

State of the System



Hillsborough Dashboard

MAP-21 Performance Targets

for federally required measures

pavement

- ≥ **60%** interstate pavement in good condition
- ≤ **5%** interstate pavement in poor condition
- ≥ **40%** non-interstate NHS pavement in good condition
- ≤ **5%** non-interstate NHS pavement in poor condition

bridges

- ≥ **50%** NHS bridges in good condition by deck area
- ≤ **10%** NHS bridges in poor condition by deck area

transit assets

- ≤ **22%** rolling stock (buses & vans) meeting or exceeding useful life benchmark
- ≤ **81%** equipment (support vehicles) meeting or exceeding useful life benchmark
- 0%** rail fixed guideway track with performance restrictions
- ≤ **10%** passenger & parking facilities rated below 3 on term scale






safety

- ≤ **188** fatalities on a 5-yr rolling average (2015-2019)
- ≤ **1,354** serious injuries on a 5-yr rolling average (2015-2019)
- ≤ **229** fatalities & serious injuries on a 5-yr rolling average (2015-2019)
- ≤ **1.33** fatalities per 100M VMT on a 5-yr rolling average (2015-2019)
- ≤ **9.55** serious injuries per 100M VMT on a 5-yr rolling average (2015-2019)

travel time reliability

- ≥ **75%** interstate NHS network with a level of travel time reliability < 1.50
- ≥ **50%** non-interstate NHS network with a level of travel time reliability < 1.50
- ≤ **2.00** truck travel time reliability index score

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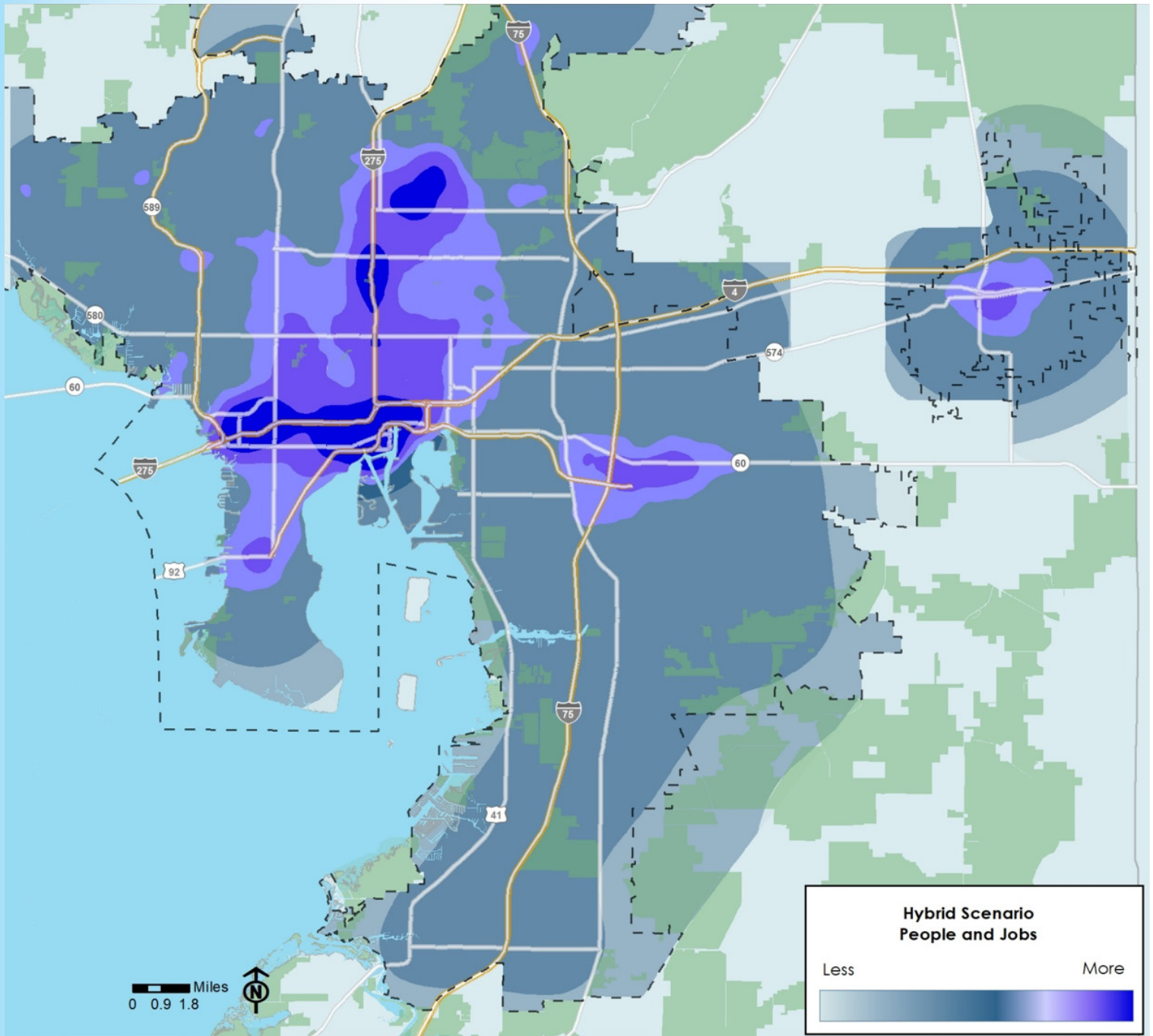
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Introduction

