

Vision Zero

Corridor Studies



SPEED
LIMIT
30



 **START CROSSING**
Watch For
Vehicles

 **DON'T START**
Finish Crossing
If Started

 **TIME REMAINING**
To Finish Crossing

 **DON'T CROSS**

TO CROSS
→
PUSH BUTTON



This Page Intentionally Left Blank

Vision Zero Corridor Studies

North 15th Street



E. 13
1500

N. 15th St.
13100 13000

SPEED
LIMIT
30





Table of Contents

INTRODUCTION	7
PROJECT PURPOSE	9
EXISTING CONDITIONS	9
<i>Roadway Conditions</i>	9
<i>Multimodal Conditions</i>	9
<i>Demographics</i>	13
<i>Crash Data Summary</i>	14
<i>Road Safety Audit</i>	18
PUBLIC ENGAGEMENT AND INPUT	19
<i>Public Engagement Results</i>	20
PLANNED IMPROVEMENTS	26
<i>University Area Community Plan</i>	26
<i>131st Avenue PLAT Study (CIP: 69642000)</i>	27
<i>Corridor Improvements</i>	29
LONG-TERM CORRIDOR IMPROVEMENTS	30
<i>Alternative 1 - Wide Sidewalks</i>	32
<i>Alternative 2 - Retrofit Wide Sidewalks</i>	34
<i>Alternative 3 - Bike Lanes</i>	36
NEXT STEPS	38

This Page Intentionally Left Blank

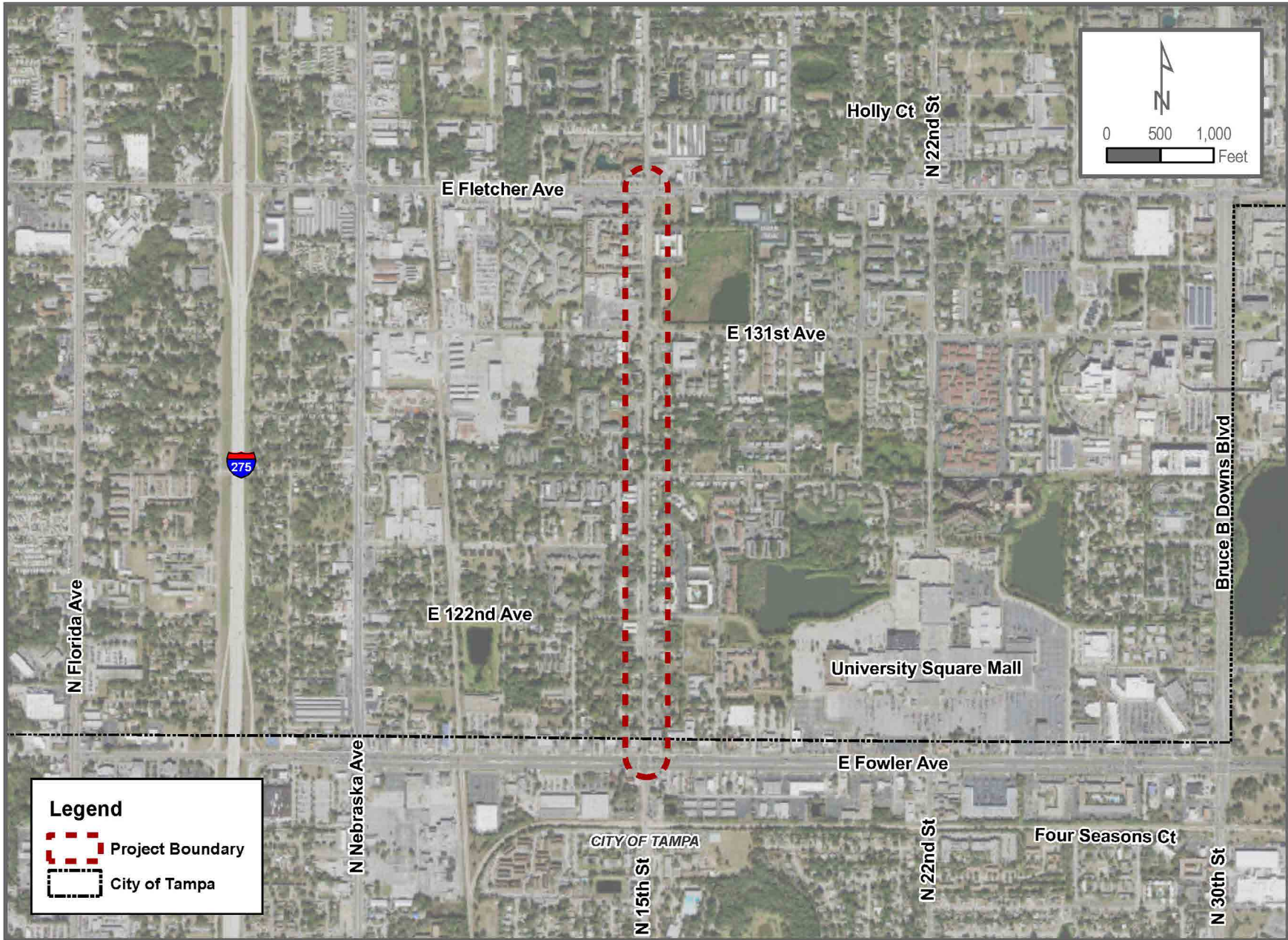
INTRODUCTION

Vision Zero is embedded in the belief that traffic related deaths and injuries are preventable. The goal of Vision Zero is to reduce traffic fatalities and serious injuries to zero through the implementation of low-cost engineering strategies, public engagement and education strategies, community-oriented law enforcement, and a focus on design standards. Vision Zero uses a data driven approach to identify areas of concern and apply resources to the most dangerous corridors and intersections within the County.

Hillsborough County has the highest traffic fatality rate per capita of all large counties in the country (*Vision Zero Action Plan*, 2017). To put that into perspective, on average one person dies in a car crash in Hillsborough County every four days (*Vision Zero Action Plan*, 2017). Between 2015 and 2017, the Hillsborough Metropolitan Planning Organization (MPO) and Hillsborough County adopted Vision Zero Resolutions, asserting the area's collective goal and commitment of zero traffic related deaths and serious injuries. In 2017, the Vision Zero Action Plan was adopted as the guiding document for Vision Zero actions and efforts within Hillsborough County. Through a data driven approach the top twenty corridors with the most severe crashes per mile were identified as part of the Vision Zero Action Plan.

North 15th Street between Fowler Avenue and Fletcher Avenue (**Figure 1**) is one of Hillsborough County's Top 20 Vision Zero corridors in the High Injury Network (HIN) due to the high number of fatal and severe injury crashes that were reported between 2012 and 2016. During that time, 418 crashes occurred on the corridor resulting in one fatality and 26 serious injuries. The Vision Zero Action Plan documented that 44% of the serious injury crashes along North 15th Street involved either a pedestrian or bicyclist.

Figure 1 - Project Location Map



PROJECT PURPOSE

The purpose of this Vision Zero corridor project is to enhance safety and mobility on North 15th Street through the implementation of short-term safety and long-term design improvements that uphold Vision Zero beliefs and objectives. The safety and mobility improvements recommended in this report serve to enhance mobility and safety for everyone that travels, lives, and works on North 15th Street. The recommended improvements for North 15th Street were developed through a process inclusive of a field review, review of planned projects, crash data analysis, community engagement in the form of virtual outreach efforts, and coordination with the Hillsborough MPO and Hillsborough County.

EXISTING CONDITIONS

North 15th Street is located within the University Area in Hillsborough County. The roadway provides a north-south local and regional connection between Fowler Avenue and Fletcher Avenue, two regional arterials. Regional destinations including the University of South Florida, hospitals and medical institutions, and the RITHM redevelopment at the University Mall property are in close proximity to North 15th Street. The land use character along the corridor is urban with a mix of commercial and residential uses at both ends of the corridor that generate high levels of pedestrian and transit activity.

Roadway Conditions

North 15th Street from Fowler Avenue to Fletcher Avenue is a 2-lane undivided roadway with a posted speed limit of 30 miles per hour. North 15th Street is classified as a collector roadway and connects the two arterial roadways of Fowler Avenue and Fletcher Avenue. There are numerous other local and collector roads such as East 131st Avenue that intersect this mile long corridor. The average daily traffic for North 15th Street is approximately 10,500 vehicles. The average daily traffic for Fowler Avenue and Fletcher Avenue is 55,970 and 42,500 vehicles, respectively.

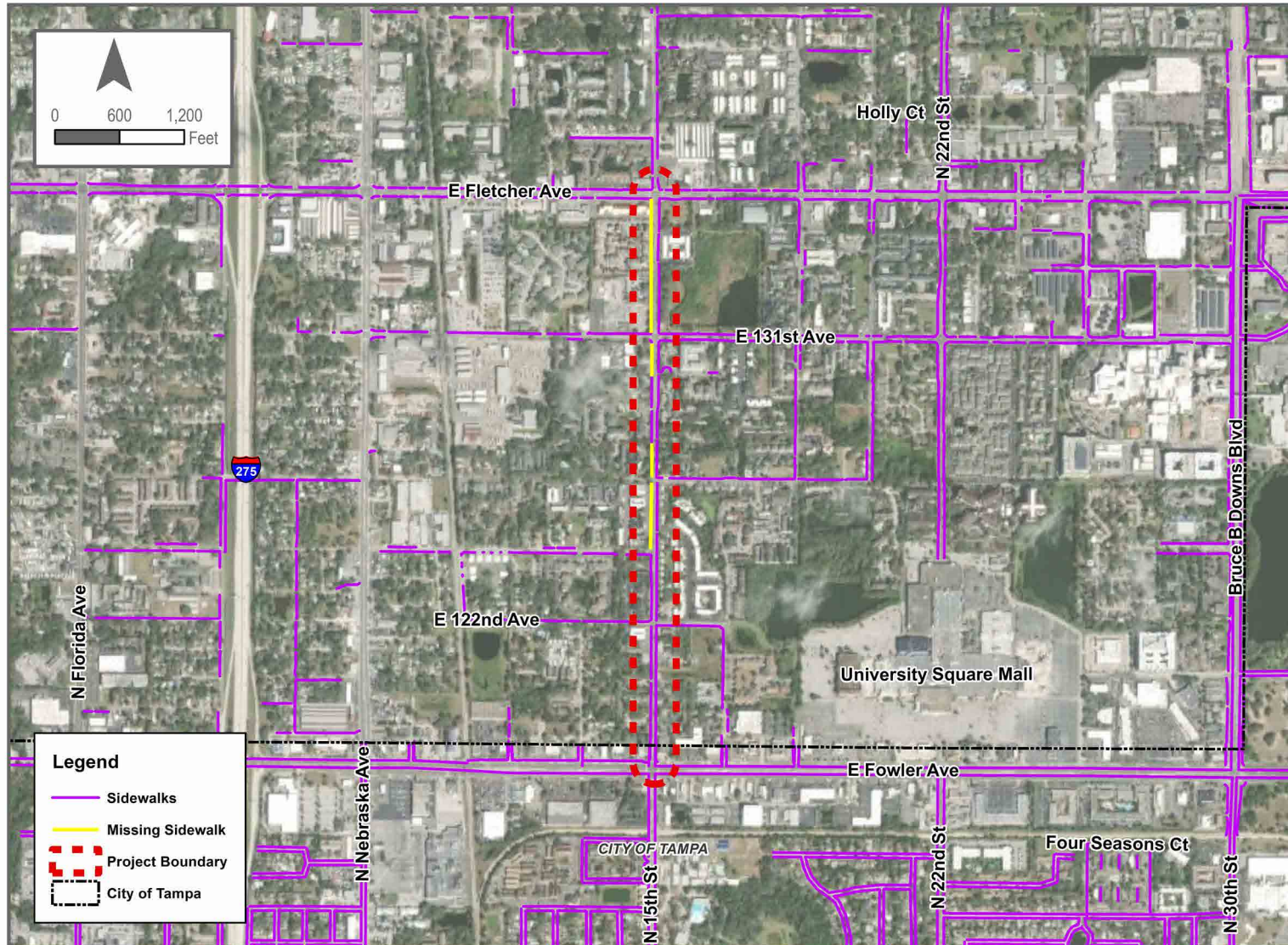
Multimodal Conditions

Multimodal facilities on North 15th Street include a continuous sidewalk ranging from four to five feet wide on the east side of the roadway. On the west side, there is fragmented sidewalk ranging from four to five feet wide.



