



HILLSBOROUGH COUNTY Infrastructure Assessment: I-4 CORRIDOR REPORT

prepared for:



**Hillsborough
County Florida**

prepared by:



MAY 2021



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The summaries below outline key findings in the report regarding existing Community Facilities, Transportation, and Public Utilities.

Community Facilities

- Study boundary: Over half of the study area is outside the urban service area. The study boundary was developed based on the ULI I-4 Corridor Advisory Service Report and includes three Strategic Node Areas identified in the report.
- Schools and Libraries: Several schools will be near, or above capacity by 2024-2025 such as: Mango Elementary, Armwood Senior High, and Strawberry Crest High. There is one library located within the study area.

Transportation

- Existing Roadways: The majority of the study area consists of roadways classified as local roadways, but there are a number of interstates and arterials with significant volumes such as I-4, I-75, US 301, US 92/SR 600, CR 579/Mango Road and SR 574/E. Dr. Martin Luther King Jr. Boulevard.
- Existing Traffic Volumes: Several non-interstate roadways are typically congested including Harney Road, Orient Road, N Kingsway Road, US 92/SR 600.
- Safety: There were around 3,600 crashes in the study area over a 5-year period with an average of 6 fatalities per year. The majority of fatalities and incapacitating injuries are along the state roadways - I-4, I-75, US 301 and US 92. Crash hot spots are located along the main arterial roadways including US 92/SR 600, and US 301. There are additional hot spots located on north/south County roadways such as CR 579/Mango Road and McIntosh Road. There is also a cluster of fatal and incapacitating injuries along Mango Road and Harney Road.
- Programmed projects: Minimal improvements are programmed within the Node Areas for the Hillsborough County CIP.
- Transit: The majority of the study area is not serviced by HART public transit.

Public Utilities

- Overview: All Node Areas have minimal water and wastewater infrastructure. The majority of residential properties north of I-4 within the study area are supported by well water and septic systems.
- Public Water and Wastewater Existing Capacity: The Lithia Water Treatment Plant will not be able to handle new growth past 2026 without upgrades to the existing plant. As outlined in the May 2020 wastewater analysis report, the Valrico AWWTF currently has no capacity issues anticipated unless flow is diverted.
- Public Existing Stormwater Infrastructure: The study area does not appear to have any major flooding issues based on the County's GIS flood complaint records.
- Public Utilities Programmed Improvements: There are culvert, drainage and water quality, and potable and reclaimed water programmed intersection point projects located on or adjacent to several the collector and arterial roadways.



Introduction

Background

The I-4 corridor serves as a major transportation corridor not only for Hillsborough County but also for the greater region. The I-4 corridor has been extensively studied. First in 2010, the Hillsborough County Planning and Growth Management Department and Planning Commission staff evaluated the I-4 corridor to identify areas of opportunity for potential economic development. Most recently, in 2017, the County engaged the Urban Land Institute (ULI) to conduct an I-4 Corridor Advisory Service Report which analyzed the feasibility of sustainable development strategies in the I-4 corridor area. The report focused on the area between I-75 and Plant City, linking future land use policy and infrastructure investments to desired economic development outcomes including targeted industries. ULI recommended that the County should plan for mixed-use nodes of development over time along the I-4 corridor while preserving the County's unique and rural character.

The panel's major recommendation is to hold the line throughout the county and take a phased approach to accommodate this new growth with density...However, the (USA) boundary will need to be revisited and reevaluated on a regular basis to decide how it might need to move to accommodate future growth. But this revision must be done in a planned way, which is described in greater detail throughout this report.

Project Purpose

This report serves as a planning level analysis to examine the capacity and quality of existing infrastructure, land, transportation, and public utilities as it relates to the area defined in the ULI study. This infrastructure analysis will provide a baseline level of infrastructure provisions upon which recommendations for capital investment strategies, growth management strategies, and quality of life enhancements could be predicated in the future.



Figure 1: I-4 Corridor and I-75



Study Boundary

The study boundary was developed based on the ULI I-4 Corridor Advisory Service Report and contains a portion of the USA, as shown in Figure 3. The study boundary shown in the dashed yellow line is bounded north of Thonotosassa Road, south of SR 574/ E Dr. Martin Luther King Jr. Boulevard, east of N Forbes Road, and west of Orient Road). Figure 3 also shows the three Strategic Node Areas identified in the ULI Study in light purple. The three Node Areas add up to 2,200 acres with Node Area 1 at 400 acres, Node Area 2 at 820 acres, and Node Area 3 at 980 acres.

This report focuses on infrastructure conditions within the three Node Areas. However, infrastructure such as community facilities and transportation connectivity were also reviewed within the overall study boundary shown in the dashed yellow line.

Report Structure

The following pages divide the report into 3 sections that describe the existing conditions and future steps for the I-4 corridor.

- Section 1: Community Facilities
- Section 2: Transportation
- Section 3: Public Utilities



Figure 2: I-4 Corridor

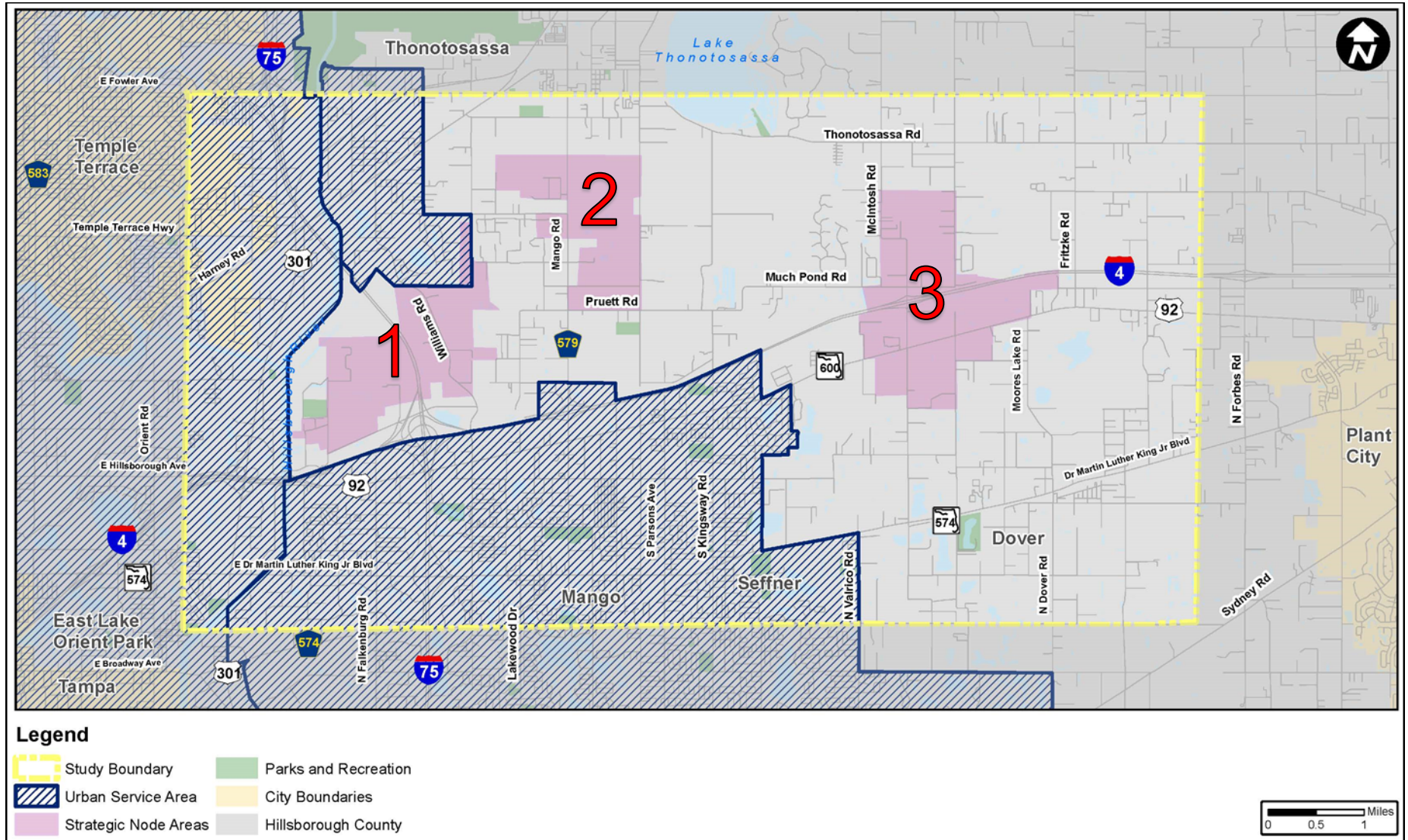


Figure 3: Study Boundary



Section 1: Community Facilities

The I-4 corridor study boundary encompasses a wide variety of community facilities in the area. This section describes schools and libraries, emergency management/police/fire, parks within the overall study boundary as well as the three Node Areas. In addition, this section describes the land uses in the area. Land uses in the northern part of the study boundary are predominantly agriculture with office, commercial and light industrial centered around major roadways such as US 301, US 92/SR 600, SR 574/ E Dr. Martin Luther King Jr. Boulevard, I-4 and I-75, specifically interstate ramps/interchanges. Suburban residential areas are located in the southern portion of the study boundary.

There are limited community facilities currently within the Node Areas. As shown in Figure 4, schools are the only community facilities located within or adjacent to the Nodes.

Schools and Libraries

Schools and libraries within and adjacent to the study boundary are shown in Figure 4 on page 7. There are 17 schools within the study boundary (8 Elementary, 4 Middle, 2 Highschool, 2 K-12 and 1 Technical). There are five schools located adjacent to I-75 along minor arterial or collector roadways. Multiple school zone boundaries are within or run through the study area including four high school boundaries, seven middle school boundaries and 15 elementary school boundaries (4 boundaries are on the edge of the study boundary). *Table 1* on the following page shows existing and projected school capacities to the 2024-2025 school year. Several schools will be near, or above capacity by 2024-2025 such as: Mango Elementary, Armwood Senior High, and Strawberry Crest High.

Node Area 1 contains one middle school. Node Area 2 has no community facilities; one elementary school is adjacent on Pruettt Road. Node Area 3 has one elementary school, one middle school and one high school.

There is one library within the study boundary. The Seffner-Mango Branch Library is located on N Kingsway Road and is adjacent to US 92/SR 600.



Table 1: School Capacity

School	Actual 2019-2020 FISH ¹ Capacity	Actual 2019-2020 40 Day County	Actual 2019-2020 Utilization	Projected 2024 - 2025 Utilization
Bailey Elementary	920	717	78%	80%
Colson Elementary	896	703	78%	80%
Dover Elementary	967	631	65%	65%
Folson Elementary	698	465	67%	70%
Lopez Elementary	779	554	71%	76%
Mango Elementary	793	732	92%	97%
McDonald Elementary	725	510	70%	74%
Thonotosassa Elementary	551	429	78%	85%
Burnett Middle	1,198	780	65%	68%
Jennings Middle	1,203	703	58%	63%
Armwood Senior High	2,465	2,231	91%	96%
Strawberry Crest High	2,323	2,312	100%	101%
Lopez Exceptional Student Education Center	122	64	52%	51%
<p><i>The following schools are not identified in the 5-Year Work Plan that are within the study area: Aparicio-Levy Tech College, Willis Peters Exceptional, Independence Academy.</i></p> <p>¹Florida Inventory of School Houses</p> <p>Source: Hillsborough County Public Schools Tentative 5-Year Facilities Work Plan 2020-2021 through 2024-2025</p>				

Emergency Management/Police/Fire

For emergency management services (EMS), the study boundary includes the service area for AmeriCare Ambulance Service and there is one EMS ambulatory location (near the intersection of US 92 and CR 579/Mango Road).

One fire station is adjacent to I-4, located on US 92/SR 600. An additional fire station is located off SR 574/ E Dr. Martin Luther King Jr. Boulevard. Five fire districts serve the study boundary. All nodes are within a 5-10-minute drive time from a fire station. Node 1 is within a 5-minute drive distance, Node 2 is near two fire stations within 5 or 10 minutes, and Node 3 is within a 10-minute drive from a fire station.



Parks

There are **19** park and recreation sites within the study boundary. Some of the larger park and recreational sites include The Bullets Baseball Complex, Mango Dog Park, Burnett Sports Complex, Tanner Road Park, and Rodney Colson Sports Complex. Eureka Springs park is adjacent to Node Area 1. Node Areas 2 and 3 have no park or recreation sites. Recreation uses include boat ramps, dog parks and sports complexes.

Table 2: Park and Recreation Sites

Name	Use	Total Acres
Baker Creek Boat Ramp	Boat Ramp	12.17
Burnett Sports Complex	Sports	19.17
The Bullets Baseball Complex	Sports	59.49
EL Bing	Sports	19.74
Evans	Recreation	17.48
Kings Forest	Recreation	5.07
Lake Weeks Boat Ramp	Boat Ramp	4.21
Lakeview Village	Playground	19.24
Mango Dog Park	Dog	21.71
Rodney Colson	Sports	46.59
Seffner Civic Center	Community	3.04
Tampa Bypass Canal	Boat Ramp	4.54
Thonotosassa	Sports	19.09
Wilderness Park @ Veterans Memorial	Nature	13.90
Total:		265.44

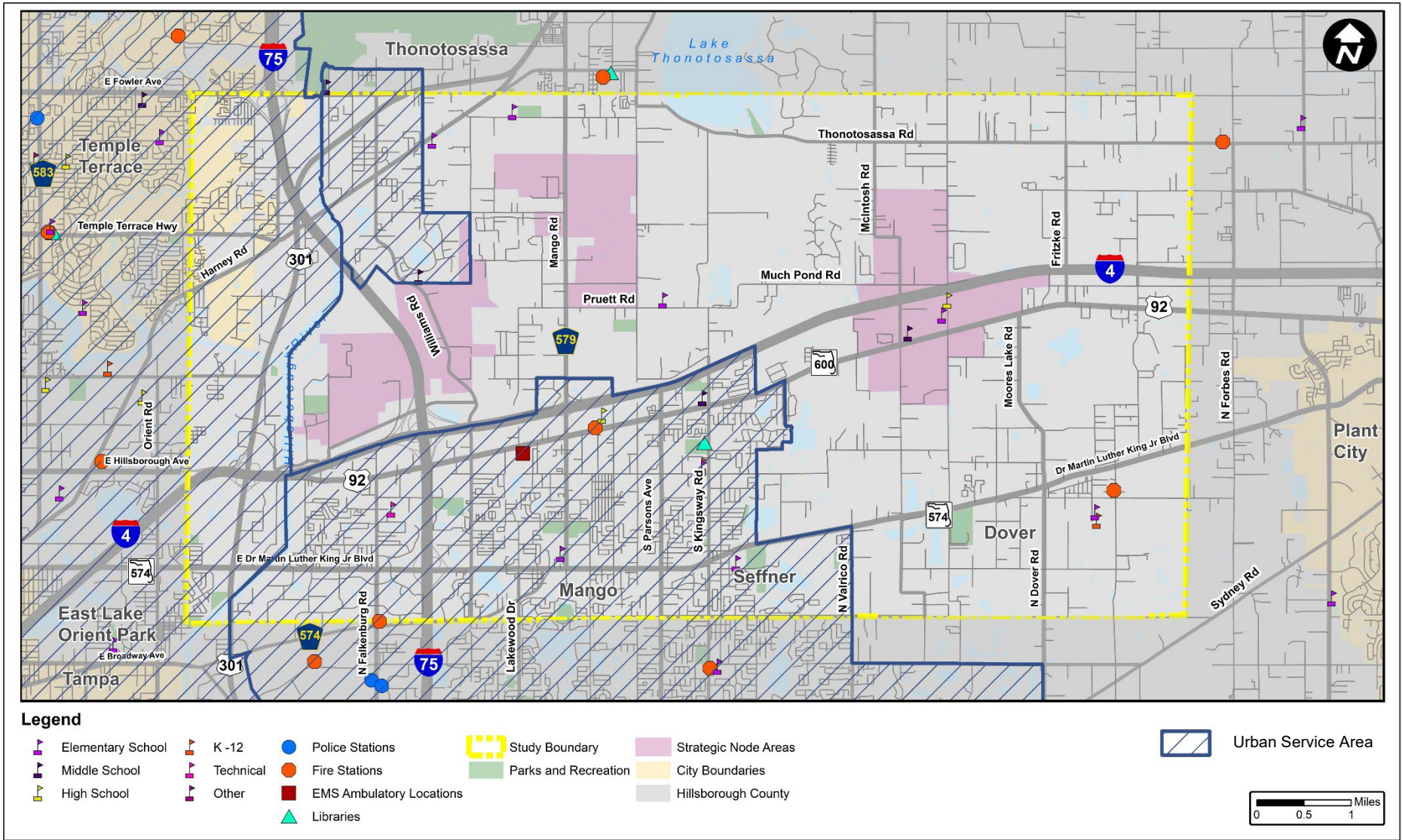


Figure 4: Community Facilities

Future Land Use

The west portion of the study boundary is within the Urban Service Area allowing for higher densities, intensities, and mix of uses. The land outside of the USA falls mainly into agriculture, public land or low to medium residential future land use categories. Within the Nodes Areas, the future land use is primarily agriculture, low residential, and suburban mixed-use.