As of 2018, Hillsborough County is home to just over 1.3 million people. By the year 2045, this number is expected to exceed 2 million, making this county more populous than present day Phoenix or Philadelphia. The map below offers a glimpse into 2045 by showing where people and jobs could be located.



It is the goal of the Hillsborough MPO to ensure that all current and future residents and visitors have safe, convenient, reliable, affordable, comfortable, and well-maintained mobility options.

The State of the System report looks at how our transportation system has performed over the past two years, and whether we have made progress toward achieving our goals. The performance of various aspects of the transportation system helps planners determine what kinds of projects can best address those needs.

Each section of this State of the System report describes the performance of a specific element of the transportation system, displays the resources dedicated to funding improvements in that element, lists the kinds of projects able to be funded with those resources, and forecasts how those projects might enhance performance in future years. This data-driven, results focused approach to planning is called performance-based planning and programming (PBPP) and is how the MPO prioritizes projects across Hillsborough County and the Tampa Bay region.

Hillsborough County faces significant challenges in maintaining or improving the condition and performance of the transportation network, and this mirrors a nationwide trend.

Nationally, the backlog of needed highway and transit infrastructure projects is approaching \$1 trillion and continuing to grow. Average commute times are growing. Meeting the growing demands on our transportation system means we need to invest our limited funding where we can get the biggest bang for the buck. This can be achieved by targeting projects in areas of greatest deficiency in performance.

Transportation planning does not occur in a laboratory separated from the community. The planning profession balances technical analysis with community engagement to identify community needs. Engaging with citizens and establishing the right performance measures allows the Hillsborough MPO to evaluate how well the transportation system is addressing the community's needs and how well future transportation projects may improve the community's quality of life.

Measuring performance is the first step toward addressing the community's needs. The *Imagine 2040 Plan* took this approach. It was adopted in 2014, prior to the passage of federal legislation requiring performance-based planning. The Hillsborough MPO created the following program categories to measure specific areas of performance and guide investment decisions in preparation for our 2045 Long Range Transportation Plan update (expected late 2019):



State of Good Repair & Resiliency relates to the maintenance of pavement, bridges and transit assets in good working condition, and mitigating floods along transportation infrastructure, which limits our community's resiliency to hazardous weather events. Performance affects the replacement schedule of assets and is measured by:

- ◆ Percent of pavement and bridges in good/poor condition
- ◆ Percent of transit assets not in a state of good repair
- ◆ Economic impact and recovery time resulting from a major storm



Vision Zero focuses on reducing frequent crashes. Performance affects safety and is measured by:

- ◆ Total fatal and serious injury crashes; crashes involving vulnerable users; and crash rate per vehicle miles traveled



Smart Cities seeks to reduce traffic delays. Performance has impacts on health and the economic vitality of Hillsborough County and the Tampa Bay region and is measured by:

- ◆ Travel time reliability and truck travel time reliability
- ◆ Percent of population affected by high vehicular emissions



Real Choices When Not Driving reflects investments in transportation alternatives, such as transit, multi-use trails, and services for the transportation disadvantaged. Performance affects quality of life and is measured by:

- ◆ People and jobs served by transit and multi-use trails system
- ◆ Access to critical destinations by transit, walking, and biking



Major Projects are a key component in growing our economy. Good transportation infrastructure investments promote economic growth and performance is measured by:

- ◆ Jobs served and congestion reduced in key economic spaces



State of Good Repair & Resiliency

PERFORMANCE TARGETS

		Actual 2016
≥ 60%	Interstate pavement in good condition	50.9%
≤ 5%	Interstate pavement in poor condition	0%
≥ 40%	Non-interstate NHS pavement in good condition	42%
≤ 5%	Non-interstate NHS pavement in poor condition	0.2%

Adopted by the Hillsborough MPO on October 30, 2018
 NHS = National Highway System

Good condition means no major investments are needed because the pavement is not excessively rough, cracked, rutting, or faulting.

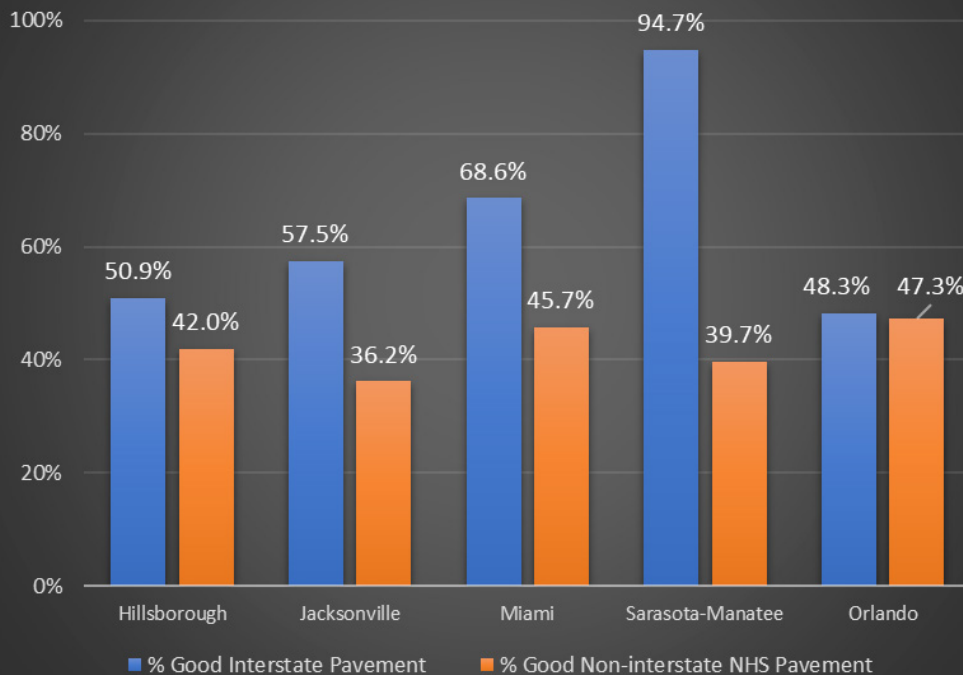
Poor condition means major investments are needed to rehabilitate the surface. As of 2018, Hillsborough is exceeding all of these targets except for percentage of interstate pavement in good condition: our goal is to achieve 60% or better, and we are currently at 50.9%.

The Federal Highway Administration’s national goals of maintaining infrastructure condition and enhancing environmental sustainability apply to the State of Good Repair & Resiliency program.

Maintaining infrastructure and transit assets in good working condition is critical to ensure the usability and safety of roads, bridges, and transit vehicles. For these reasons, maintaining a state of good repair and improving resiliency is the MPO’s highest ranking priority. Timely maintenance of assets ensures the system performs as intended; whereas, deferring maintenance and allowing systems to deteriorate into poor condition can lead to more costly rehabilitation in the long run.

Roadway pavement is our most important asset – without it – car, bus, and bike mobility would be limited or nonexistent. There are more than 12,000 lane miles of road within Hillsborough County, with ownership and maintenance responsibilities divided among the local jurisdictions of Hillsborough County, City of Tampa, Plant City, Temple Terrace, Tampa-Hillsborough Expressway Authority, and the Florida Department of Transportation. Totalling more than 7,000 lane miles, Hillsborough County owns the most pavement, by far. Following the County, City of Tampa owns 2,800, and FDOT owns almost 2,000 lane miles.

