FERRY PARK NEIGHBORHOOD TRAFFIC STUDY

FORT WALTON BEACH, FL

Prepared for:

City of Fort Walton Beach

Prepared by:

Kimley-Horn and Associates, Inc.

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LICENSE NO. 88747

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Table of Contents

Table of Figures

Table of Tables

Appendices

Appendix A: Literature Review

Appendix B: Community Workshops

Appendix C: Raw Traffic Data

Appendix D: Crash Data Summary

Appendix E: Synchro Output Reports

Appendix F: Signal Warrant Analysis Worksheets

1.0 INTRODUCTION

Kimley-Horn and Associates, Inc. was retained by the City of Fort Walton Beach to conduct a Traffic Study in the Ferry Park Neighborhood in Fort Walton Beach, Florida. The Ferry Park Neighborhood is the second in a series of Fort Walton Beach neighborhoods for which the City has proposed to conduct one neighborhood traffic study per year, with the intention to study each neighborhood at least once every five to six years.

Aspects of this Neighborhood Traffic Study include a literature review of previously completed studies, public involvement opportunities for members of the neighborhood to voice their concerns and preferences, collection of traffic data throughout the neighborhood, analysis of existing traffic operations within the neighborhood, and development of a menu of potential transportation improvements for the Ferry Park Neighborhood.

2.0 PURPOSE AND NEED

The Ferry Park Neighborhood is situated north of Hollywood Boulevard NE/SE and east of State Road (SR) 85/Eglin Parkway NE in Fort Walton Beach. Elliott Point Elementary School is located within the neighborhood, directly across Hughes Street NE from Ferry Park, which features a walking path, a disc golf course, tennis courts, and many other amenities. The school and park generate pedestrian and bicycle traffic within the neighborhood, furthering the need to maintain relatively low vehicle speeds and safe movement of vehicles on the neighborhood roadway network.

This Neighborhood Traffic Study has been completed to investigate resident concerns and identify potential improvement alternatives to reduce vehicle speeds and thereby improve safety, particularly for vulnerable road users. The study includes a significant data collection effort that informs an areawide traffic analysis and the development of improvement alternatives. Various low-cost, medium-cost, and high-cost improvement alternatives are recommended for consideration by the City of Fort Walton Beach, so that the City may choose from a menu of improvements, some of which may be more quickly implemented than others.

3.0 LITERATURE REVIEW

Several individual studies have been completed over the last decade to evaluate traffic conditions, operating speeds, and traffic control within the Ferry Park Neighborhood. The City of Fort Walton Beach collected and provided these studies for review. These studies were reviewed to understand locations of concern and specific mitigation efforts that may have been successfully or unsuccessfully implemented in the past. **Figure 1** summarizes the timeline of the studies, and **Figure 2** illustrates the study locations. Copies of the studies, petitions, and additional literature are included in **Appendix A**.

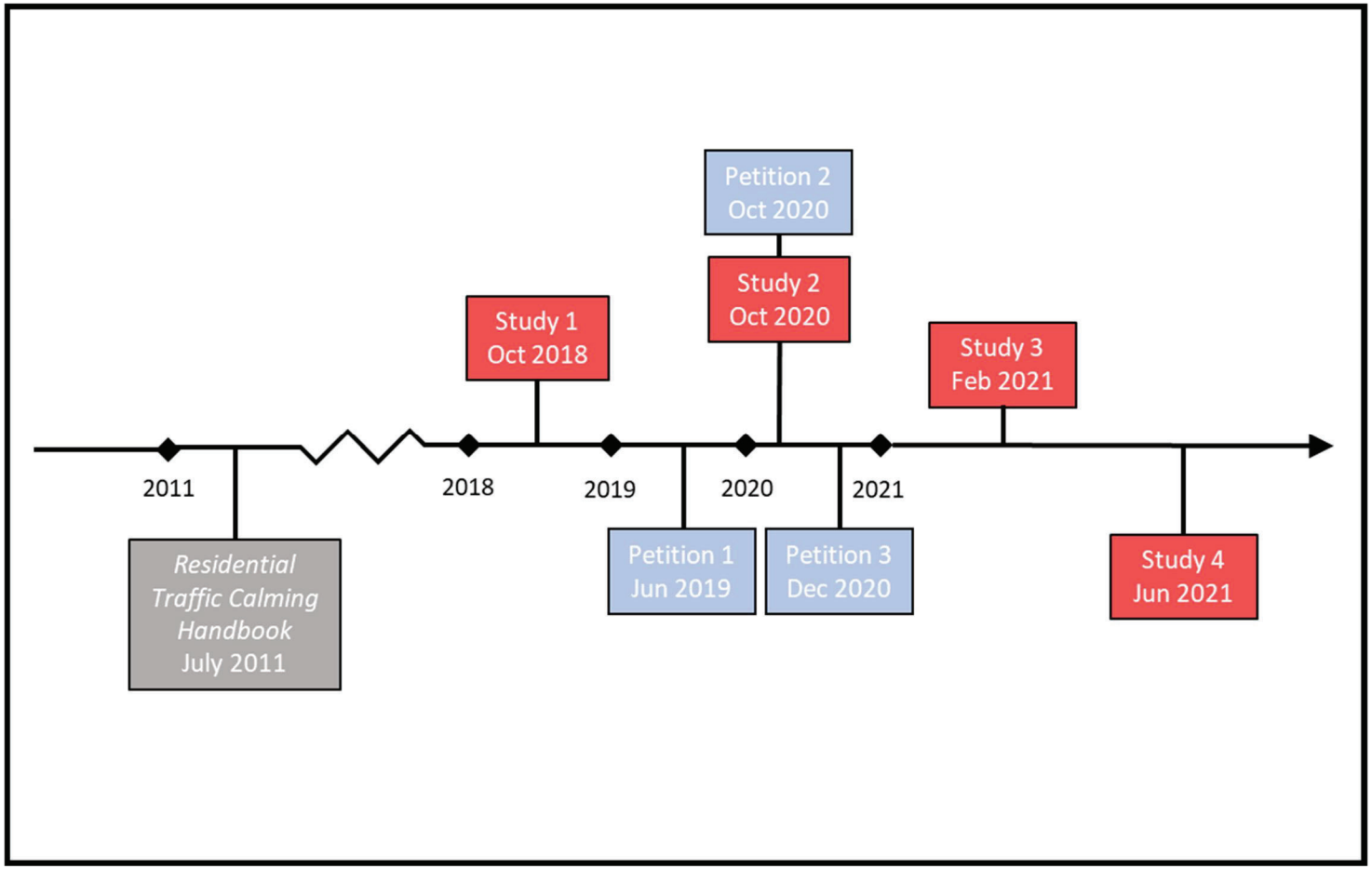


Figure 1: Literature Review Timeline

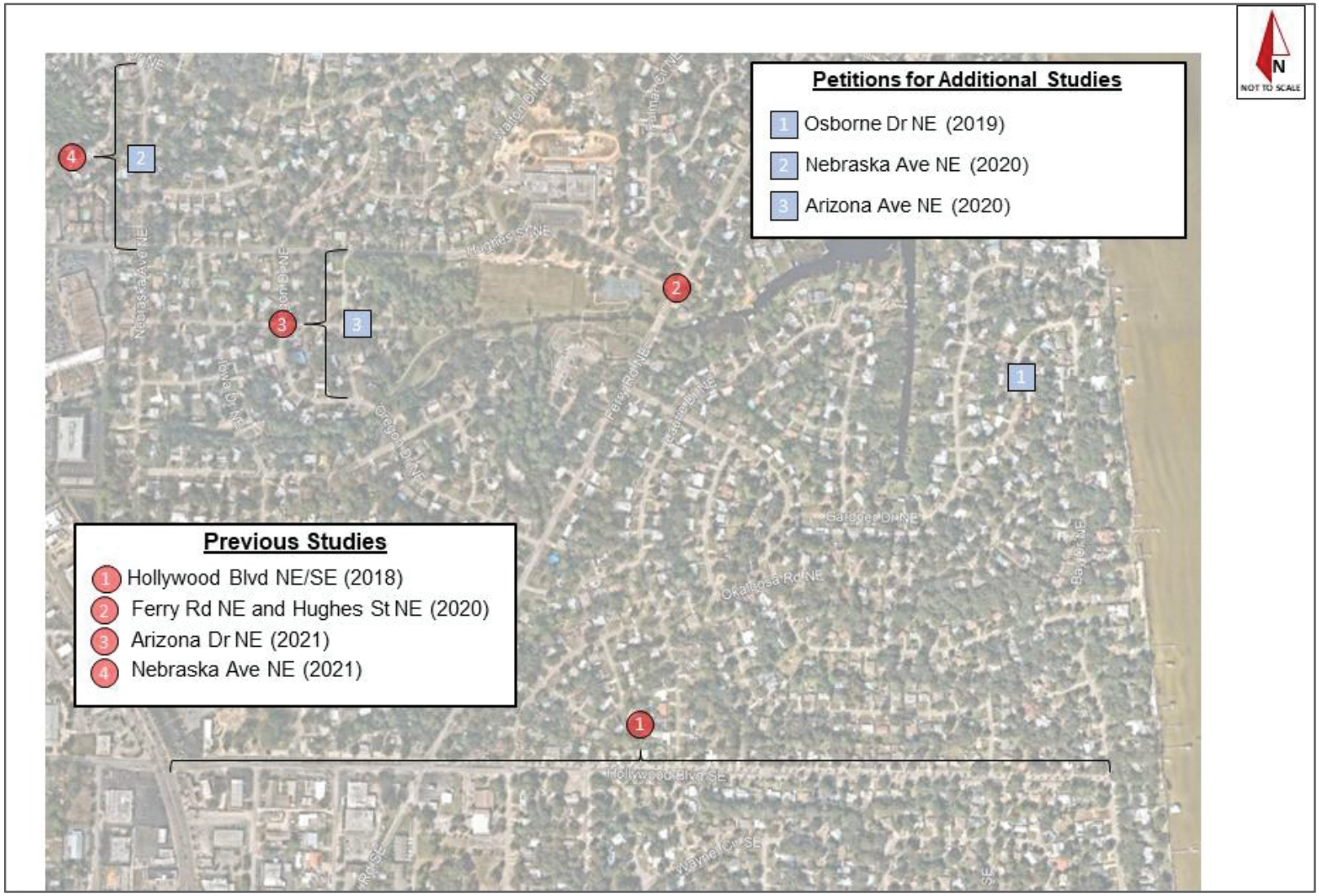


Figure 2: Map of Past Studies and Petitions

3.1 STUDY 1: HOLLYWOOD BOULEVARD NE/SE TRAFFIC STUDY (OCTOBER 2018)

The City of Fort Walton Beach Public Works & Utility Services Department conducted a traffic study on Hollywood Boulevard NE/SE east of SR 85 (Eglin Parkway). Traffic counters were deployed at two (2) locations on Hollywood Boulevard NE/SE to measure speed and traffic volumes for a two-week period from August 7, 2018, to August 23, 2018. The vehicle speed data indicated 85th percentile speeds ranging from 42 mph to 50 mph along Hollywood Boulevard, well over the posted 35 mph speed limit.

The study also evaluated crash data from October 25, 2013, to August 23, 2018, for the Hollywood Boulevard NE/SE corridor from SR 85 (Eglin Parkway) to Bay Drive NE/SE. The crash evaluation indicated that there were 82 vehicular crashes on the subject section of Hollywood Boulevard NE/SE during the analysis period. Of the 82 crashes, two (2) resulted in fatalities and five (5) resulted in injuries. The most common crash location was at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE, where 24 of the crashes occurred.

Study 1 recommended reducing the posted speed limit from 35 mph to 30 mph, adding speed limit signage and electronic speed feedback signs, periodically removing vegetation that inhibits sight distance, studying the existing corridor further to check if four lanes are needed, and connecting a sidewalk from Vine Avenue NE to Laurie Drive NE.

3.2 STUDY 2: FERRY ROAD NE AND HUGHES STREET NE TRAFFIC ANALYSIS (OCTOBER 2020)

The City of Fort Walton Beach Public Works & Utility Services Department performed a traffic study at the intersection of Ferry Road NE and Hughes Street NE. Two (2) traffic counters were placed on Ferry Road NE and one (1) traffic counter was placed on Hughes Street NE to measure operating speeds and traffic volumes over a two-week period from September 25, 2020, to October 5, 2020. The average speeds on Ferry Road NE ranged from 25 mph to 27 mph and the 85th percentile speed at both locations was approximately 33 mph. The average speed on Hughes Street NE was reported as 24 mph and the 85th percentile speed was reported as 28 mph.

An All-Way Stop-Control (AWSC) Warrant was conducted at the intersection in accordance with the *Manual on Uniform Traffic Control Devices* (MUTCD), Section 2B.04. Only one (1) of four (4) conditions of the AWSC Warrant was met, so Study 2 did not recommend the installation of AWSC at the intersection of Ferry Road NE and Hughes Street NE.

3.3 STUDY 3: ARIZONA DRIVE NE TRAFFIC ANALYSIS (FEBRUARY 2021)

The City of Fort Walton Beach Public Works & Utility Services Department performed a traffic study on Arizona Drive NE. One (1) traffic counter was placed on Arizona Drive NE to measure operating speeds and traffic volumes over a one-week period from February 11, 2021, to February 18, 2021. The average speed on Arizona Drive NE was 21.4 mph in both directions and the 85th percentile speed was 25 mph.

Based on the background information, Study 3 recommended installing a “Watch for Children” sign and a “Speed Limit” sign located at Yacht Club Court NE with a “STOP” sign, for consistency throughout the community. Study 3 did not recommend any traffic calming devices based on the results of the vehicle speed analysis.

3.4 STUDY 4: NEBRASKA AVENUE NE TRAFFIC STUDY (JUNE 2021)

The City of Fort Walton Beach Public Works & Utility Services Department performed a traffic study on Nebraska Avenue NE. One (1) traffic counter was placed in front of 110 Nebraska Avenue NE to measure speed and traffic volumes over a two-week period from February 18, 2021, to March 1, 2021. The average operating speeds along Nebraska Avenue NE ranged from 20 mph to 21 mph, and 85th percentile speeds ranged from 21 mph to 25 mph. The highest bidirectional daily traffic volume measured during the data collection period was 461 vehicles.

Based on the data collected, Study 4 recommended installing “Watch for Children” signage underneath the existing speed limit signs and replacing the existing “YIELD” sign located at Yacht Club Court NE with a “STOP” sign, for consistency throughout the community. Study 4 did not recommend any traffic calming devices based on the results of the vehicle speed analysis.

3.5 PETITION 1: OSBORNE DRIVE TRAFFIC STUDY PETITION (JUNE 2019)

Residents of Ferry Park submitted a petition to the City of Fort Walton Beach requesting consideration for traffic calming measures on Osborne Drive NE between Gardner Street NE and Bay Drive NE. The concerns cited in the petition were high traffic speeds, especially from non-residents, and the associated safety concerns.