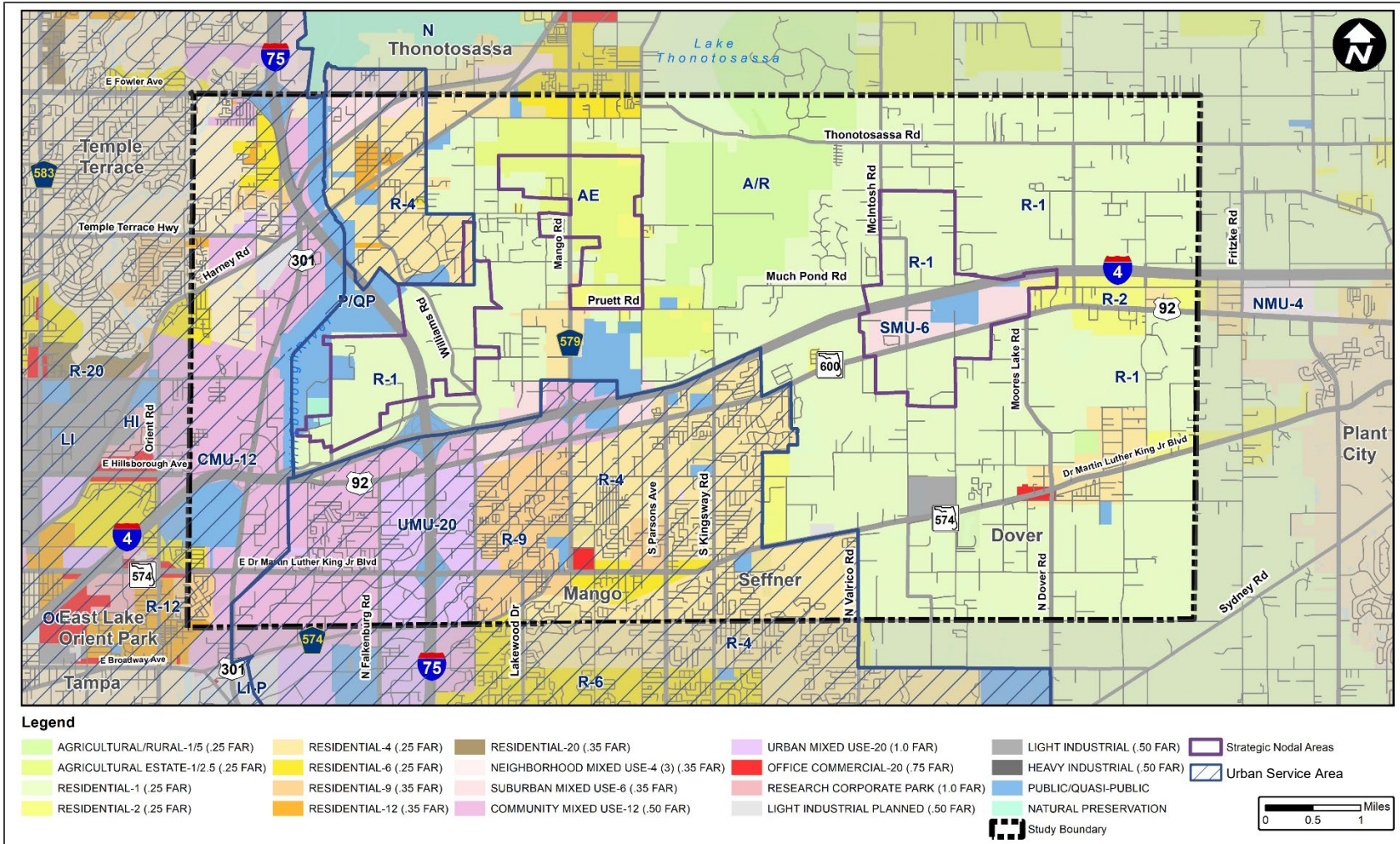


Figure 5: Future Land Use

Planned Development

Currently, there are 8,612 acres of planned development within the study area that are planned for a mixture of uses that could include residential units, office, and commercial opportunities. The planned development is primarily Planned Development (PD) with some Interstate Planned Development (IPD).

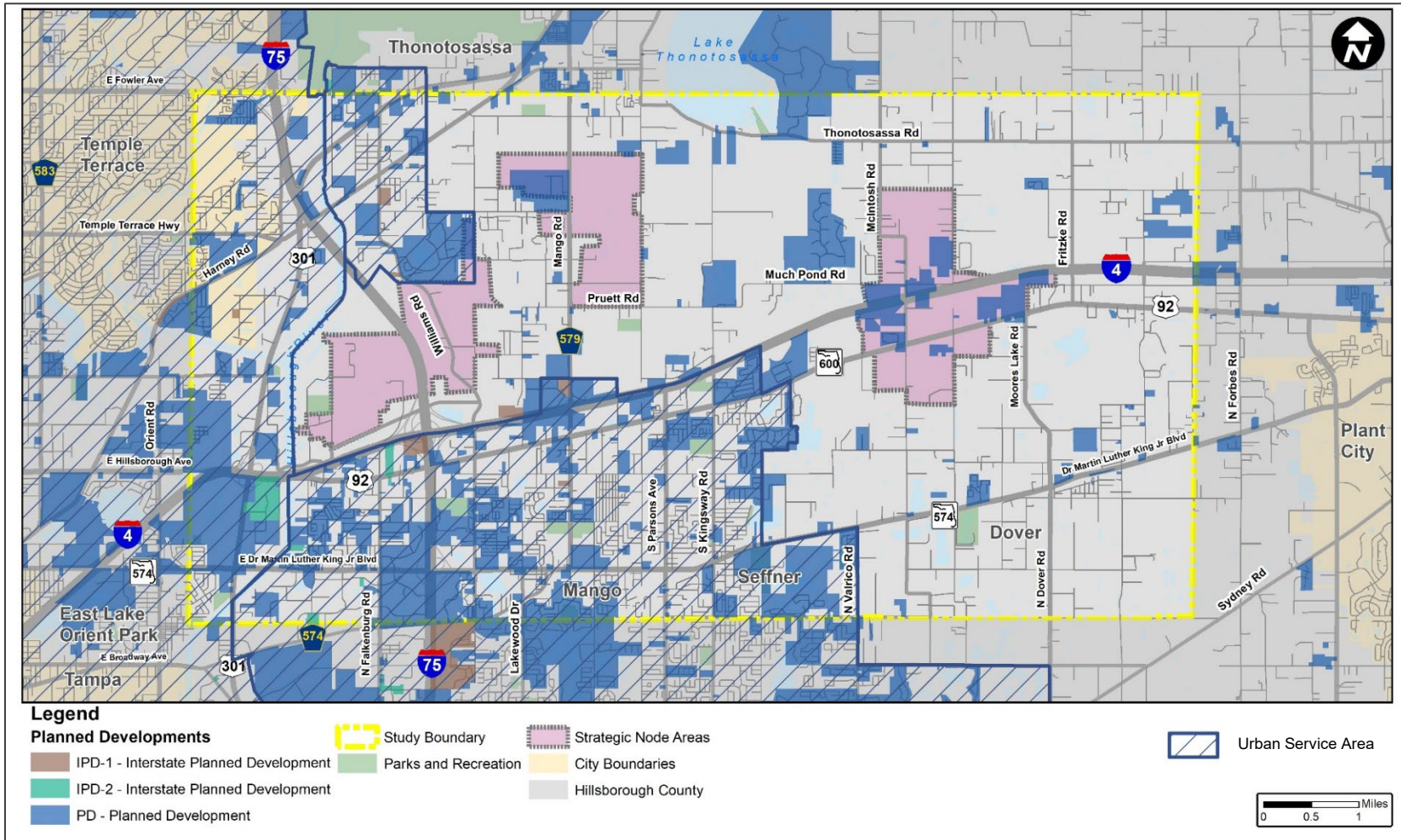


Figure 6: Planned Development



Section 2: Transportation

The transportation section explores the existing roadway conditions, traffic volumes, and roadway congestion in the study boundary. This section also summarizes programmed, planned and potential roadway projects from existing plans. Existing transit and safety projects are also identified. The section also includes a summary of traffic crash information and safety hotspots, based upon a review of the past five years of crash data.

Existing Roadways

As indicated in *Table 3*, there are 420 miles of roadways within the study boundary. Approximately 15% of roads are principal arterials or arterial roadways including regional connectors I-4, I-75, US 301, US 92/SR 600, and SR 574/ E Dr. Martin Luther King Jr. Boulevard. These roadways provide connectivity from the study boundary to regional destinations such as South Hillsborough County, Brandon, Lakeland, Downtown Tampa, Pinellas County, and Sarasota County. The principal arterials (State roadways), arterials (State and County roadways), and some collector roadways in the study boundary are also designated truck routes. A map of truck routes can be found in the Appendix. The other roadways in the study boundary local roads, connecting the neighborhoods and commercial destinations to the core roadway network. The roadway functional classifications are shown in *Figure 7*. According to the Context Classification map shown in *Figure 8*, the study boundary contains primarily Natural/Rural (C1/C2) and Suburban (C3R) roadways. C1/C2 roadways are characterized as natural, agricultural, woodlands, and wetlands whereas C3R roadways are characterized as most residential uses.

Table 3: Roadway Functional Classification Miles

Classification	Centerline Miles	Percent of Total
Principal Arterial	53 miles	13%
Arterial	12 miles	3%
Collector	77 miles	18%
Other Roadways	278 miles	67%
Total	420 miles	100.00%

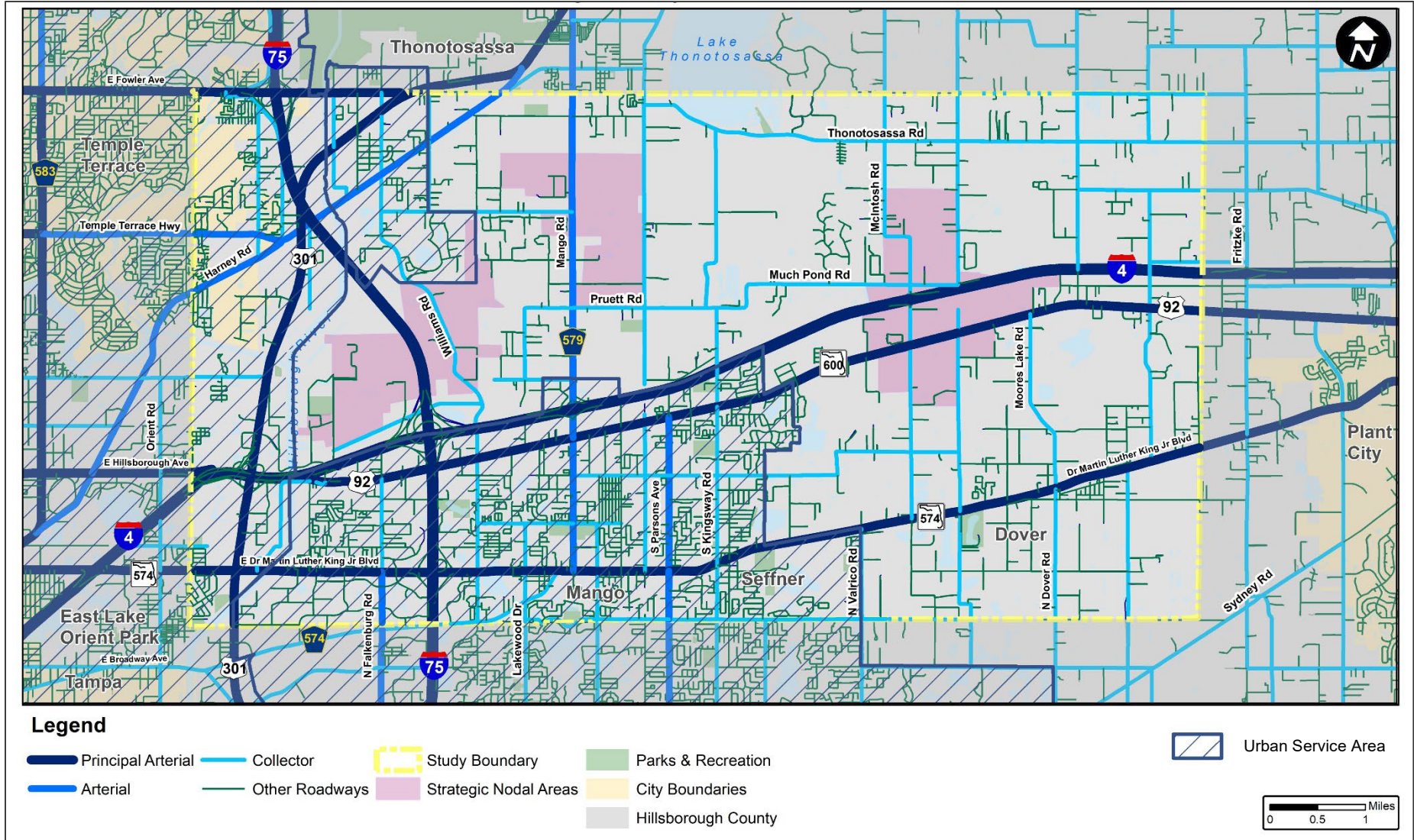


Figure 7: Roadway Functional Classification

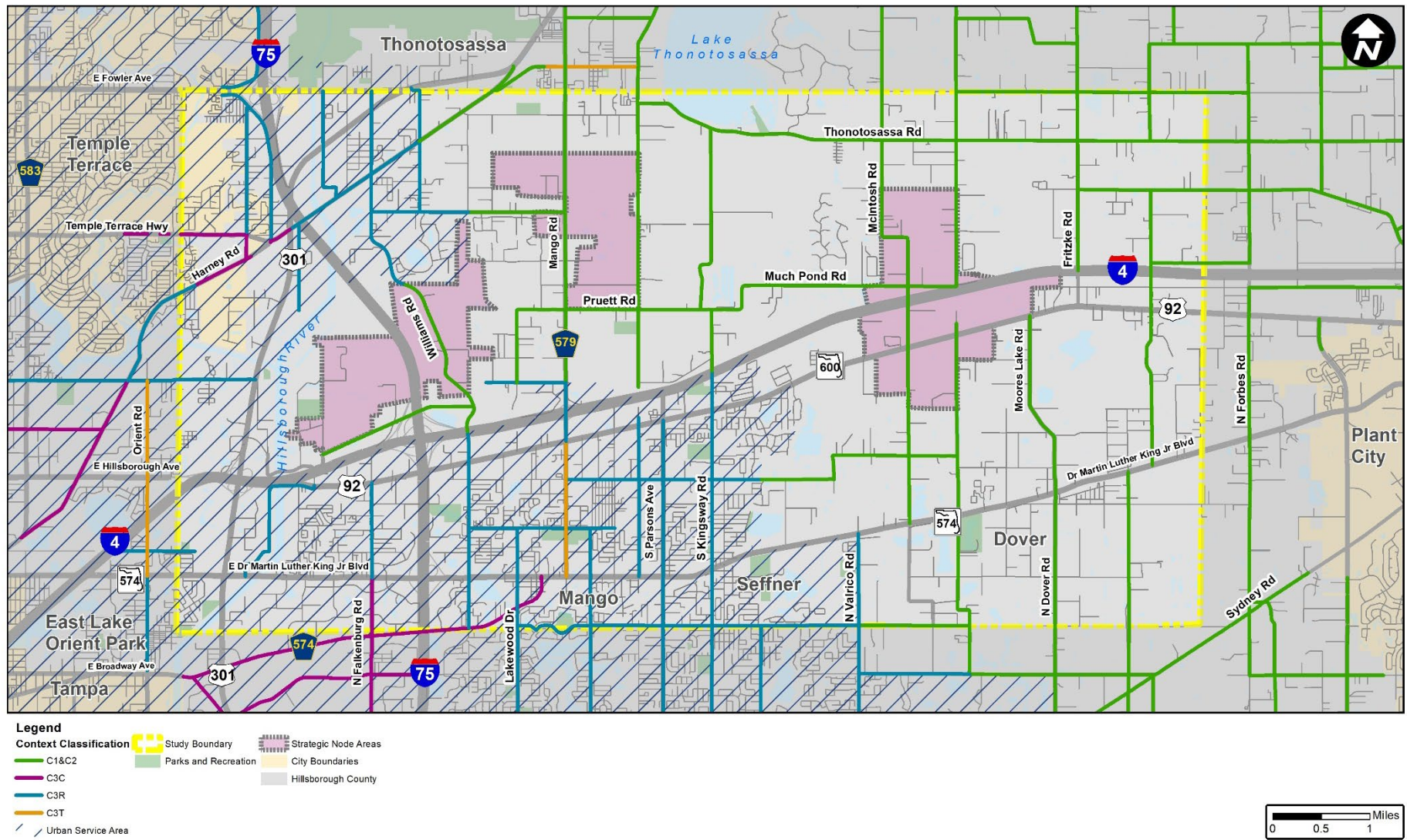


Figure 8: Roadway Context Classification



Existing Traffic Volumes

Average Annual Daily Traffic

Average Annual Daily Traffic (AADT) volumes, based on 2019 Florida Department of Transportation (FDOT) data, were reviewed and indicate the highest daily traffic volume in the study boundary is located on I-75 near the I-4 interchange. Other high volumes (80,000 +) of traffic are present on I-4 and I-75. In addition, there are several segments of principal arterials with significant volumes over 40,000 AADT including SR 574/ E Dr. Martin Luther King Jr. Boulevard from Orient Rd to US 301 and I-75 to CR 579/Mango Road and US 301 from I-4 to E Sligh Avenue. Major roadways with 20,000 or lower volumes of daily traffic include US 92/SR 600, CR 579/Mango Road, and SR 574/ E Dr. Martin Luther King Jr. Boulevard from S Kingsway Road to the western edge of the study boundary.