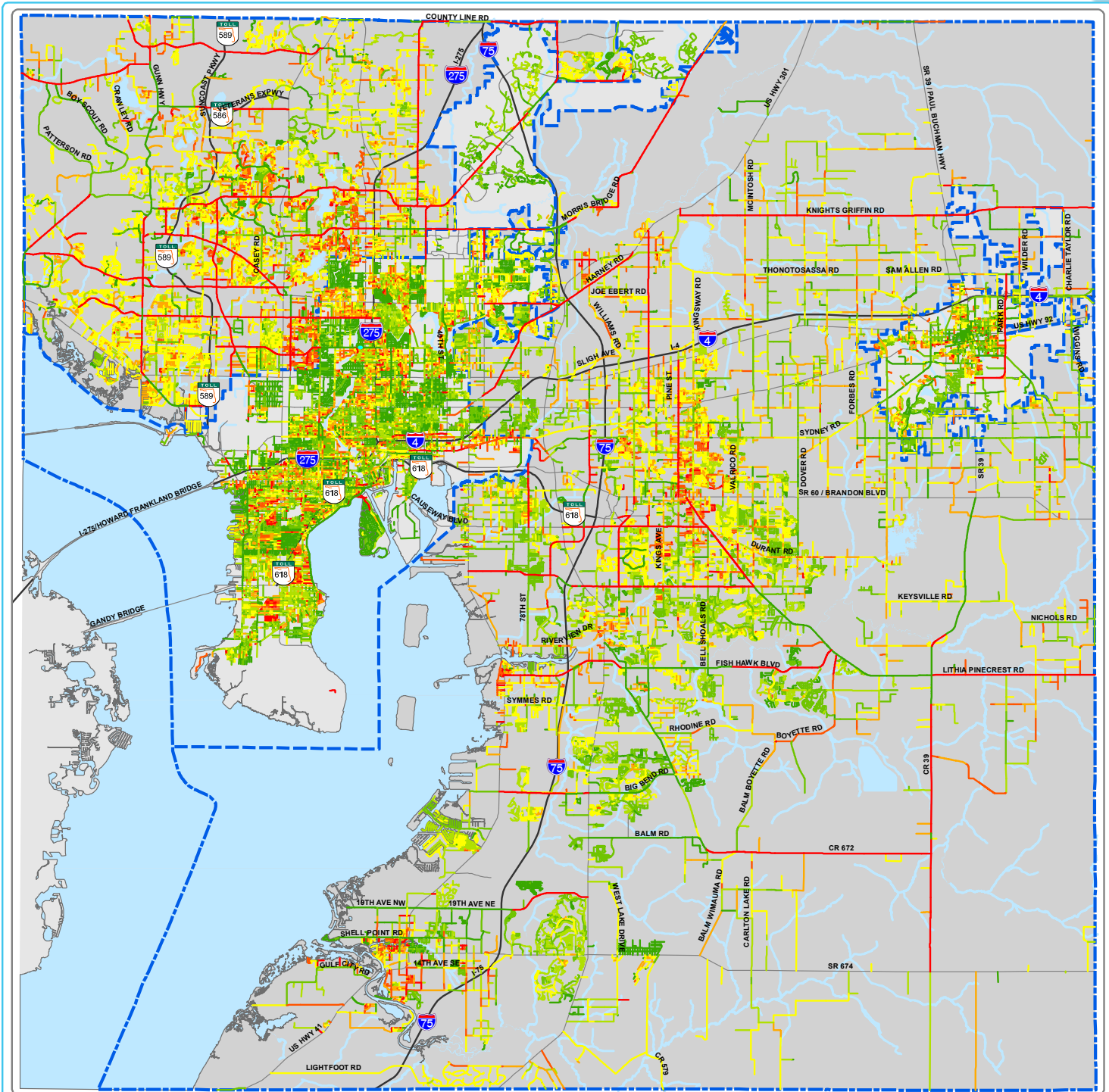
How Hillsborough NHS Pavement Condition Compares to Other Major Metro Areas in Florida



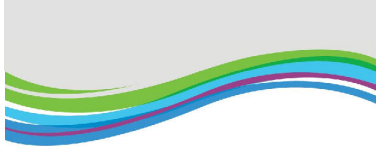
In Hillsborough County, slightly more than half of the Vehicle Miles Traveled are on FDOT’s network, which includes the interstates and other high-capacity roads. The high (and increasing) volume of traffic can rapidly deteriorate asphalt condition, which has an optimal lifespan of approximately 15 years.