The gaps in the sidewalk on the west side are located between the Hillsborough Area Regional Transit Authority (HART) bus stops at East 124th Avenue and south of Villena Avenue (approximately 700 feet), between Millerman Pines Drive and East 131st Avenue (approximately 340 feet), and between East 131st Avenue and Fletcher Avenue (approximately 1,250 feet) **(Figure 2)**. Dedicated bicycle facilities are not provided along the corridor.

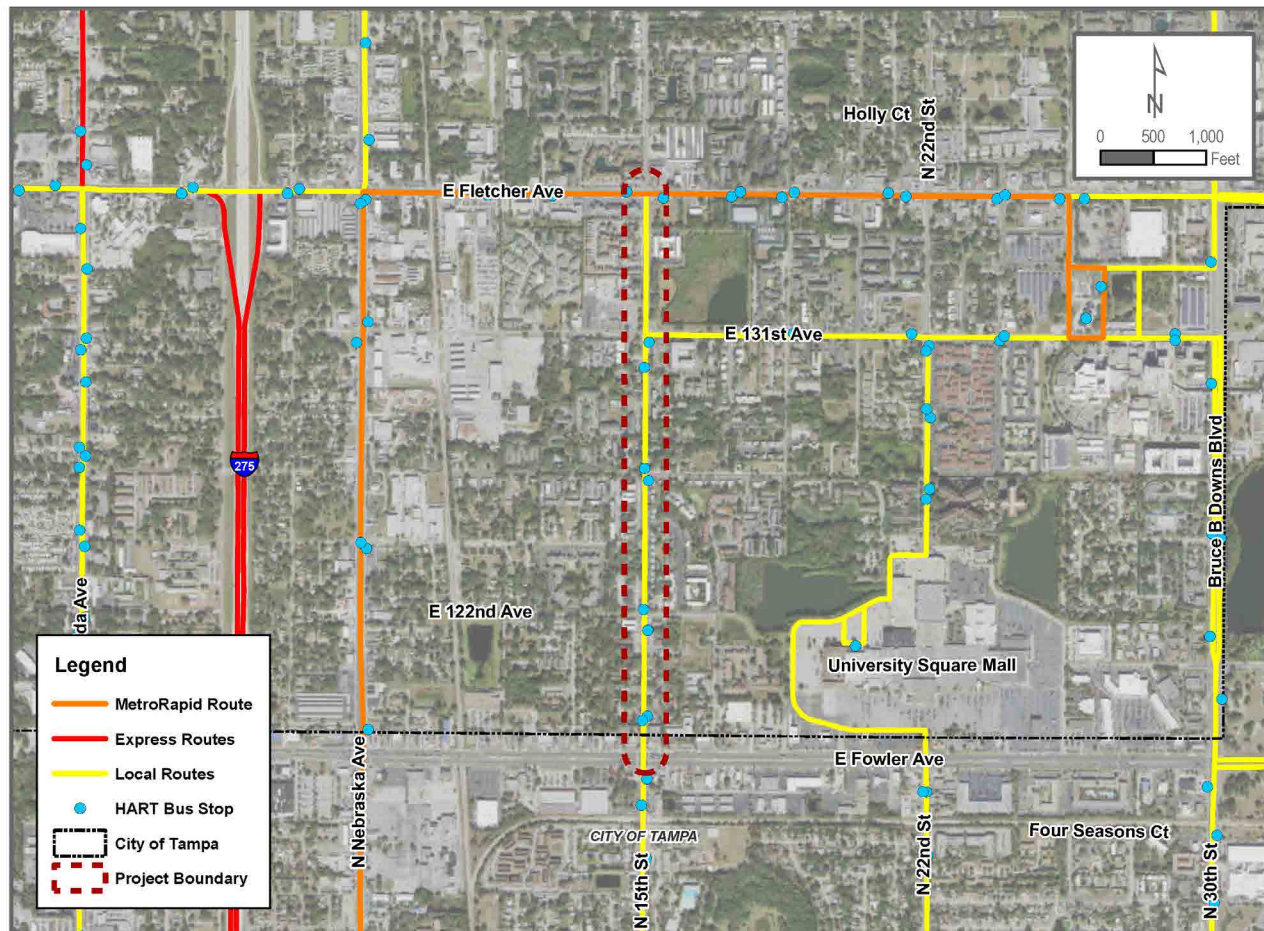
Figure 2 - Sidewalk Existing Conditions



Transit service along the corridor (**Figure 3**) is provided by the Hillsborough Area Regional Transit (HART). HART operates local Route 42 along North 15th Street and East 131st Avenue. There are ten HART bus stops located along the North 15th Street corridor. The corridor contains the highest ridership numbers for users with disabilities.

The Metro Rapid route, a high frequency bus route connecting Downtown Tampa and the University Area, operates along Fletcher Avenue with stops at the intersection of Fletcher Avenue and North 15th Street. Local Routes 1 and 33 also operate along Fletcher Avenue and provide service to stops located at the Fletcher Avenue and North 15th Street intersection. The HART University Area Transit Center is located approximately one mile to the east of North 15th Street on East 131st Avenue. The transit routes are heavily utilized along North 15th Street.

Figure 3 - Transit Existing Conditions

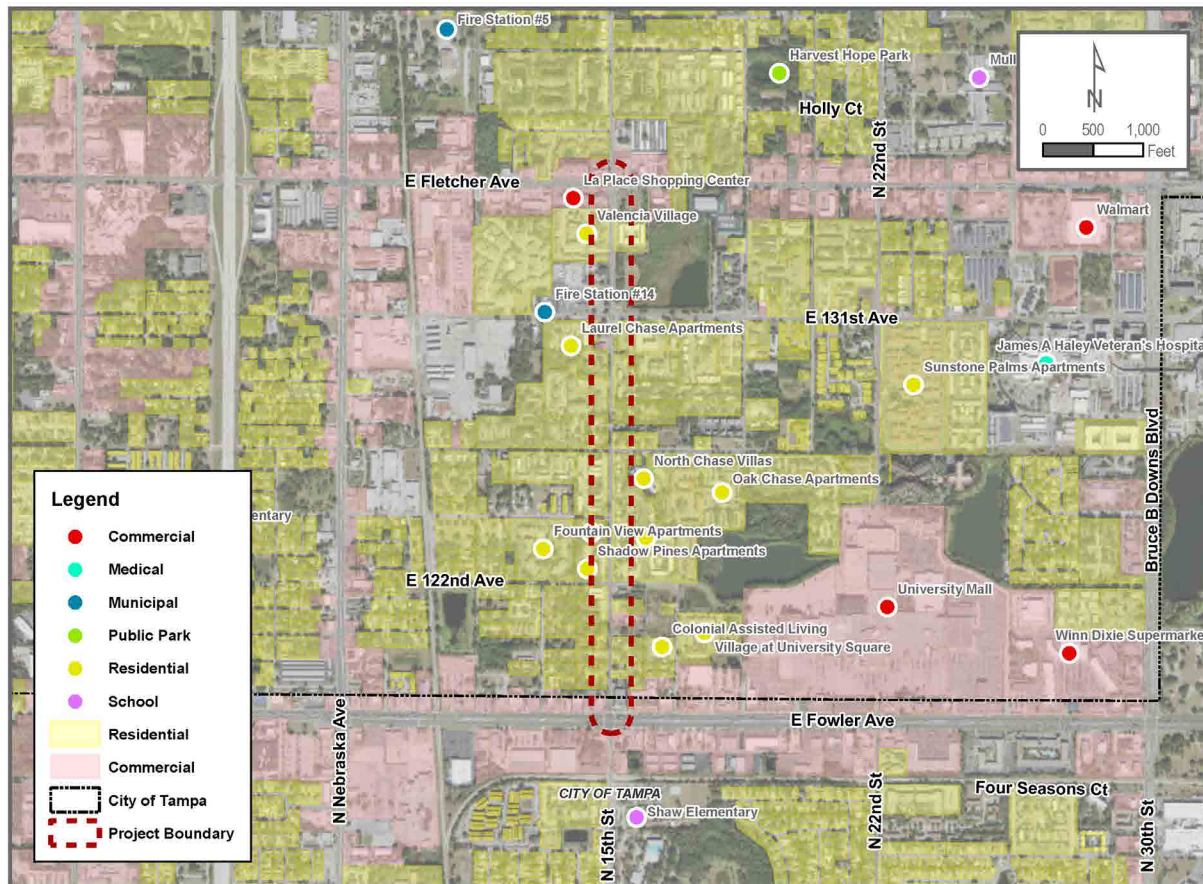


Land Use

The existing land use along North 15th Street contributes to a mixed urban and residential character with shopping plazas, apartments and student housing. Key points of interest along the corridor include the La Place Shopping Center, Teresa's Grocery, and various apartment complexes and single-family residences (**Figure 4**). The existing land uses generate pedestrian, bicycle, and transit activity as people travel to and from destinations along North 15th Street or utilize North 15th Street as a thoroughfare to other destinations in the area and region.

The adopted Future Land Use (FLU) along the corridor supports a moderately dense urban character by allowing for up to 20 dwelling units per acre (DU/A) for residential uses and up to a 0.75 Floor Area Ratio (FAR) for non-residential uses. With the redevelopment of the University Mall to a mixed-use center, there is anticipated to be an increase in vehicular, pedestrian, bicycle, and transit activity in the area.

Figure 4 - Land Use Map



Demographics

The demographics of the North 15th Street study area were analyzed using ESRI's Community Analyst software utilizing American Community Survey (ACS) data from 2014-2018. The estimated population of the area within a one-mile buffer of the North 15th Street study corridor is 40,600 comprised of about 16,000 households. The ACS Housing and Populations summaries are provided in **Appendix A**.

Transit Dependent Populations

Transit dependent populations utilize the North 15th Street corridor daily. **Table 1** summarizes the percentage of the population within the study area that rely on walking, biking, and public transportation. Transit dependent demographic statistics were reviewed for the study area and compared to the demographic statistics for Hillsborough County.