3.6 PETITION 2: NEBRASKA AVENUE TRAFFIC STUDY PETITION (OCTOBER 2020)

Residents of Ferry Park submitted a petition to the City of Fort Walton Beach requesting consideration for traffic calming measures on Nebraska Avenue NE between Hughes Street NE and Yacht Club Drive NE. The concerns cited in the petition were high traffic speeds and high traffic volumes, especially traffic from non-residents. The City conducted Study 4 in response to this petition.

3.7 PETITION 3: ARIZONA DRIVE TRAFFIC STUDY PETITION (DECEMBER 2020)

Residents of Ferry Park submitted a petition to the City of Fort Walton Beach requesting consideration for traffic calming measures on Arizona Drive NE between Hughes Street NE and Oregon Drive NE. The concerns cited in the petition were high traffic speeds and associated safety concerns. The City conducted Study 3 in response to this petition.

3.8 RESIDENTIAL TRAFFIC CALMING HANDBOOK (JULY 2011)

The City of Fort Walton Beach Engineering and Utility Services Department published a Residential Traffic Calming Handbook outlining steps that residents can take to collaborate with City officials regarding the installation or removal of traffic calming devices.

The Handbook includes a description of the roads eligible for traffic calming measures, information about the source of funding for traffic calming measures, several examples of potential traffic calming measures, and an outline of the procedures for implementing or removing traffic calming measures.

Per the Residential Traffic Calming Handbook, only roads classified as local are eligible for consideration of traffic calming measures under the guidelines of this program; arterial roadways and collector roadways are not eligible.

Funding for residential traffic calming measures can be allotted from the City's annual budget, but the Handbook notes that the annual budget is often fully encumbered by the time a traffic calming measure is requested. Alternative funding options presented are waiting for the next budget year, a local special tax assessment, neighborhood association funding, or a proportionate share assessment paid by affected residents. Typically, the proportionate share assessment would be required only when the affected residents request a traffic calming measure that is more costly than the most economically feasible traffic calming measure deemed acceptable by the City Engineer.

The examples of potential traffic calming measures outlined in the Residential Traffic Calming Handbook include a Neighborhood Traffic Watch Program (i.e., flyers to increase awareness of the need to control speed), roundabouts, street narrowing, speed tables, chicanes, and combinations thereof.

The most extensive portion of the Residential Traffic Calming Handbook outlines the standard procedure for implementing traffic calming measures. The procedure requires (Step 1) the initiation of a request by a concerned resident, (Step 2) a traffic engineering analysis considering the existing roadway conditions and collecting vehicular volume and speed data at the subject location, (Step 3) a preliminary analysis by the City Engineer evaluating the results of the traffic engineering analysis, (Step 4) a petition signed by 75% of the affected property owners within the vicinity of the proposed traffic calming measure who agree with the recommendation, and (Step 5) a Public Hearing to provide an opportunity for the City to obtain additional input from residents on the recommended traffic calming measure(s). In the event that residents wish to remove traffic calming measures, the conditions for removal are outlined as well.

Finally, the Handbook outlines conditions in which traffic calming measures can be installed in what are deemed "emergency situations." This section allows the City discretion to install traffic calming measures where crashes have occurred as a result of speeds or volumes or when the 85th percentile speed is measured at 25 mph or greater in excess of the posted speed limit.

4.0 PUBLIC INVOLVEMENT

Community engagement is an essential input for this Ferry Park Neighborhood Traffic Study, in addition to the traffic data collected in the neighborhood. Opportunities for public input included a kickoff community workshop and an online survey shared with the residents of the Ferry Park Neighborhood.

4.1 KICKOFF COMMUNITY WORKSHOP

A kickoff community workshop was held on Wednesday, May 24, 2023, at 6:00 PM at the Fort Walton Beach Field Office Complex for the project team to introduce the Ferry Park Neighborhood Traffic Study to the community and to provide an opportunity for local residents to provide input on the direction of the project. Approximately 17 people attended the Kickoff Community Workshop, including representatives from the City of Fort Walton Beach and Kimley-Horn. A copy of the sign-in sheet is included in **Appendix B**.

City staff introduced the general project study area, discussed the historical context of prior studies and the City's plan to conduct annual neighborhood studies, outlined the study purpose with the attendees, and introduced the Kimley-Horn project team.

Representatives from Kimley-Horn presented a slideshow that elaborated on the historical context of the Ferry Park Neighborhood studies, illustrated the study area, discussed the planned approach to collecting information from the public and collecting traffic data within the neighborhood, illustrated some potential improvement elements that would be considered in the study, and opened the floor for public participation.

4.1.1 Question and Answer

During the presentation, residents asked questions about several of the potential improvement elements and identified areas of concern within the neighborhood, including along Yacht Club Drive NE, Nebraska Avenue NE, and Oregon Drive NE. Several residents made note of a lack of sidewalk infrastructure in certain parts of the neighborhood and expressed various thoughts about golf carts utilizing roadways within the neighborhood. One resident pointed out that the length of the eastbound left-turn lane on Hollywood Boulevard NE/SE at Ferry Road NE is not sufficient for deceleration.

There was some discussion regarding the implementation of a lower areawide speed limit, as well. Representatives from the City and from Kimley-Horn noted that the purpose of the study is to evaluate all options, but lowering speed limits is not typically considered a valid standalone mitigation measure without implementation of other measures to encourage drivers to reduce vehicle speeds.

4.1.2 Breakout Session

During the breakout session, members of the project team were stationed around the room at one of two display boards to answer questions and guide the public in providing input. Copies of the exhibits are included in **Appendix B**.

One of the display boards featured an aerial exhibit of the Ferry Park Neighborhood with proposed data collection locations. Attendees were prompted to use sticky notes to comment on concerns at specific locations within the neighborhood roadway network and, more specifically, to identify any locations where additional traffic data should be collected to help capture a comprehensive representation of existing traffic patterns within the neighborhood.

Comments posted on the aerial exhibits, as written, included:

- Speed and volume counters on Nebraska Avenue NE, both north and south of Hughes Street NE
- Striping (Ferry Road NE and Hollywood Boulevard NE/SE)
- Roundabout (Ferry Road NE and Hollywood Boulevard NE/SE)
- Speed and volume counters on Staff Drive NE
- Speed and volume counters on Oregon Drive NE

The second display board featured illustrations of 12 different traffic calming techniques. Attendees were asked to vote for potential improvement measures that they thought would be appropriate in the context of the Ferry Park Neighborhood. Several participants wrote specifically where they would like to see specific traffic calming techniques implemented. The input received on this exhibit will help guide the project team in considering potential improvements and determining appropriate locations for implementation. **Figure 3** summarizes the votes received for each traffic calming alternative presented at the Kickoff Community Workshop. Comments posted on the exhibit included:

- Speed cushion/tables on Yacht Club Drive NE and Nebraska Avenue NE from Hughes Street NE to Yacht Club Drive NE
- Raised crosswalk
- Speed feedback signage on Yacht Club Drive NE
- Redesign the intersection of Yacht Club Drive NE & Nebraska Avenue NE using corner extension/bulb-out
- Pedestrian crossing signage with beacons at Smith Drive NE & Ferry Road NE, Walton Drive NE & Hughes Street NE, and Oregon Drive NE & California Drive NE
- Complete street/road diet on Hollywood Boulevard NE/SE
- (Mini) roundabout on Hollywood Boulevard NE/SE & Bay Drive NE/SE and Hollywood Boulevard NE/SE & Ferry Road NE/SE

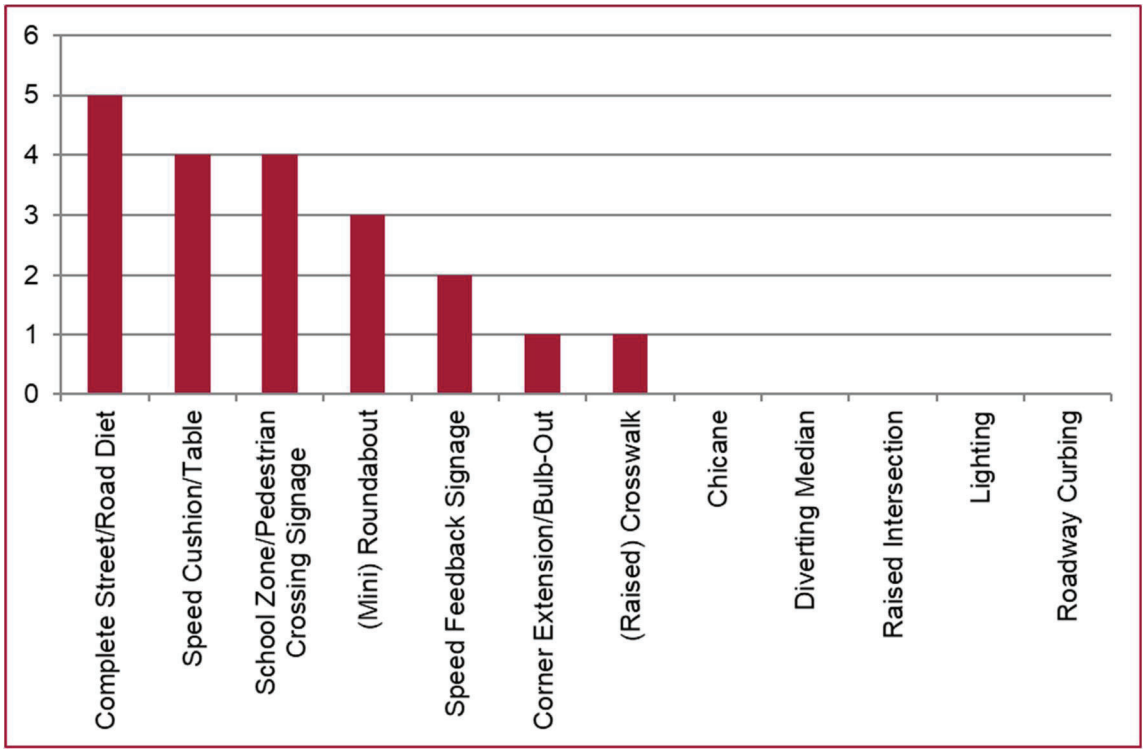


Figure 3: Kickoff Community Workshop Vote Count, Potential Improvement Elements

For the remainder of the Kickoff Community Workshop, the project team answered questions from the public, and the attendees were encouraged to fill out comment cards elaborating on their traffic concerns within the Ferry Park Neighborhood. Comment cards submitted by meeting participants are included in **Appendix B**. The meeting ended at approximately 7:15 PM.

4.2 ONLINE SURVEY

To supplement the information and opinions collected from the public at the Kickoff Community Workshop, a follow-up online survey was published by the Fort Walton Beach Public Relations office to the Ferry Park Neighborhood Nextdoor group. Over a two-week period, 35 responses were collected, providing further insight into the concerns of Ferry Park Neighborhood residents and suggesting additional locations for data collection to inform the traffic analysis.

4.2.1 Ranking Concerns

Survey participants were asked to rank five traffic concerns within the Ferry Park Neighborhood from most concerning to least concerning: vehicle speeds, number of vehicles, bike and pedestrian safety, vehicles running stop signs, and school pick-up queues. **Figure 4** summarizes how the 35 respondents ranked the concerns, with 1 representing the most concerning and 5 the least. Vehicle speeds were most commonly cited as the most concerning issue by survey participants. Bicycle and pedestrian safety was the next-highest ranked concern, followed by

vehicles running stop signs and number of vehicles. School pick-up queues were most commonly the lowest-ranked concern among the options presented to the survey participants.

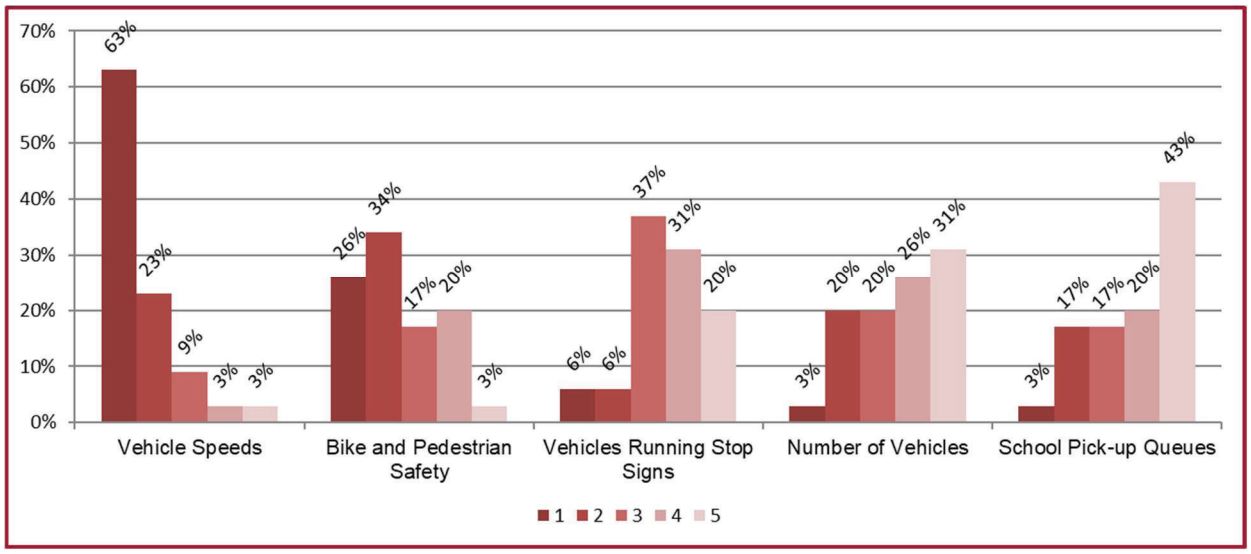


Figure 4: Online Survey, Ranking Traffic Concerns

Respondents were given an opportunity to write in additional concerns not captured in the ranking options. Their answers include the following:

- Lack of lighting
- Low visibility of crosswalks (Ferry Road NE and Smith Drive NE intersection, in particular)
- Business parking on neighborhood roads (Yacht Club Drive NE, in particular)
- Lack of sidewalks
- Roads need resurfacing

4.2.2 Improvement Alternatives

Survey participants were asked to review the same list of 12 potential improvement elements that were presented at the Kickoff Community Workshop and select up to 3 that they would most like to see implemented in the Ferry Park Neighborhood. Responses indicated that lighting was the most popular element (17 votes), followed closely by speed cushion/table (15 votes) and raised crosswalk (11 votes). **Figure 5** illustrates the number of votes each alternative received in the online survey.

