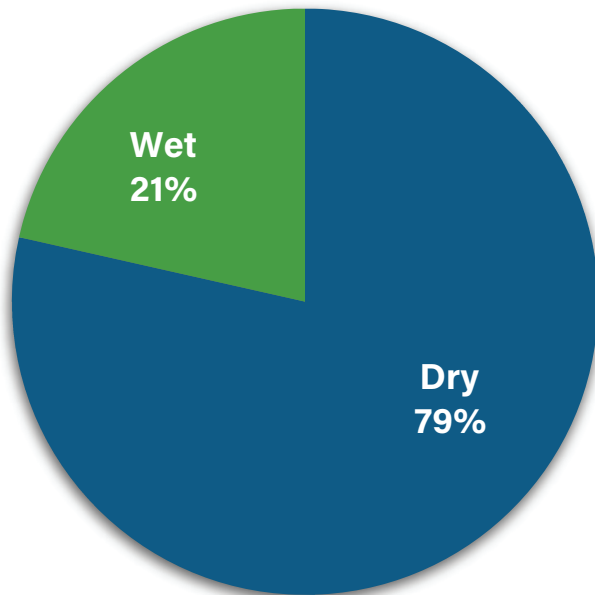


Crashes by Lighting Condition



Road Surface

A majority of the crashes (79%) occurred during Dry road surface conditions. The remaining crashes occurred during Wet road surface conditions.



Crashes by Road Surface Condition



View of East Bay Boulevard at Melissa Oaks Drive



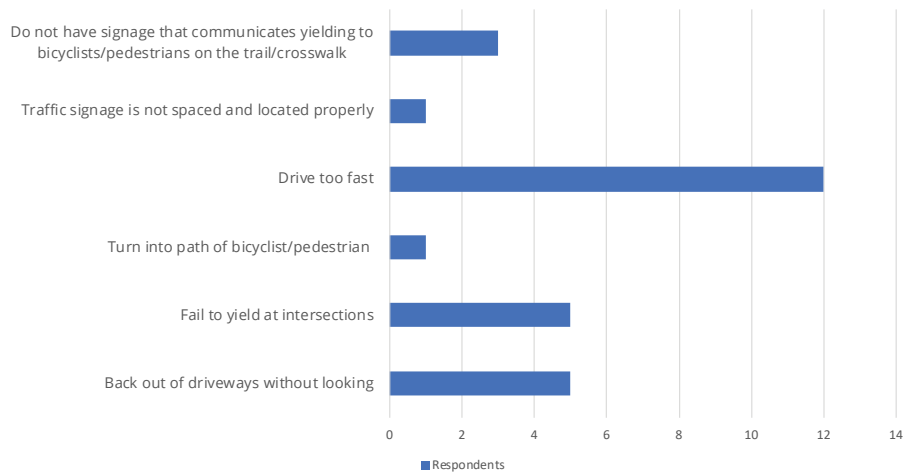
View of East Bay Boulevard North of US 98

3.0 Public Engagement

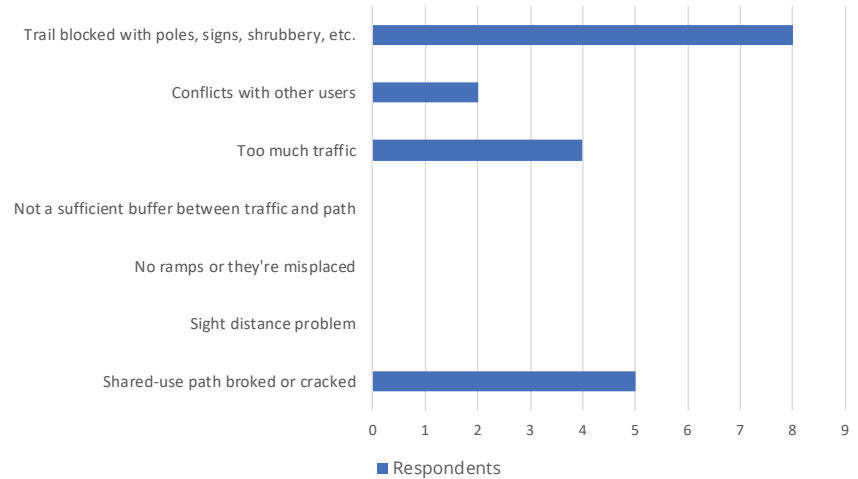
The Corridor Management Plan Team hosted two public workshops to solicit comments and feedback from the community about what they would like the East Bay corridor to become. The workshops were planned at critical times so the public could initially influence focus areas of the technical analysis and then provide meaningful input on the proposed improvements. As daily users of the corridor, attendees of the workshops were encouraged to discuss ideas related to operations and safety for all modes of transportation.

Since the corridor contains a unique amenity with the shared-use path, an additional