Table 1 - Transit Dependent Populations

Demographic Statistic	Study Area (North 15th Street One-Mile Buffer)	Hillsborough County
Total Population	40,661	1,378,045
Total Households	15,842	516,011
Total Housing Units	17,962	571,337
Housing Units with one or no vehicle	11,840 (6%)	237,034 (42%)
Renter (Housing Units)	13,368 (74%)	216,306 (38%)
Individuals younger than 18 or older than 65	14,287 (35%)	524,606 (38%)
Low income households¹	5,311 (34%)	73,426 (14%)
Individuals who commute using transit²	1,077 (6%)	10,039 (22%)

¹Households below the poverty level

²Percent of workers 16+ years

Source: U.S. Census Bureau, 2014-2018 American Community Survey

Crash Data Summary

Crash data for the most recent five years (2014 to 2018) was collected from the Hillsborough County Metropolitan Planning Organization (MPO) and analyzed to better understand existing safety concerns on North 15th Street. Detailed crash reports for the most recent fatal and serious injury crashes were also collected and reviewed as part of the analysis.

Between 2014 and 2018, 489 crashes (**Table 2**), resulting in 16 serious injuries, were reported on North 15th Street. Rear end, angle, and left turn were the most common crash types of all crashes that were reported. Of the 16 serious injury crashes, four involved pedestrians and one involved a bicyclist traveling on North 15th Street.

Table 2 - Crash Data Summary

Crashes per Year	Total Crashes	Serious Injury Crashes	Pedestrian Crashes	Bicycle Crashes
2014	64	8	5	4
2015	74	2	3	2
2016	133	0	8	3
2017	121	4	4	2
2018	97	2	3	3
Total	489	16	23	14

As shown in **Figure 5**, most crashes (66%) occurred in Daylight conditions, as did most serious injury crashes (63%). It should be noted that 25% of serious injury crashes occurred during Dark-Lighted conditions. Of all crashes, 57% occurred at an intersection. Of serious injury crashes, 65% occurred at an intersection. As shown in the crash heat map (**Figure 6**), most crashes at intersections occurred at Fletcher Avenue, East 131st Avenue, and Fowler Avenue. **Figure 7** shows the serious injury and pedestrian crash locations in relation to bus stops located along the corridor.

Notably, 31% of the severe crashes on this corridor involved either pedestrians or bicyclists as compared to the 16% countywide (Vision Zero Action Plan). The serious crashes and the pedestrian crashes often occurred by the existing transit stops.

Figure 5 - Crash Data Summary

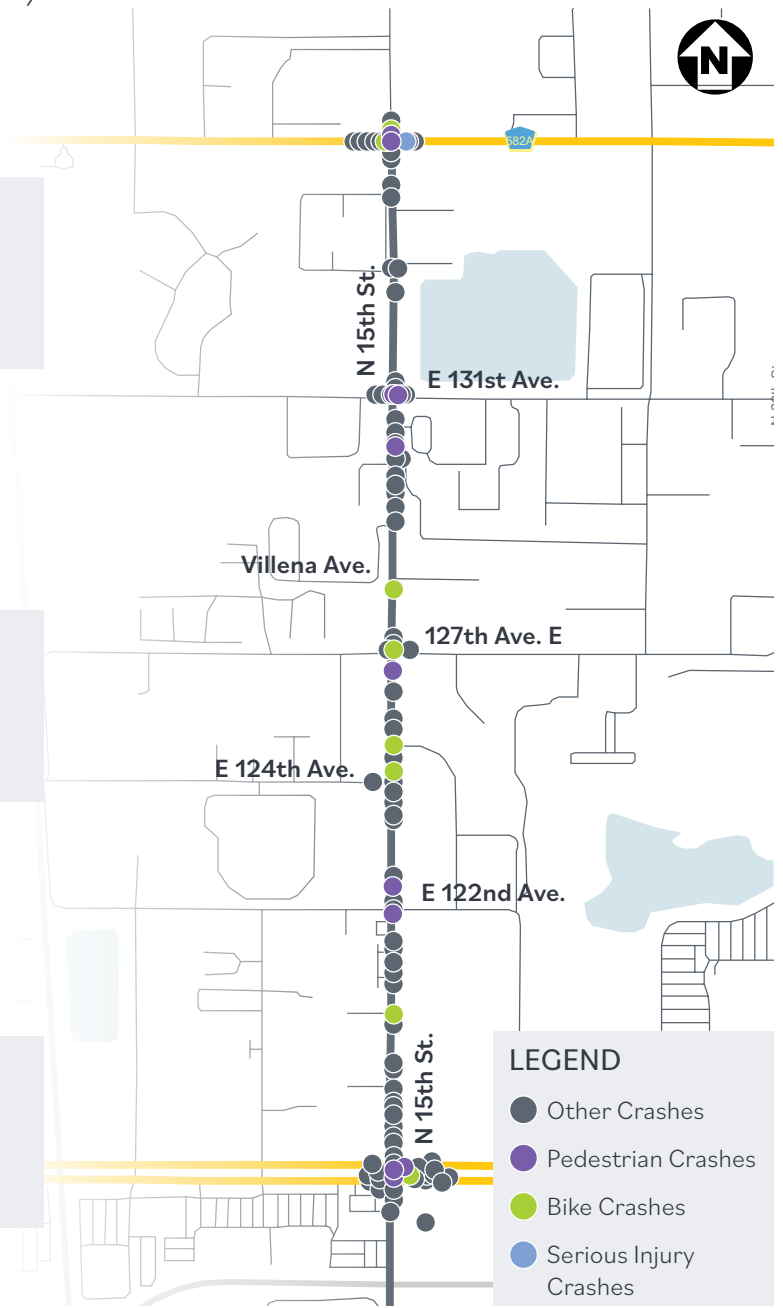
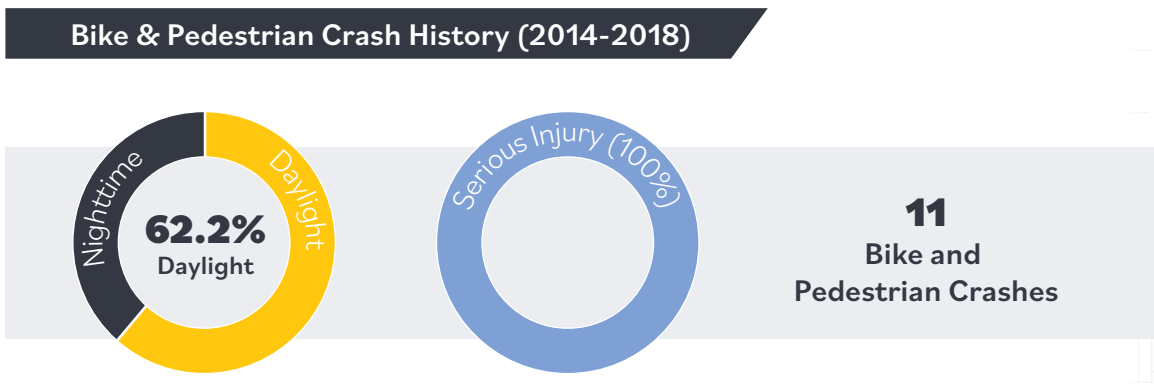
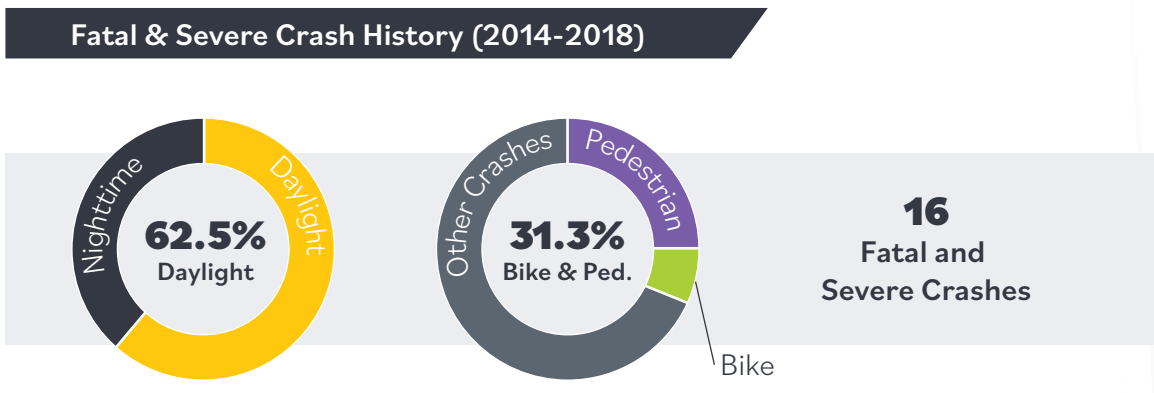
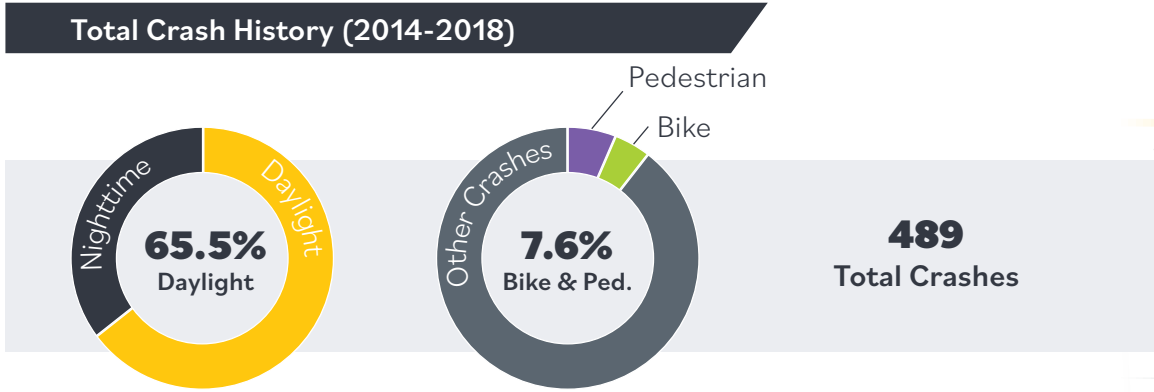