Roadway Congestion

Peak volume to capacity (v/c) data from the 2019 Level of Service (LOS) Report was reviewed for study boundary. Capacity is based on the adopted LOS for each roadway. A v/c ratio of 1.01 or greater indicates that the volume exceeds the capacity of the road and indicates areas with a high amount of peak congestion. As shown in *Figure 7*, several main regional and local roadways have high congestion (peak v/c ratio of 1.01 or greater):

- Interstates
- Principal Arterials
 - US 301
 - SR 574/ E Dr. Martin Luther King Jr. Boulevard from Highview Boulevard to S Kingsway Road
- Sections of Collectors:
 - McIntosh Road from I-4 to US 92/SR 600
 - N Valrico Road from SR 574/ E Dr. Martin Luther King Jr. Boulevard to the southern edge of the study boundary

Roadways with medium-high congestion levels (v/c ratios of 0.81 to 1.0) include:

- Harney Road
- Orient Road
- N Kingsway Road
- Sections of US 92/SR 600

Roadways with medium to low congestion (v/c ratios less than 0.60) include north to south collectors such as McIntosh Road, CR 579/Mango Road, Williams Road, Joe Ebert Road, S Parsons Avenue, Thonotosassa Road, Temple Terrace Highway, and roadways south of Dover.

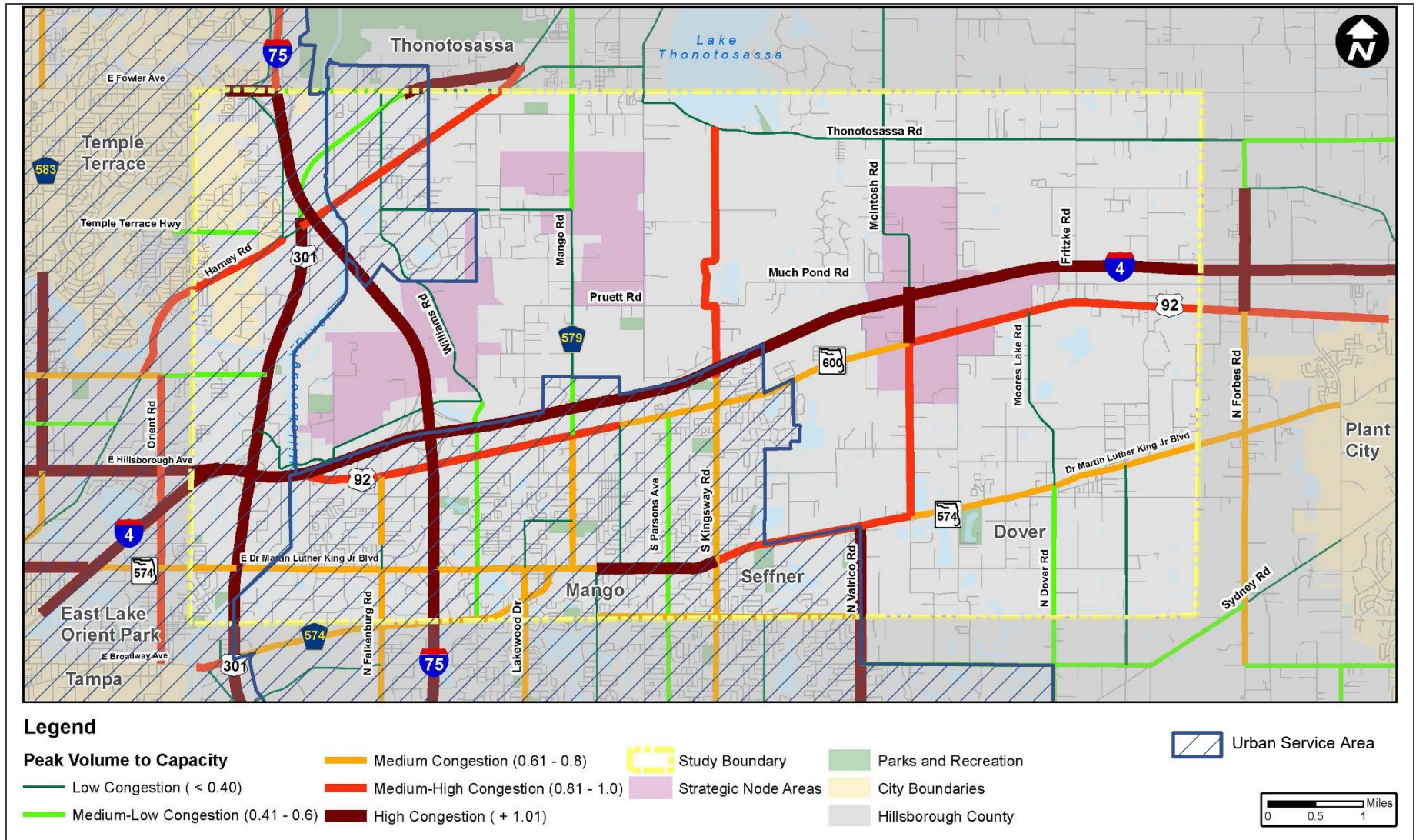


Figure 9: Peak Volume to Capacity



Travel Time Reliability

Data regarding Travel Time Index (TTI) and Buffer Time Index (BTI) as measures of effectiveness and reliability was collected for the I-4 Corridor. TTI is defined as a measure of average conditions and average travel times. BTI is defined as the amount of extra “buffer” time need to be on-time 95% of the time. Data was collected using Iteris Clearguide in February 2021. For the TTI, data references the time period of 3/18/2019 - 3/22/2019; Tuesday, Wednesday, Thursday only; granularity of 15 minutes; AM Peak of 7 AM - 9 AM; PM Peak of 4 PM - 6 PM. For the BTI, data references the time period of 1/1/2019 - 12/31/2019; Tuesday, Wednesday, Thursday only; granularity of 15 minutes; AM Peak of 7 AM - 9 AM; PM Peak of 4 PM - 6 PM. The number for each route is the average of the averages for that route.

The morning TTI indicates slower travel times southbound on I-75 and Eastbound on CR 574 within the study area. The evening TTI indicates slower travel times southbound on I-75, Eastbound on I-4 and US 92, and both direction on CR 574. The morning BTI shows normal conditions within the study area with the exceptions of westbound I-4 with a 50% buffer time. The evening BTI shows normal conditions except for Eastbound I-4 (100%) and both directions of I-75 (50%).

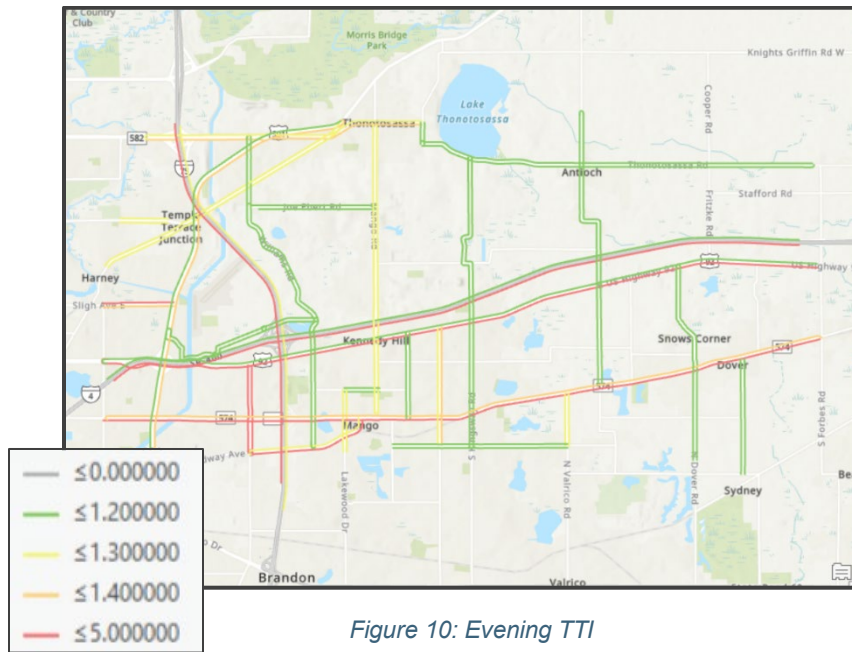


Figure 10: Evening TTI

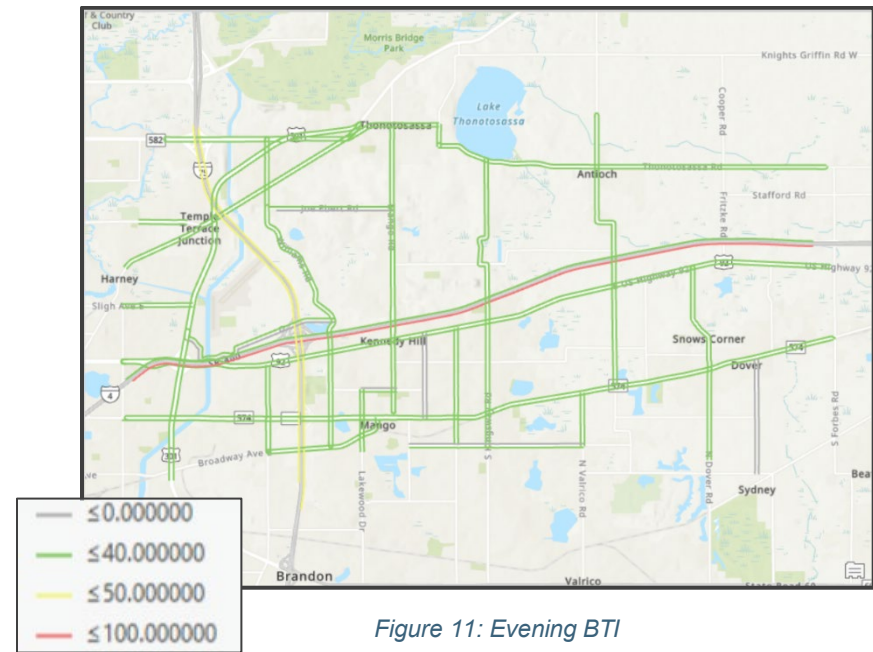


Figure 11: Evening BTI



Pavement Condition Inventory

Hillsborough County provided a roadway pavement condition inventory for all non-state roadways within the study boundary. This data is preliminary and is subject to future changes. Roadways are scored out of 100 and the scores were developed by Hillsborough County using the PAVER 7 software. The County's target is to keep the network pavement condition score above 70. *Figure 12* shows roadways with a score of 70 and above as good condition and roadways under 70 as needs improvement.

Roadways that are in good condition include CR 579/Mango Road from Bessie Dix Road to S of SR 574/ E Dr. Martin Luther King Jr. Boulevard, CR 579/Mango Road from Joe Ebert Road to northern edge of the study boundary, S Kingsway Road from Much Pond Road to SR 574/ E Dr. Martin Luther King Jr. Boulevard, McIntosh Road from US 92 to the southern edge of the study boundary, and N Dover Road from SR 574/ E Dr. Martin Luther King Jr. Boulevard to the southern edge of the study boundary. Several segments of S Parsons Avenue, Thonotoasassa Road, E Sligh Avenue, Fritizke Road and Mores Lake Road are also in good condition.

There are several segments of main collectors that need improvement including Harney Road, Thonotosassa Road, Sydney Dover Road, Taylor Road, and N Kingsway Road. Pruet Road, Much Pond Road, and Williams Road have segments that need improvement within the Node Areas.

Figure 12 also shows the planned 2020 to 2021 pavement conditions resurfacing projects. Planned projects include segments of E Sligh Avenue, Much Pond Road, S Kingsway Road, Williams Road, N Falkenburg and other local roadways. Much Pond Road, Williams Road and Davis Pool Road are planned resurfacing projects within the Node Areas.

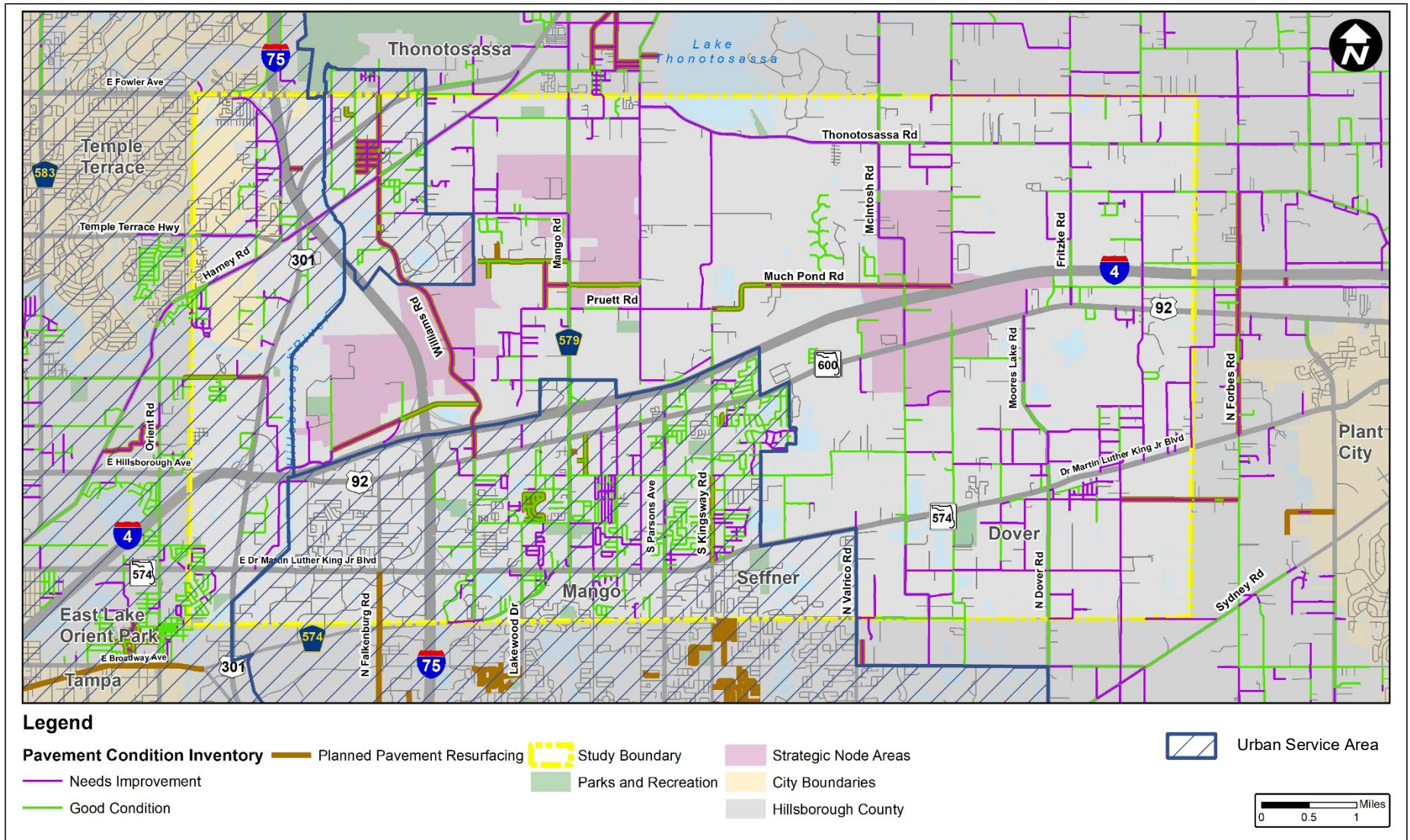


Figure 12: Pavement Condition Inventory (Scores 70 and lower)



Safety

The existing transportation infrastructure encourages high speed motor vehicle travel and creates an unsafe environment for all users, particularly vulnerable users including pedestrians and bicyclists. There are a total of 8,617 crashes that occurred within the study boundary from 2015-2019. As indicated in *Table 5*, a total of 3,658 crashes occurred in the study boundary (excluding crashes) from 2015 to 2019. As indicated in *Table 3*, a total of 1,338 crashes occurred within the Nodes Areas from 2015 to 2019. Street lighting within the study boundary is sporadic.