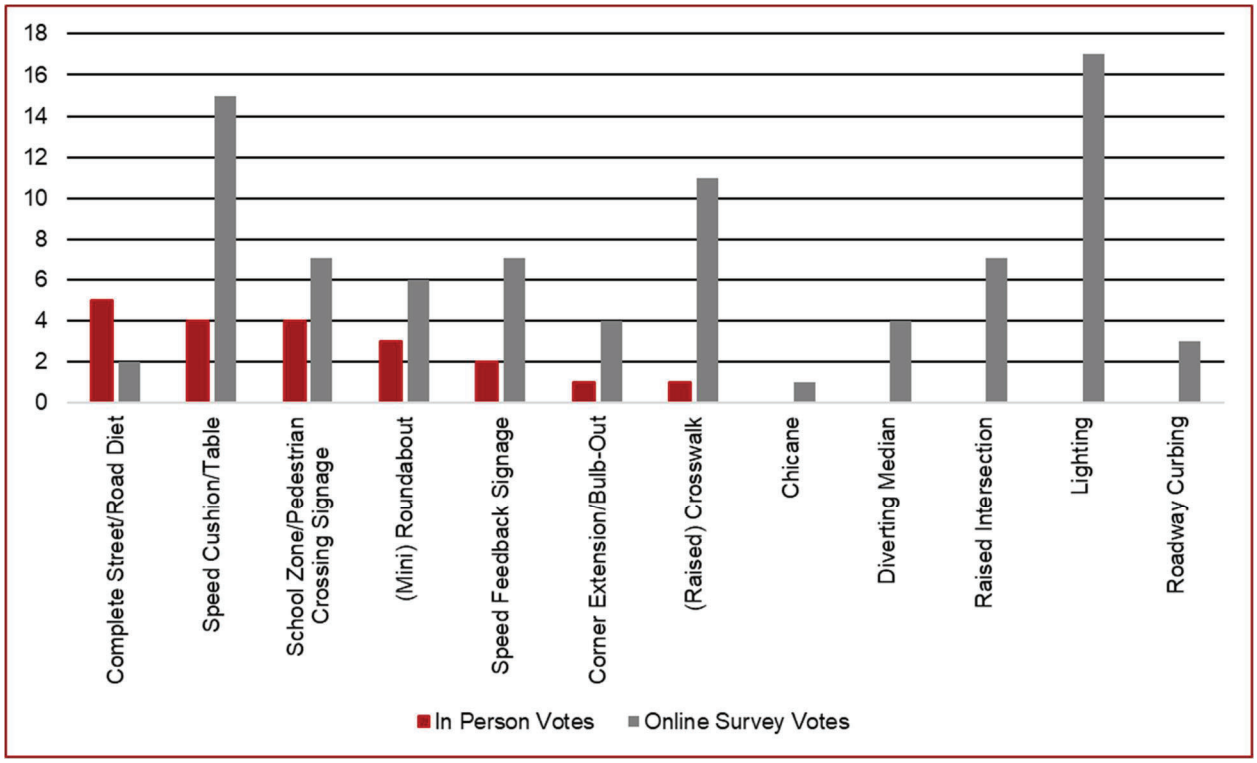


Figure 5: Online Survey, Potential Improvement Elements

4.2.3 Data Collection Locations

Lastly, survey participants were offered an opportunity to help guide the data collection process for the traffic study by recommending data collection locations within the Ferry Park Neighborhood. Participants were not provided with a map of the proposed data collection locations, so some of the responses overlap with sites that were already planned for inclusion in the data collection efforts:

- Ferry Road NE
- Gardner Drive NE
- Hollywood Boulevard NE/SE
- Hughes Street NE
- Yacht Club Drive NE
- Nebraska Avenue NE
- Smith Drive NE
- Texas Street NE at Iowa Drive NE

5.0 DATA COLLECTION

An extensive data collection effort was undertaken as part of the Ferry Park Neighborhood Traffic Study in order to verify the qualitative observations of the residents. The traffic data provides a quantitative measure for traffic analysis and upon which recommendations can be made. The raw traffic count data is provided in **Appendix C**.

5.1 SEGMENT SPEED AND VOLUME DATA

Based on input from the City and from the public, vehicular speed and volume data were collected at various locations throughout the Ferry Park Neighborhood to document existing traffic conditions.

5.1.1 Data Collection

An expansive collection of traffic volume and speed data was undertaken in the Ferry Park Neighborhood on Tuesday, May 16, 2023, and Tuesday, June 20, 2023. Data collected included 24-hour directional speed and volume data at 21 locations within the Ferry Park Neighborhood.

Figure 6 illustrates the data collection locations and the daily volumes and average daily speeds in each direction. **Figure 7** illustrates the AM peak hour and PM peak hour volumes and average peak hour speeds in each direction.

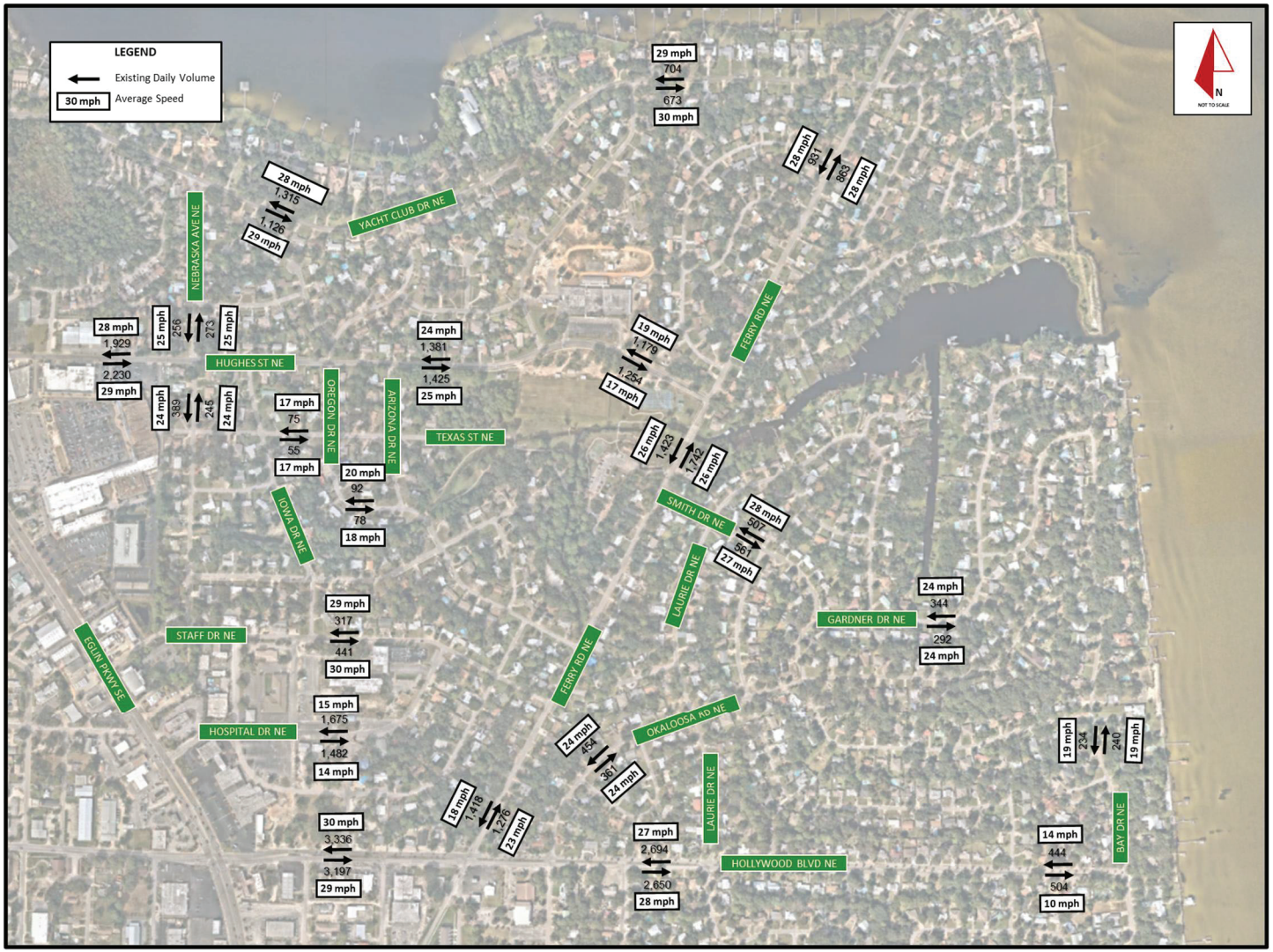


Figure 6: Daily Traffic Volumes and Average Speeds

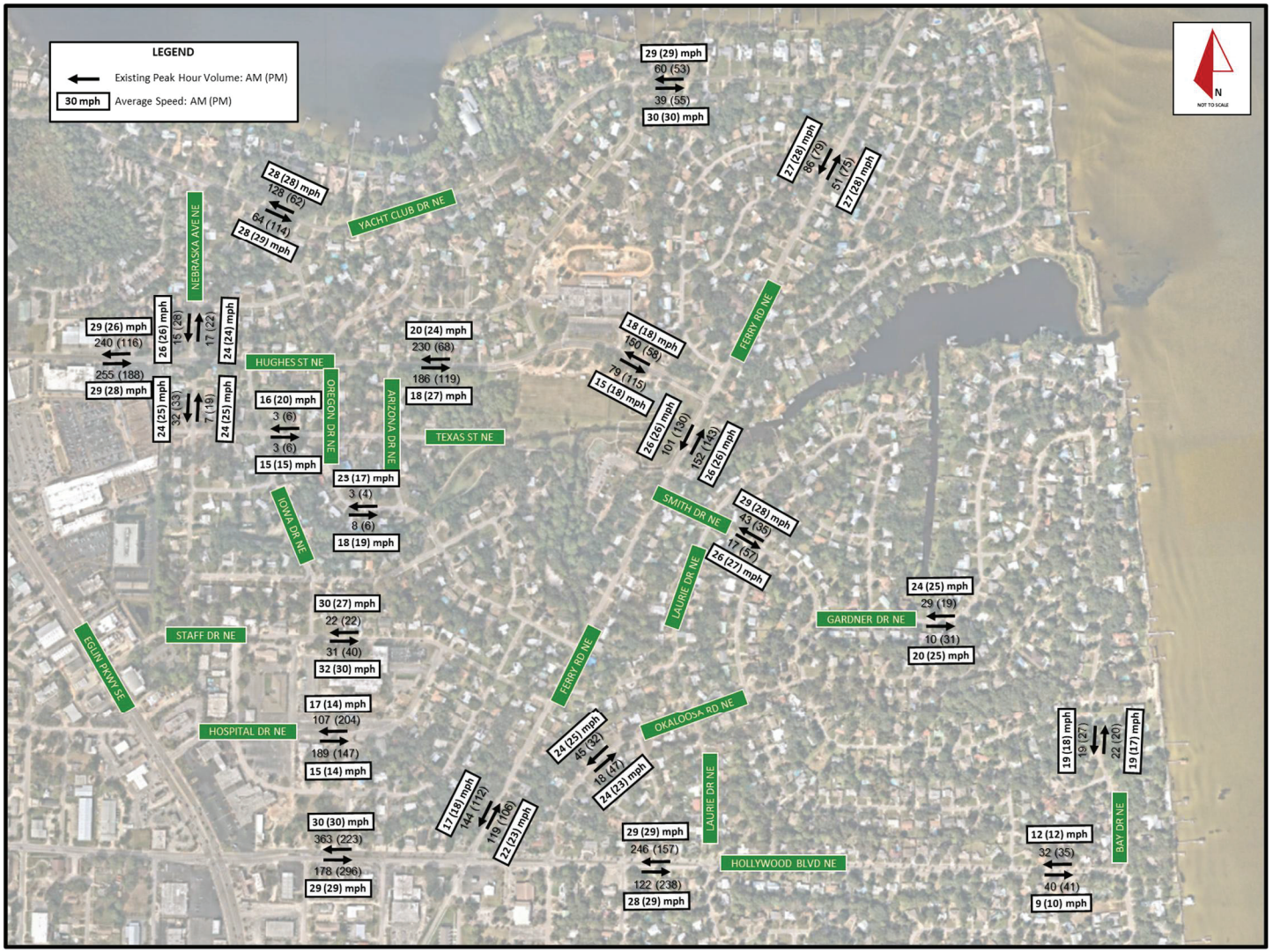


Figure 7: Peak Hour Traffic Volumes and Speeds

5.2 TURNING MOVEMENT VOLUMES

Turning movement counts were collected at six (6) locations on Tuesday, May 16, 2023, and Tuesday, June 20, 2023. Turning movement volumes were recorded from 7:00 AM to 9:00 AM and from 12:00 PM to 6:00 PM to account for the AM peak period, the PM peak period, and the afternoon peak period in relation to pick-up traffic to and from the Elliott Point Elementary School. Turning movement data included heavy vehicles (including buses), pedestrians, and bicyclists. **Figure 8** illustrates the AM peak hour and PM peak hour turning movement volumes at the following locations:

- Yacht Club Drive NE and Nebraska Avenue NE
- Hughes Street NE and Nebraska Avenue NE
- Ferry Road NE and Hughes Street NE
- Ferry Road NE/SE and Hollywood Boulevard NE/SE
- Hollywood Boulevard NE/SE and Bay Drive NE/SE
- Ferry Road NE and Yacht Club Drive NE

Since the operating hours of Elliott Point Elementary School do not necessarily match the peak hours of traffic on the surrounding roadway network, peak hour data during the afternoon hours were determined separately.