Figure 6 - Crash Heat Map

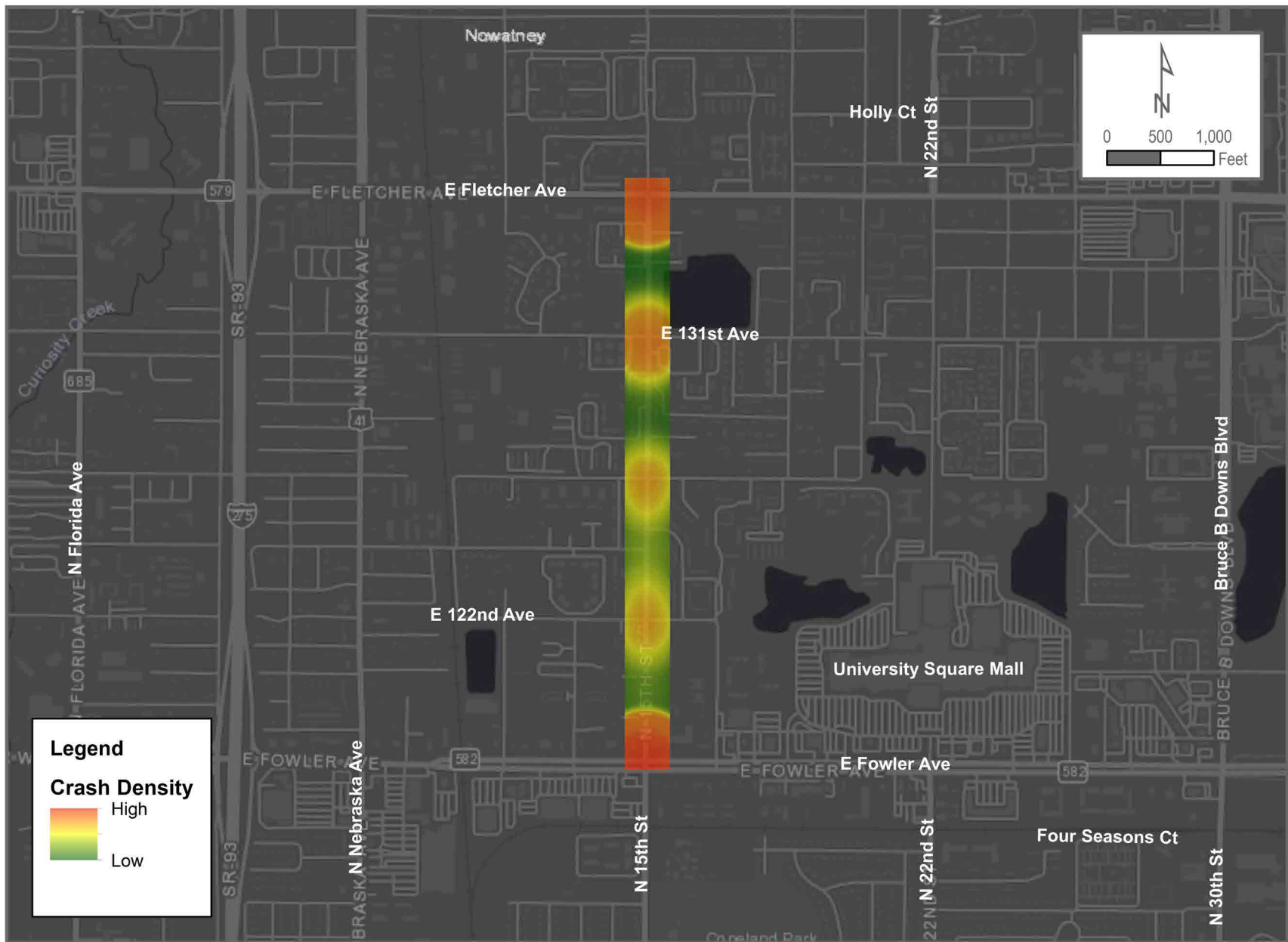
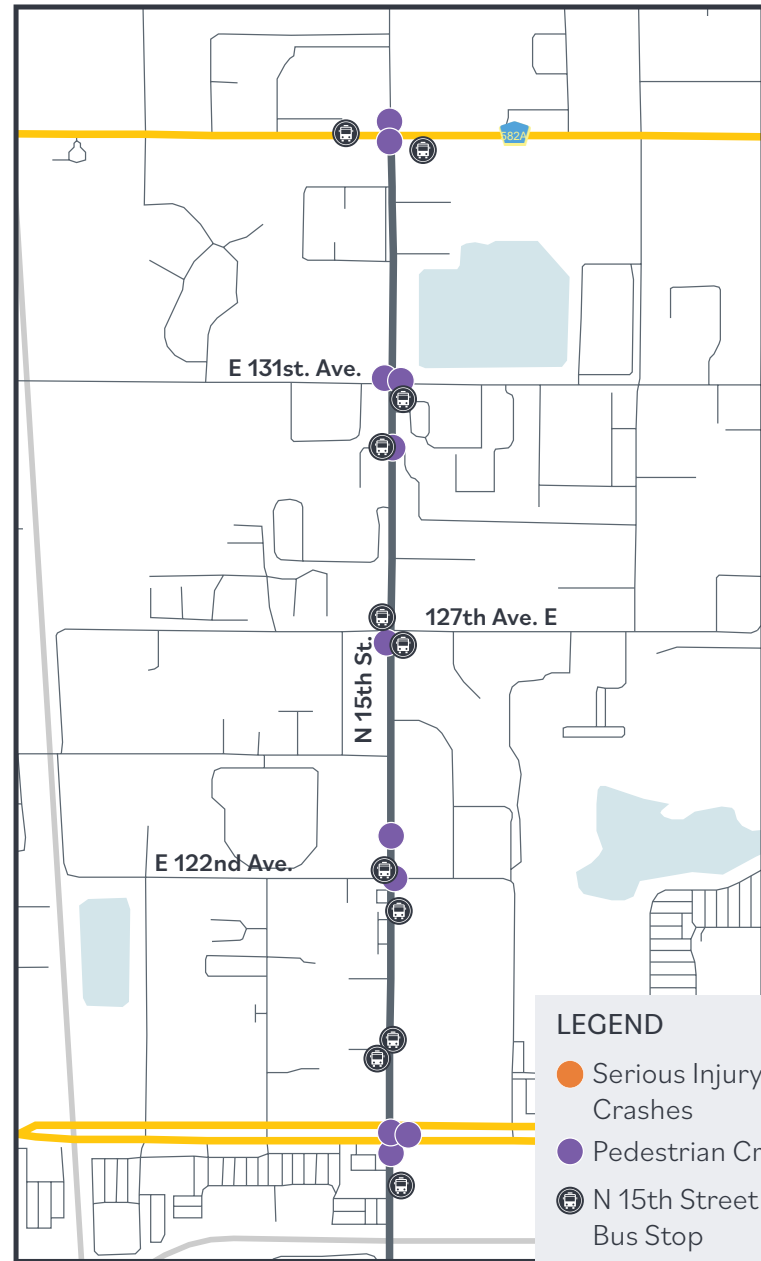


Figure 7 - Serious Injury and Pedestrian Crash Locations



LEGEND

- Serious Injury Crashes
- Pedestrian Crashes
- Ⓜ N 15th Street Bus Stop

Crash Reports (2015 to 2020)

The crash analysis included a review of the crash reports from the fatal and serious injury crashes of the most recently available (2015 to 2020) crash reports reported on the corridor. Between 2015 and 2020, three fatal crashes and ten severe injury crashes were reported on or in proximity to the corridor. According to the crash reports, all three fatal crashes occurred in dark-lighted conditions and involved pedestrians near or at the intersection of North 15th Street and East 122nd Avenue.

Five of the ten severe injury crashes involved pedestrians. Of the pedestrian involved crashes, one occurred when a left turning vehicle struck pedestrians in the crosswalk at North 15th Street and Fletcher Ave and the two other pedestrian involved crashes were due to crossing midblock outside of crosswalk on Fowler Avenue near the intersection of North 15th Street. All non-pedestrian involved severe injury crashes occurred at intersections along North 15th Street (East Fletcher Avenue, East Fowler Avenue, East 127th Avenue) and were angle or left turn crashes generally caused by a motorist failing to stop at red lights or stop signs, or failing to yield to oncoming traffic.

Road Safety Audit

A Road Safety Audit (RSA) for North 15th Street was conducted on June 24, 2020 to review the existing conditions. During the safety audit the conditions along the corridor were reviewed with a focus on the existing conditions and connectivity options provided for pedestrians, cyclists, and vehicles. The findings from the audit include the need for maintenance along the corridor to address sidewalk and shoulder erosion (**Figure 8**), the removal of debris from drainage structures (**Figure 9**), restriping of degraded pavement markings (**Figure 10**), and replacement of cracked sidewalks (**Figure 11**).

Figure 8 - Erosion



Figure 9 - Debris



Figure 10 - Restriping



Figure 11 - Replacement



Other observations from the audit include the need of detectable warnings and crosswalks which are recommended to be placed on the side streets of unsignalized intersections. At the time of the audit, there were sidewalk gaps along the corridor on the west side of the corridor. Where the sidewalk is missing, there are indications of high pedestrian travel and wear and tear in these areas (**Figure 12 and Figure 13**). The detailed audit for North 15th Street is provided in **Appendix B**.

PUBLIC ENGAGEMENT AND INPUT

Public engagement efforts were conducted to further understand the community's existing mobility and safety needs to better define the final recommended safety improvements for North 15th Street. Public engagement for the North 15th Street corridor included virtual outreach efforts. Through these efforts over 50 community members and community stakeholders participated in the public engagement efforts.

Both online and paper versions of a survey were available to the public and advertised via the MPO's Vision Zero webpage, emailed to neighborhood associations, and distributed to the University Area Community Development Corporation (UACDC). The North 15th Street project factsheet was used to advertise the surveys (**Appendix C**). The online survey was conducted through MetroQuest, an online public engagement software. In order to capture public input from those without internet access, a one-page paper version of the online survey was available at the UACDC. The paper version of the survey was available in both English and Spanish languages.

Figure 12 - Pedestrian Travel (West Side)



Figure 13 - Pedestrian Travel (East Side)



Public Engagement Results

Tampa Innovation Partnership Advisory Board

Public engagement for the North 15th Street project first took place on August 19th, 2020 at the Tampa Innovation Partnership’s (Tampa !p) Advisory Board Meeting. Members of Tampa !p Advisory Board are representatives from the area’s institutions, non-profits, governments, and businesses and are familiar with the existing conditions and needs of North 15th Street. At the meeting, the existing conditions findings and preliminary safety improvement ideas were presented to the Advisory Board. Members of the Advisory Board also completed a brief online survey on the current conditions and future vision for safety on North 15th Street. The survey results indicate the greatest safety concerns on North 15th Street are lack of sidewalks, lack of marked crosswalks, and darkness at night (**Figure 14**). The top selected improvements from the Advisory Board include widening sidewalks, slowing down vehicles, adding bicycle lanes, adding a multiuse trail, and installing additional lighting on the corridor (**Figure15**).

Figure 14 - Greatest Safety Concern

Thinking about the current conditions on N 15th Street, what concerns you the most?

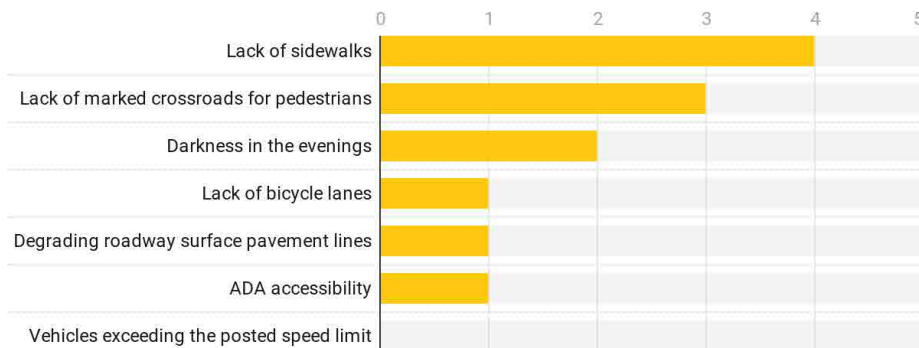
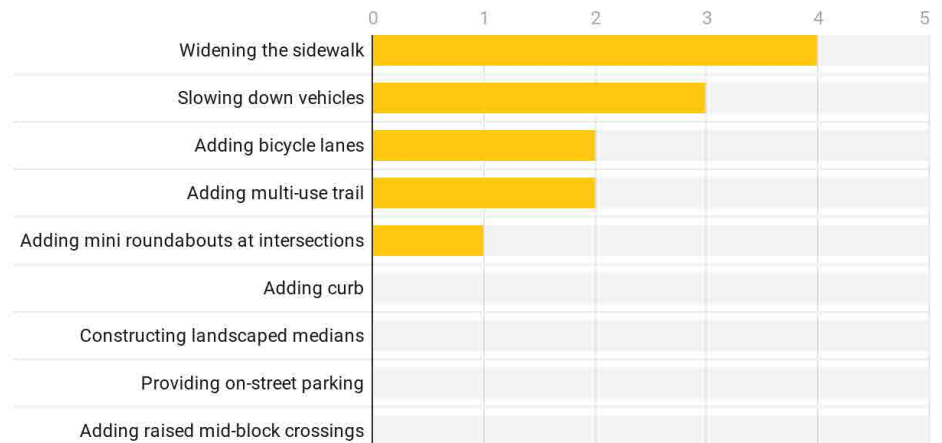


Figure 15 - Most Important Improvements

Thinking about the current conditions on N 15th Street, what improvements do you feel are most important to include?