Table 4: Crash Analysis for the I-4 Study Boundary (2015-2019)

Year	Total Crashes	Pedestrian Crashes	Bicycle Crashes	All Fatalities	Incapacitating Injuries	Pedestrian Fatalities	Pedestrian Incapacitating Injuries	Bicycle Fatalities	Bicycle Incapacitating Injuries	Nighttime Crashes
2015	723	12	5	7	35	4	1	0	1	234
2016	786	15	6	8	50	2	4	0	2	265
2017	768	8	10	4	25	1	1	2	2	227
2018	691	15	6	6	36	3	3	0	0	198
2019	690	17	6	6	18	1	3	1	2	221
Total	3,658	67	33	31	164	11	12	3	7	1,135
5-year Average	723	13	7	6	33	2	2	1	1	227

Source: Hillsborough County

Note: Data analysis does not include crashes on Interstate 4 and Interstate 75.

Table 5: Crash Analysis for the Node Areas (2015-2019)

Year	Total Crashes	Pedestrian Crashes	Bicycle Crashes	All Fatalities	Incapacitating Injuries	Pedestrian Fatalities	Pedestrian Incapacitating Injuries	Bicycle Fatalities	Bicycle Incapacitating Injuries	Nighttime Crashes
2015	238	0	0	0	5	0	0	0	0	75
2016	286	1	1	1	8	0	1	0	1	75
2017	255	1	0	0	7	0	1	0	0	102
2018	286	0	2	1	4	0	0	0	0	85
2019	273	1	1	1	6	1	0	0	1	89
Total	1,338	3	4	3	30	1	2	0	2	426
5-year Average	268	0.6	0.8	0.6	6	0.2	0.4	0	0.4	85

Source: Hillsborough County



Figure 13 shows the study boundary crashes (excluding I-4 and I-75) trend line for 2015 to 2019 for fatalities, incapacitating injuries, pedestrian, and bicycle crashes. Overall trends for fatalities and pedestrian crashes show a significant decrease in 2017 leading to an increase in 2018. For bicycle crashes, the trend hit a high point in 2017 before declining. Incapacitating injuries show the highest number of crashes in 2016 and the lowest number in 2018. Figure 14 includes all crashes that involved a fatality or incapacitating injury in the study boundary.

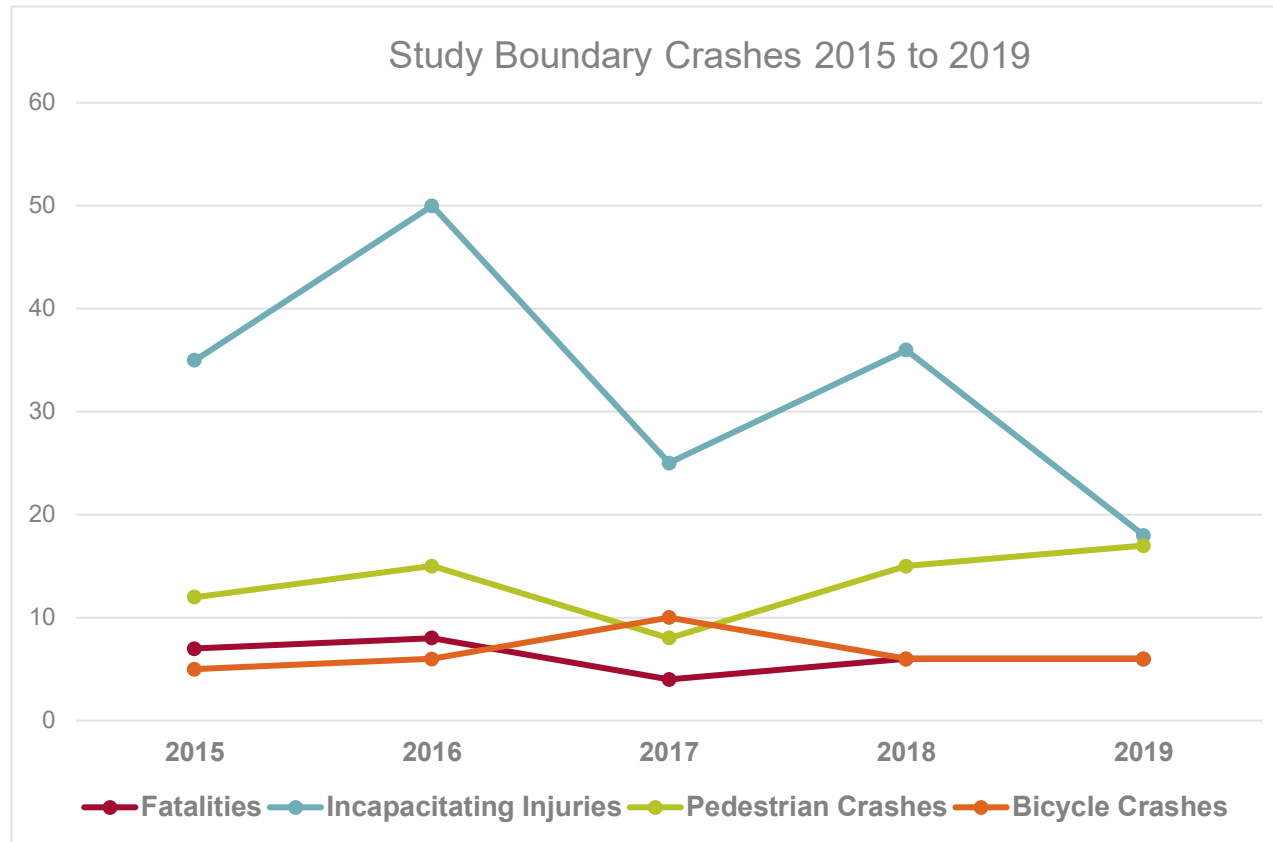


Figure 13: Study Boundary Crashes Trend Line (excludes I-4 and I-75 crashes)

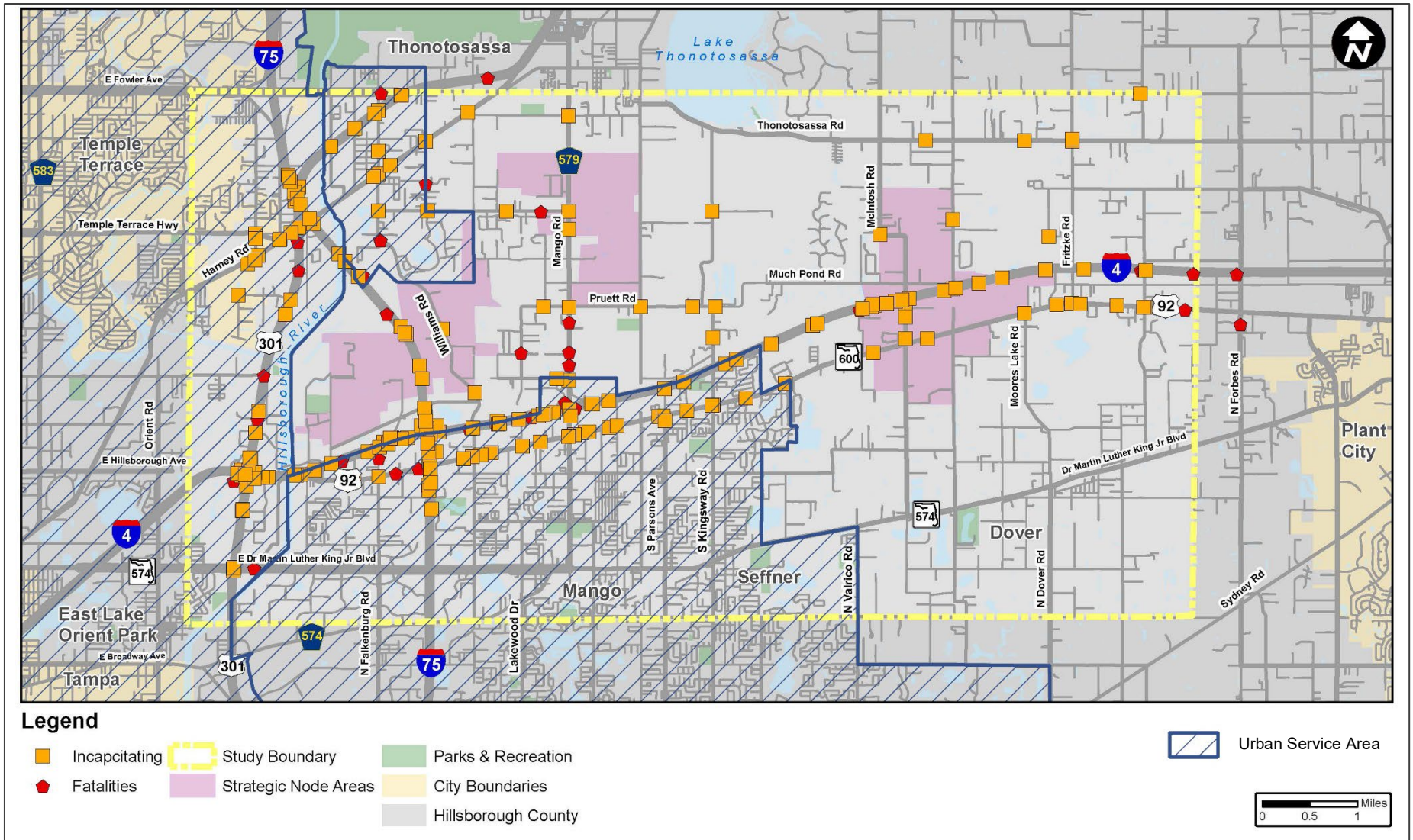


Figure 14: Severe Crashes (2015-2019)

Crash Hot Spots Map

Crash hot spots are located along the main arterial roadways including US 92/SR 600, and US 301. There are additional hot spots located on north/south County roadways such as CR 579/Mango Road and McIntosh Road. I-4 and I-75 crashes were excluded from this data to indicate issues within County jurisdiction.

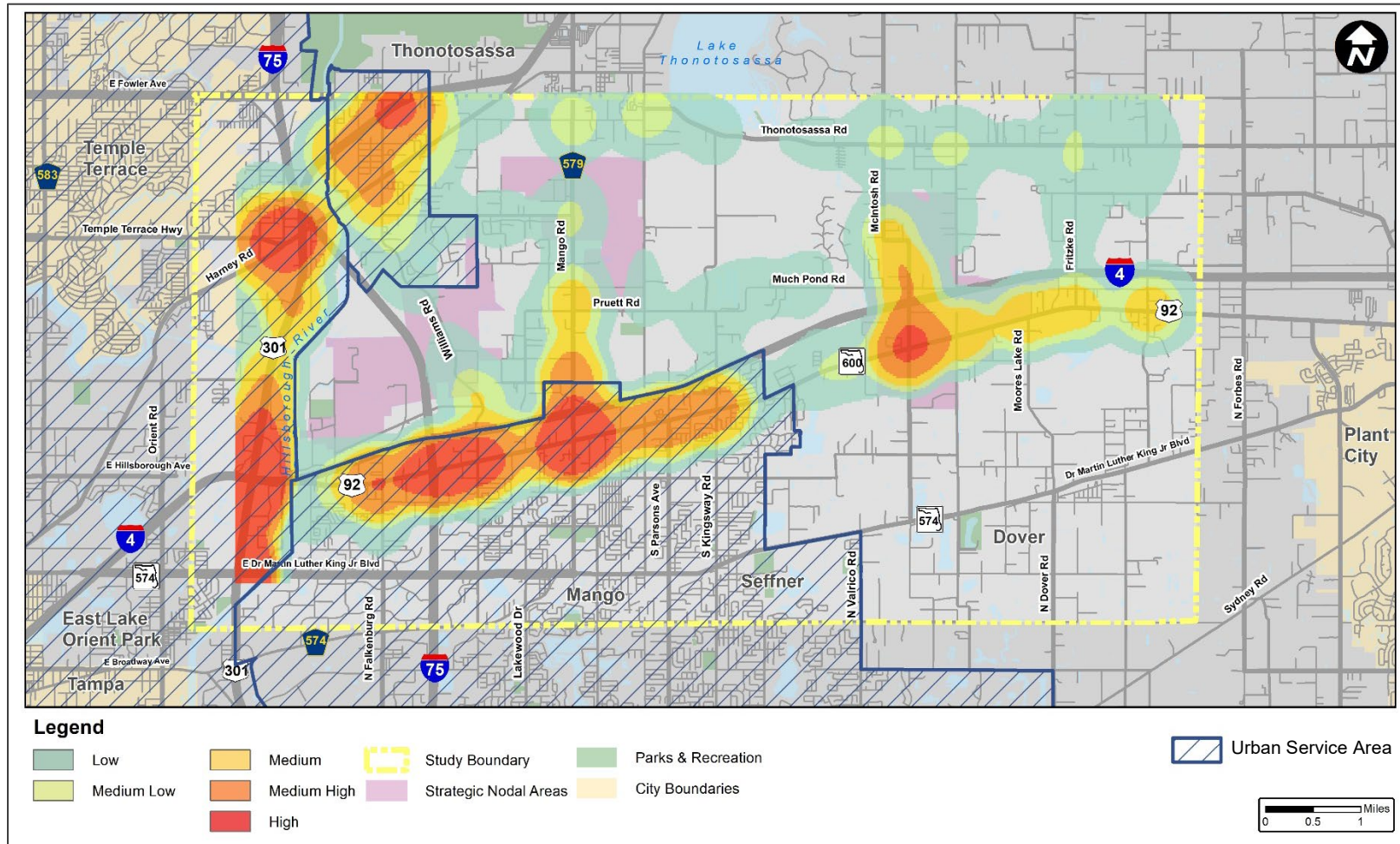


Figure 15: Crash Hot Spots 2015-2019



County Corridor Preservation Plan

The Hillsborough County Corridor Preservation Plan identifies the future arterial and collector roadway improvements needed to support the adopted future land use and transportation plans. As shown in *Figure 16*, the 2015 corridor preservation plan has intersection and interchange improvements on I-75 at Sligh Avenue (blue circle) and SR 574/ E Dr. Martin Luther King Jr. Boulevard (red circle). The plan identifies lane enhancements on several connectors within the study boundary including Moores Lake Road, Sydney Dover Road, CR 579, Williams Road, US 301, N Falkenburg Road, US 92/SR 600, Sligh Avenue, Joe Ebert Road (possible future connection from CR 579/Mango Road to McIntosh Road) SR 574/ E Dr. Martin Luther King Jr. Boulevard, Broadway Avenue, S Kingsway Road, and N Valrico Road.