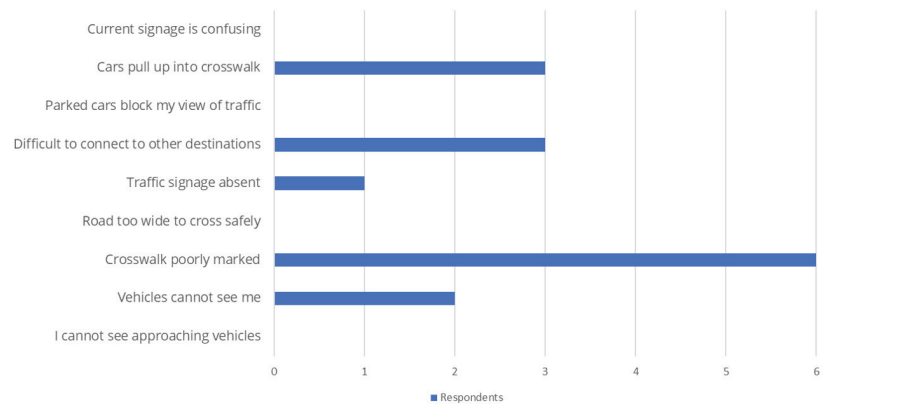
public engagement opportunity was scheduled to capture real time user experiences on the path. The Corridor Management Plan Team conducted a walk-bike assessment on November 16, 2019 and asked participants to not only observe the physical aspects of the path, but also the interaction between vehicles and path users. 20 people completed the assessment and results indicated that overall, most people felt safe on the shared-use path. Respondents indicated there were some path blockage issues due to shrubbery, tree limbs, etc. which can be resolved through additional maintenance. When asked about driver behavior, 60% of respondents said people drove too fast in their vehicles. Most respondents indicated it was easy to cross streets and navigate intersections, however, some of the crosswalks were poorly marked and it was difficult to connect to other destinations from the shared-use path. These results helped guide the Corridor Management Plan Team to hone in on topics related to speed and crosswalk navigability.



Walk-Bike Assessment Respondent Results for Driver Behavior



Walk-Bike Assessment Respondent Results for Pedestrian Bicyclist Safety



Walk-Bike Assessment Respondent Results for Path and Roadway Navigation



Participant in the Walk-Bike Assessment

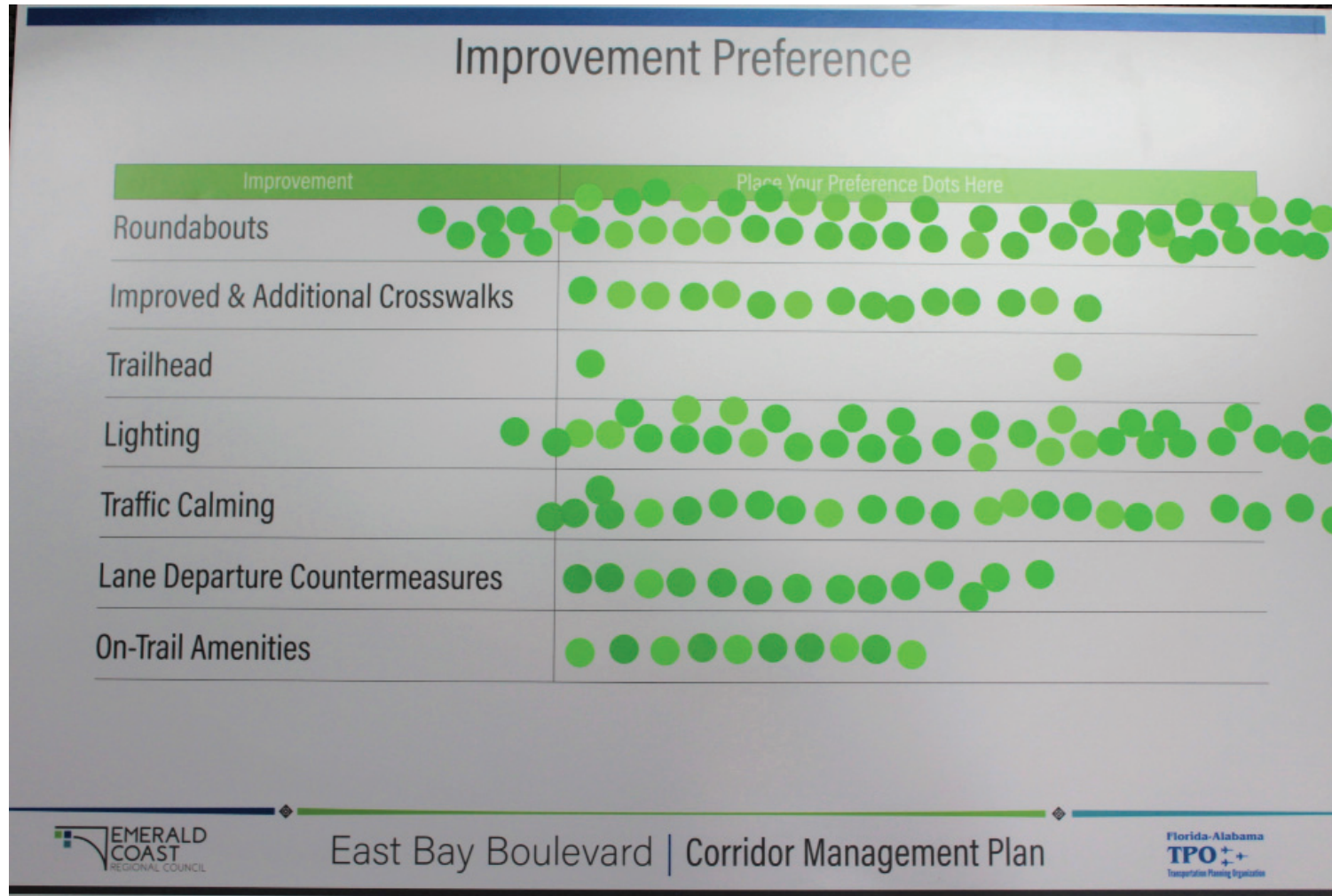
Following the bicycle and pedestrian assessment, the first public workshop was held on November 21, 2019 with 60 people in attendance. Postcards were sent to all residences and businesses located within 500 feet of the 9 mile corridor. Media outlets and social media were also used to promote the workshop. A substantial amount of time during the workshop was dedicated to an open dialogue format and the public was also provided comment cards to record specific concerns. Table 2 documents concerns based on topic and location conflicts along the corridor:

Table 2. November 21, 2019 Public Workshop Comments	
Topics	
Speeding	
Reducing Speed Limit	
Safely Crossing the Street	
Path Amenities	
Access to the shared use path	
Lighting	
Golf Carts	
Areas of Concern	
Curve on East Bay Boulevard near Cedar Street	
Edgewood Drive	
Andorra Street	
Brighton Oaks Boulevard	
US 87/East Bay Boulevard intersection	
Grand Bay Court	

At the second public workshop held on February 24, 2020, the team shared ideas for suggested improvements based on analysis of the corridor and public input. Ideas to address traffic calming, safety, lane-departures, and on-path amenities were discussed with the public. There was consensus supporting proposed improvements with an additional emphasis on reducing the speed limit to 35 miles per hour. The intersection of East Bay Boulevard and Bergren Road was a new area identified due to current speeding and potential for development growth in the future. There was also discussion about allowing golf carts on the shared-use path because of the close proximity to a golf course

and allowing them as a mode of transportation for disabled individuals, but there was not a consensus of support.

A preference survey was used as an engagement tool to gauge public priority of investments. There was overwhelming support for roundabouts, with lighting and traffic calming rounding out the top three. The input collected from the workshops will aid the county and TPO in implementing projects as funding becomes available.



Results of Preference Survey from Public Workshop 2



4.0 Proposed Corridor Enhancements

The project team utilized various transportation planning techniques to identify problem areas, gain an understanding of the East Bay Boulevard corridor itself, and determine potential solutions to make it safer for all users. These techniques included data collection, field observations, a community walking tour, and two public workshops to hear concerns from members of the surrounding areas. Vehicular travel impacts to pedestrian safety

was a key issue facing many residents and users of the East Bay Boulevard corridor, particularly when crossing the road to access the shared-use path. The following pages summarize the proposed enhancements determined appropriate for East Bay Boulevard. Table 3 summarizes these improvements with associated cost estimates. One of the major goals of this project was to create a menu of corridor improvements that could be implemented over time as funding becomes available.

Table 3. Summary of Proposed Corridor Improvements	
Improvement	Estimated Cost
Safety Improvements at the Horizontal Curve in the Vicinity of Cedar Street	
Repainting of the center line and edge line	Varies
Installation of in-lane speed advisory markings	\$2,000
Installation of additional chevron alignment signs	\$3,000
Installation of solar powered raised pavement markings (RPMs)	\$8,800
Edgewood Drive Intersection and Safety Improvements	
Option 1 - Enhanced pedestrian crossing	\$25,000
Option 2 - Construction of a roundabout with crosswalk	\$1,750,000
Option 3 - Construction of a WB left turn lane with crosswalk	\$200,000
Enhancements to existing pedestrian crosswalks at Elodie Lane, Brighton Oaks Boulevard/Barco De Villa, Avenida Del Sol	\$25,000 (per location)
Construction of a roundabout at Andorra Street	\$1,750,000
Construction of a trailhead at Edgewood Drive	\$250,000-\$650,000 (Dependent on design, not including stormwater improvements)
Continued monitoring of Bergren Road and East Bay Boulevard intersection operations	N/A
Consideration of speed limit reduction on East Bay Boulevard at the approaches to the US 98 and SR 87 intersections	\$2,000
Corridor-Wide Improvements	
Corridor lighting plan	\$50,000
Installation of speed feedback signs	< \$10,000
Installation of paved shoulders	\$11,500,000 (includes milling and resurfacing of entire corridor)
Installation of rumble strips	
Consideration of additional shared-use path amenities	Varies

Safety Improvements at the Horizontal Curve in the Vicinity of Cedar Street

On the western portion of the study area there is a substantial horizontal curve on East Bay Boulevard located in the vicinity of Cedar Street. Two-thirds (67%) of the crashes in this area were either off-road or rollover crashes. The following recommendations are suggested to improve safety in this area. It should be noted that not every recommendation must be implemented immediately.

Repainting of the center line and edge lines

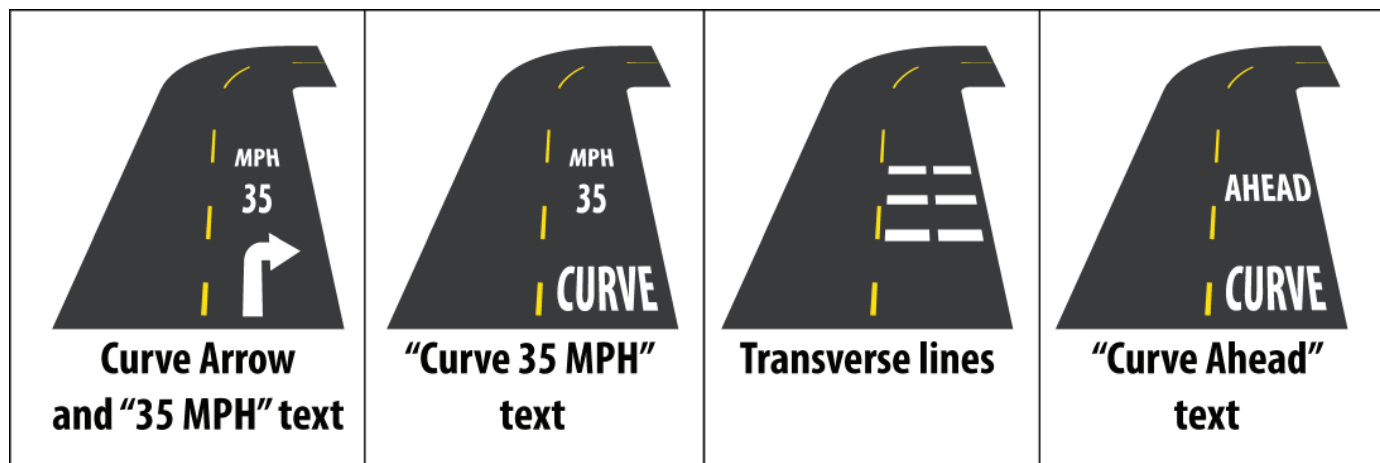
The existing center line and edge lines on East Bay Boulevard are extremely worn and difficult for drivers to see. These lines are critical in assisting in the ability for drivers to stay in their lanes and the roadway itself. It is recommended that these lines be repainted. This may be accomplished during the next scheduled roadway resurfacing.