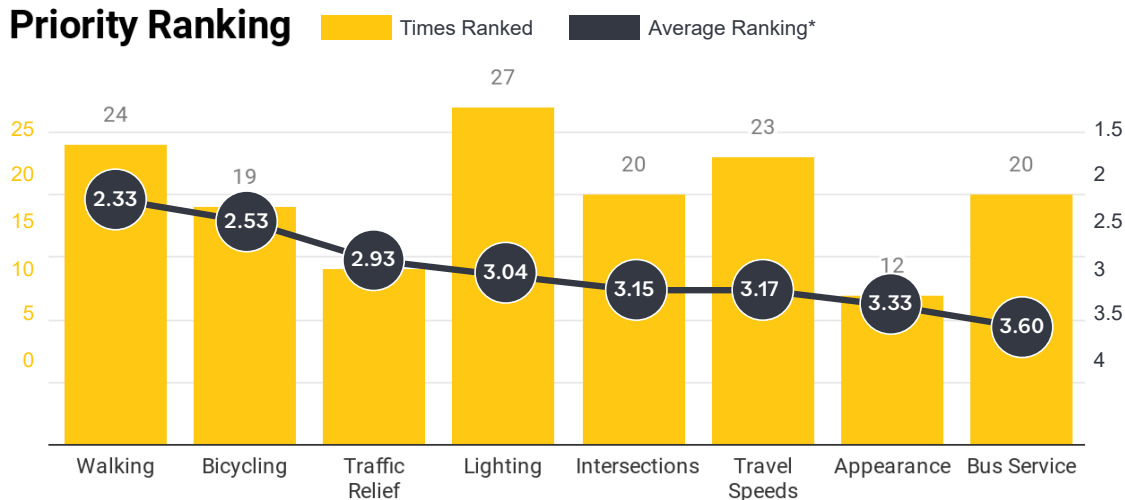
MetroQuest

MetroQuest Studio, a public engagement online platform, was used to inform the public about the Vision Zero project and collect feedback on safety needs, preferences, and priorities for North 15th Street using five interactive and visual screens. The survey was open for public input from September 1st, 2020 to September 30th, 2020 and was advertised via the Hillsborough MPO's project webpage, official MPO social media channels, local media news outlets, and emailed to neighborhood and community groups in the project area. Within the survey, participants were asked to rank safety priorities, rate potential safety improvement options, and map areas of concern or projects ideas on North 15th Street. In total, the survey had 50 participants that contributed over 800 total data points and over 90 written comments.

Priority Ranking

On the second screen participants were asked to rank their top five safety priorities including bicycling, bus service, corridor appearance, intersections, lighting, traffic relief, travel speeds, and walking improvements. As indicated in **Figure 16**, Walking and Bicycling had the highest average ranks of all safety priorities for the corridor. Appearance and Bus Service had the lowest average ranks for safety priorities.

Figure 16 - Priority Ranking



* Improvements were ranked on a scale of 1 to 5 with 1 being the highest

2. Thinking about the current conditions on N 15th Street, what improvements do you feel are most important to include? (Select all that apply.)

- Adding raised mid-block crosswalks
- Slowing down vehicles
- Adding mini roundabouts at intersections
- Providing On-Street Parking
- Widening the sidewalk
- Adding a multi-use trail
- Adding bicycle lanes
- Constructing landscaped medians
- Adding curb
- Providing additional lighting

3. Do you have any other concerns about N 15th Street that are not listed above?

4. Are there any specific locations that concern you on N 15th Street?

5. One Word | Today, N 15th Street is...

6. One Word | My vision for N 15th Street is...

7. How do you typically travel along N 15th Street?

- Bike
- Walk
- Drive
- Ride the Bus
- Other:

Additional Comments:

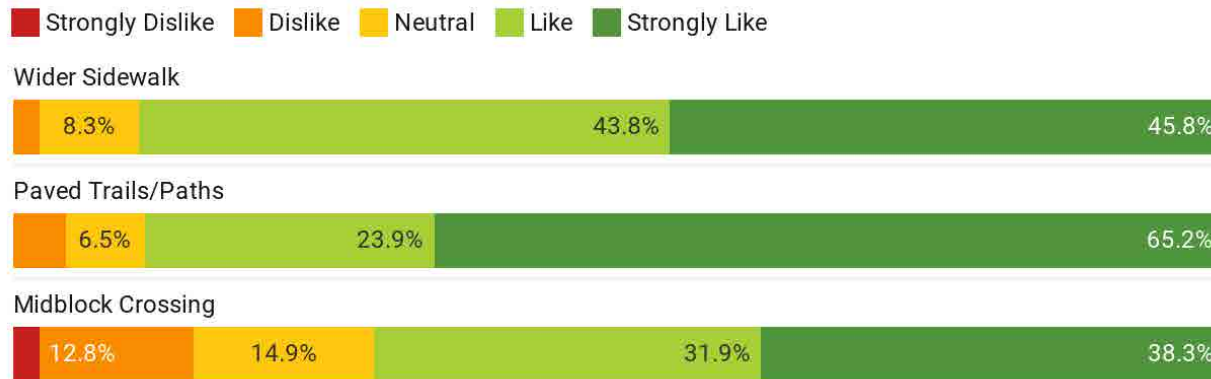
Preferred Improvements

On the third screen participants were asked to rate potential safety improvement options for walking, bicycling, and traffic on North 15th Street. Participants were shown three to four improvement options for each category and asked to rate them on a 5-point scale between “Strongly Dislike” and “Strongly Like”. For walking improvements participants rated their preferences for midblock crossings, paved trails/paths, and wider sidewalks (**Figure 17**). Of the three options, paved trails/paths received the highest average rating, closely followed by wider sidewalks (**Table 3**).

Table 3 - Walking Improvements

	Strongly Dislike (1)	Dislike (2)	Neutral (3)	Like (4)	Strongly Like (5)	Average Rating
Wider Sidewalk	0	1	4	21	22	4.33
Paved Trails/ Paths	0	2	3	11	30	4.50
Midblock Crossing	1	6	7	15	18	3.91

Figure 17 - Walking Improvements

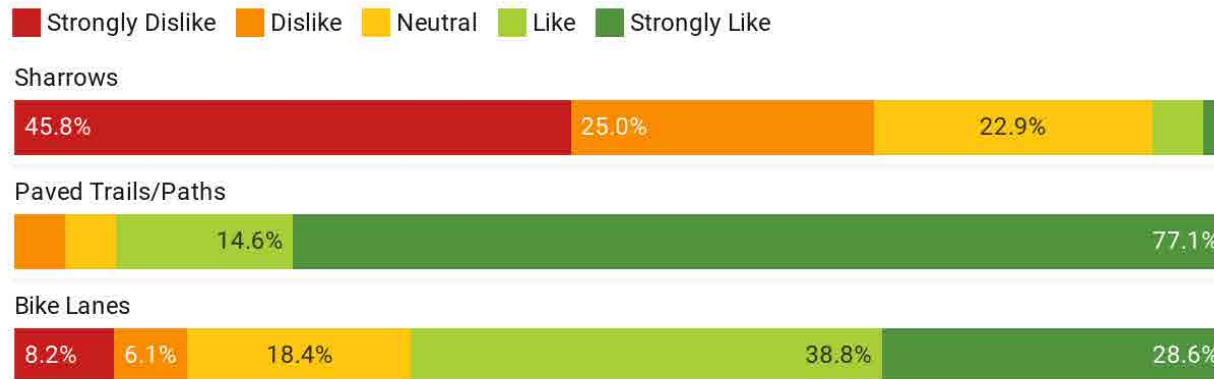


For bicycle improvements, participants rated their preferences for bike lanes, paved trails/paths, and sharrows (**Figure 18**). Of the three options, paved trails/paths received the highest average rating and sharrows received the lowest average rating (**Table 4**).

Table 4 - Bicycle Improvements

	Strongly Dislike (1)	Dislike (2)	Neutral (3)	Like (4)	Strongly Like (5)	Average Rating
Sharrows	22	12	11	2	1	1.92
Paved Trails/ Paths	0	2	2	7	37	4.65
Bike Lanes	4	3	9	19	14	3.73

Figure 18 - Bicycle Improvements



For traffic calming improvements, participants rated their preferences for raised medians, oval median islands, mini roundabouts, and landscaping (Figure 19). Of the four options, landscaping received the highest average rating and mini roundabouts received the lowest average rating (Table 5). Figure 20 and Figure 21 provide example selection screens from the survey.

Table 5 - Traffic Calming Improvements

	Strongly Dislike (1)	Dislike (2)	Neutral (3)	Like (4)	Strongly Like (5)	Average Rating
Oval Median Island	6	6	6	18	9	3.40
Mini Roundabout	7	13	5	13	7	3.00
Landscaping	0	0	5	15	25	4.44
Raised Median	2	3	8	19	12	3.82

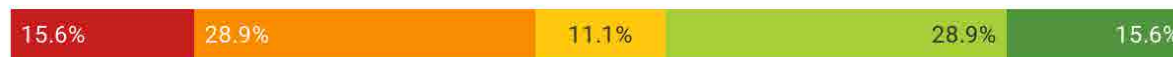
Figure 19 - Traffic Calming Improvements

Strongly Dislike Dislike Neutral Like Strongly Like

Oval Median Island



Mini Roundabout



Landscaping



Raised Median



Figure 20 - Survey: Oval Median

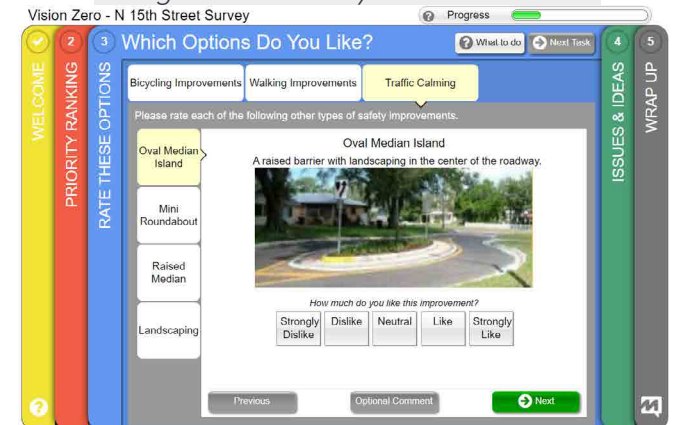
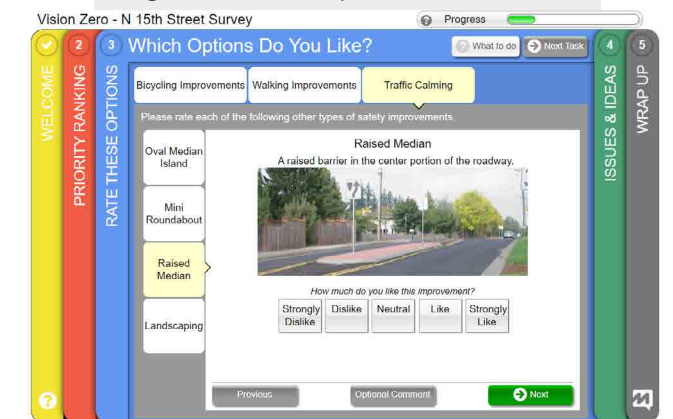


Figure 21 - Survey: Raised Median



Areas of Concern

To further understand safety issues and project opportunities on North 15th Street participants were asked to pinpoint their concerns and ideas on an interactive map on the fourth survey screen. Participants had the opportunity to add pins related to destinations, project ideas, safety concerns, traffic, and “anything else”. In total, 83 pins were added to the map. A summary of the map inputs is provided in **Appendix D**.