Programmed Improvements

Programmed and funded improvements were reviewed from the Hillsborough County Capital Improvements Program (CIP) and FDOT 5-year Work Program.

The Hillsborough County CIP includes funded projects within the next 5 years from 2021-2025. As shown in *Figure 17*, there are programmed road widenings and resurfacing on or adjacent to segments of main collectors. Roadway and pedestrian/bike programmed intersection point projects are located on or adjacent to the main north to south roadways. *Figure 17* does not include utility, feasibility, bridge, traffic signal or community facility projects.

Minimal improvements are programmed within the Node Areas for the Hillsborough County CIP. There is one roadway operations and safety project in Node Area 3 at the intersection of US 92/SR 600 and Gallagher Road. There are two projects adjacent to I-4 in Node Areas 1 and 2 at CR 579/Mango Road and Pruet Road and Merlot Circle and Williams Road

As shown in *Figure 17*, FDOT's 5-year (2021-2025) Work Program includes lane additions, resurfacing, and interchange improvements on I-75 and I-4. Lane additions are also programmed on SR 574/ E Dr. Martin Luther King Jr. Boulevard from east of S Kingsway Road to McIntosh Road.

In 2018, FDOT completed a Project Development and Environment (PD&E) Study on US 92 from I-4 to east of the County Line Road. The purpose of the study was to evaluate a multi-lane roadway improvement to accommodate future traffic by adding additional lanes.

Hillsborough County Surtax & Pedestrian Facility Projects

Funded by the one-cent surtax revenue collected since the referendum passing in November 2018, the 2021 Surtax Project Plan includes projects to improve safety and mobility, expand traffic and transit operations, and reduce congestion countywide. The projects are approved by the independent oversight committee and are not fully funded for construction but are partially funded to complete preliminary phases which may include planning and design. Included in the 2021 plan, there are resurfacing projects connecting to the Nodes Areas on Williams Road, Much Pond Road, McIntosh Road, Moore Lake Road, N Parsons Avenue and Joe Ebert Road. A complete street project including improvements for vehicle capacity, connects US 301 and Williams Road to reduce congestion, improve safety and mobility, and accommodate all forms of travel.

Hillsborough County has also developed prioritized future pedestrian improvement projects that are currently unfunded. These projects provide updated pedestrian facilities that connect to major roadways within the study boundary (see orange dashed lines).

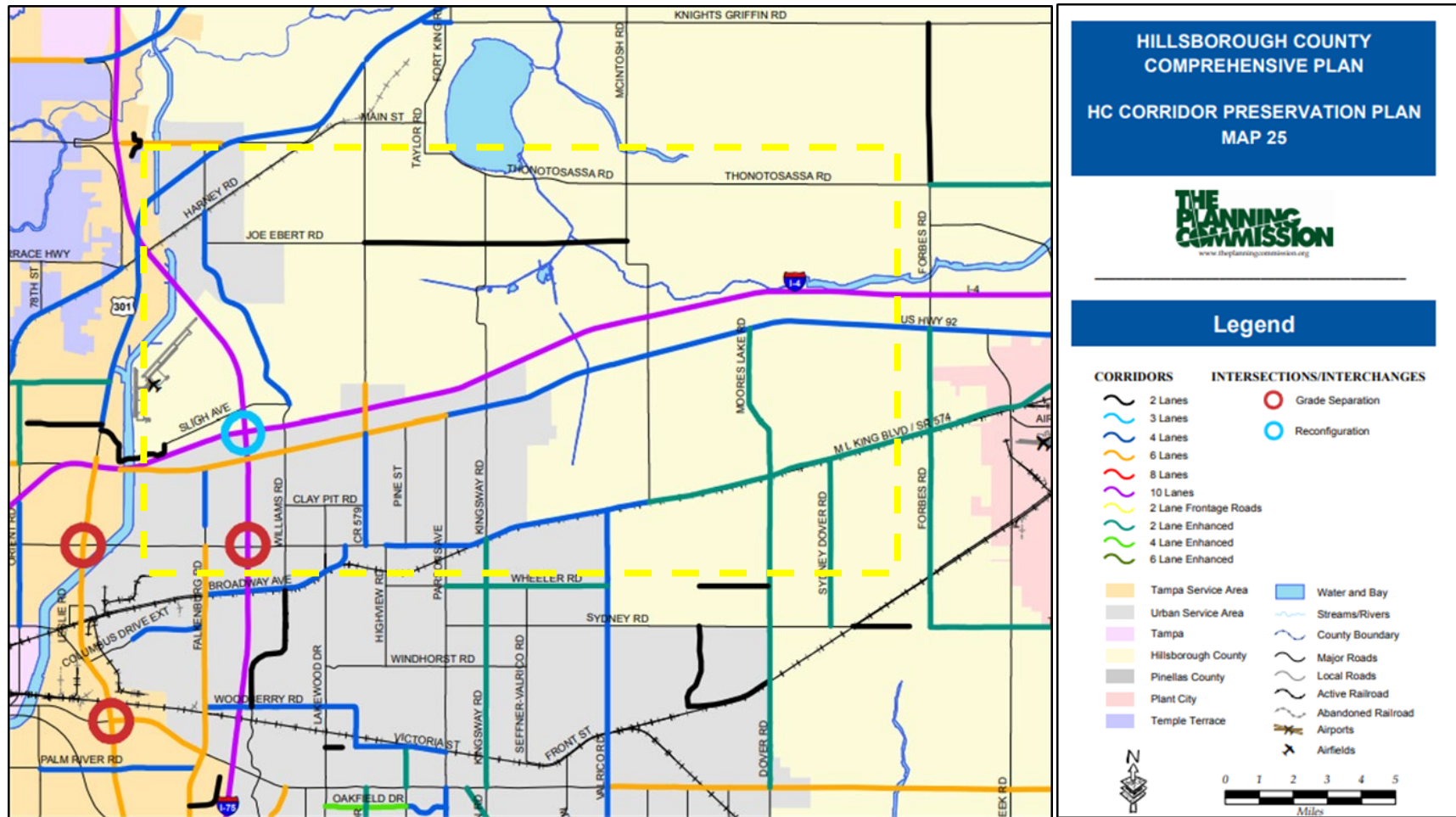


Figure 16: Hillsborough County Corridor Preservation Plan

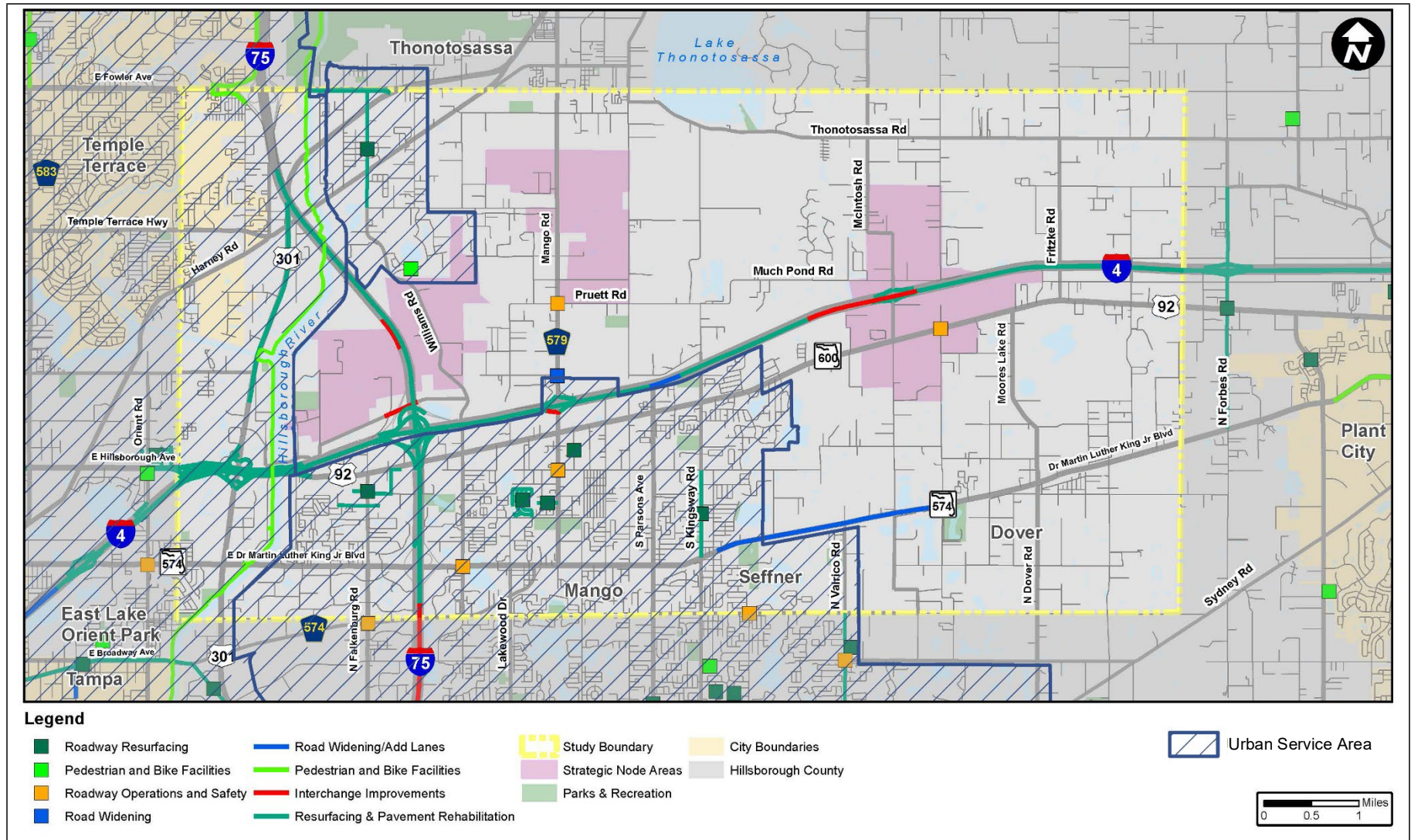


Figure 17: FDOT 5-Year Work Program & Hillsborough County Capital Improvement Program



2045 Long Range Transportation Plan

The 2045 Long Range Transportation Plan (LRTP) includes several cost feasible projects planned along and adjacent to the I-4 corridor. Lane widenings are planned for the major study boundary roadways including I-4, I-75, US 301, Orient Road, SR 574/ E Dr. Martin Luther King Jr. Boulevard, and US 92/SR 600. The managed lane projects on I-4 and I-275 will expand the interstates to 10 lanes and will feature express lanes in both directions. A new roadway will be constructed on Sligh Avenue from US 301 to Williams Road and will go across I-75. The study boundary is highlighted in a yellow dashed box in *Figure 18*.

Table 6: 2045 Cost Feasible Projects Within Study Boundary

<i>I-4 Express Lanes and Interchange Improvements</i>		
ID	Facility	Description
S-12	I-4 from W of Selmon Connector to E of Branch Forbes Road	Add 2 express lanes (each direction)
S-14	I-4 WB from W of I-75 to E of CR 579/Mango Road	Modify interchange/New WB CD Road
S-15	I-4 WB from W of Orient Road to W of I-75	Modify interchange/New WB CD Road
S-16	I-4 EB from E of Orient Road to W of I-75	Modify interchange/New EB CD Road
<i>I-75 Express Lanes and Interchange Improvements</i>		
ID	Facility	Description
S-18	I-75 from US 301 to N of Bruce B Downs	Add 2 express lanes (each direction) plus I75/I-4 Interchange Reconstruction
<i>Other State Projects</i>		
ID	Facility	Description
R-3	US Hwy 301 from Selmon Expressway to Sligh Avenue	Add 2 lanes
R-7	US 92/SR 600/SR 600 from Garden Lane/Eureka Springs to CR 579/Mango Road	Add 2 lanes
R-8	US 92/SR 600/SR 600 from E of I-4 to W of County Line Road	Operational Improvements
<i>Major County Roadway Projects</i>		
ID	Facility	Description
L-1	Sligh Avenue from US 301 to Williams Road	New Road
<i>Additional Local High-Congestion Roadway Candidates</i>		
ID	Facility	Description
L-15	CR 579/Mango Road from US 92/SR 600/SR 600 to I-4	Add 2 lanes
L-16	CR 579/Mango Road from I-4 to Sligh Avenue	Add 2 lanes
L-17	CR 579/Mango Road from US 92/SR 600/SR 600 to SR 574/ E Dr. Martin Luther King Jr. Boulevard	Add 2 lanes

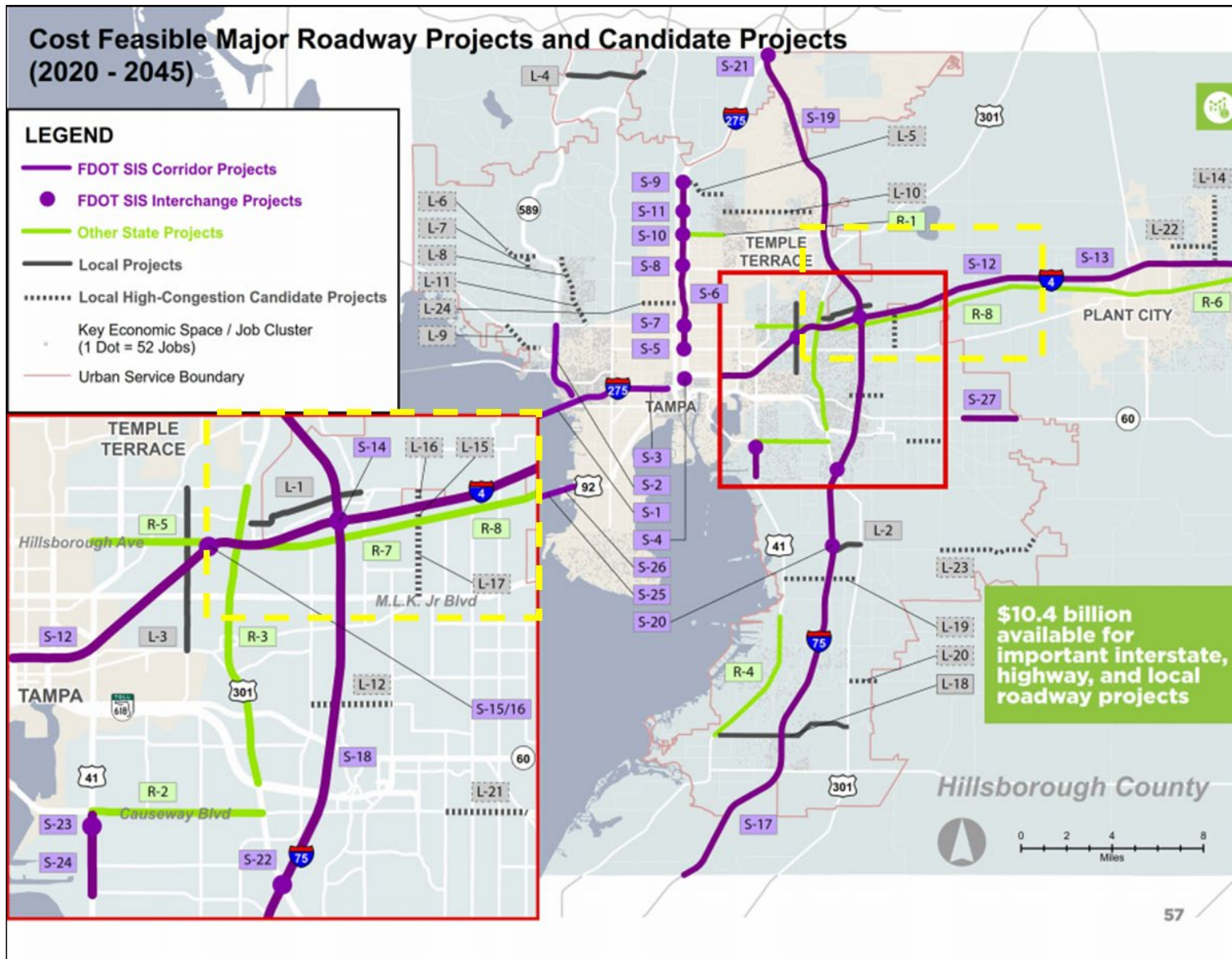


Figure 18: 2045 Long Range Transportation Plan – Cost Feasible Major Roadway Projects

Transit

Based on the Hillsborough Area Regional Transit, there are three existing transit routes (routes 37, 38 and 48) within the study boundary.