Installation of In-Lane Speed Advisory Markings

In-lane speed advisory markings can provide essential information related to a driver's safe negotiation of an approaching curve and are helpful in reducing speeds before entering the curve. There are various types of in-lane speed advisory markings as shown in the photo below.



East Bay Boulevard in the Vicinity of Cedar Street - Note the poor condition of the center and edge lines



Examples of In-Lane Speed Advisory Markings, Source: Federal Highway Administration (FHWA)



Installation of Additional Chevron Alignment Signs

Chevron signs emphasize and guide drivers through a change in horizontal alignment. While there are currently existing chevron signs on the curve, it is recommended that additional signs be erected. Figure 8 shows an example of warning signs for a horizontal curve with four chevron signs in each direction.



View of Existing Chevron Alignment Signs at Cedar Street



Example of a Chevron Alignment Sign

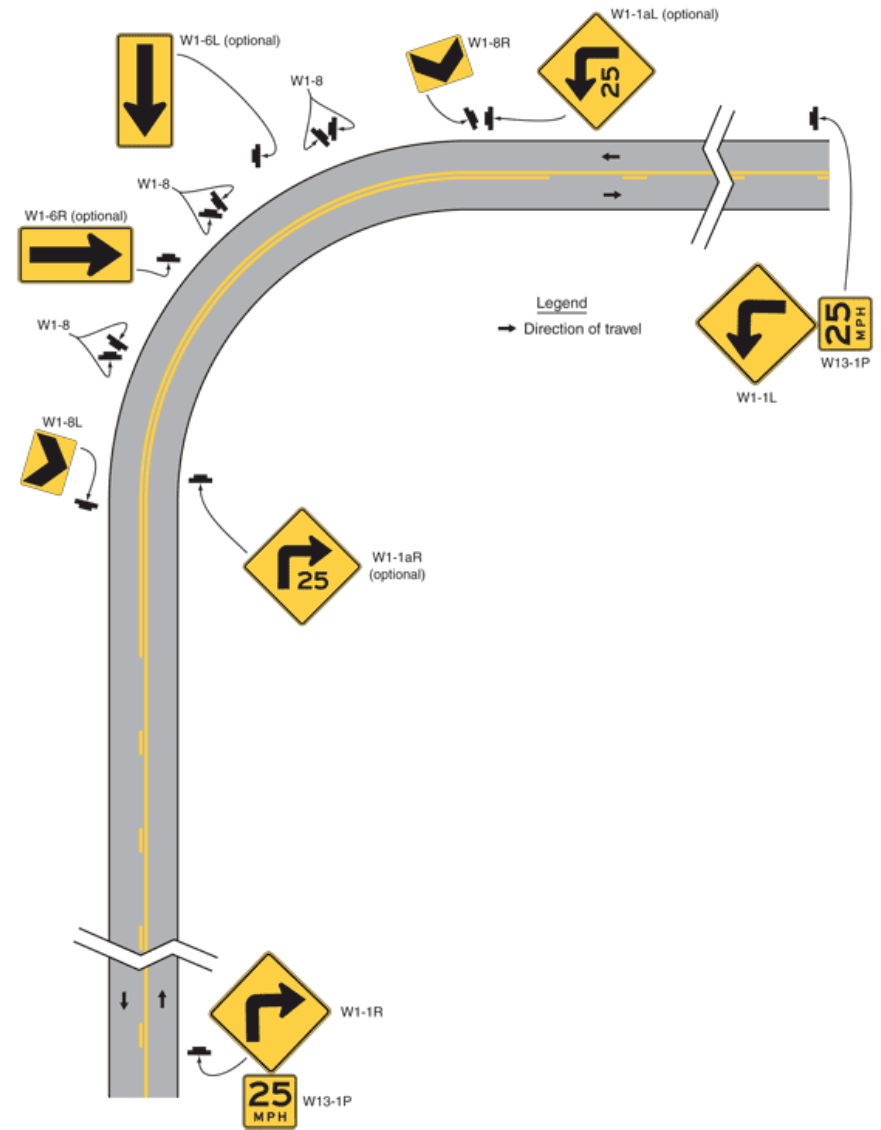


Figure 8. Example of Warning Signs for a Horizontal Curve (Source: MUTCD)



Installation of Solar Powered Raised Pavement Markings (RPMs)

Raised pavement markings are reflective delineators located along the center line and edge lines of a roadway. They provide drivers with an enhanced vision of the roadway. Recently, illuminated solar powered RPMs have begun to be installed on roadways that help drivers navigate curves at night. It is recommended that solar powered RPMs be installed on East Bay Boulevard near the curve at Cedar Street.