Safety concerns indicated by participants included poor lighting along the corridor and unsafe crossings at intersections throughout the corridor including Fletcher Avenue, Villena Avenue, 127th Avenue, 122nd Avenue, and Fowler Avenue. Project ideas proposed by participants included raised medians near the Fletcher Avenue intersection, better bus stops and shelters along the corridor, and landscaping throughout the corridor.

Corridor Vision

On the final screen, participants were asked about their future vision for North 15th Street. When asked to describe North 15th Street as it is today in one-word participants described it has “busy”, “dangerous”, “unsafe”, and “rundown”. When asked to describe their vision for North 15th Street in one-word participants listed “safe” or “safer”, “clean”, and “walkable”. The participants’ responses indicate a need for safety improvements on North 15th Street, as well as eluded to their hopes for a safer, more comfortable corridor in the future.

Today, N 15th Street is....



My Vision for N 15th Street is...



“Needs sidewalk”

“This section is not very well lit. Very difficult to see”

“Could these be raised medians?”

PLANNED IMPROVEMENTS

Hillsborough County has responded to the safety needs of North 15th Street and is enhancing safety with planned Capital Improvement Projects and short-term safety improvements throughout the corridor.

Prior to the development of the final recommended safety improvements the documentation and information provided in **Table 6** was reviewed for overlap and consistency with any potential recommended safety improvements.

Table 6 - Planned Improvements

Improvement	Location	Improvement Type	Phase
East 131st Avenue Preliminary Land Use and Transportation (PLAT) Study	East 131st Avenue from Bruce B Downs Boulevard to Nebraska Avenue	CIP Improvements	Planning
Intersection Improvements	Fletcher Avenue and North 15th Street	CIP Improvements	Preliminary Engineering Report
Corridor Improvements	North 15th Street from Fowler Avenue to Fletcher Avenue	Short-Term Safety Improvements	Construction

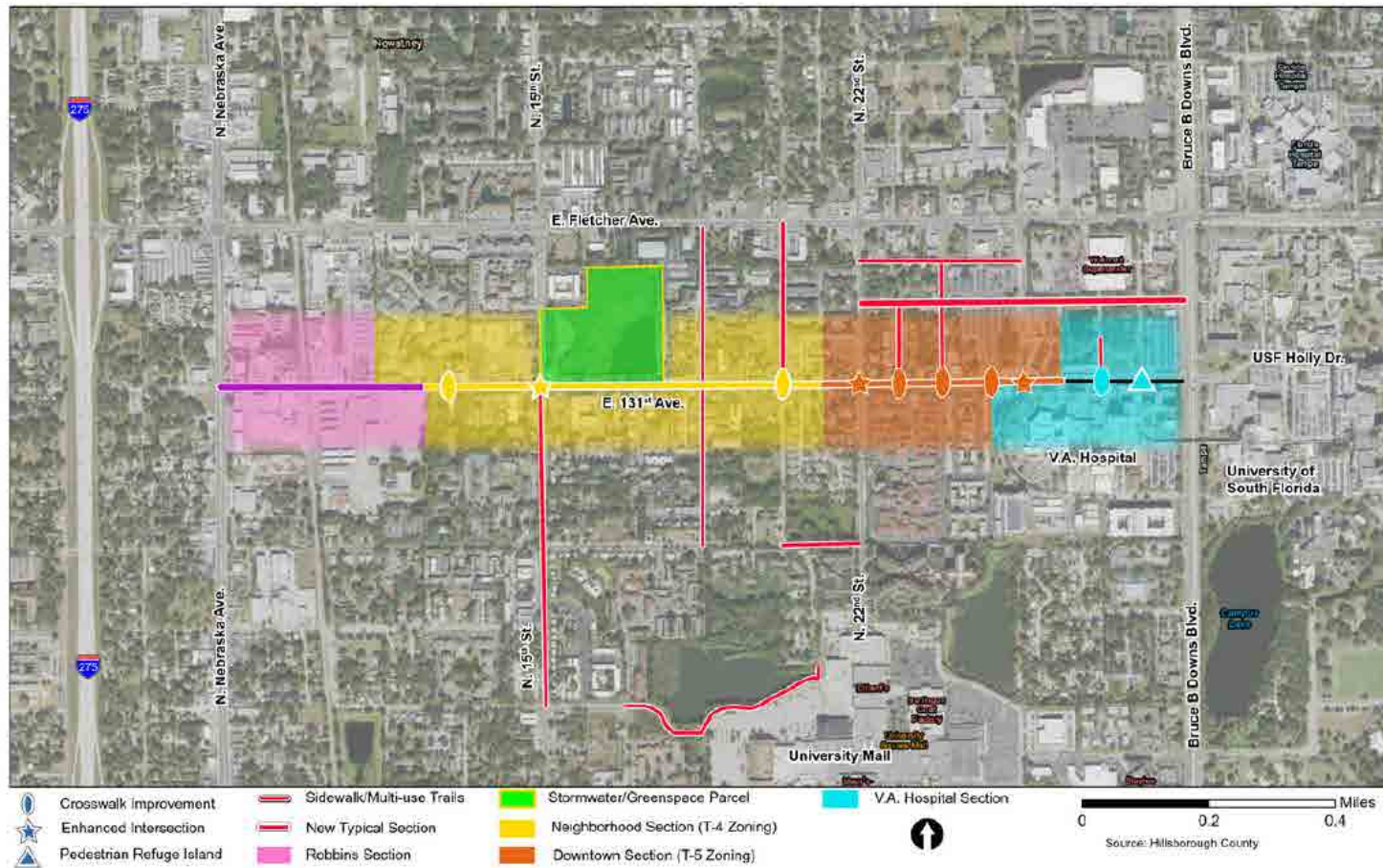
University Area Community Plan

The Vision of the University Area Community Plan in the Livable Communities Element of Unincorporated Hillsborough County's Comprehensive Plan states that the plan "will strive to create a stable, safe, and livable community through physical revitalization which establishes positive neighborhood identity and provides community design guidelines to achieve a pedestrian friendly, mixed use area that will serve the needs of the citizens of the University Area Community". The safety improvement recommendations for the North 15th Street corridor support the vision of the University Area Community Plan by improving multimodal safety along the corridor and contributing to creating a pedestrian friendly environment.

131st Avenue PLAT Study (CIP: 69642000)

The East 131st Avenue Preliminary Land Use and Transportation (PLAT) Study is the land use and transportation redevelopment vision for the East 131st Avenue corridor (**Figure 22**). In general, the recommendations from the PLAT study include proposed zoning and future land use categories changes along the corridor to create neighborhoods with a connected urban feel. The recommended transportation improvements support the connected feel by enhancing multimodal connections and safety along the East 131st Avenue corridor with new roadway typical sections that include bike and pedestrian facilities and improved crossings. Specific to North 15th Street, the PLAT study recommends enhanced intersection improvements at East 131st Avenue and North 15th Street and the creation of a recreation area or park on the Hillsborough County-owned stormwater site at the intersection of East 131st Avenue and North 15th Street.

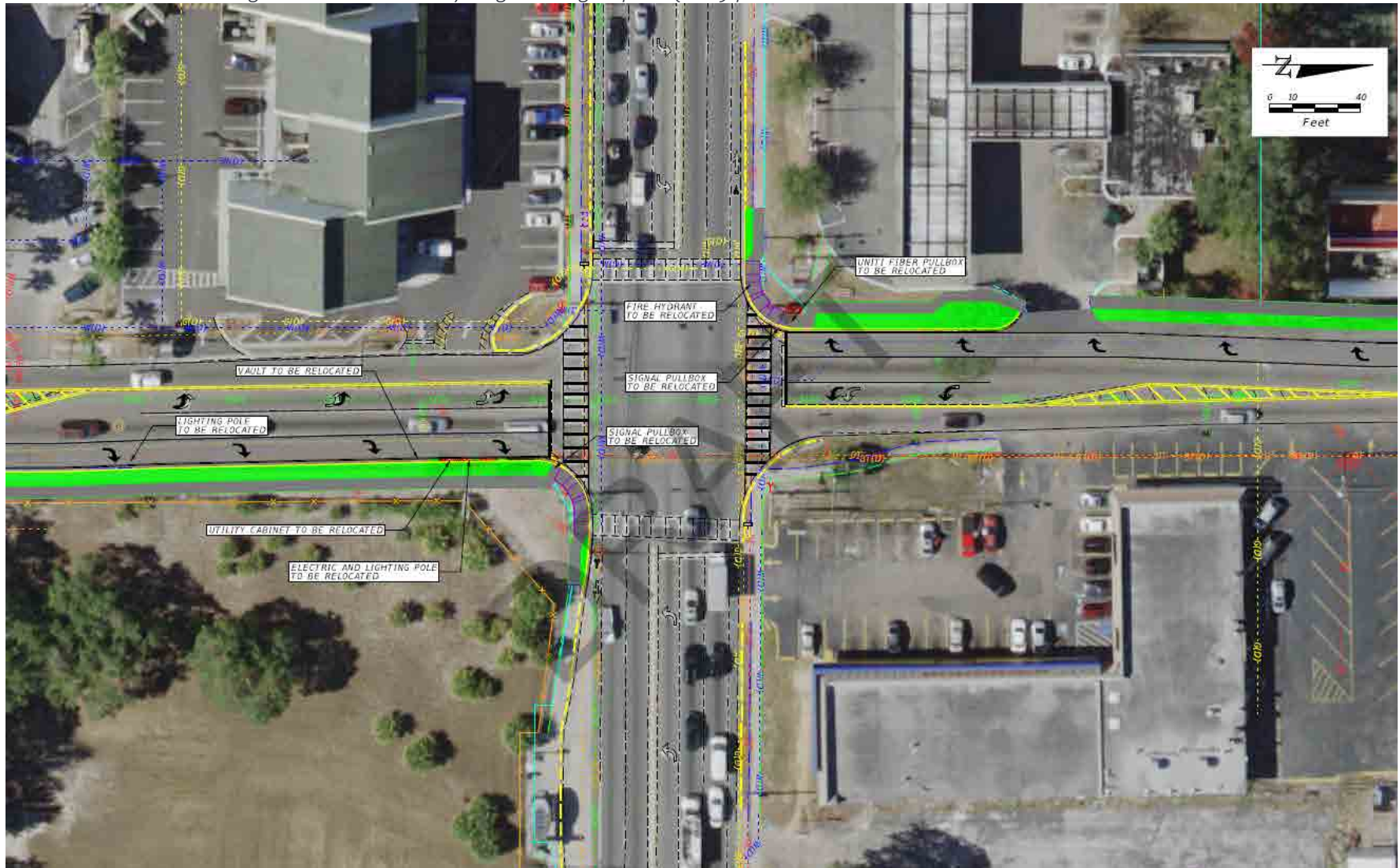
Figure 22 - East 131st Avenue Preliminary Land Use and Transportation (PLAT) Study



Fletcher Avenue and North 15th Street (CIP: 69679037)

The Preliminary Engineering Report (PER) for Fletcher Avenue and North 15th Street recommends intersection improvements that include widening the intersection to include right turn lanes for the northbound and southbound intersection approaches (on North 15th Street) while maintaining the existing travel lanes and left turn lanes in each direction **(Figure 23)**.