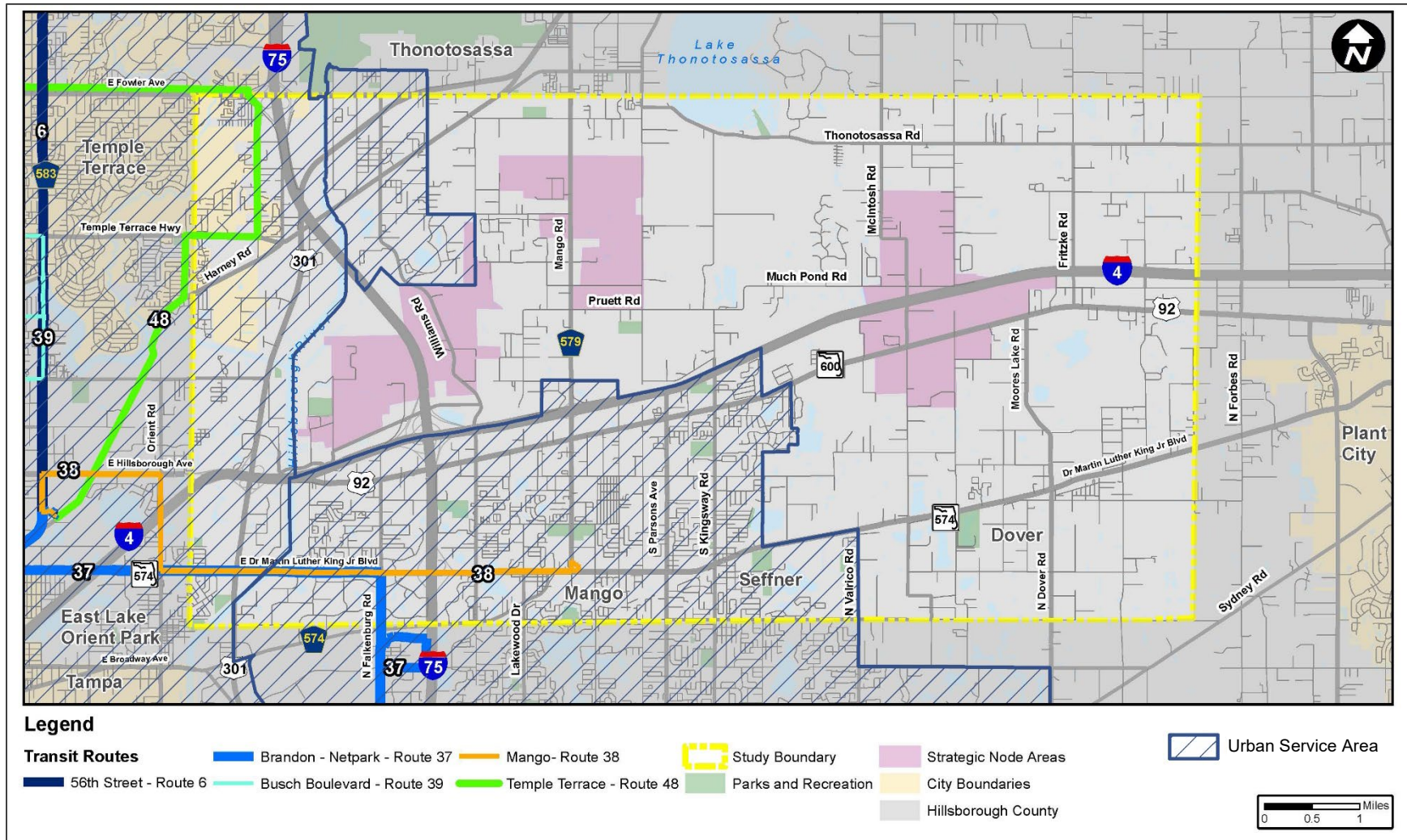


Figure 19: Existing Transit



Hillsborough County Transit Development Plan

The Hillsborough Area Regional Transit Authority Transit Development Plan (TDP) identifies the funded and unfunded local and premium express/regional service needs from 2021 to 2030. The funded action plan is shown in *Figure 20*.

Within the study boundary, the funded action plan identifies improved frequency for two routes including:

- Route 38 – improved weekday frequency from 60 to 30 minutes, connecting Mango to the Netpark Transfer Center
- Route 48 – improved weekday frequency from 60 to 30 minutes, connecting Netpark Transfer Center, Temple Terrace, and University Area Transit Center

Neither route is within the Node Areas.

Unfunded needs within the study boundary include:

- Route 37 – improved weekday frequency from 30 to 15 minutes, connecting Brandon to the Netpark Transfer Center
- Route 75 LX – new limited express service connecting South County to University Area Transit Center
- Route 175 LX – new limited express service connecting FishHawk/Riverview to University Area Transit Center

The unfunded local service needs is shown in *Figure 22*.

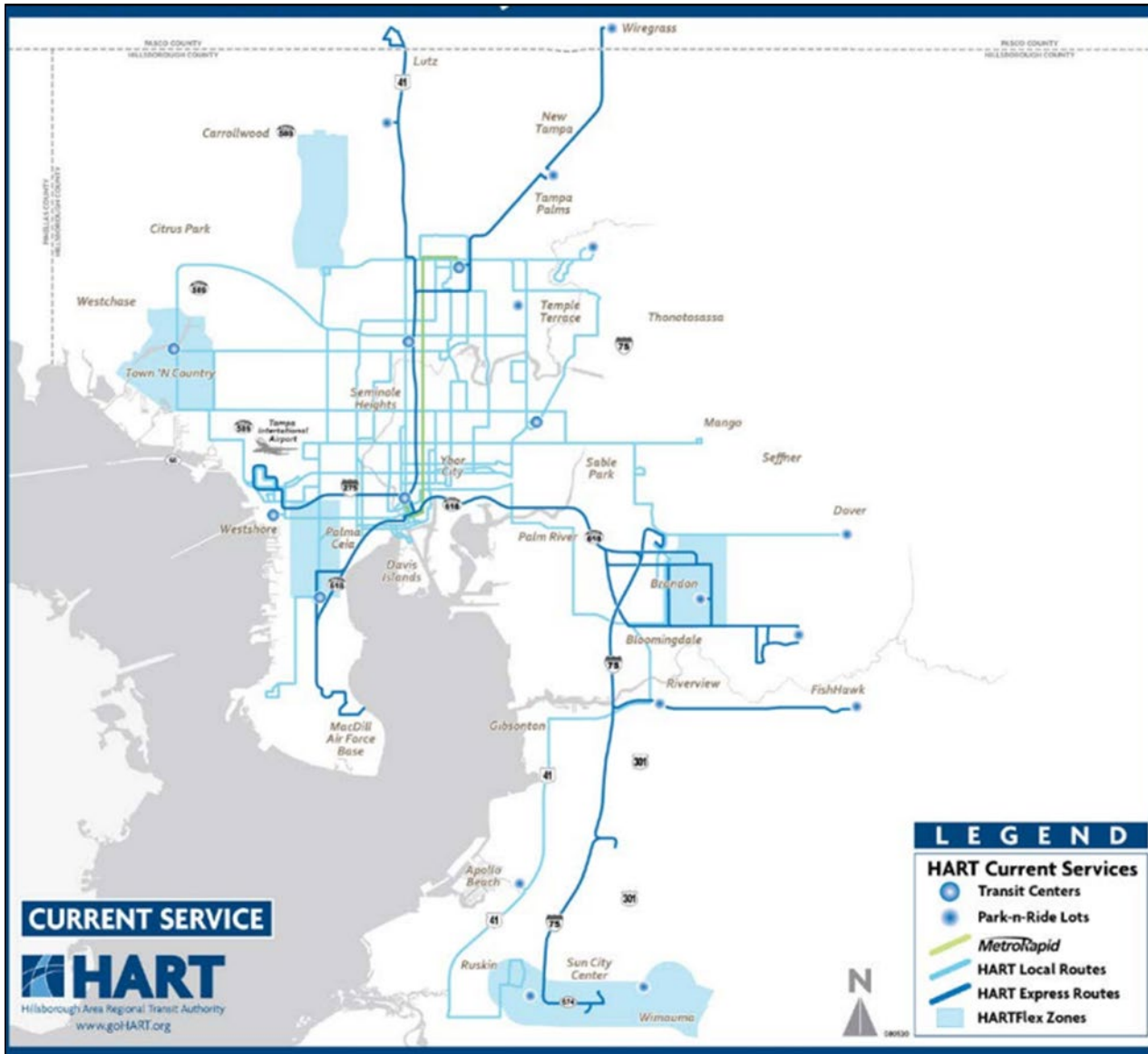


Figure 20: TDP Action Plan

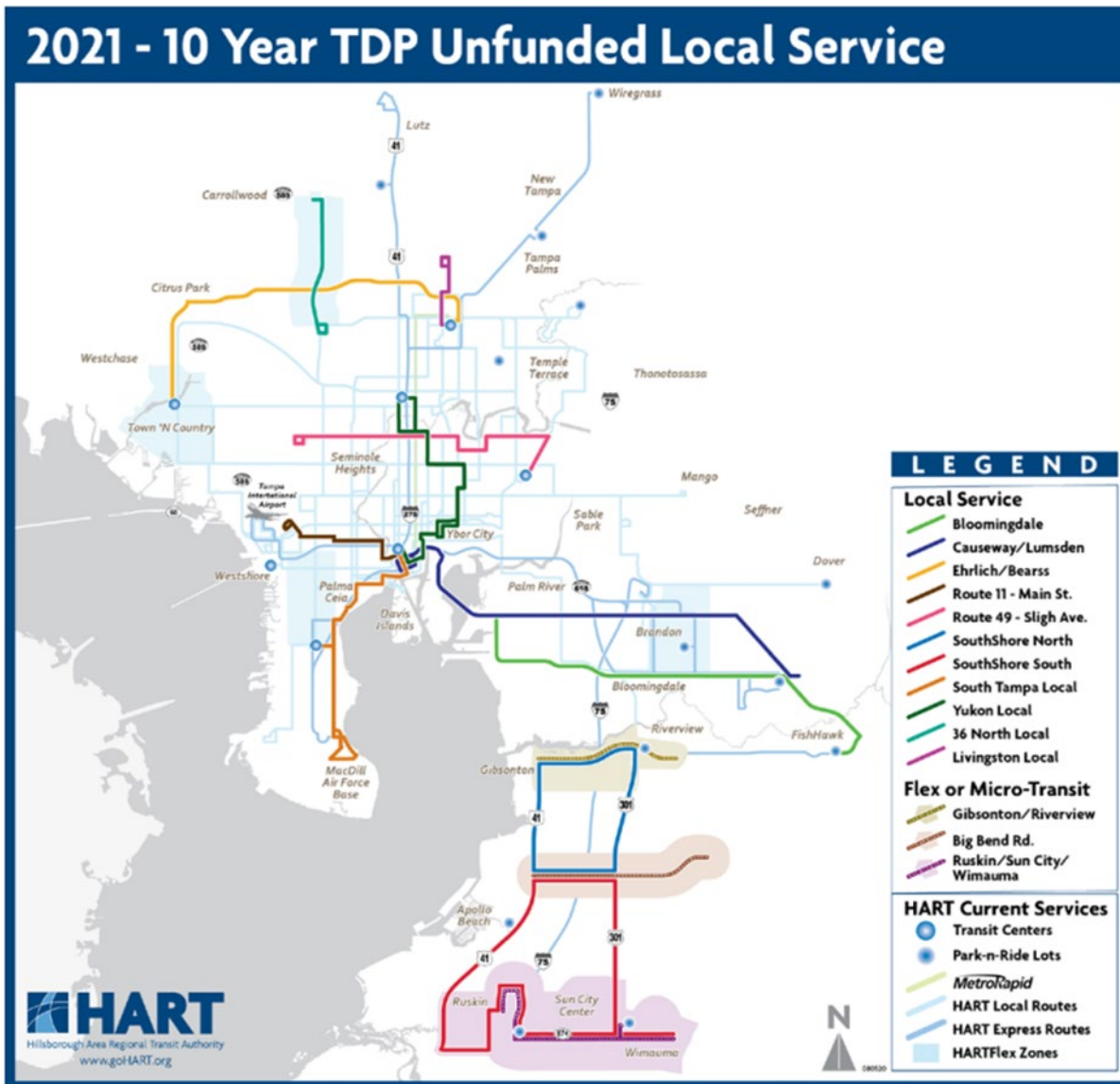


Figure 21: TDP Local Service 2021-2030

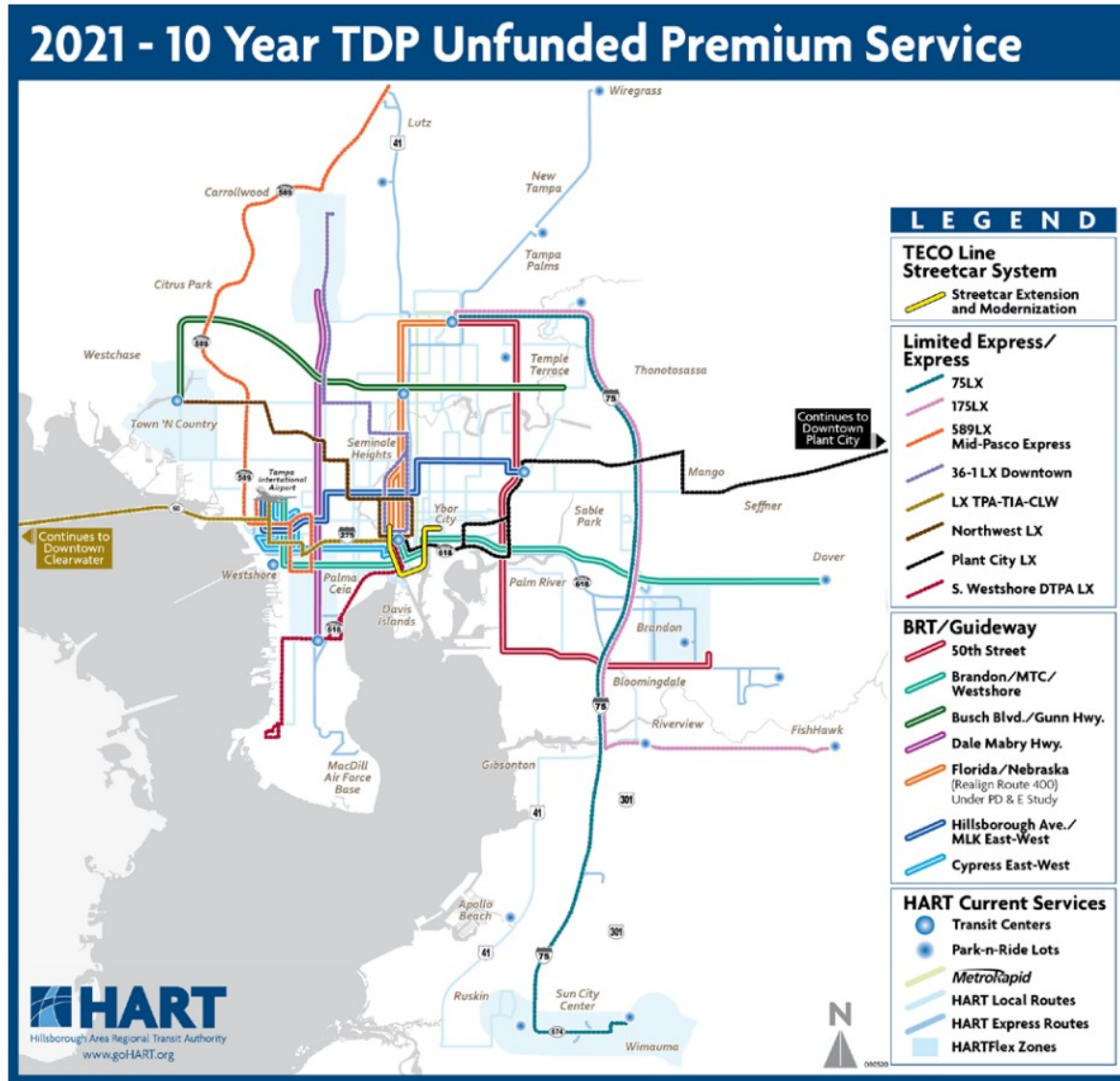


Figure 22: 10 Year TDP Unfunded Premium Service



Section 3: Public Utilities

The public utilities section highlights the existing infrastructure for public water, wastewater, and stormwater within the study boundary and the three Node Areas. The end of the section describes the programmed improvements from the Hillsborough County Capital Improvements Program (CIP).