Example of Illuminated Raised Pavement Markings (RPMs)



Edgewood Drive Intersection and Safety Improvements

Edgewood Drive is one of the few roadways that directly connects East Bay Boulevard with US 98. It also serves large residential areas and will provide access to a future school. Three options were conceptualized as potential improvements for this area.

Option 1 - Enhanced Pedestrian Crossing

Due to the large residential areas that Edgewood Drive serves, this location would be appropriate for an enhanced pedestrian crossing to allow pedestrians and cyclists to safely cross East Bay Boulevard to reach the shared-use path. This crossing would be signalized with pedestrian actuated rectangular rapid flashing beacons (RRFBs). Santa Rosa County has committed funding to construct a sidewalk on Edgewood Drive. This crossing will provide a vital connection between the shared-use path and the new sidewalk. Figure 9 shows an illustrative rendering of an enhanced pedestrian crossing. Figure 10 shows the general area of where the crossing could be placed.

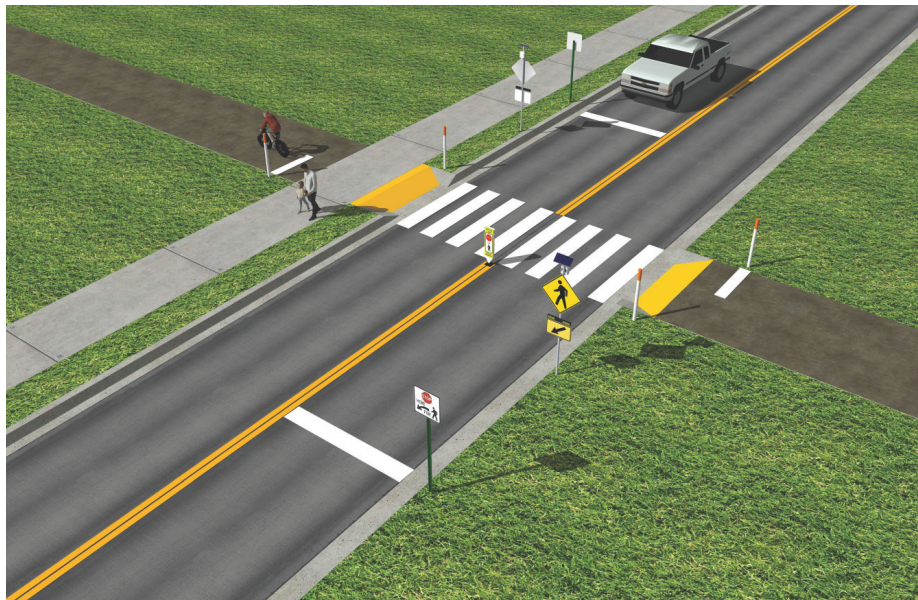


Figure 9. Illustrative Rendering of an Enhanced Pedestrian Crossing



Figure 10. Potential Enhanced Crosswalk Location at Edgewood Drive

Option 2 - Edgewood Drive Roundabout

The construction of roundabouts can provide significant benefits by reducing severe crashes at intersections as well as reducing speeds. Conversion of two-way stop controlled intersections have shown up to an 82% reduction in severe crashes and up to a 30% decrease in 85th percentile speeds. Figure 11 shows a conceptual rendering of a crosswalk at the intersection of Edgewood Drive and East Bay Boulevard. This roundabout would have features integrated into its design to facilitate crossings for pedestrians and bicyclists. Speed limits would have to be reduced from 45mph at the approaches to the roundabout.



Figure 11. Proposed Roundabout Concept at Edgewood Drive and East Bay Boulevard

Option 3 - Edgewood Drive Westbound Left Turn Lane

The final option for the intersection of Edgewood Drive would be to construct a westbound left turn lane on East Bay Boulevard. Due to the large residential area and the planned school as well as future planned residential growth on Edgewood Drive, a left turn lane would better facilitate vehicles turning south onto Edgewood Drive. This option would include an enhanced pedestrian crossing. Figure 12 shows the proposed left turn lane at Edgewood Drive.

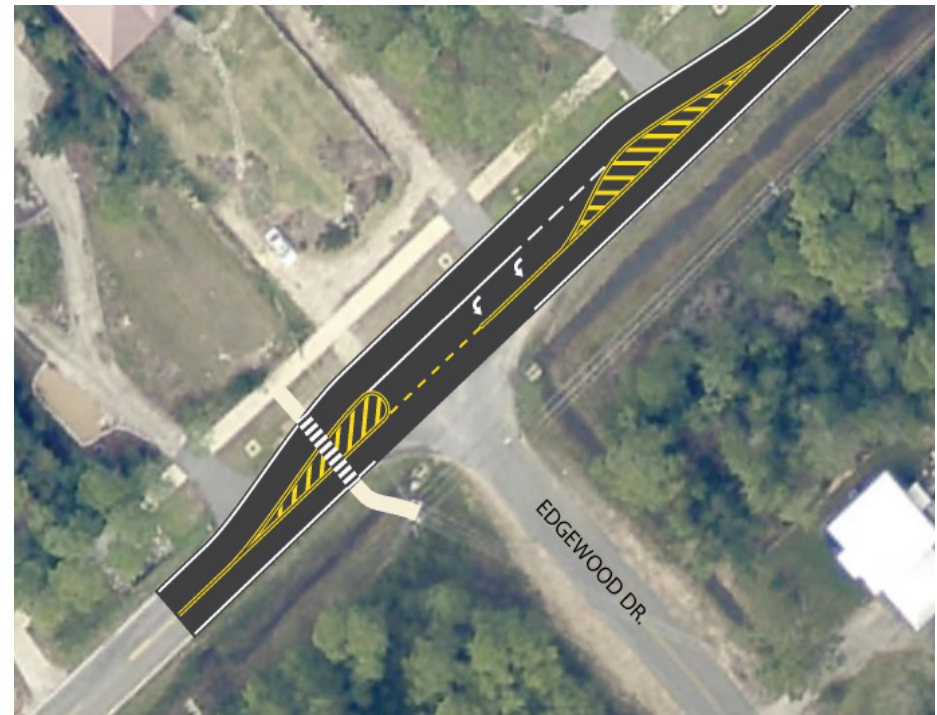


Figure 12. Proposed WB Left Turn Lane Concept at Edgewood Drive and East Bay Boulevard