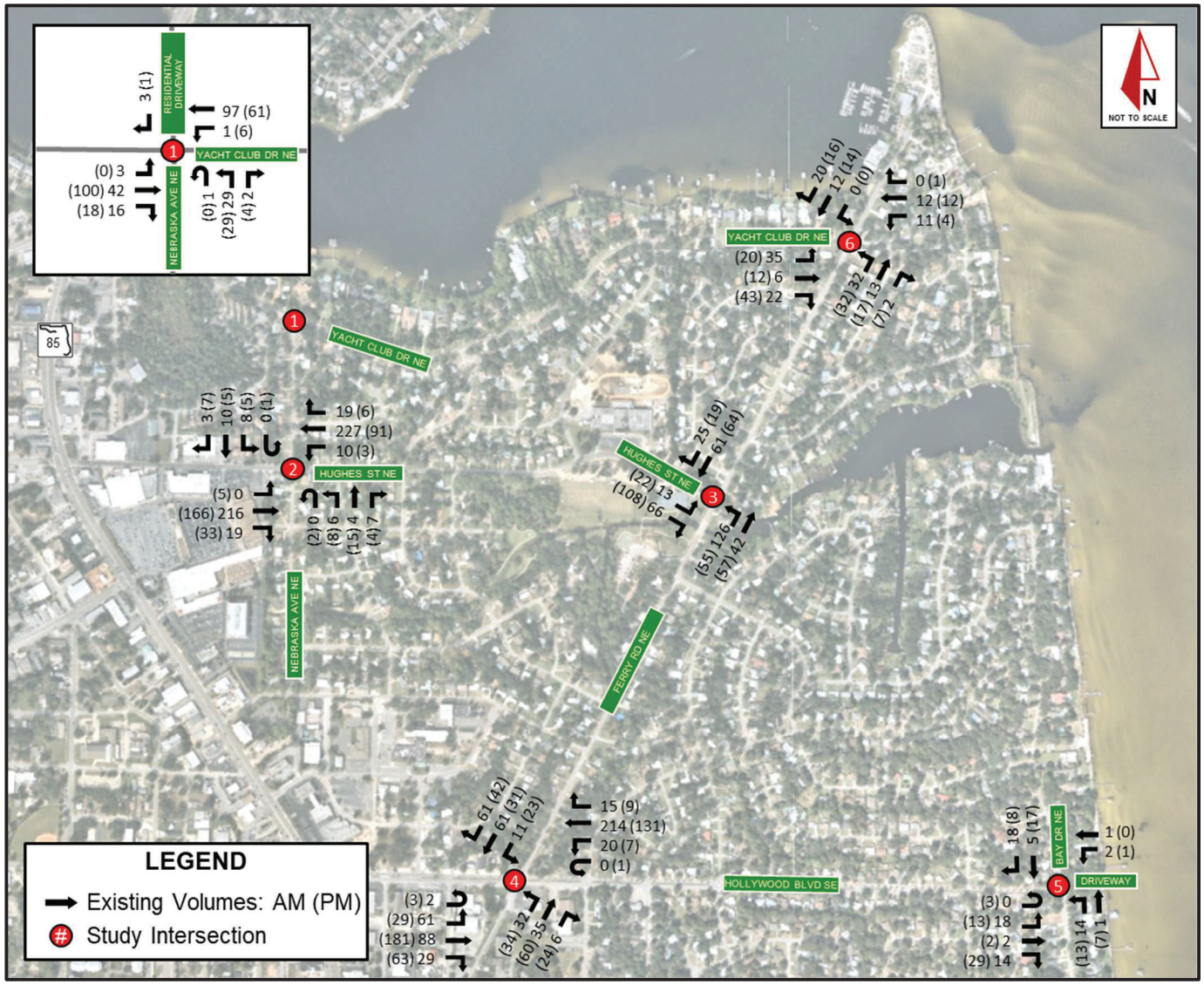


Figure 8: Intersection Turning Movement Volumes

5.3 CRASH DATA

Crash data within the Ferry Park Neighborhood were obtained from the University of Florida's *Signal Four Analytics* web application for crashes reported from January 1, 2018, through December 31, 2022. Ninety-six (96) crashes were recorded within the study area during the five-year analysis period. Individual crash reports for each incident were reviewed in order to understand the circumstances and contributing factors for each crash. A table summary of the raw crash data is included in **Appendix D**.

5.4 SCHOOL ZONE DELINEATION AND SIGNAGE

The locations of school zone pavement markings and signs were reviewed utilizing aerial photography and field review within the Ferry Park Neighborhood. Additionally, information regarding the Elliott Point Elementary School drop-off and pick-up procedures and the locations identified and/or utilized by queueing parents were reviewed.

6.0 TRAFFIC ANALYSIS

The data collected in May 2023 and June 2023 were evaluated in order to better understand the traffic patterns within the Ferry Park Neighborhood and identify deficiencies or areas of concern.

6.1 SPEED AND VOLUME ANALYSIS

The data collection locations with reference numbers are illustrated in **Figure 9**.

6.1.1 Daily Speed and Volume Analysis

Table 1 summarizes the daily speed and volume data collected within the Ferry Park Neighborhood at the 21 data collection locations. **Figure 9** illustrates the daily speed and volume data collection sites.

Table 1: Daily Speed and Volume Data

Roadway	Count Location Number	Speed (mph)					Volume (veh/day)		
		Posted	Northbound/Eastbound		Southbound/Westbound		NB/EB	SB/WB	Two-way Total
			Average	85th Percentile	Average	85th Percentile			
Yacht Club Dr NE (East of Nebraska Ave NE)	1	25	29	32	28	33	1,126	1,315	2,441
Yacht Club Dr NE (West of Ferry Rd NE)	2	25	30	34	29	34	673	704	1,377
Hughes St NE (West of Nebraska Ave NE)	3	25	29	33	28	33	2,230	1,929	4,159
Hughes St NE (West of Elliot Point Elementary)	4	25	25	29	24	28	1,425	1,381	2,806
Hughes St NE (East of Elliot Point Elementary)	5	25	17	21	19	22	1,254	1,179	2,433
Ferry Rd NE (North of Hughes St NE)	6	30	28	29	28	29	863	931	1,794
Ferry Rd NE (South of Hughes St NE)	7	30	26	31	26	30	1,742	1,423	3,165
Ferry Rd NE (North of Hollywood Blvd NE/SE)	8	30	23	28	18	23	1,276	1,418	2,694
Okaloosa Rd NE (West of Laurie Dr NE)	9	25	24	28	24	29	361	454	815
Hollywood Blvd NE/SE (West of Ferry Rd NE/SE)	10	30	29	34	30	35	3,197	3,336	6,533
Hollywood Blvd NE/SE (East of Ferry Rd NE/SE)	11	30	28	34	27	34	2,650	2,694	5,344
Hollywood Blvd NE/SE (West of Bay Dr NE/SE)	12	30	10	16	14	19	504	444	948
Hospital Dr NE (SR 85/East of Eglin Pkwy NE)	13	25	14	22	15	22	1,482	1,675	3,157
Bay Dr NE (North of Hollywood Blvd NE/SE)	14	25	19	23	19	24	240	234	474
Staff Dr NE (East of Iowa Dr NE)	15	25	30	34	29	33	463	333	796
Nebraska Ave NE (North of Hughes St NE)	16	25	25	29	25	29	287	269	556
Nebraska Ave NE (South of Hughes St NE)	17	25	24	28	24	28	257	408	665
Oregon Dr NE (West of Arizona Dr NE)	18	25	18	23	20	24	82	97	179
Gardner Dr NE (East of Laurie Dr NE)	19	25	24	28	24	29	307	361	668
Smith Dr NE (East of Laurie Dr NE)	20	25	27	29	28	32	531	532	1,063
Texas St NE (East of Iowa Dr NE)	21	25	17	22	17	23	58	79	137

Locations where daily speed data indicated that the 85th percentile speed was 5 mph or greater in excess of the posted speed limit are highlighted in red. The 85th percentile speeds along Yacht Club Drive NE, Hughes Street NE (west of Nebraska Avenue NE), Hollywood Boulevard NE/SE (west of Ferry Road NE), Staff Drive NE (east of Iowa Drive NE), and Smith Drive (east of Laurie Drive NE) suggest that traffic calming measures may be warranted to reduce travel speeds along those streets.

Figure 9: Speed and Volume Count Locations

Overall, all of the roadways within the Ferry Park Neighborhood have sufficient capacity to accommodate the daily traffic volumes observed during the spring and summer data collection periods. Based on the Florida Department of Transportation (FDOT) *Multimodal Quality/Level of Service Handbook (2023)* generalized service capacity tables, assuming a context classification for each site as shown in **Table 2**, and adjusting for non-state roads (multiply by 0.90), roadways with an exclusive left turn lane (multiply by 1.05), multilane roads with no exclusive turn lanes (multiply by 0.75), and undivided roads with no exclusive turn lanes (multiply by 0.80), the daily LOS C capacities of the study roadways range from 11,020 to 29,010 vehicles per day.

Table 2: Generalized Service Capacity of Study Sites

Count Location Number	Roadway	FDOT Context Classification	Numb. of Lanes	Daily MSV	Daily Volumes
1	Yacht Club Dr NE (East of Nebraska Ave NE)	C3R	2	14,110	2,441
2	Yacht Club Dr NE (West of Ferry Rd NE)	C3R	2	14,110	1,377
3	Hughes St NE (West of Nebraska Ave NE)	C3C	2	11,020	4,159
4	Hughes St NE (West of Elliot Point Elementary)	C3R	2	14,110	2,806
5	Hughes St NE (East of Elliot Point Elementary)	C3R	2	14,110	2,433
6	Ferry Rd NE (North of Hughes St NE)	C3R	2	14,110	1,794
7	Ferry Rd NE (South of Hughes St NE)	C3R	2	14,110	3,165
8	Ferry Rd NE (North of Hollywood Blvd NE/SE)	C3R	2	14,110	2,694
9	Okaloosa Rd NE (West of Laurie Dr NE)	C3R	2	14,110	815
10	Hollywood Blvd NE/SE (West of Ferry Rd NE/SE)	C3C	4	29,010	6,533
11	Hollywood Blvd NE/SE (East of Ferry Rd NE/SE)	C3R	4	23,150	5,344
12	Hollywood Blvd NE/SE (West of Bay Dr NE/SE)	C3R	4	23,150	948
13	Hospital Dr NE (SR 85/East of Eglin Pkwy NE)	C3C	2	11,020	3,157
14	Bay Dr NE (North of Hollywood Blvd NE/SE)	C3R	2	14,110	474
15	Staff Dr NE (East of Iowa Dr NE)	C3C	2	11,020	796
16	Nebraska Ave NE (North of Hughes St NE)	C3R	2	14,110	556
17	Nebraska Ave NE (South of Hughes St NE)	C3R	2	14,110	665
18	Oregon Dr NE (West of Arizona Dr NE)	C3R	2	14,110	179
19	Gardner Dr NE (East of Laurie Dr NE)	C3R	2	14,110	668
20	Smith Dr NE (East of Laurie Dr NE)	C3R	2	14,110	1,063
21	Texas St NE (East of Iowa Dr NE)	C3R	2	14,110	137

C3C: Suburban Commercial
C3R: Suburban Residential
MSV: Maximum service volume

6.1.2 Peak Hour Speed and Volume Analysis

Table 3 summarizes the AM peak hour and PM peak hour average speed data collected for the Ferry Park Neighborhood Traffic Study.

Table 3: Peak Hour Average Speeds

Speed/Volume Count Location Number	Roadway	Posted Speed (mph)	Average Speed (mph)					
			AM			PM		
			Peak Hour	NB/EB	SB/WB	Peak Hour	NB/EB	SB/WB
1	Yacht Club Dr NE (East of Nebraska Ave NE)	25	8:00AM-9:00AM	28	28	5:00PM-6:00PM	29	28
2	Yacht Club Dr NE (West of Ferry Rd NE)	25	8:00AM-9:00AM	30	29	4:15PM-5:15PM	30	29
3	Hughes St NE (West of Nebraska Ave NE)	25	8:00AM-9:00AM	29	29	5:00PM-6:00PM	28	26
4	Hughes St NE (West of Elliot Point Elementary)	25	8:00AM-9:00AM	18	20	5:00PM-6:00PM	27	24
5	Hughes St NE (East of Elliot Point Elementary)	25	8:00AM-9:00AM	15	18	5:00PM-6:00PM	18	18
6	Ferry Rd NE (North of Hughes St NE)	30	7:00AM-8:00AM	27	27	4:45PM-5:45PM	28	28
7	Ferry Rd NE (South of Hughes St NE)	30	7:00AM-8:00AM	26	26	4:00PM-5:00PM	26	26
8	Ferry Rd NE (North of Hollywood Blvd NE/SE)	30	7:00AM-8:00AM	22	17	4:45PM-5:45PM	23	18
9	Okaloosa Rd NE (West of Laurie Dr NE)	25	7:00AM-8:00AM	24	24	5:00PM-6:00PM	23	25
10	Hollywood Blvd NE/SE (West of Ferry Rd NE/SE)	30	7:30AM-8:30AM	29	30	4:30PM-5:30PM	29	30
11	Hollywood Blvd NE/SE (East of Ferry Rd NE/SE)	30	7:15AM-8:15AM	28	29	4:15PM-5:15PM	29	29
12	Hollywood Blvd NE/SE (West of Bay Dr NE/SE)	30	8:00AM-9:00AM	9	12	4:45PM-5:45PM	10	12
13	Hospital Dr NE (SR 85/East of Eglin Pkwy NE)	25	7:15AM-8:15AM	15	17	4:30PM-5:30PM	14	14
14	Bay Dr NE (North of Hollywood Blvd NE/SE)	25	8:00AM-9:00AM	19	19	4:15PM-5:15PM	17	18
15	Staff Dr NE (East of Iowa Dr NE)	25	7:00AM-8:00AM	32	30	4:15PM-5:15PM	30	27
16	Nebraska Ave NE (North of Hughes St NE)	25	7:15AM-8:15AM	24	26	5:00PM-6:00PM	24	26
17	Nebraska Ave NE (South of Hughes St NE)	25	7:00AM-8:00AM	24	24	4:00PM-5:00PM	25	25
18	Oregon Dr NE (West of Arizona Dr NE)	25	7:45AM-8:45AM	18	23	5:00PM-6:00PM	19	17
19	Gardner Dr NE (East of Laurie Dr NE)	25	7:15AM-8:15AM	20	24	4:30PM-5:30PM	25	25
20	Smith Dr NE (East of Laurie Dr NE)	25	7:45AM-8:45AM	26	29	5:00PM-6:00PM	27	28
21	Texas St NE (East of Iowa Dr NE)	25	7:00AM-8:00AM	15	16	5:00PM-6:00PM	15	20

[1]Speed shown in red text represents locationas where average speeds are equal to or greater than 5 mph over posted speed.

Locations where peak hour average speeds were 5 mph or greater in excess of the posted speed limit are highlighted in red. During the AM and PM peak hours, the count locations on Yacht Club Drive NE west of Ferry Road NE, and Staff Drive NE east of Iowa Drive NE were identified as having average travel speeds more than 5 mph in excess of the posted speed limit.

Table 4 summarizes the AM peak hour and PM peak hour 85th percentile speed data collected for the Ferry Park Neighborhood Traffic Study.