Public Water and Wastewater Existing Infrastructure

The purpose of the water and wastewater infrastructure assessment is to define and focus on the existing utilities that serve the three Node Areas. To understand how the three Node Areas are served by existing water and wastewater transmission and distribution systems, a broader study boundary was created that encompasses all three areas. A majority of the water and wastewater infrastructure is concentrated in the southern portion of this boundary created. Specifically, all three Node Areas identified have minimal water and wastewater infrastructure. A majority of the residential properties north of I-4 within this boundary are supported by well water and septic systems, which are owner maintained and operated.

Each individual Node Area was further examined to identify what utility infrastructure is currently in place and in what condition. Based on the provided Updated Capacity Analysis Reports for South-Central Potable Water System (January 2020) and Advanced Wastewater Treatment Facilities (May 2020), there are no current distribution and treatment expansions planned for these specific Node areas.

Below is a summary for each of the three Node Areas.

Node Area 1

As shown in *Figure 23*, Node Area 1 has a 12" water main running down Williams road servicing areas to the North of Node Area 1, such as Jennings Middle School and the Toulon neighborhood development. There are no distribution lines off of the 12" water main within Node Area 1 as there are minimal residential developments. According to County GIS records this distribution line is ductile iron and was installed in 2010. Since ductile iron pipe has a service life expectancy of more than 50 years, this water main should be in good condition. The areas not currently serviced by the County are expected to have onsite wells for potable water according to the Florida Water Management Inventory - Hillsborough County Drinking Water 2018 Map.

Node Area 1 does not have any wastewater infrastructure within its boundary, the nearest force main is just to the North and pumps to the City of Temple Terrace. This force main is 6" PVC with limited capacity. It should be noted that the City of Temple Terrace currently pumps all wastewater to the City of Tampa and sewer treatment rates will be increasing by 100% over the next 20 years (5% per year). All properties within

Node Area 1 are expected to be on septic systems, according to the Florida Water Management Inventory – Hillsborough County Wastewater Map. Nodes outside of urban service area are expected to be on septic systems.

Node Area 2

As shown in *Figure 23*, Node Area 2 is centrally located in the study boundary and located north of Pruet Road. This area is bordered by a 12" water main located on CR 579/Mango Road running North/South and 16" water main on Pruet Road running East/West. There are only a few



minor service laterals servicing locations within Node Area 2, but there are not any distribution or transmission lines within the boundary. According to County GIS records these water mains are ductile iron and were installed in 1997 (CR 579/Mango Road) and 1988 (Pruett Rd). The County expects these water mains to be in fair condition based on the minimal repair efforts they have had in the area. Similarly, to Node Area 1, the areas not currently serviced by the County are expected to have onsite wells.

Similarly, to Node Area 1, Node Area 2 does not have any County wastewater infrastructure within its boundary, and it is expected that this area and a majority of the surrounding area are on septic systems. Adjacent to the southern portion of Node Area 2 there is a 4" PVC force main running south on CR 579/Mango Road constructed in 2000. This force main is servicing a small area and is expected to have little capacity remaining. The primary land use of Node Area 2 is agricultural estate, septic and well systems are typical of large rural areas.

Node Area 3

Node Area 3 is the furthest east area in the study boundary, with area to the north and south of I-4. This area does not have any County water infrastructure within its boundary or nearby. This area is expected to have onsite wells, similar to both Node Areas 1 and 2.

Node Area 3 has minimal wastewater infrastructure with one force main within its boundary, a 6" force main running North/South on Gallagher Road servicing Strawberry Crest High School and Bailey Elementary School. According to County GIS records this 6" FM was constructed with PVC in 2009 and is expected to be in good condition. The remaining areas in Node Area 3 are similar to both Node Areas 1 and 2 and are expected to all be on septic systems.

Public Water and Wastewater Existing Capacity

Water Treatment Plant Capacity

As outlined in the January 2020 Capacity Analysis Report, the Lithia water treatment facility is expected to handle new growth within the County since the Central Hillsborough water treatment plant has hydraulic limitations to provide water to the system. The Lithia Water Treatment Plant will not be able to handle new growth past 2026 in the County without upgrades to the plant. To support new growth in the node areas, the Lithia or Central Hillsborough water treatment plants will need capacity or hydraulic upgrades if growth is expected past 2026.

Wastewater Treatment Plant Capacity

As outlined in the May 2020 wastewater capacity analysis report, the Valrico AWWTF has the most capacity and is assumed to take the wastewater flow increase in the study boundary. There are currently no capacity issues anticipated unless flow is diverted from another wastewater plant at the County to the Valrico facility.

Public Existing Stormwater Infrastructure

The purpose of the existing stormwater infrastructure assessment is to define the existing drainage infrastructure supporting the three Node Areas and define known existing flooding issues based on a limited desktop study. The three Node Areas were studied together as a whole. The three areas are primarily rural areas with minimal impervious areas other than roadways to cause major runoff.



All three Node Areas have the stormwater infrastructure to support the impervious areas existing within their boundaries. Both Node Areas 1 and 3 have stormwater infrastructure connecting their areas to a larger drainage system outside of their boundaries. Node Area 2 has the least amount of infrastructure which is expected due to its lack of impervious area. This area does not have any major connections to a larger stormwater system.

All Node Areas and the entire I-4 study boundary area do not appear to have any major flooding issues based on the County's GIS flood complaint records. Node Areas 1 and 2 do have small FEMA flood plains within their boundaries due to low lying areas.

Public Utilities Programmed Improvements

The Hillsborough County Capital Programmed Improvements (CIP) lists the Countywide funded projects within the next 5 years from 2021 to 2025. As shown in *Figure 24*, there are culvert, drainage and water quality, and potable and reclaimed water programmed intersection point projects located on or adjacent to several the collector and arterial roadways. Minimal investment is present within the Node Areas 1 and 2, except for a few projects adjacent to the I-4 interstate near Node Area 1. For Node Area 3, there are 3 culvert project and 2 drainage and water quality projects programmed in the next 5 years.

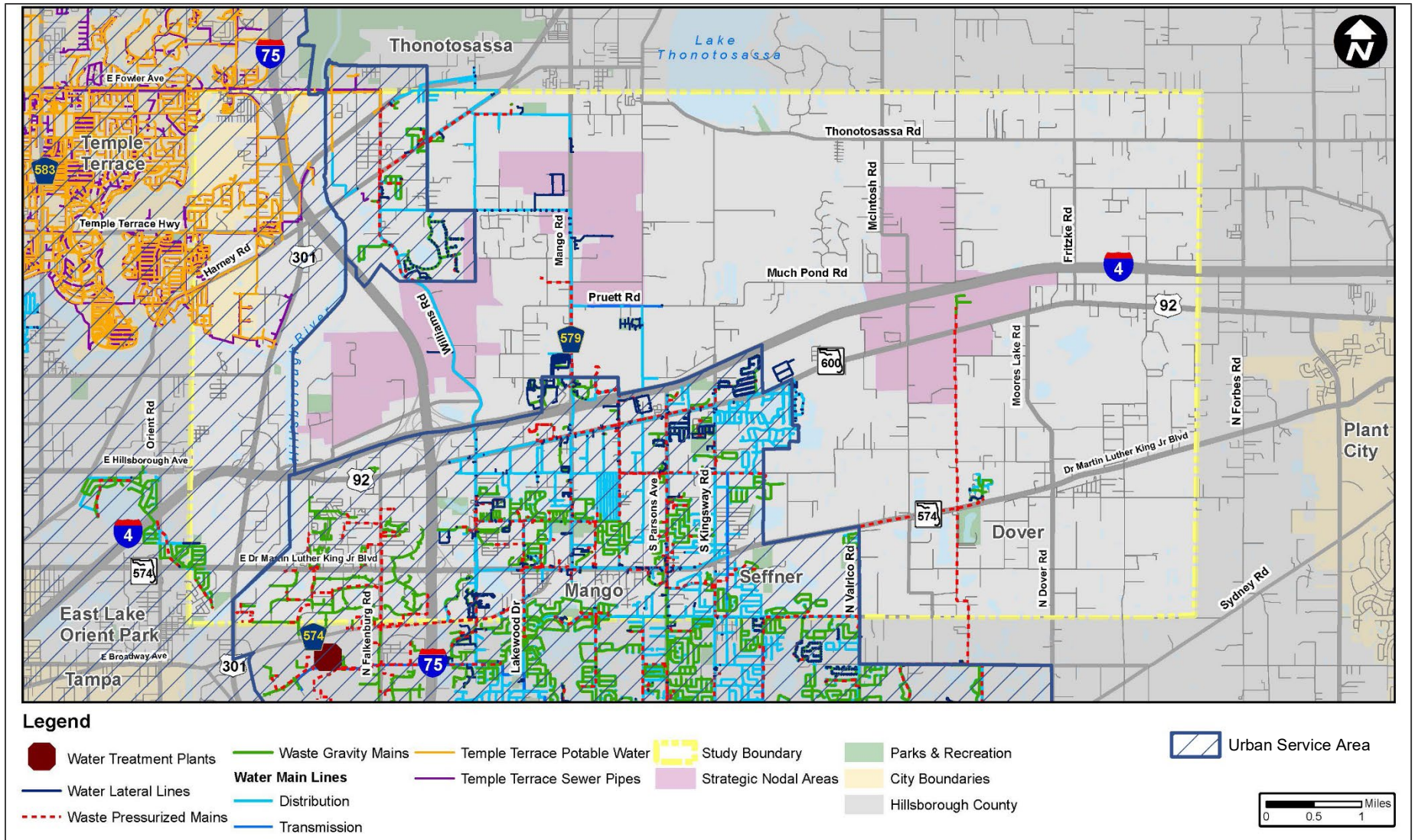


Figure 23: Public Utilities

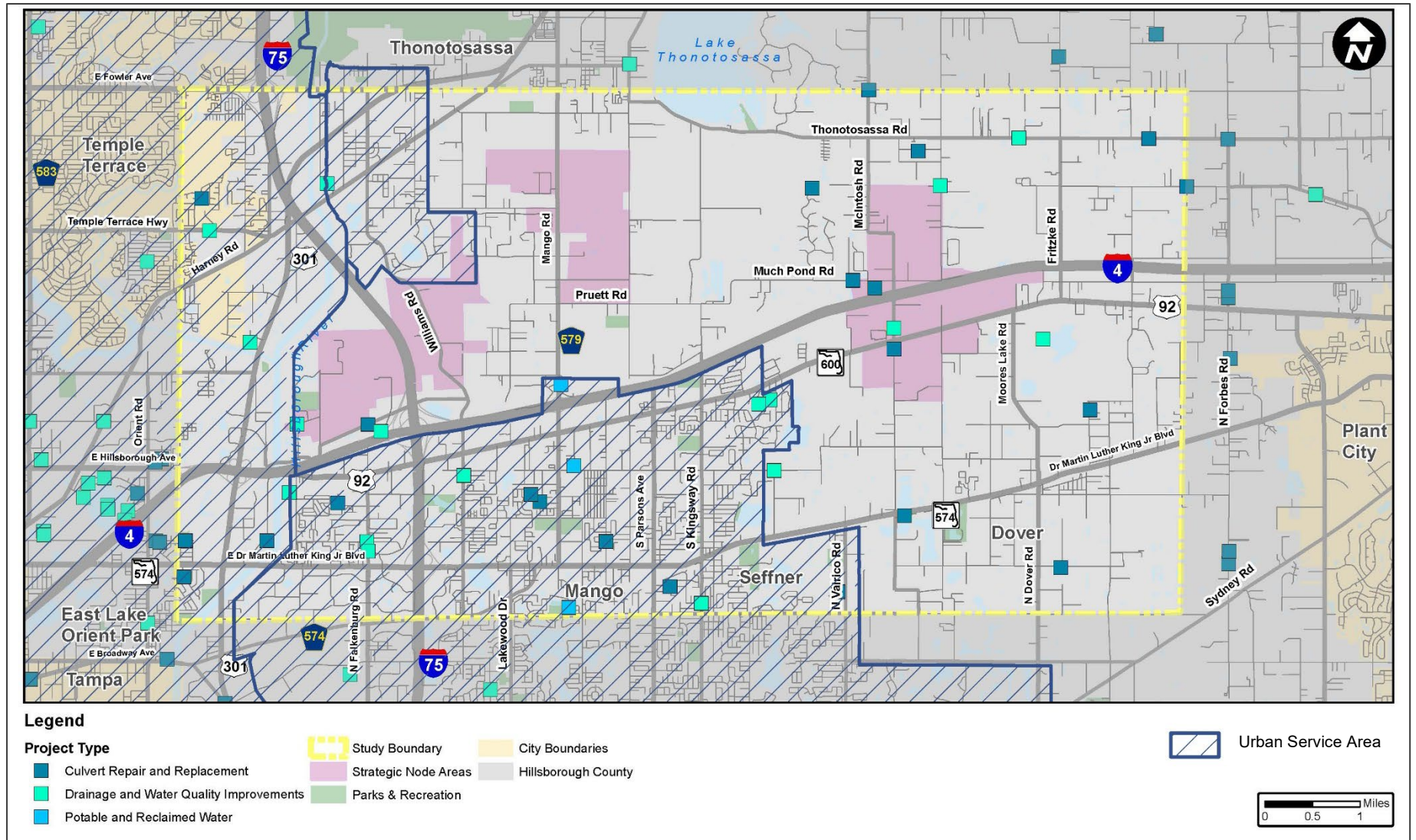


Figure 24: Public Utilities Programmed Improvements



APPENDIX (ADDITIONAL MAPS)