Enhancements to Existing Pedestrian Crosswalks at Elodie Lane, Brighton Oaks Boulevard/Barco De Villa, Avenida Del Sol

Currently, there are three existing crosswalks along East Bay Boulevard located at: Elodi Lane, Brighton Oaks Boulevard/Barco De Villa, and Avenida Del Sol (See Figure 13). None of these crosswalks include signalization for pedestrians. It is recommended that all three of these existing crosswalks be enhanced to include pedestrian actuated rectangular rapid flashing beacons (RRFBs) to facilitate the movement of pedestrians from the south side of East Bay Boulevard to the shared-use path located on the north side.





Andorra Street Roundabout

As mentioned previously, the construction of roundabouts can provide significant benefits by reducing severe crashes at intersections as well as reducing speeds. Andorra Street, located on the eastern portion of the corridor, provides a direct north-south link from East Bay Boulevard to US 98. This location would serve as an advantageous location for the location of a roundabout. Speed limits would have to be reduced at the approaches to the roundabout. Figure 14 shows a potential concept for a roundabout at Andorra Street and East Bay Boulevard.

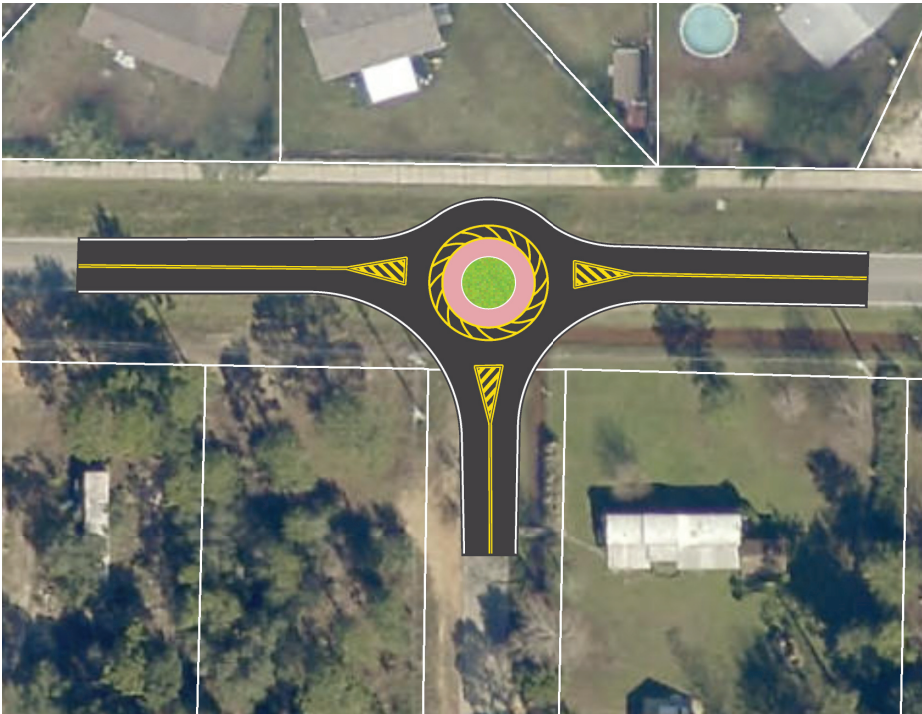


Figure 14. Proposed Roundabout Concept at Andorra Street and East Bay Boulevard



Edgewood Drive Trailhead

The parcel on the southwest corner of the intersection of Edgewood Drive and East Bay Boulevard is currently owned by Santa Rosa County. This parcel is approximately 1.21 acres in size. Currently, there are no areas along East Bay Boulevard where users of the shared-use path who live outside of the community can park their vehicles in order to access the shared-use path. The proposed recommendation would construct a trailhead for the shared-use path. This trailhead would include approximately 10 parking spaces as well as seating areas and significant vegetation. A vegetated buffer would surround the trailhead from the surrounding parcels. Any proposed trailhead designs would need to include stormwater improvements in conjunction with construction. Figure 15 shows a potential concept plan for the trailhead at the intersection of Edgewood Drive and East Bay Boulevard.



Figure 15. Edgewood Drive Trailhead Concept

Continued Monitoring of Bergren Road and East Bay Boulevard Intersection Traffic Operations

Due to proposed development scheduled in the vicinity of Bergren Road, south of East Bay Boulevard, it is recommended that traffic operations conditions be monitored regularly at the intersection of East Bay Boulevard and Bergren Road. Future intersection improvements may be required at this intersection which could include turn lanes or a potential roundabout. The location of the Bergren Road at East Bay Boulevard intersection is shown in Figure 16.