Table 4: Peak Hour 85th Percentile Speeds

Speed/Volume Count Location Number	Roadway	Posted Speed (mph)	85th Percentile Speed (mph)					
			AM			PM		
			Peak Hour	NB/EB	SB/WB	Peak Hour	NB/EB	SB/WB
1	Yacht Club Dr NE (East of Nebraska Ave NE)	25	8:00AM-9:00AM	33	33	5:00PM-6:00PM	33	33
2	Yacht Club Dr NE (West of Ferry Rd NE)	25	8:00AM-9:00AM	33	33	4:15PM-5:15PM	33	33
3	Hughes St NE (West of Nebraska Ave NE)	25	8:00AM-9:00AM	33	33	5:00PM-6:00PM	33	33
4	Hughes St NE (West of Elliot Point Elementary)	25	8:00AM-9:00AM	23	23	5:00PM-6:00PM	28	28
5	Hughes St NE (East of Elliot Point Elementary)	25	8:00AM-9:00AM	18	18	5:00PM-6:00PM	23	23
6	Ferry Rd NE (North of Hughes St NE)	30	7:00AM-8:00AM	28	28	4:45PM-5:45PM	28	28
7	Ferry Rd NE (South of Hughes St NE)	30	7:00AM-8:00AM	33	33	4:00PM-5:00PM	33	33
8	Ferry Rd NE (North of Hollywood Blvd NE/SE)	30	7:00AM-8:00AM	28	23	4:45PM-5:45PM	28	23
9	Okaloosa Rd NE (West of Laurie Dr NE)	25	7:00AM-8:00AM	28	33	5:00PM-6:00PM	28	33
10	Hollywood Blvd NE/SE (West of Ferry Rd NE/SE)	30	7:30AM-8:30AM	33	33	4:30PM-5:30PM	38	33
11	Hollywood Blvd NE/SE (East of Ferry Rd NE/SE)	30	7:15AM-8:15AM	38	33	4:15PM-5:15PM	38	33
12	Hollywood Blvd NE/SE (West of Bay Dr NE/SE)	30	8:00AM-9:00AM	8	18	4:45PM-5:45PM	18	18
13	Hospital Dr NE (SR 85/East of Eglin Pkwy NE)	25	7:15AM-8:15AM	23	23	4:30PM-5:30PM	23	23
14	Bay Dr NE (North of Hollywood Blvd NE/SE)	25	8:00AM-9:00AM	23	23	4:15PM-5:15PM	23	23
15	Staff Dr NE (East of Iowa Dr NE)	25	7:00AM-8:00AM	38	33	4:15PM-5:15PM	33	33
16	Nebraska Ave NE (North of Hughes St NE)	25	7:15AM-8:15AM	28	31	5:00PM-6:00PM	28	28
17	Nebraska Ave NE (South of Hughes St NE)	25	7:00AM-8:00AM	28	28	4:00PM-5:00PM	28	28
18	Oregon Dr NE (West of Arizona Dr NE)	25	7:45AM-8:45AM	26	23	5:00PM-6:00PM	23	18
19	Gardner Dr NE (East of Laurie Dr NE)	25	7:15AM-8:15AM	25	28	4:30PM-5:30PM	29	28
20	Smith Dr NE (East of Laurie Dr NE)	25	7:45AM-8:45AM	33	33	5:00PM-6:00PM	28	33
21	Texas St NE (East of Iowa Dr NE)	25	7:00AM-8:00AM	18	18	5:00PM-6:00PM	23	28

[1]Speed shown in red text represents locationas where average speeds are equal to or greater than 5 mph over posted speed.

In addition to the sites with excessive average speeds, other sites that exhibited 85th percentile speeds more than 5 mph in excess of the posted speed limit include Yacht Club Drive NE east of Nebraska Avenue NE, Hughes Street NE west of Nebraska Avenue NE, Okaloosa Road NE (westbound) west of Laurie Drive NE, Hollywood Boulevard NE/SE east of Ferry Road NE/SE, Nebraska Avenue NE north of Hughes Street NE, and Smith Drive NE east of Laurie Drive NE.

Table 5 summarizes the AM peak hour and PM peak hour volume data collected in the Ferry Park Neighborhood.

Table 5: Peak Hour Volume Data and Capacity of Study Sites

Count Location Number	Roadway	Peah Hour Volume		Peak Hour MSV	V/C
		AM	PM		
1	Yacht Club Dr NE (East of Nebraska Ave NE)	191	175	1,270	0.15
2	Yacht Club Dr NE (West of Ferry Rd NE)	99	105	1,270	0.08
3	Hughes St NE (West of Nebraska Ave NE)	493	303	990	0.50
4	Hughes St NE (West of Elliot Point Elementary)	366	183	1,270	0.29
5	Hughes St NE (East of Elliot Point Elementary)	191	158	1,270	0.15
6	Ferry Rd NE (North of Hughes St NE)	133	151	1,270	0.12
7	Ferry Rd NE (South of Hughes St NE)	244	261	1,270	0.21
8	Ferry Rd NE (North of Hollywood Blvd NE/SE)	206	180	1,270	0.16
9	Okaloosa Rd NE (West of Laurie Dr NE)	57	74	1,270	0.06
10	Hollywood Blvd NE/SE (West of Ferry Rd NE/SE)	525	499	2,610	0.20
11	Hollywood Blvd NE/SE (East of Ferry Rd NE/SE)	339	360	2,090	0.17
12	Hollywood Blvd NE/SE (West of Bay Dr NE/SE)	23	26	2,090	0.01
13	Hospital Dr NE (SR 85/East of Eglin Pkwy NE)	167	172	990	0.17
14	Bay Dr NE (North of Hollywood Blvd NE/SE)	33	36	1,270	0.03
15	Staff Dr NE (East of Iowa Dr NE)	53	60	990	0.06
16	Nebraska Ave NE (North of Hughes St NE)	31	49	1,270	0.04
17	Nebraska Ave NE (South of Hughes St NE)	38	50	1,270	0.04
18	Oregon Dr NE (West of Arizona Dr NE)	9	9	1,270	0.01
19	Gardner Dr NE (East of Laurie Dr NE)	36	50	1,270	0.04
20	Smith Dr NE (East of Laurie Dr NE)	58	92	1,270	0.07
21	Texas St NE (East of Iowa Dr NE)	4	9	1,270	0.01

Overall, all of the roadways within the Ferry Park Neighborhood have sufficient capacity to accommodate the AM peak hour and PM peak hour traffic volumes observed during the data collection periods. Based on the FDOT *Multimodal Quality/Level of Service Handbook (2023)* generalized service capacity tables and adjusting for non-state roads (multiply by 0.90), roadways with an exclusive left turn lane (multiply by 1.05), multilane roads with no exclusive turn lanes (multiply by 0.75), and undivided roads with no exclusive turn lanes (multiply by 0.80), the peak hour two-way LOS C capacities of the study roadways ranges from approximately 990 to 2,610 vehicles per hour.

6.2 INTERSECTION CAPACITY ANALYSIS

Six stop-controlled intersections were evaluated during the AM peak hour and the PM peak hour using the *Synchro* (version 11) software package, which implements the methodologies published in the latest *Highway Capacity Manual*:

1. Nebraska Avenue NE and Yacht Club Drive NE
2. Nebraska Avenue NE and Hughes Street NE
3. Ferry Road NE and Hughes Street NE
4. Ferry Road NE/SE and Hollywood Boulevard NE/SE
5. Bay Drive NE/SE and Hollywood Boulevard NE/SE
6. Ferry Road NE and Yacht Club Drive NE

The intersection of Hughes Street NE with Nebraska Avenue NE and Hughes Street NE with Ferry Road NE were also evaluated during the midday peak hour to account for potential operational concerns related to the school dismissal period.

All approaches at the study intersections operate with LOS C or better during AM, midday, and PM peak hours, with all approaches experiencing an average delay of less than 16 seconds at the study intersections during the peak analysis periods. Synchro output reports are included in **Appendix E**.

6.3 CRASH ANALYSIS

Detailed crash data within the study area from 2018 through 2022 were reviewed and evaluated. A total of 96 crashes were included in the study sample for analysis. Crash reports were examined to better understand individual crashes and ensure their information was coded accurately into the database. **Table 6** presents the overall distribution of the crash sample by type and injury severity. The following sections discuss in more detail the characteristics of the crash sample.

Table 6: Summary of Crashes by Type and Severity

Row Labels	Fatal	Injury	Property Damage Only
Angle	0	3	14
Bicycle	0	2	1
Head On	0	1	2
Left Turn	1	6	14
Off Road	1	7	14
Other	0	2	13
Rear End	0	1	5
Right Turn	0	1	0
Rollover	0	0	1
Sideswipe	1	0	5
Unknown	0	0	1

6.3.1 Crash Severity

Of the 96 crashes recorded in the 5-year analysis period, 3 resulted in a fatality, 23 resulted in one or more injuries, and 70 resulted in property damage only. **Figure 10** illustrates the crash locations by injury severity. The three fatal crashes and one incapacitating injury crash are described in detail below:

- May 20, 2018. Occurred under daylight conditions and with wet surface conditions. A westbound vehicle on Sudduth Circle NE stopped at the intersection with Ferry Road NE, then proceeded into the intersection, where it struck a northbound motorcycle. The motorcycle driver was transported to Fort Walton Beach Medical Center and was pronounced deceased at the hospital.

- July 12, 2018. Occurred under dark, lighted conditions and with dry surface conditions. A westbound vehicle on Hollywood Boulevard NE lost control, running off the road and striking multiple fixed objects before overturning in the center median. The driver and passenger were both declared deceased at the scene. The driver was suspected to be under the influence of alcohol at the time of the incident.

- August 30, 2019. Occurred under daylight conditions and with dry surface conditions. A northbound vehicle on Chicago Avenue NE turned left onto Hollywood Boulevard NE and was struck by a westbound vehicle on Hollywood Boulevard NE. The westbound vehicle swerved after the collision and struck a palm tree in the center median of Hollywood Boulevard NE. The driver of the second vehicle was transported to the Fort Walton Beach Medical Center and was pronounced deceased at the hospital.

- August 15, 2022. Occurred under daylight and dry surface conditions. A vehicle was traveling eastbound on Hollywood Boulevard NE west of the SR 85/Eglin Parkway intersection, with an estimated speed of 45 mph (10 mph higher than the posted speed limit of 35 mph), when the driver lost control of the vehicle, ran off the road, and hit a tree. Airbags were deployed. The driver sustained a minor injury while a passenger was transported to Fort Walton Beach Medical Center due to a potentially severe injury on their left hip/leg.

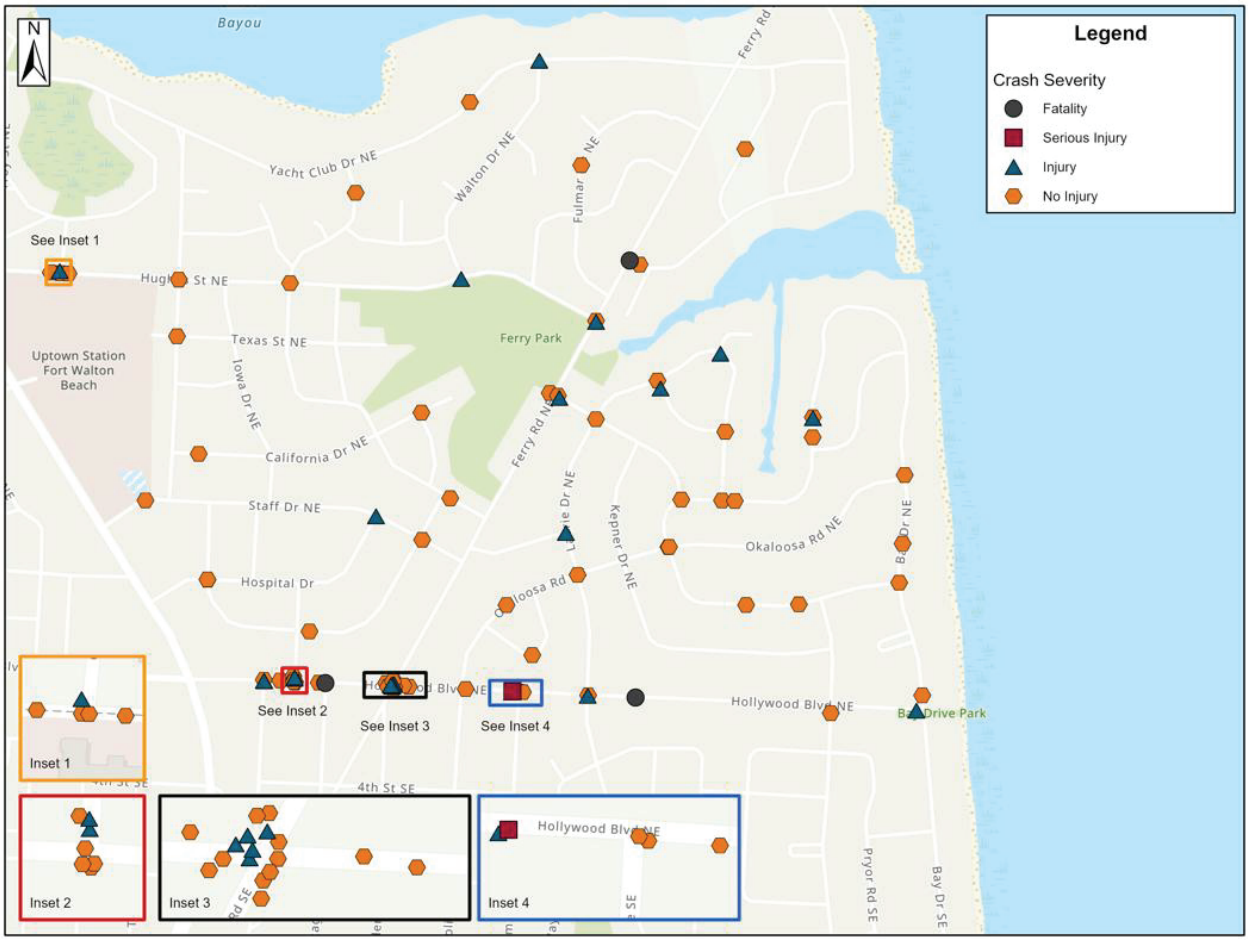


Figure 10: Crash Locations by Severity

Figure 11 depicts the crash location by year. In addition, four insets present a magnified view of critical intersections within the Ferry Park Neighborhood. There were five crashes at the intersection of Hughes Street NE and Opp Road (1.0 crash per year); one resulted in injuries. At the intersection of Hollywood Boulevard NE/SE and Vine Avenue NE, there were seven reported crashes (1.4 crashes per year); two resulted in injuries. There were seventeen crashes at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE (3.4 crashes per year); twenty-nine percent (29%) resulted in injuries. Finally, five crashes occurred at the intersection of Hollywood Boulevard NE/SE and Elm Avenue SE (1.0 crash per year); two resulted in injuries.