Figure 23 - Preliminary Engineering Report (PER) for Fletcher Avenue and North 15th Street



Corridor Improvements

As part of the Vision Zero strategies, there is a focus on providing both immediate safety improvements as well as long term corridor changes. As part of this strategy, Vision Zero emphasizes how Paint Saves Lives through lower cost retrofits at targeted locations to save lives. Additionally, Vision Zero promotes a focus on the built environment as future construction occurs to ensure the future will not be like the past.

Hillsborough County is currently enhancing the 15th Street corridor from Fowler Avenue to Fletcher Avenue. To date, nine midblock crossings including seven raised pedestrian crossing locations with rectangular rapid flashing beacons (RRFBs) have been constructed. These pedestrian crossings will provide enhanced access to the existing transit locations as well as provide traffic calming for vehicles driving along North 15th Street. Temporary asphalt landings are provided at the midblock crossing to accommodate wheelchairs. The temporary asphalt landings will be updated to concrete sidewalk and curb ramps.

Corridor improvements will also include filling the existing sidewalk gaps on the west side of the corridor. This sidewalk construction will provide a complete network for pedestrians traveling along the west side of the corridor. Additionally, the lighting along the corridor has been upgraded to LED lighting and additional lighting has been installed at the intersections. Collectively, the short-term improvements address immediate pedestrian needs and will provide enhanced visibility for the existing corridor.





LONG-TERM CORRIDOR IMPROVEMENTS

The long-term corridor safety improvement options were developed as a result of the safety analysis, public engagement feedback, and review of the planned and programmed short-term improvements. The long-term improvement options aim to transform the corridor's character, calm traffic, and provide safe mobility options for all modes. A summary of the three long-term improvement options is provided in **Table 7**. Each option is further detailed in the following sections of the report. All three long-term corridor improvement options take into account the short-term safety improvements currently being constructed on North 15th Street. The long-term options also take into consideration existing constraints on North 15th Street. The existing constraints include the location of power poles, driveways, and drainage structures along the corridor. The existing power poles will need to be relocated for the implementation of the long-term concepts. Drainage along North 15th Street will also need to be addressed with each of the long-term options. Hillsborough County is currently developing context sensitive cross sections as part of the Transportation Technical Manual (TTM) update. During the design phase of the long-term improvements for North 15th Street, the design should consider the latest typical sections per the TTM. Furthermore, public engagement and input, including consideration of emergency vehicles, should be taken into consideration for the long-term improvements. The detailed typical sections and order of magnitude cost estimates for each long-term improvement option are provided in **Appendix E and Appendix F**.

Table 7 - Long-Term Corridor Improvements

Characteristics	Existing	Option 1: Wide Sidewalks	Option 2: Retrofit Wide Sidewalks	Option 3: Bike Lanes
Cross Section Width (Approximate Typical ROW)	60 feet	60 feet	60 feet	60 feet
Number of Lanes	2 lanes	2 lanes	2 lanes	2 lanes
Lane Width	12 feet	10 feet	12 feet	10 feet
Curb and Gutter	Valley Gutter (intermittent)	Type F Curb and Gutter	Valley Gutter	Type F Curb and Gutter
Pedestrian Facilities	4-foot to 5-foot sidewalks on both sides (intermittent)	8-foot sidewalk on both sides	8-foot sidewalk on both sides	6-foot sidewalk on both sides
Buffer Width	Varies	10 feet	4 feet	No buffer
Bicycle Facilities	None	None	None	7-foot buffered bike lanes on both sides
Aesthetics	Small-scale landscaping	Small-scale landscaping and trees	Small-scale landscaping	Small-scale landscaping
Utility Impacts	--	Relocate power poles	Relocate power poles	Relocate power poles
Pros	--	Wider sidewalks and reduced travel lanes to encourage lower speeds	Wider sidewalks	Wider sidewalks and dedicated bicycle facilities
Cons	--	Cost, Bicycle facilities are not separated	Reduced separation between roadway and sidewalk, Bicycle facilities are not separated	Cost, Additional pavement

Alternative 1 - Wide Sidewalks

The recommended long-term safety improvements for Alternative 1 consist of wider sidewalks throughout the entire corridor (**Figure 24**). The wider sidewalks are recommended to be eight feet in width and be provided continuously along both sides of the corridor. The wider sidewalks on both sides of the roadway will contribute to an enhanced pedestrian facility. Based on design criteria and the TTM updates, shared lane markings (SLMs) should be evaluated for implementation based upon the roadway volumes with the Alternative 1 improvements.

A lane width reduction is also recommended as part of Alternative 1. The lane widths are currently 12 feet wide and are recommended to be reduced to 10 feet wide. The narrowed traffic lanes serve as a traffic calming element along the corridor to slow vehicles and enhance safety for all modes traversing the corridor. The enhanced buffer will provide separation between pedestrians and vehicles. Furthermore, it is recommended that curb and gutter be added to the roadway to provide an additional buffer between the roadway and upgraded sidewalks. Coordination will be required with emergency services during the design phase to determine the type of curb and gutter.

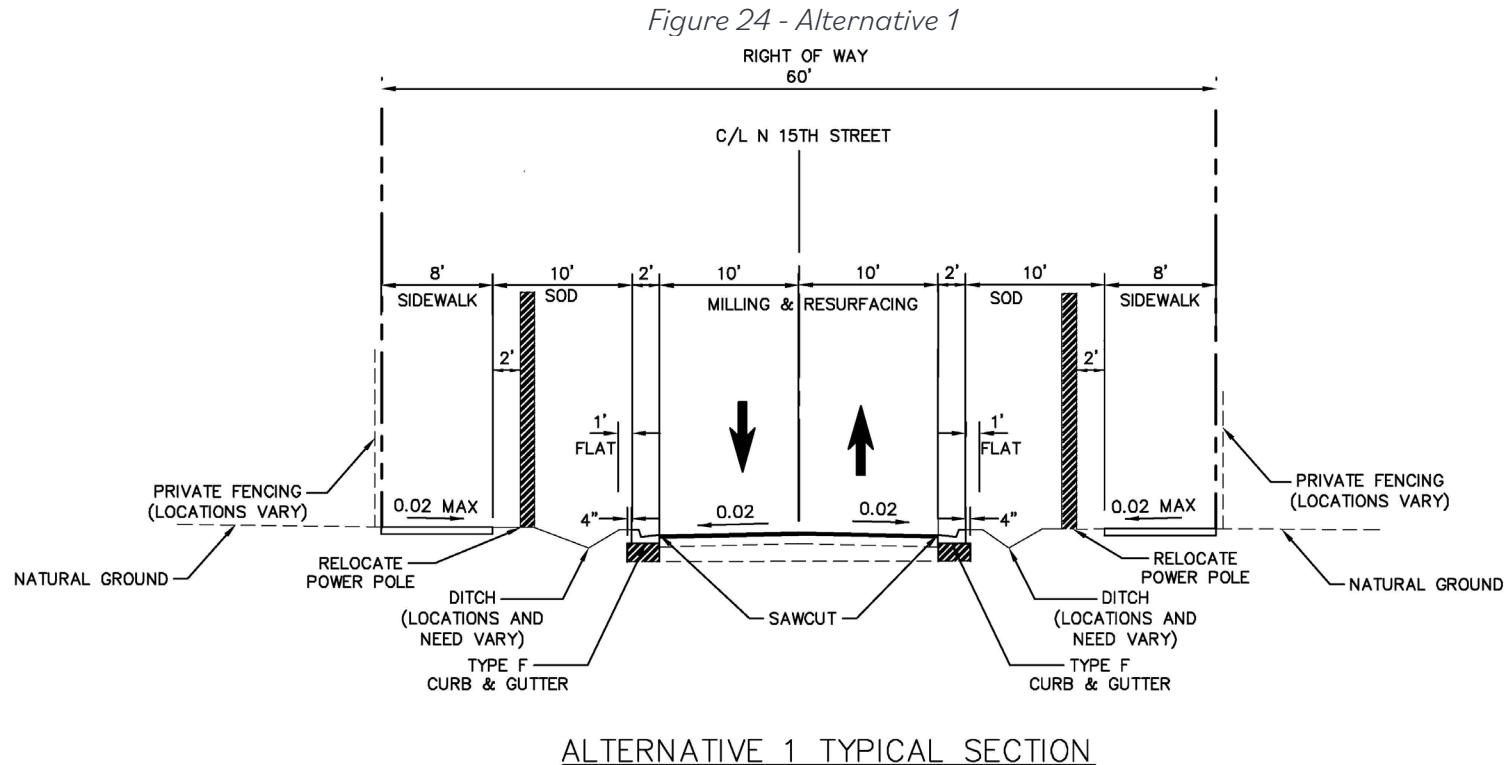
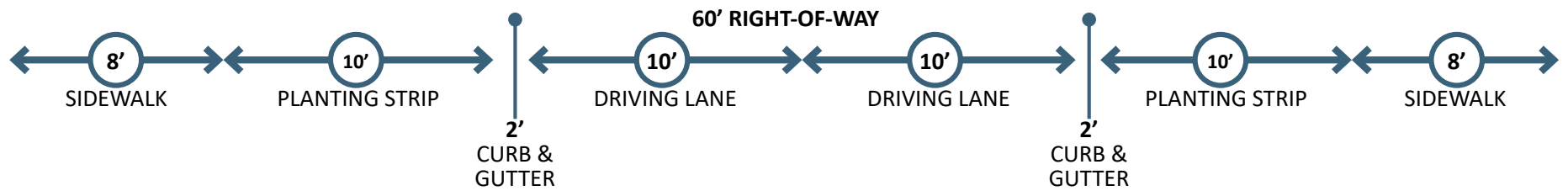