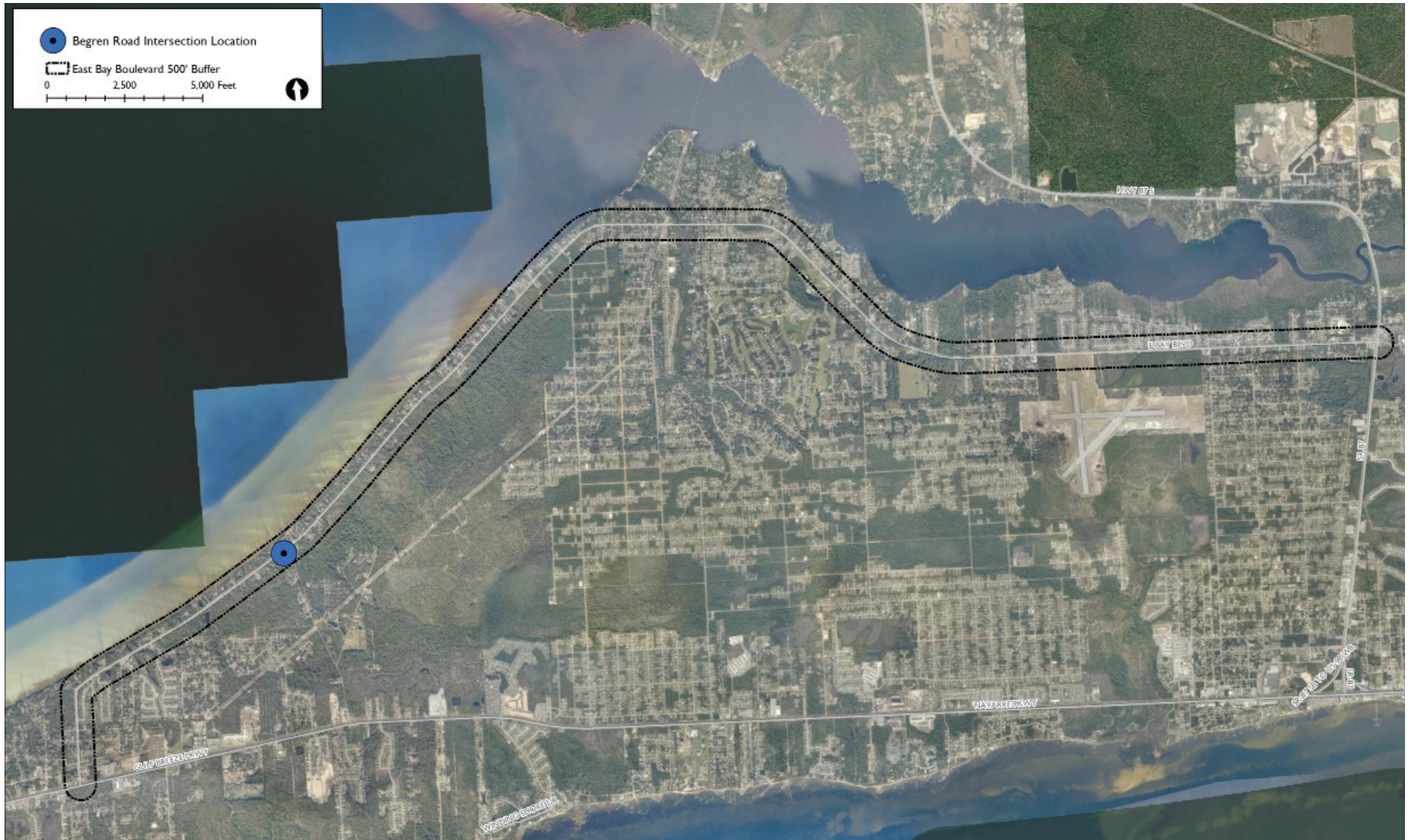


Figure 16. Bergren Road at East Bay Boulevard

As part of the ongoing public engagement efforts, a major concern for residents was the perception of high speeds along the corridor. Vehicular speed data was collected at two points along the intersection as part of this study. While a complete reduction of the speed limit is not warranted along the entire corridor, it is recommended that reduced speed limits (35 mph) be enacted at the approaches to both the SR 87 and US 98 intersections (See Figure 17).





Corridor-Wide Improvements

East Bay Boulevard Corridor Lighting Plan

Currently, there is no consistent lighting along East Bay Boulevard. Of particular concern is the fact that there is no lighting at the major intersections or along the shared-use path. The FHWA/FDOT warrant system justifies lighting along the entire East Bay Corridor.

It is proposed that a lighting plan be conducted along the corridor with priorities at the following areas:

1. Pedestrian Crosswalks
2. Major Intersections
3. Shared-Use Path
4. Corridor-Wide

Corridor-wide lighting and light for the shared-use path could be accomplished in conjunction with each other. Figure 18 shows an example of this.