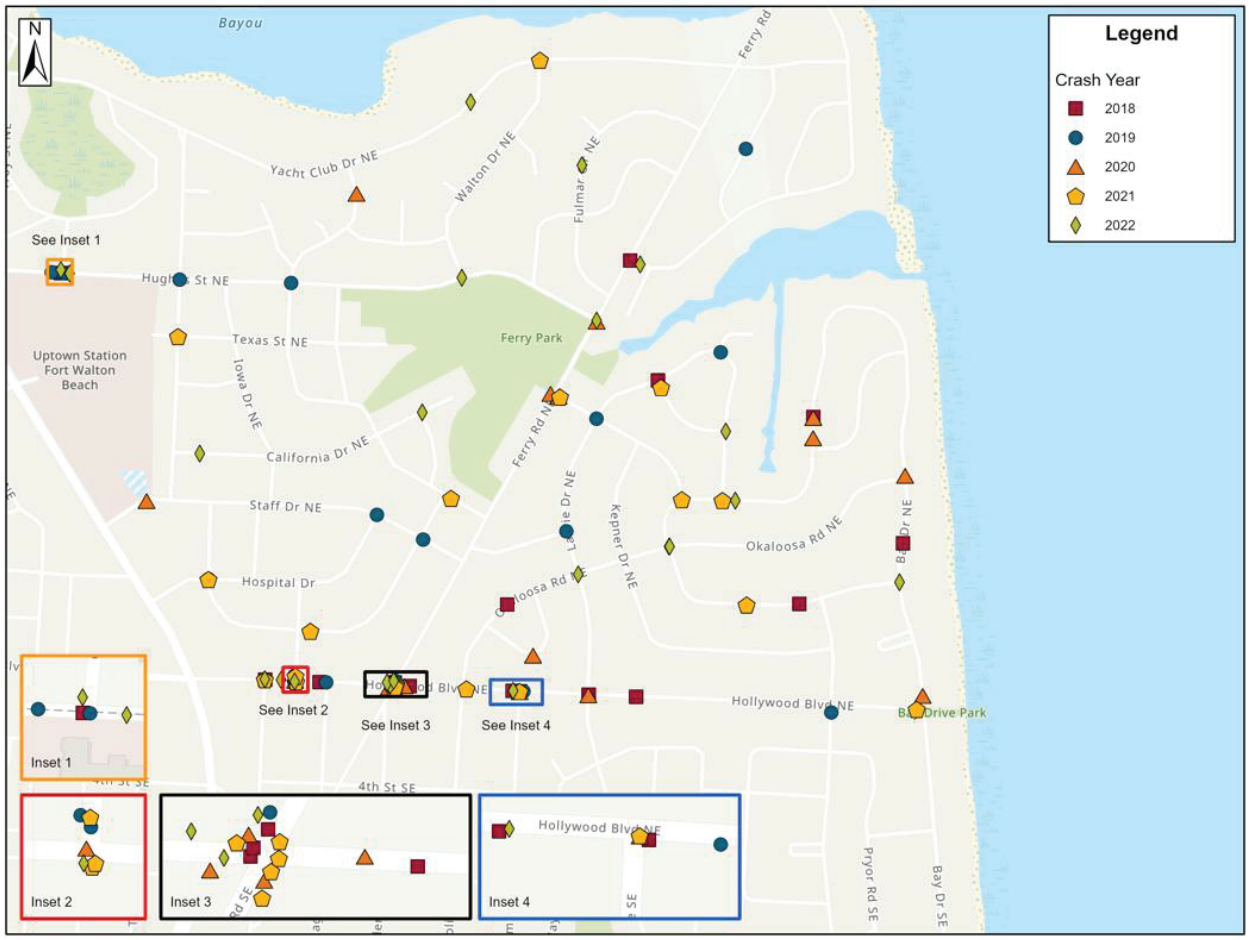


Figure 11: Crash Locations by Year

6.3.2 Crash Types

The most common crash type reported in the five-year analysis period was off-road crashes, which accounted for 22 of 96 crashes within the study area. There were 21 left-turn crashes, 17 angle crashes, 6 sideswipe crashes, 6 rear-end crashes, 3 bicycle crashes, and 3 head-on crashes. There was one recorded rollover crash and one right turn crash, and the remaining crashes were identified as either other or unknown. Four out of the six motorcycle crashes resulted in either a fatality or injury.

Figure 12 illustrates crash locations by crash type. The three crashes involving bicycles are described below.

One of the crashes labeled as a bicycle crash involved a skateboard and occurred on October 3, 2020. A pedestrian was traveling north along Ferry Road on an electronic skateboard, while a vehicle was traveling east along Hughes Street. The vehicle stopped at the stop sign at Hughes Street. After stopping, the vehicle made a left-turn onto Ferry Road but failed to observe the pedestrian on a skateboard making a left-turn in the intersection. The vehicle struck the pedestrian on the skateboard. No injuries were reported at the time of report.

Another bicycle crash occurred on March 30, 2022. A bicyclist and vehicle were heading south along Opp Drive. The vehicle was stopped at the stop sign facing south on Opp Drive at Hughes Street NE. The bicyclist failed to stop, proceeded to pass the vehicle on the left and maneuvered in front of the vehicle. The driver of the vehicle did not observe the bicyclist and initiated a left-turn movement onto Hughes Street NE, striking the bicyclist. No injuries were reported at the time of the report.

The third bicycle crash occurred on September 13, 2022. A bicyclist and vehicle were traveling westbound along Hughes Street near Elliot Point Elementary School. The vehicle overtook the cyclist and turned right into Elliot Point Elementary School. The bicyclist collided with the rear passenger side of the turning vehicle. The collision resulted in the bicyclist sustaining non-incapacitating injuries.

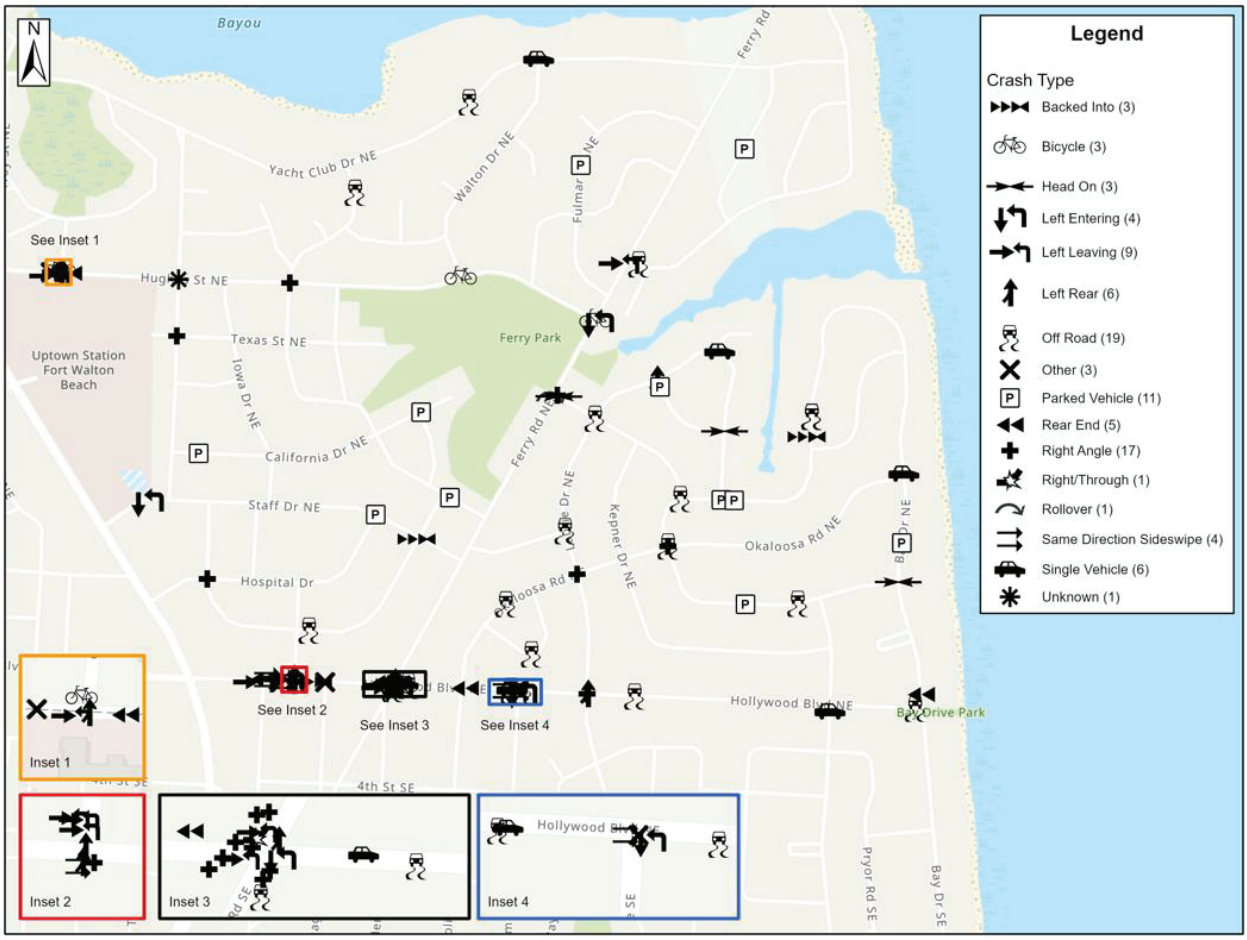


Figure 12: Crash Locations by Type

6.3.3 Contributing Factors

Crash-contributing factors in the Ferry Park Neighborhood were analyzed to identify potential trends susceptible to correction. Nearly half of the crashes occurred along Hollywood Boulevard,

43 out of 96. Seventeen (17) of the crashes occurred in the vicinity of the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE. Nineteen (19) crashes occurred with wet roadway conditions and 36 of the crashes occurred under dark conditions. **Figure 13** illustrates the distribution of crashes by lighting condition and road surface condition.

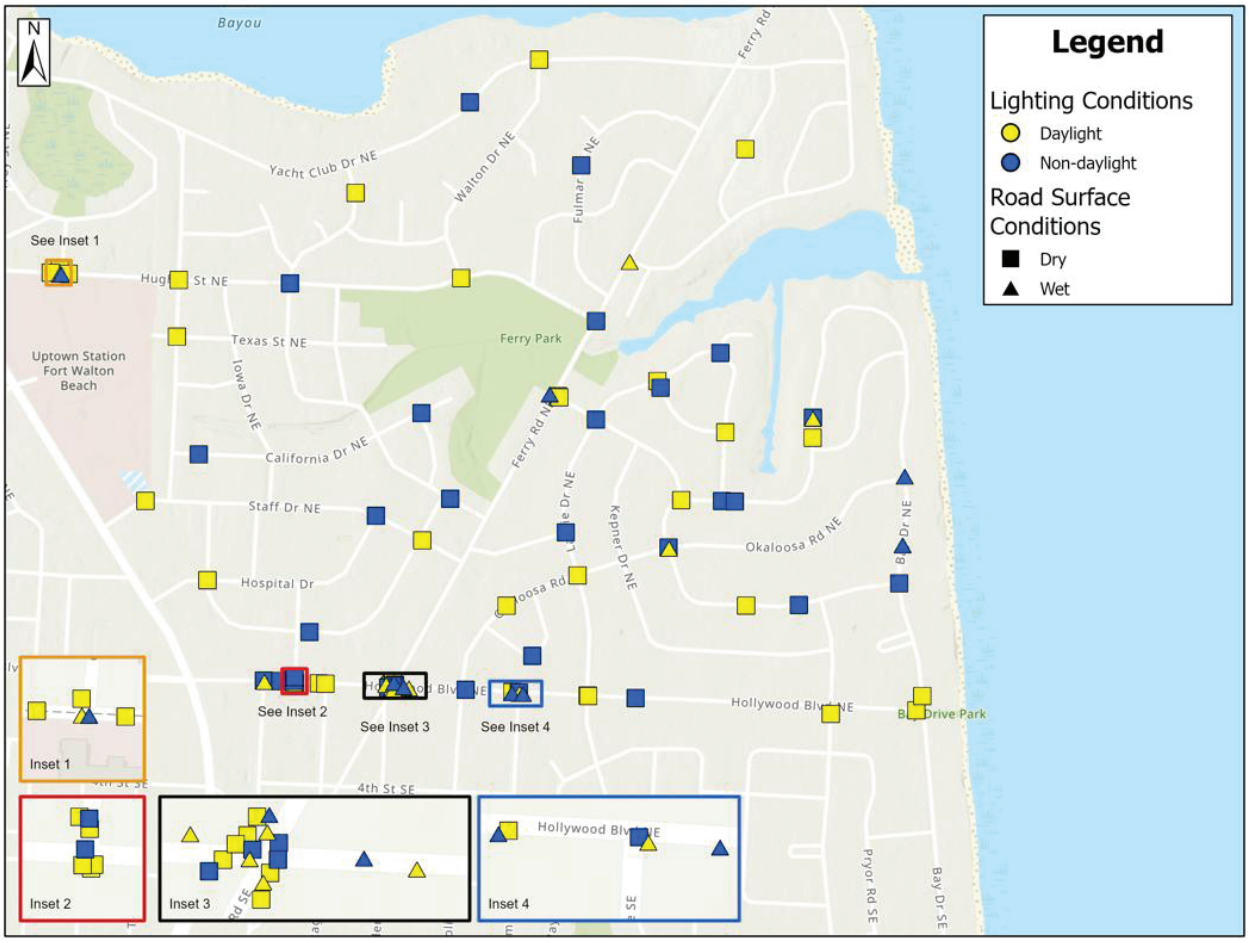


Figure 13: Crash Locations by Lighting and Surface Conditions

6.3.4 Crash History at Hollywood Boulevard NE/SE and Ferry Road NE/SE

From January 1, 2018, through December 31, 2022, there were 17 crashes at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE. Twelve crashes (71%) were classified as property damage only, and the remaining five (29%) resulted in one or more injuries. The three most common types of crashes were angle crashes (8 crashes, 47%), left-turn crashes (4 crashes, 24%), and off-road crashes (2 crashes, 12%). Most crashes occurred during daylight conditions; only six crashes (35%) occurred during dark lighting conditions. Ten crashes (59%) happened with dry surface conditions, and seven crashes (41%) occurred with wet surface conditions.

6.4 SCHOOL ZONE ANALYSIS

Traffic to and from Elliott Point Elementary School has an inevitable impact on the surrounding roadway network. As part of this Traffic Study, the existing school zone delineation and signage were reviewed for conformance with industry standards.

6.4.1 Signage

There is existing school zone signage on Hughes Street NE from Walton Drive NE to Ferry Road NE, Ferry Road NE from Smith Drive NE to Fulmar Circle NE, Walton Drive NE from Hughes Street NE to Long Court NE, and Bayshore Street NE from Walton Drive NE to Oregon Drive NE. **Figure 14** illustrates the existing school zone signage and pavement markings in the vicinity of Elliott Point Elementary School. As illustrated in **Figure 14**, the school zone area is continuous and limited to the area immediately around the school, where school-aged pedestrians may be expected to cross a roadway.

The existing school zone limits are not consistent with the recommendations in the latest FDOT *Speed Zoning for Highways, Roads and Streets in Florida* (*Speed Zoning Manual*). School zone speed limits should be lowered from 20 mph to 15 mph. This school speed limit aligns with Florida Statute and the *Speed Zoning Manual* that sets maximum school zone speed limits at 15 mph on road sections where the posted speed limit is less than 35 mph, which is the case on Hughes Street NE (25 mph) and Ferry Road NE (30 mph).

It is noted in the *Speed Zoning Manual* that the extents of school zones should be minimized to encourage compliance; the longer a vehicle is traveling through a school zone, the less likely they are to remain at the advisory speed. The school zones in Ferry Park Neighborhood are adequate and no changes are recommended.