Figure 25 - Alternative 1 Illustration

ALTERNATIVE 1: WIDE SIDEWALKS

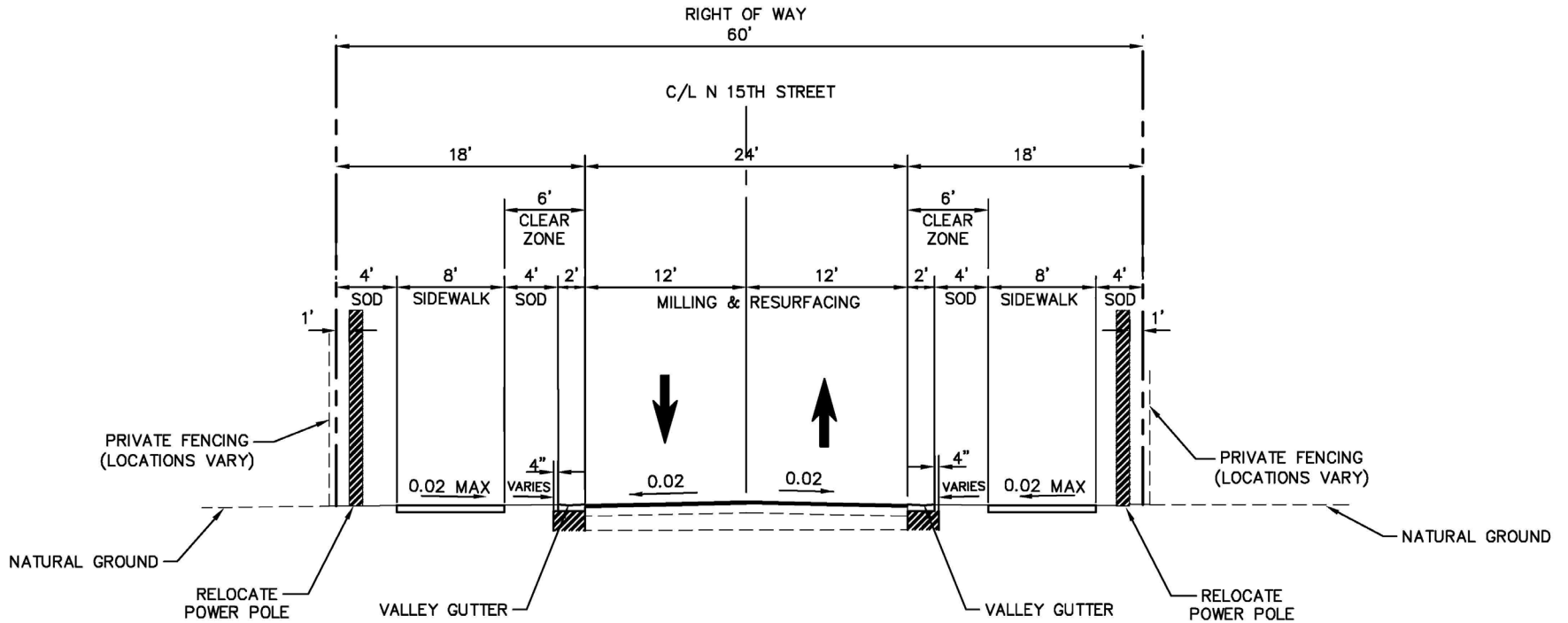


Alternative 2 - Retrofit Wide Sidewalks

The recommended long-term safety improvements for Alternative 2 consist of an 8-foot wide sidewalk on the west and east side of the roadway (Figure 26). The wider sidewalk will provide an enhanced pedestrian facility along the corridor. Based on design criteria and the TTM updates, shared lane markings (SLMs) should be evaluated for implementation based upon the roadway volume with the Alternative 2 improvements.

The travel lanes remain at the existing width of 12-feet as part of Alternative 2. There is existing valley gutter along the corridor that is recommended to be extended along both sides of the corridor to provide an additional buffer between the roadway and upgraded sidewalks to accommodate the drainage. The four-foot buffer will provide separation between pedestrians and vehicles.

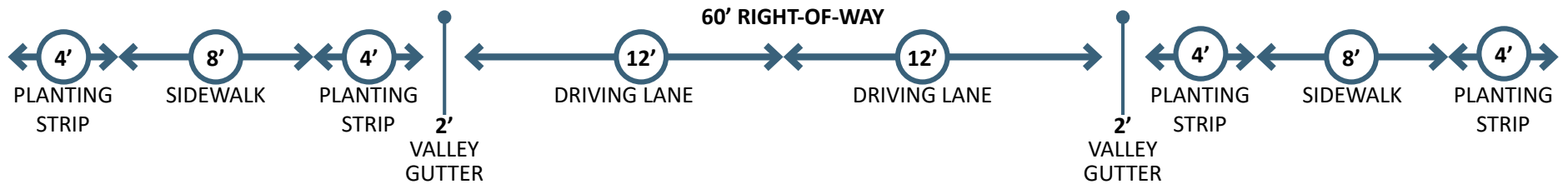
Figure 26 - Alternative 2



ALTERNATIVE 2 TYPICAL SECTION

Figure 27 - Alternative 2 Illustration

ALTERNATIVE 2: RETROFIT WIDE SIDEWALKS



Alternative 3 - Bike Lanes

The recommended long-term safety improvements for Alternative 3 consist of 6-foot wide sidewalks and buffered bike lanes throughout the corridor (**Figure 28**). The wide sidewalks are recommended to be six feet in width continuously along both sides of the corridor. The wider sidewalks on both sides of the roadway will contribute to an enhanced pedestrian facility. The 7-foot buffered bike lanes will provide a dedicated space for bicyclists on the roadway.

A lane width reduction is also recommended as part of Alternative 3. The lane widths are currently 12 feet wide and are recommended to be reduced to 10 feet wide. The narrowed traffic lanes serve as a traffic calming element along the corridor to slow vehicles and enhance safety for all modes traversing the corridor. Furthermore, it is recommended that curb and gutter be added to the roadway to provide an additional buffer between the roadway and upgraded sidewalks. Coordination will be required with emergency services during the design phase to determine the type of curb and gutter.

Figure 28 - Alternative 3

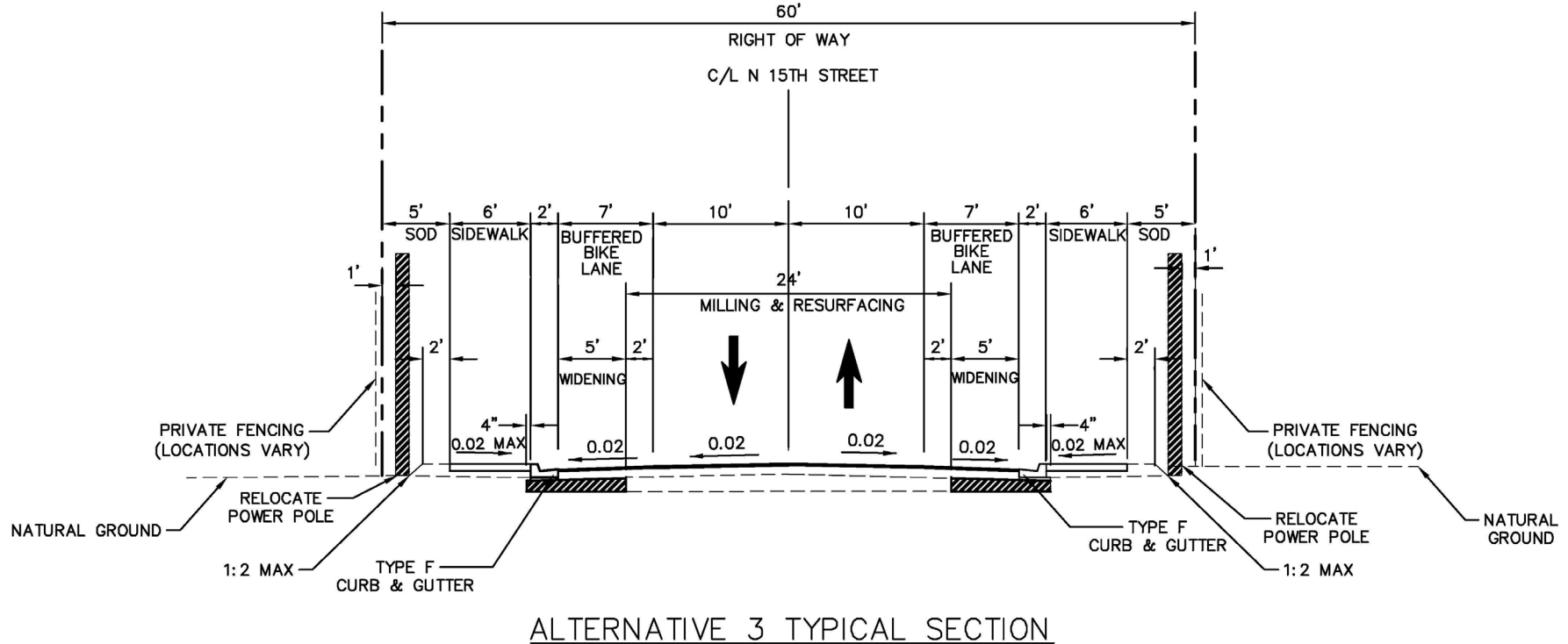
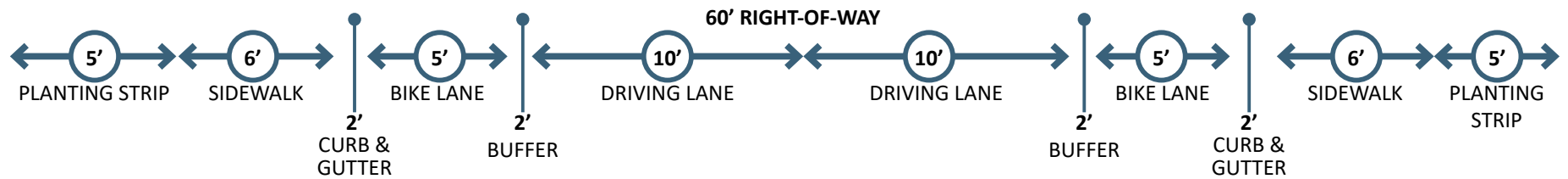


Figure 29 - Alternative 3 Illustration

ALTERNATIVE 3: BIKE LANES



Additional Corridor Improvements

All three long-term safety improvement alternatives are inclusive of additional corridor improvements. The additional corridor improvements include traffic calming and corridor landscaping. Additional lighting along the corridor will be addressed through the County's ongoing project which has updated the existing lighting to LED. Additional landscaping along the corridor is recommended and could be provided throughout the corridor.

Raised medians and mini roundabouts (**Figure 30**) are recommended to be implemented along the corridor to provide traffic calming. The raised medians and mini roundabouts are intended to slow traffic by creating a slight horizontal shift of the travel lanes. The raised crosswalks shown in **Figure 30** have recently been constructed by Hillsborough County.

It is recommended to implement a Leading Pedestrian Interval (LPI) interval at the intersection of North 15th Street and East 131st Avenue. High emphasis crosswalks and detectable warning surfaces should also be implemented along all of the minor side streets.

NEXT STEPS

The purpose of the North 15th Street Vision Zero project was to identify long-term safety improvement concepts that align with Vision Zero goals. The long-term safety improvement concepts were developed through a review of existing conditions, technical analysis, and public engagement. The three long-term alternative options for North 15th Street were developed at the planning level and are just the beginning for long-term safety improvements.

The next steps for the improvement concepts are public engagement and preliminary engineering design phases. During public engagement, public input will be solicited for the alternative long-term options. The preliminary engineering design phase will include additional public engagement and will document engineering and environmental analyses in support of future decision-making related to the alternative long-term options for North 15th Street.

Figure 30 - Corridor-Wide Improvements