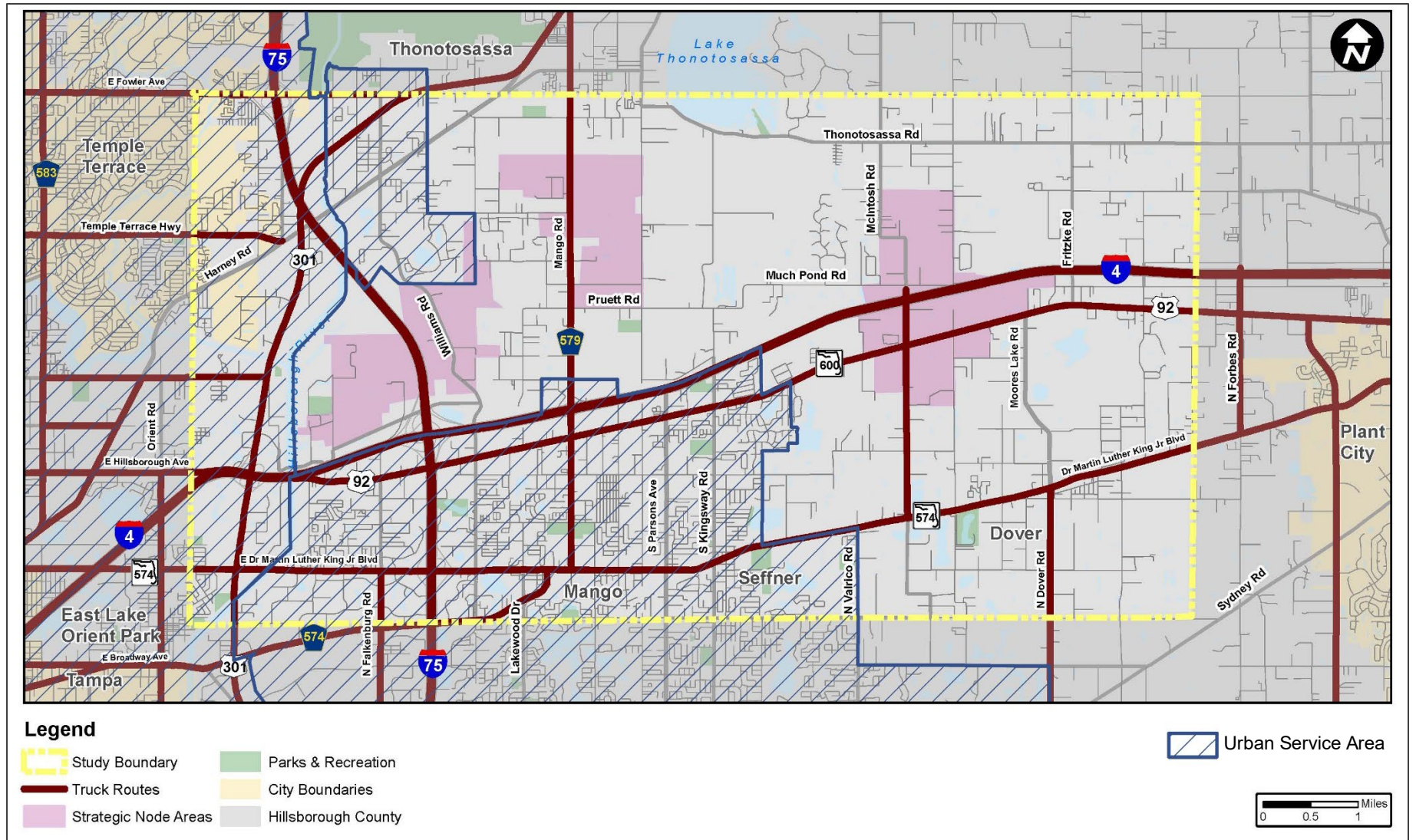


Figure 25: Truck Routes

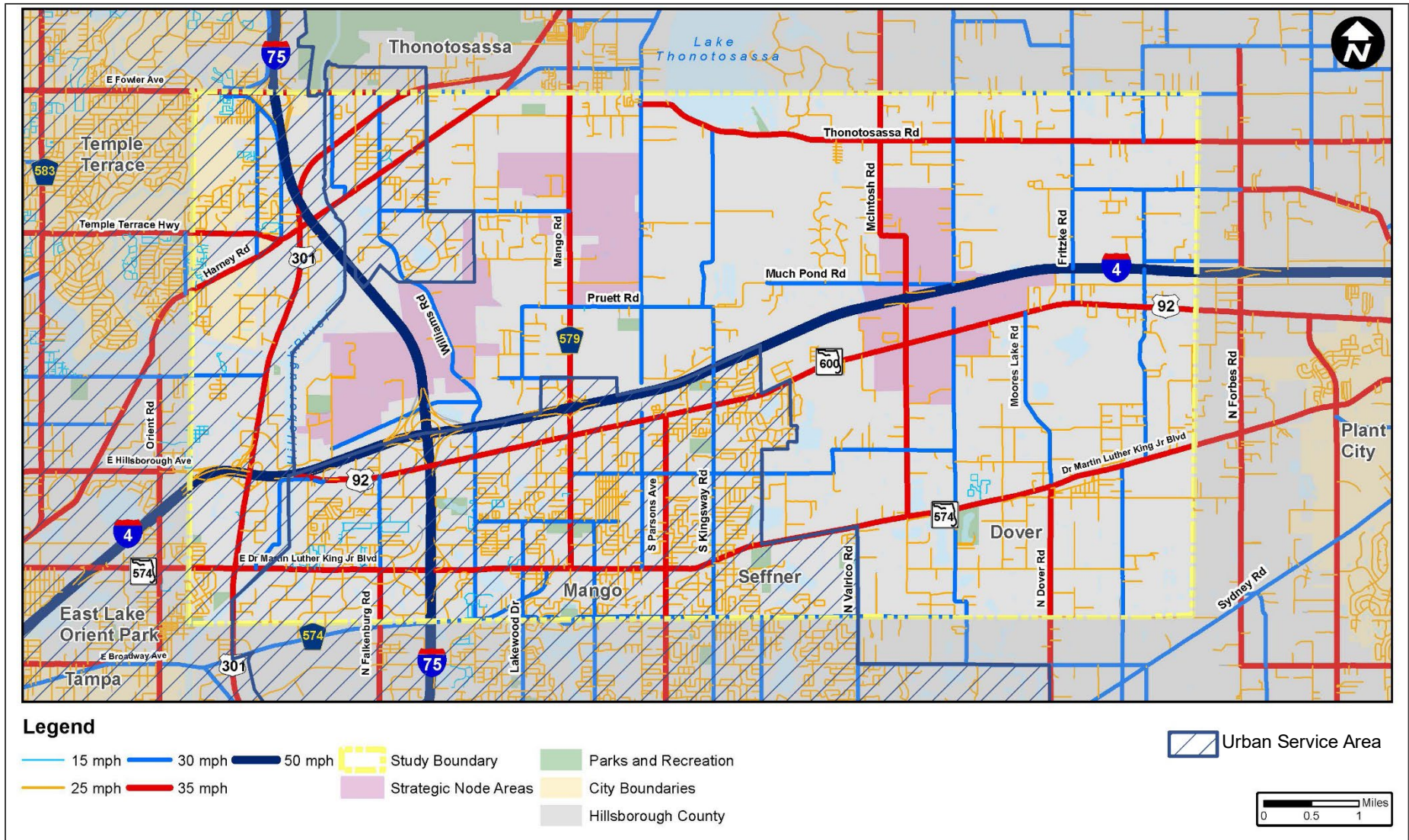


Figure 26: Estimated Speed

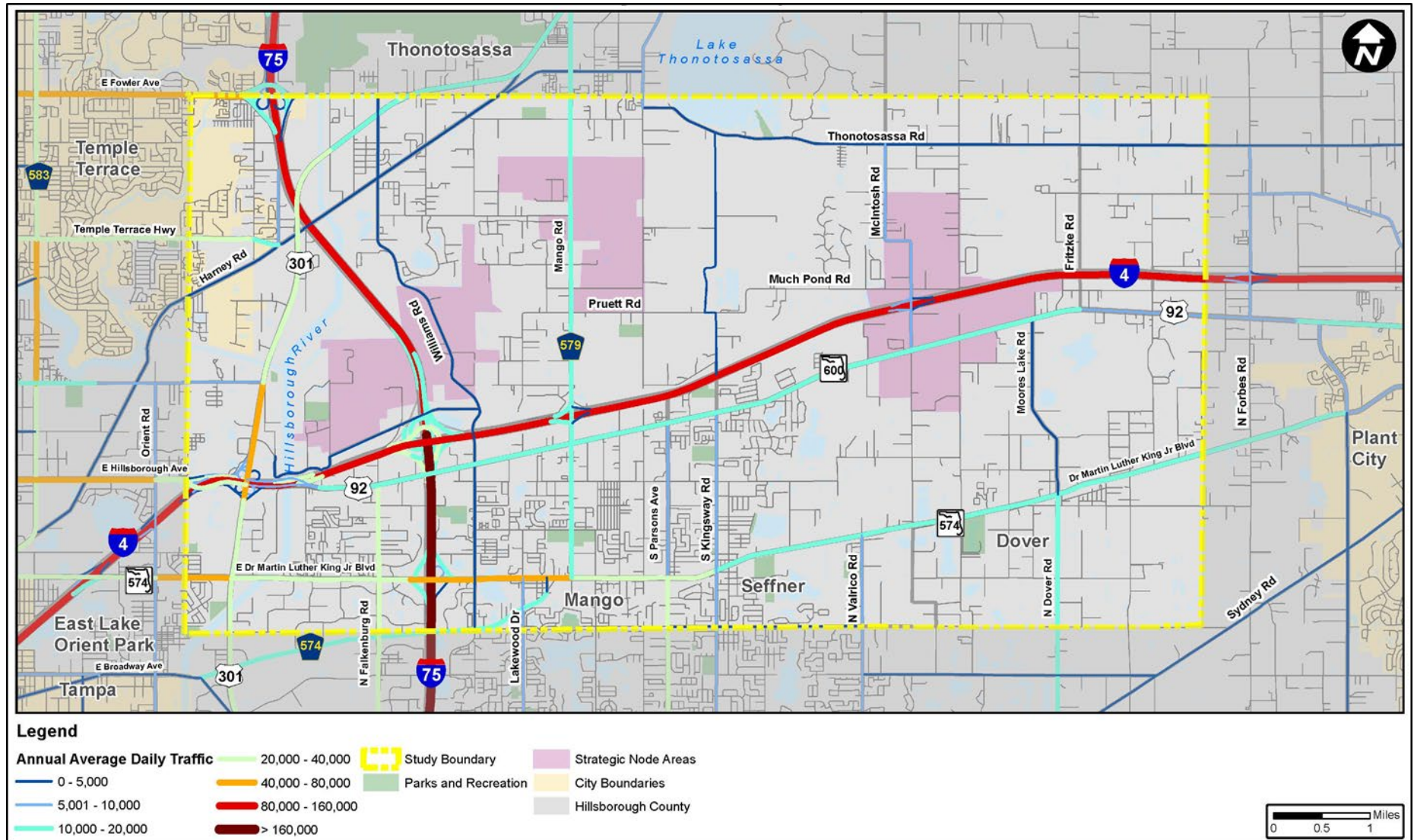


Figure 27: Average Annual Daily Traffic (ADT)

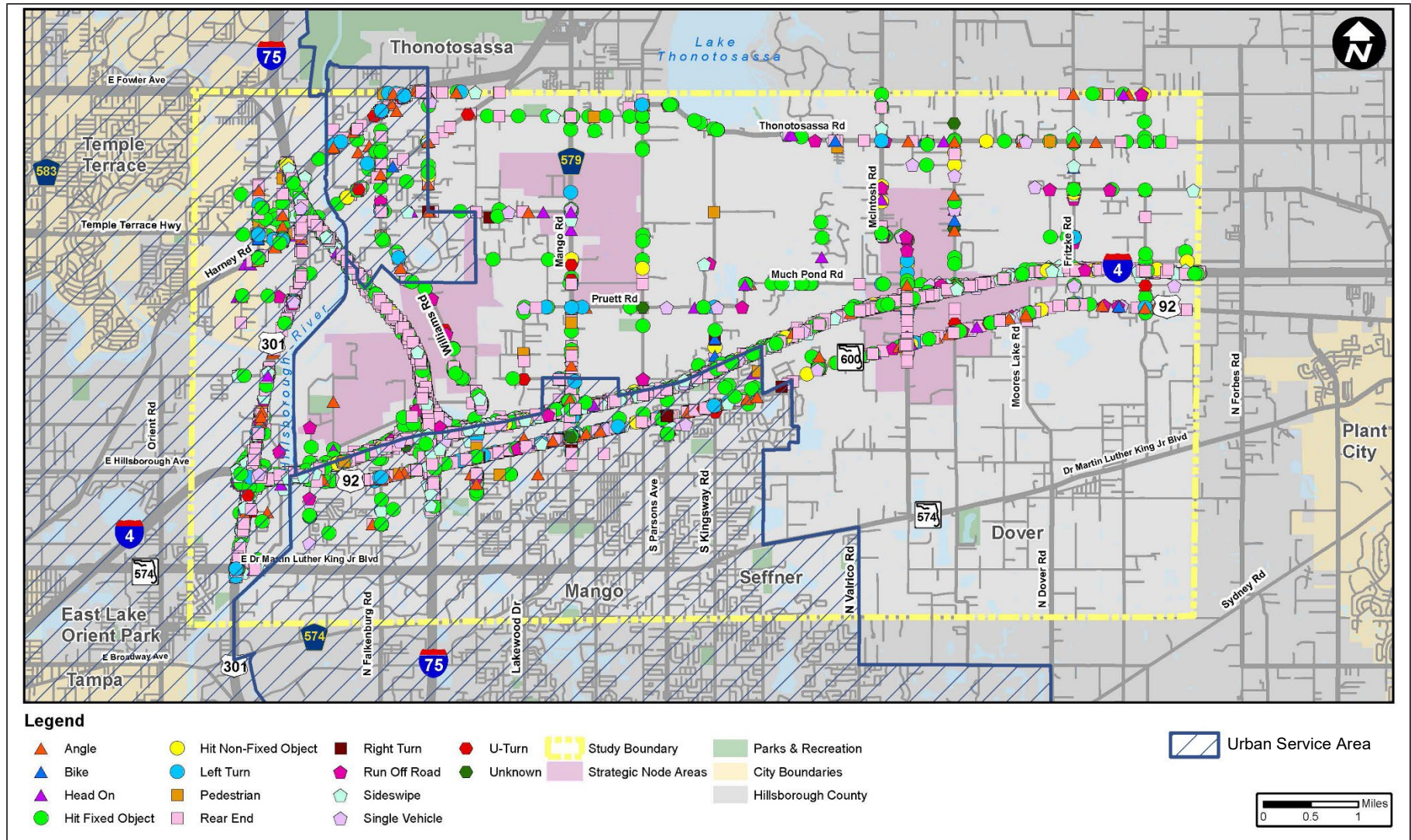


Figure 28: Total Crashes (2015-2019)

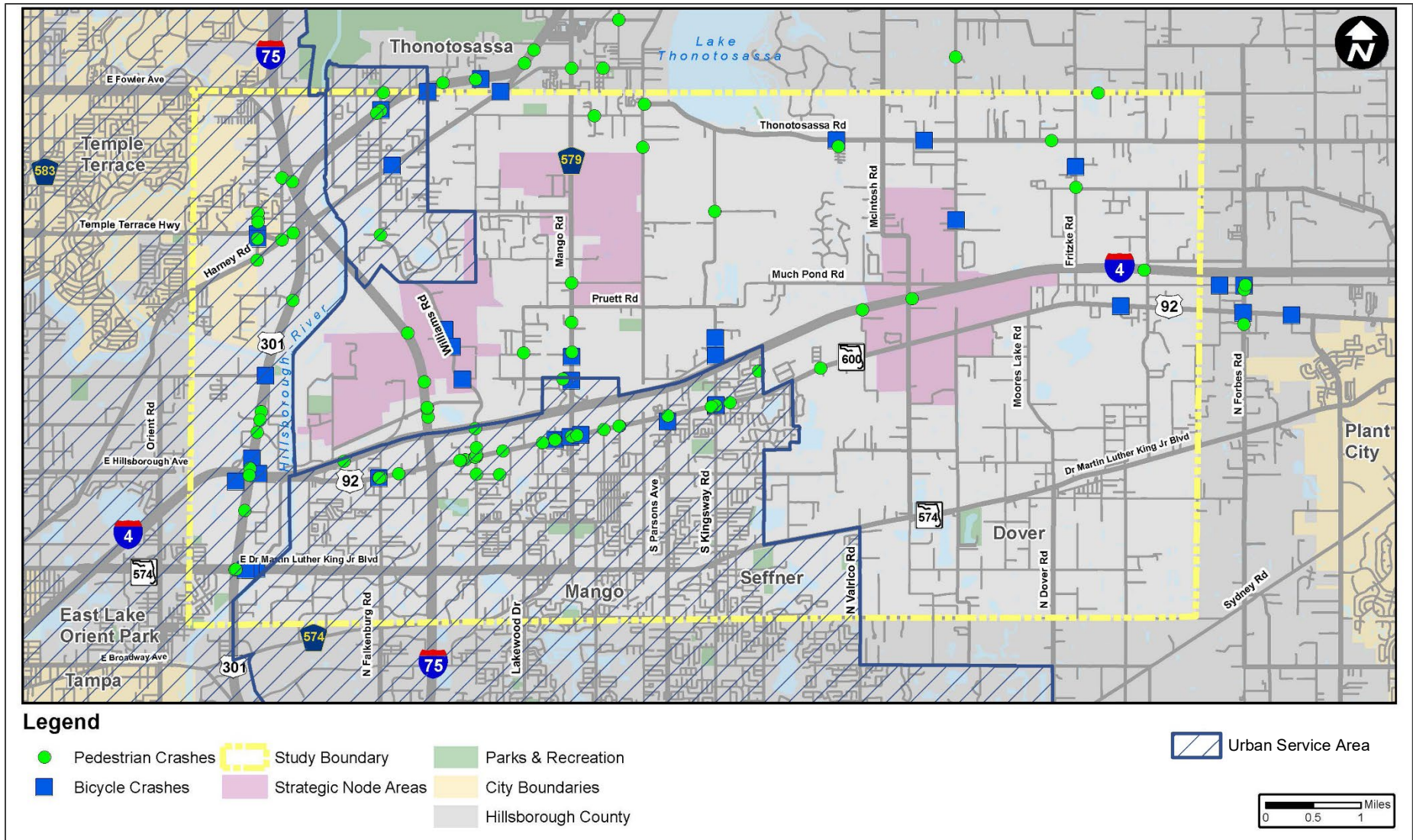


Figure 29: Pedestrian & Bicycle Crashes 2015-2019