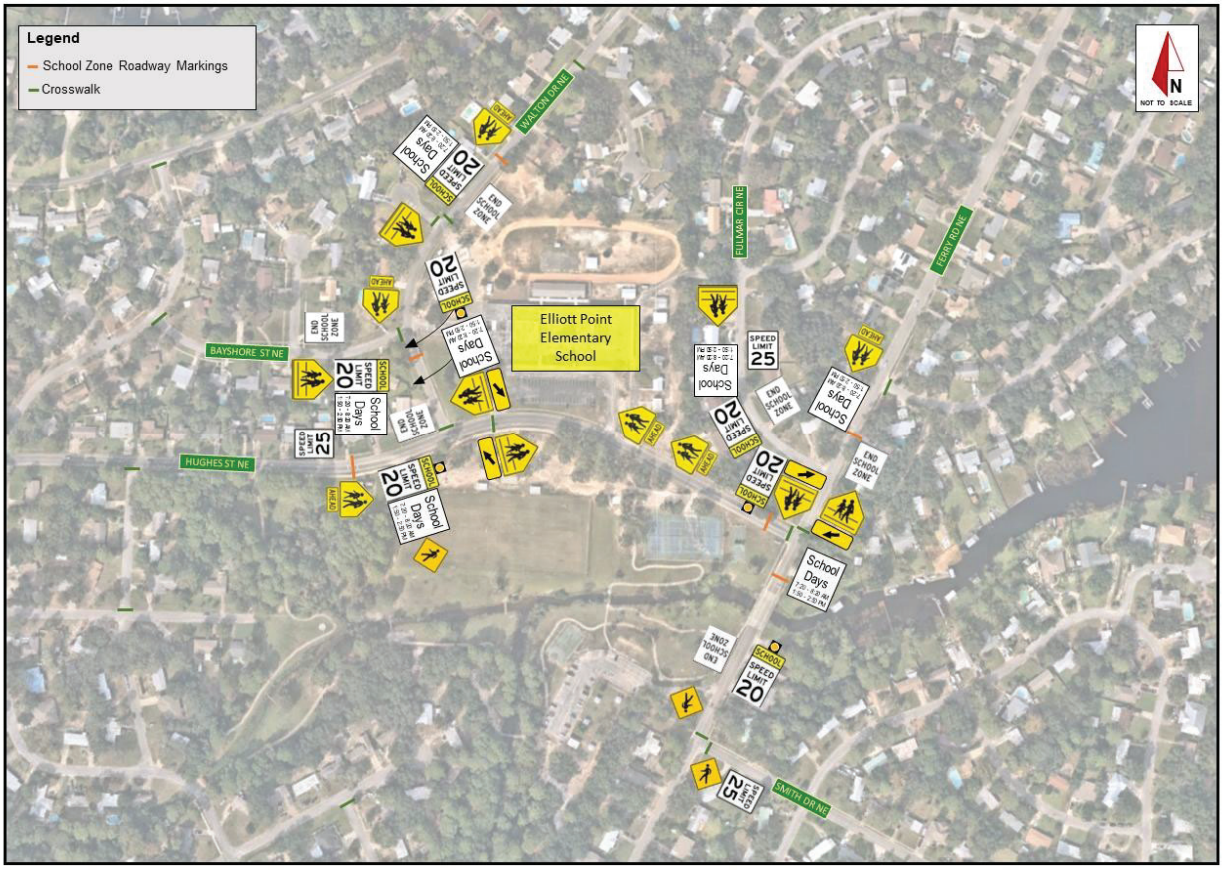


Figure 14: Existing School Zone Signage and Pavement Markings

The school zone signage was generally observed to comply with the latest guidelines from FDOT's *Speed Zoning Manual* and the latest *Manual on Uniform Traffic Control Devices* (MUTCD). The current school zone signage includes flashing beacons to increase driver awareness of reduced speed limits during the morning drop-off and afternoon pick-up periods. However, crosswalks within the school zones (and elsewhere within the Ferry Park Neighborhood) would benefit from supplementary In-Street Pedestrian Crossing signs (MUTCD R1-6a) with supplemental SCHOOL plaques (MUTCD S4-3P), illustrated in **Figure 15**.

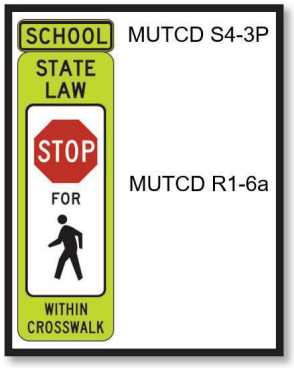


Figure 15: Recommended School Zone Signage

6.4.2 Unpaved Parking Lot Concerns

Residents at the public kickoff meeting expressed concerns about the conditions in the unpaved parking lot at Ferry Park across Hughes Street NE from Elliott Point Elementary School. Although improvements to the unpaved parking lot are outside the scope of this project, the citizen concerns have been noted by the City and shared with the Parks and Recreation department.

6.5 SIGNAL WARRANT ANALYSIS

A Signal Warrant Analysis was performed in accordance with Chapter 4C of the MUTCD for the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE. FDOT Form 750-020-01 was used to perform the Signal Warrant Analysis. The analyses were performed based on existing turning movement volumes.

The major street, Hollywood Boulevard NE/SE, is a four-lane roadway with a 30-mph posted speed limit and was analyzed as a two-lane approach. The minor street, Ferry Road NE/SE, is a two-lane road with a 25-mph posted speed limit and was analyzed as a one-lane approach.

The Signal Warrant Analysis was performed for the five warrants listed below from Chapter 4C of the MUTCD:

- Warrant 1 – Eight-Hour Vehicular Volume
- Warrant 2 – Four-Hour Vehicular Volume
- Warrant 3 – Peak Hour
- Warrant 4 – Pedestrian Volume
- Warrant 7 – Crash Experience

100% volume thresholds were utilized for this signal warrant analysis, per the MUTCD, as the posted speed limit is less than 40 mph, and the intersection was not in a built-up area of an isolated community with a population less than 10,000 people. Signal warrant worksheets are provided in **Appendix F**.

6.5.1 Warrant 1 – Eight-Hour Vehicular Volume

Per the MUTCD, Warrant 1 Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. The MUTCD advises evaluating Warrant 1 Condition B for cases where the minor street experiences excessive delays due to high major street traffic volume.

Table 7 summarizes the highest anticipated eight-hour vehicular volumes at the intersection compared to the minimum vehicular volume thresholds needed in order to satisfy Warrant 1 Condition A.

Table 7: Warrant 1 Condition A - Minimum Vehicular Volume Thresholds

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	1		2 or more		7:00 AM - 8:00 AM	11:00 AM - 12:00 PM	12:00 PM - 1:00 PM	1:00 PM - 2:00 PM	2:00 PM - 3:00 PM	3:00 PM - 4:00 PM	4:00 PM - 5:00 PM	5:00 PM - 6:00 PM
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400)	350 (280)	**600 (480)**	420 (336)	429 (429)	379 (379)	399 (399)	414 (414)	421 (421)	380 (380)	435 (435)	396 (396)
Highest Approach on Minor Street	**150 (120)**	105 (84)	200 (160)	140 (112)	109 (109)	80 (80)	85 (85)	97 (97)	97 (97)	96 (96)	117 (117)	111 (111)

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met for eight hours.

As shown, none of the existing volumes exceed the MUTCD 100% thresholds for Condition A. Therefore, Warrant 1 Condition A **is not satisfied**.

Table 8 summarizes the highest anticipated eight-hour vehicular volumes at the intersection compared to the minimum vehicular volume thresholds needed in order to satisfy Warrant 1 Condition B.

Table 8: Warrant 1 Condition B - Minimum Vehicular Volume Thresholds

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	1		2 or more		7:00 AM - 8:00 AM	11:00 AM - 12:00 PM	12:00 PM - 1:00 PM	1:00 PM - 2:00 PM	2:00 PM - 3:00 PM	3:00 PM - 4:00 PM	4:00 PM - 5:00 PM	5:00 PM - 6:00 PM
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600)	525 (420)	**900 (720)**	630 (504)	429 (429)	379 (379)	399 (399)	414 (414)	421 (421)	380 (380)	435 (435)	396 (396)
Highest Approach on Minor Street	**75 (60)**	53 (42)	100 (80)	70 (56)	**109 (109)**	**80 (80)**	**85 (85)**	**97 (97)**	**97 (97)**	**96 (96)**	**117 (117)**	**111 (111)**

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if parenthetical volumes are met for eight hours.

None of the existing volumes exceed the MUTCD 100% thresholds for Condition B. Therefore, Warrant 1 Condition B **is not satisfied**.

Warrant 1 is also met if reduced volume thresholds (80%) are exceeded for both Condition A and Condition B for any eight (8) hours of the day, indicating significant delay and inconvenience at the intersection. **Table 7 and Table** 8 show minimum vehicular volume thresholds needed in order to satisfy Warrant 1 Conditions A and B at 80% volume thresholds in parentheses beneath the 100% volume thresholds. As shown in the tables, none of the hours exceed the MUTCD 80% columns for Condition A nor Condition B. Therefore, the combination of Warrant 1, Condition A and B **is not satisfied**.

Since none of the Warrant 1 Conditions are met, Warrant 1 **is not satisfied**.

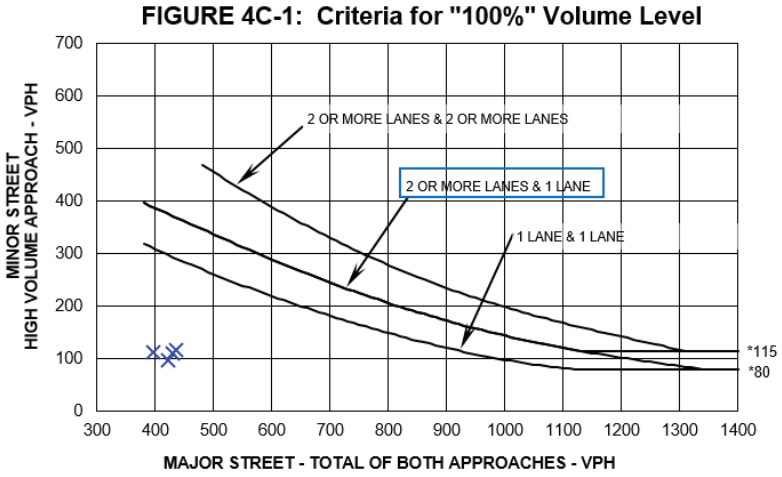
6.5.2 Warrant 2 – Four-Hour Vehicular Volume

Per the MUTCD, Warrant 2 is intended for application at locations where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. Warrant 2 was analyzed for the four highest anticipated hourly volumes on the minor street approach under future buildout conditions, summarized in **Table 9**.

Table 9: Highest Four Hours of Vehicular Volume

Four Highest Hours	Volumes	
	Major Street	Minor Street
7:00 AM - 8:00 AM	429	109
2:00 PM - 3:00 PM	421	97
4:00 PM - 5:00 PM	435	117
5:00 PM - 6:00 PM	396	111

Data points for the four highest hours were plotted on Figure 4C-2 from the MUTCD to determine if forecasted volumes exceed Warrant 2 thresholds. **Figure 16** shows the study intersection volumes (in blue) layered onto the MUTCD Figure 4C-2.



** Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Figure 16: Warrant 2: 100% Volume Criteria

Since none of the four highest hours exceed the “two-lane major street / one-lane minor street” curve on the 100% threshold figure provided in the MUTCD, Warrant 2 **is not satisfied**.

6.5.3 Warrant 3 – Peak Hour

The MUTCD recommends evaluating Warrant 3 when minor street traffic suffers excessive delay entering the major street for a minimum of one hour on an average day. **Figure 17** shows the study intersection peak hour volumes (in blue) layered onto the MUTCD Figure 4C-3.

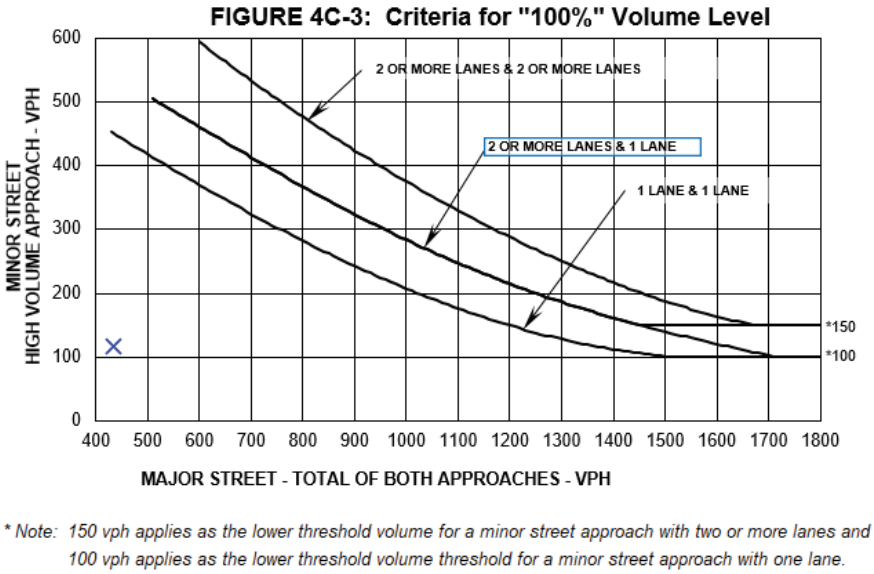


Figure 17: Warrant 3: 100% Volume Criteria

Since the peak hour volumes do not exceed the "two-lane major street / one-lane minor street" curve on the thresholds provided in the MUTCD, Warrant 3 **is not satisfied**.

6.5.3 Warrant 4 – Pedestrian Volume

The MUTCD recommends evaluating Warrant 4 when the traffic volume on a major street is so heavy that pedestrians experience excessive delays in crossing the major street.

There are no signed or marked pedestrian crossings at the intersection of Ferry Road and Hollywood Boulevard. There were 18 total pedestrians recorded crossing the major street during the data collection period. The maximum recorded pedestrian volume during any one hour was seven (7) pedestrians crossing Hollywood Boulevard NE from 7:00 AM to 8:00 AM. Since the pedestrian volume does not exceed the thresholds established in the MUTCD, Warrant 4 **is not satisfied**.

6.5.5 Warrant 7 – Crash Experience

Per the MUTCD, Warrant 7 is intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic signal.

There was a maximum number of four (4) crashes susceptible to correction recorded within a 12-month period at the intersection from 2018 to 2022. Therefore, Warrant 7 **is not satisfied**.

7.0 POTENTIAL IMPROVEMENTS

Based on the prior studies reviewed in Section 3.0, the public participation outlined in Section 4.0, the data collection summarized in Section 5.0, and the traffic analysis presented in Section 6.0, a menu of improvement alternatives has been developed for consideration by the City of Fort Walton Beach to address existing issues and concerns in the Ferry Park Neighborhood. The improvements are sorted into three categories of varying timeframe and cost. The improvement alternatives included in this section are included in the Community Wrap-up exhibits provided in **Appendix B**.

7.1 SHORT-TERM IMPROVEMENTS

Short-term improvement alternatives are generally low-cost and can be completed without further study. Funding for these improvements would most likely come from the City Engineer's Streets Budget within the General Fund in the current year or the year following.