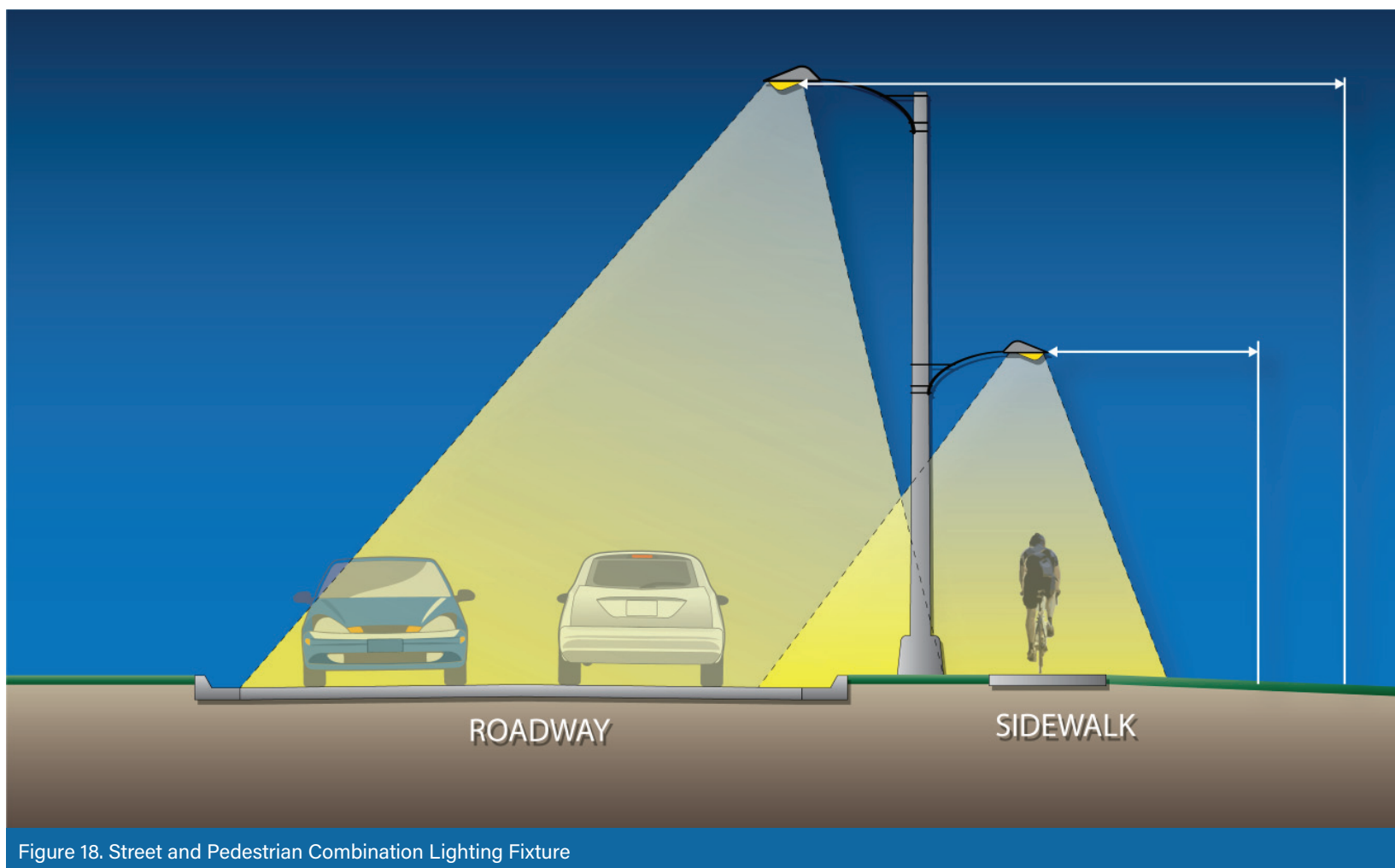


Figure 18. Street and Pedestrian Combination Lighting Fixture



Installation of Speed Feedback Signs

Speed feedback signs are dynamic speed limit signs that show the driver their current speed along with the posted speed of the roadway. Speed feedback signs have shown to effectively decrease mean and 85th percentile speeds according to FHWA. The installation of speed feedback signs is recommended for the East Bay Boulevard corridor - particularly in advance of the curve near Cedar Street.



Example of a Speed Feedback Sign



Installation of Paved Shoulders

Currently, East Bay Boulevard has no paved shoulders. The construction of at least 2' paved shoulders has been shown to reduce crash frequency up to 31% according to the FHWA. Additionally, paved shoulders allow space for cyclists who choose not to use the shared-use path. The construction of paved shoulders could be done in conjunction with a resurfacing project. It is recommended that a minimum of 5' paved shoulders be installed.



Existing Roadway Shoulder Condition



Existing Roadway Shoulder Condition



Installation of Rumble Strips

Off-road crashes are the second highest crash type along the corridor, representing 17% of all crashes. Rumble strips are pavement delineation markers that audibly alert a driver as they are veering off of the roadway. The installation of rumble strips on a roadway shoulder have shown a 30-40% reduction in off-road vehicular crashes and could be included as part of a scheduled resurfacing project. Profiled pavement markings can also be used as an alternative which are typically installed on the edge line markings of a roadway. Profiled pavement markings could be installed immediately, potentially as part of a restriping effort. At a minimum, it is recommended that either rumble strips or profiled pavement markings be installed at the curve of East Bay Boulevard in the vicinity of Cedar Street if not feasible to install along the entire corridor.



Example of Rumble Strips



Example of Profiled Pavement Markings

Shared-Use Path Amenities

Comments received from the public workshops revealed a desire for additional amenities on the shared-use path that runs along the north side of East Bay Boulevard. These amenities could include: dog waste collection stations, benches, wayfinding signage, bollards at intersections, as well as “No Motorized Vehicles” signage. The images on this page illustrates potential shared-use path amenities from other similar facilities.



Example of Dog Waste Collection Station



Example of Shared-Use Path Amenities



Example of Shared-Use Path Amenities



5.0 Conclusion

This corridor management plan is the result of a corridor analysis in combination with a public participation process. It incorporates Complete Streets concepts into the recommended design elements to ensure adequate space for all users and modes of transportation. Overall, by evaluating the corridor and utilizing public input, the project team designed this plan to increase safety and enhance multi-modal transportation along the corridor, while also creating a more livable community and sense of place.



Aerial Maps Available at the Public Workshop



Commissioner Piech Speaking at the First Public Workshop



Participants in the Walk-Bike Assessment