7.1.1 Lower School Zone Speed Limits

Consistent with the Florida Statute and the FDOT *Speed Zoning Manual*, school zone speed limits should be posted for 15 mph where the roadway's posted speed limit is less than 35 mph. Since the posted speed limit on Hughes Street NE is 25 mph and the posted speed limit on Ferry Road NE is 30 mph, the school zone speed limits currently posted as 20 mph should be reduced to 15 mph.

Note: this improvement was implemented by the City of Fort Walton Beach prior to the completion of this study.

7.1.2 In-Street Pedestrian Crossing Signage

Existing crosswalks throughout the Ferry Park Neighborhood, and in particular within the areas marked as school zones in the vicinity of Elliott Point Elementary School, would benefit from the addition of high-visibility In-Street Pedestrian Crossing signs (MUTCD R1-6a), with a supplemental SCHOOL plaque (MUTCD S4-3P) where appropriate.

7.1.3 Pedestrian Crossing Signage

Residents noted that the following intersections were missing pedestrian crossing signage: Smith Drive NE and Ferry Road NE, Walton Drive NE and Hughes Street NE, and Oregon Drive NE and California Drive NE. The intersection of Smith Drive NE and Ferry Road NE is missing a pedestrian crossing sign on Smith Drive NE. The intersection of Walton Drive NE and Hughes Street NE is missing a pedestrian crossing sign on Walton Drive NE. Finally, the intersection of Oregon Drive NE and California Drive NE is missing a pedestrian crossing sign on California Drive NE.

7.1.4 Crosswalk Pavement Markings at Oregon Drive NE and California Drive NE

It is recommended that a high-visibility crosswalk be installed at this intersection, connecting the existing sidewalks on the western side of Oregon Drive NE and the southern side of California Drive NE.

7.2 MID-TERM IMPROVEMENTS

Mid-term improvement alternatives are more costly than short-term improvement alternatives but may still be implemented without further study. Funding for these alternatives may take longer to acquire or may require approval of the City Council, as they may exceed annual operating budgets.

7.2.1 Install Speed Feedback Signs

Speed feedback signs can be an effective means to reduce travel speeds on roadways where the context of the roadway itself has been ineffective in maintaining the posted speed limit. Given the speeding history along Hughes Street NE west of Nebraska Avenue NE, Staff Drive NE east of Iowa Drive NE, and Smith Drive NE east of Laurie Drive NE, speed feedback signs are recommended for each segment.

7.2.2 Speed Cushions

Speed data and resident comments from the Community Workshop and online survey indicated that travel speeds along Yacht Club Drive NE are consistently higher than appropriate for the neighborhood context. Given the length of the segment, it is recommended that speed cushions be added at up to three locations along Yacht Club Drive NE between Nebraska Avenue NE and Ferry Road NE.

7.2.3 Raised Crosswalk

Raised crosswalks are an effective tool both for traffic calming and for improving pedestrian safety. A raised crosswalk could be considered at Ferry Road NE and Smith Drive NE, where residents noted low visibility of pedestrians and speeds along Ferry Road NE as specific issues. Schoolchildren traveling by foot to and from Elliott Point Elementary School and parkgoers traveling to and from Ferry Park commonly cross at this intersection.

7.2.4 Extend Eastbound Left Turn Lane at Hollywood Boulevard NE/SE and Ferry Road NE/SE

It is recommended that the eastbound left turn lane at Hollywood Boulevard NE/SE and Ferry Road NE/SE be extended to a length of 170 feet, which will account for 145 feet for deceleration from the posted 35 mph speed limit and 25 feet for the storage of one queued vehicle. Residents noted that the short existing turn lane (less than 100 feet) does not provide adequate distance to slow for the eastbound left-turn movement and consequently leads to near-miss instances in which a following eastbound vehicle has to slow down considerably to avoid a rear-end collision with a turning vehicle.

7.2.5 Reconfigure the Intersection at Yacht Club Drive NE and Nebraska Avenue NE

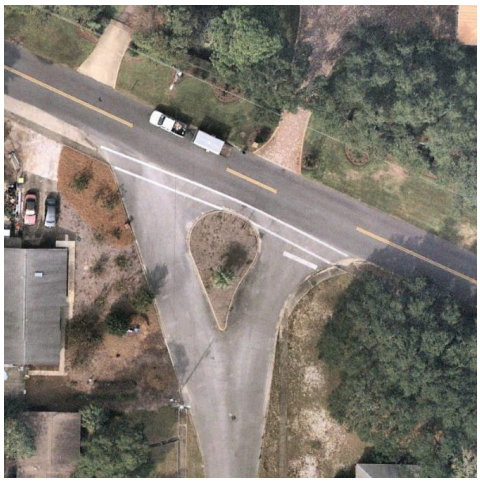


Figure 18: Yacht Club Drive NE & Nebraska Avenue NE

It is recommended that the intersection at Yacht Club Drive NE and Nebraska Avenue NE be reconfigured to minimize confusion and provide better visibility. It was noted by residents at the Kickoff Community Workshop that westbound vehicles often turn left into the northbound lane in spite of the existing 'DO NOT ENTER' signs on the northbound approach at the intersection. The center island on the south leg of the intersection creates a non-traditional geometry for unfamiliar drivers and does not provide pedestrian refuge since the pedestrian crossing is marked entirely north of the splitter island. If the intersection can be fully reconstructed into a more traditional three-leg intersection, it is recommended that some of the available right-of-way be utilized to provide pedestrian bulb-outs to shorten the crossing distance for pedestrians. If the intersection cannot be entirely reconstructed to a more traditional three-leg intersection, it is recommended that the stop bar on the northbound approach be extended to fully cross the northbound approach lane and yellow edge line striping be added around the splitter island to more clearly delineate the roadway geometry for drivers.

7.2.6 Update to the Residential Traffic Calming Handbook

The Residential Traffic Calming Handbook, reviewed in Section 3.8, was last updated in July 2011. Since 2011, methodologies for gathering public input and collecting data have been updated, and several new mechanisms have been devised for traffic calming on neighborhood streets. It may be beneficial to update to the Residential Traffic Calming Handbook to modernize its guidelines and keep the Handbook relevant.

7.3 LONG-TERM IMPROVEMENTS

Long-term improvement alternatives are the most costly improvements that may require additional study and/or design before they can be implemented. Funding for these alternatives may be sought from FDOT or federal funds through grants or fund-matching programs in order to reduce the burden on the City budget.

7.3.1 Lane Repurposing on Hollywood Boulevard NE/SE

The existing four-lane section of Hollywood Boulevard NE/SE provides far more vehicular capacity than is needed for the daily and peak hour traffic demand on the corridor. It is recommended that the typical section along Hollywood Boulevard NE/SE be reduced to one vehicular travel lane in each direction and the remaining width be repurposed to provide improved multimodal infrastructure. Given the approximately 80-foot width of the right-of-way along Hollywood Boulevard NE/SE, there are several options for the lane repurposing, including providing wider sidewalks or multiuse paths on both the northern side and the southern side of

the roadway; reconstructing the median to include a shared use path that can accommodate golf carts, bicyclists, and pedestrians; adding bike lanes within the existing pavement width and leaving the sidewalks as they currently exist; or widening the sidewalk on the northern side and providing a wider shared use path on the southern side to accommodate golf carts, bicyclists, and pedestrians. In any case, the reduced travel lanes and the multimodal improvements will lend themselves to increasing roadside friction and reducing vehicular travel speeds along Hollywood Boulevard NE/SE.

7.3.2 Roundabout Traffic Control

The residents at the Community Workshop held May 24, 2023, indicated an appetite for construction of a roundabout at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE, if traffic volumes could be accommodated. Based on the data collected for this Traffic Study, traffic control improvements are not necessary at the subject intersection to accommodate vehicular volumes; however, the crash history at the intersection indicated a relatively high crash occurrence. There were 17 crashes observed during the five-year analysis period, including 5 injury crashes (29%). Left-turn and angle crashes, which more frequently result in injury than other crash types and are largely eliminated with the installation of a roundabout, accounted for 12 crashes (71%) at the intersection of the five-year analysis period.

If the community is supportive and the City elects to construct a roundabout at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE, the design of the roundabout will need to consider impacts to the surrounding right-of-way and access conditions to the commercial developments along the south side of Hollywood Boulevard NE/SE. A roundabout would be expected to operate acceptably with just one lane on each approach. Based on the existing AM peak hour and PM peak hour volumes, a one-lane roundabout at the intersection would be expected to operate with LOS A during the AM peak hour and LOS A during the PM peak hour.

7.3.3 Improve Sidewalk Connectivity Throughout Ferry Park

Residents at the Community Workshop and in the online survey indicated that there were problematic sidewalk gaps within the Ferry Park Neighborhood. There are sidewalks along Yacht Club Drive NE, Ferry Road NE/SE, Hollywood Boulevard NE/SE, and Hughes Street NE, among others. However, in many instances, and on many of the shorter roadways, there are no pedestrian facilities. If the community is supportive and the City elects to improve sidewalk connectivity throughout the neighborhood, it is recommended that a more comprehensive analysis be completed to determine the most critical gaps in the existing sidewalk network to determine the most beneficial locations for investments to eliminate the gaps.

8.0 CONCLUSION AND RECOMMENDATIONS

8.1 PRELIMINARY RECOMMENDATIONS

Based on public input from the Community Workshop in May 2023 and the data collected in the Ferry Park Neighborhood in May and June of 2023, the following improvements are recommended for implementation:

Short-Term Improvements

- Lower school zone speed limits on Hughes Street NE and Ferry Road NE
- Add in-street pedestrian crossing signage near the Elliott Point Elementary School
- Add pedestrian crossing signage at Smith Drive NE & Ferry Road NE, Walton Drive NE & Hughes Street NE, and Oregon Drive NE & California Drive NE.
- Add high-visibility crosswalk pavement markings at the intersection of Oregon Drive NE & California Drive NE

Mid-Term Improvements

- Install speed feedback signs on Hughes Street NE, Staff Drive NE, and Smith Drive NE
- Install speed cushions on Yacht Club Drive NE
- Install a raised crosswalk at the intersection of Smith Drive NE and Ferry Road NE
- Extend left turn lanes at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE
- Reconfigure the intersection at Yacht Club Drive NE and Nebraska Avenue NE
- Update the Residential Traffic Calming Handbook

Long-Term Improvements

- Lane repurposing on Hollywood Boulevard NE/SE to add multimodal facilities and convert Hollywood Boulevard NE/SE into a two-lane roadway
- Install a roundabout at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE
- Improve sidewalk connectivity throughout the Ferry Park Neighborhood

8.2 COMMUNITY WRAP UP

A second community workshop was held on Wednesday, October 18, 2023, at 6:00 PM at Tijuana Flats near Ferry Park for the project team to share the findings of the Ferry Park Neighborhood Traffic Study and preliminary recommendations for improvements. Approximately 14 people attended the Community Workshop, including representatives from the City of Fort Walton Beach and Kimley-Horn. A copy of the sign-in sheet is included in **Appendix B**.

Photo 1: Ferry Park Neighborhood Traffic Study Community Wrap Up

City staff began by welcoming the attendees to the public meeting and outlining the intent of the Community Wrap Up. Representatives from Kimley-Horn elaborated on the data collection efforts, the results of the analyses, and the recommended improvements within the neighborhood. Exhibits were shared illustrating findings from the traffic analyses, crash analyses, survey results, and the locations recommended for the preliminary improvement options. Copies of the exhibits are provided in **Appendix B**.

Throughout the Community Wrap Up, attendees asked questions about how the preliminary improvements addressed their concerns and when they could expect to see improvements implemented within the neighborhood. Attendees also asked questions about funding mechanisms for the improvements. City staff and the Kimley-Horn project team discussed the phasing of the recommended improvements (short-term, mid-term, and long-term) and fielded questions about the effectiveness of the various improvements.

Many comments that were expressed were supportive of the primary improvements and some attendees suggested new improvements that were not previously discussed during the May 2023 Kickoff Workshop. Improvements that were not previously discussed during the May 2023 Kickoff Community Workshop included:

- Improve intersection sight distance through vegetation maintenance
- Restripe of pavement markings throughout the neighborhood
- A multimodal facility connecting the Uptown Station area to Downtown Fort Walton Beach, in addition to more general sidewalk network connectivity improvements throughout the neighborhood

8.3 FINAL RECOMMENDATIONS

The preliminary recommendations in Section 8.1 were presented at the Community Wrap Up on Wednesday, October 18, 2023, and discussed with the attendees. Based on the feedback received at that meeting, it is recommended that the preliminary recommendations (except for the speed cushions along Yacht Club Drive NE) are included as final recommendations, as well as several additional recommendations (new recommendations are signified by an asterisk*):

Short-Term Improvements

- Lower school zone speed limits on Hughes Street NE and Ferry Road NE (*already implemented*)
- Add in-street pedestrian crossing signage near the Elliott Point Elementary School
- Add pedestrian crossing signage at Smith Drive NE and Ferry Road NE, Walton Drive NE and Hughes Street NE, and Oregon Drive NE and California Drive NE.
- Add high-visibility crosswalk pavement markings at the intersection of Oregon Drive NE and California Drive NE
- Improve intersection sight distance through vegetation maintenance*
- Refresh worn pavement markings throughout the Ferry Park Neighborhood*

Mid-Term Improvements

- Install speed feedback signs on Hughes Street NE, Staff Drive NE, and Smith Drive NE
- Install a raised crosswalk at the intersection of Smith Drive NE and Ferry Road NE
- Extend left turn lanes at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE
- Reconfigure the intersection at Yacht Club Drive NE and Nebraska Avenue NE
- Update the Residential Traffic Calming Handbook

Long-Term Improvements

- Lane repurposing on Hollywood Boulevard NE/SE to add multimodal facilities and convert Hollywood Boulevard NE/SE into a two-lane roadway
- Install a roundabout at the intersection of Hollywood Boulevard NE/SE and Ferry Road NE/SE
- Improve sidewalk connectivity throughout the Ferry Park Neighborhood
    - Prioritize an Uptown-to-Downtown connector*

A planning-level sidewalk connectivity map was prepared based off initial community input to illustrate potential improvements in the Ferry Park Neighborhood. **Figure 19** illustrates the planning-level sidewalk connectivity map.

The *Uptown-to-Downtown Connector* would provide a critically important connection between the retail establishments in Uptown Station and the portion of the Great NW Coastal Trail that is programmed along US 98 from Okaloosa Island to Destin. The City of Fort Walton Beach has expressed interest in providing a means for bicycle and pedestrian travelers utilizing the new trail to reach additional retail areas within Fort Walton Beach, like Downtown Fort Walton Beach and Uptown Station, which is located on Eglin Parkway just west of the Ferry Park Neighborhood.

The *Uptown-to-Downtown Connector* would also provide additional connectivity for the residents of the Ferry Park Neighborhood to Downtown Fort Walton Beach via a safe, separated facility that would tie into the lane repurposing improvements along Hollywood Boulevard NE/SE.

*Potential sidewalk connections not evaluated for constructability at this time. For planning purposes only.

Figure 19: Planning Level Sidewalk Connectivity Map