The map on page 4 shows countywide pavement condition using the best available Pavement Condition Index (PCI) data (2012-2019) collected from the four local governments. Condition overall tends toward the higher end of the PCI Rating Scale, with pockets of poorer quality roads existing outside of the urban core.

State of Good Repair & Resiliency















HILLSBOROUGH COUNTY, FLORIDA
PAVEMENT CONDITIONS



**PRIMARY / SECONDARY
PCI RANGE**

-  86 - 100 GOOD
-  71 - 85 SATISFACTORY
-  56 - 70 FAIR
-  41 - 55 POOR
-  26 - 40 VERY POOR
-  11 - 25 SERIOUS
-  0 - 10 FAILED

LEGEND

-  CITY LIMIT
-  COUNTY BOUNDARY
-  MAJOR ROADS
-  LOCAL ROADS
-  AIRPORTS
-  BAY & WATER
-  CREEKS, STREAMS, RIVERS
-  PINELLAS COUNTY
-  TEMPLE TERRACE
-  HILLSBOROUGH COUNTY
-  PLANT CITY
-  TAMPA



State of Good Repair & Resiliency

PERFORMANCE TARGETS

≥ 50%

NHS bridges in good condition by deck area

Actual 2018

78%

≤ 10%

NHS bridges in poor condition by deck area

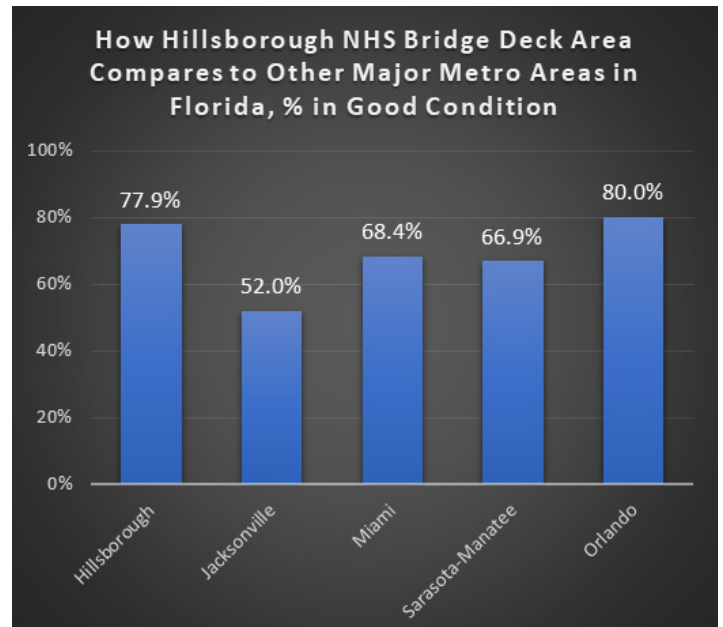
0%

Adopted by the Hillsborough MPO on October 30, 2018
NHS = National Highway System

With 246 miles of coastline, Hillsborough County's bridge infrastructure represents a critical asset. Bridges provide an important linkage both within the county and to surrounding counties. They also efficiently connect shippers to markets. There are 757 bridges in Hillsborough County. The table on the lower left shows ownership of all bridges in Hillsborough County and the percentage of bridges in nondeficient conditions.

The engineering demands of bridge replacement or repair can make maintenance exceptionally costly. Fourteen percent of all bridges in Hillsborough County are classified as functionally obsolete or deficient. On October 30, 2018, the Hillsborough MPO agreed to support FDOT's statewide targets for National Highway System bridge condition and maintain ≥ 50% in good condition and ≤ 10% in poor condition. As of 2018, Hillsborough is exceeding both of these targets with nearly **78% of NHS deck area in good condition and 0% in poor condition.**

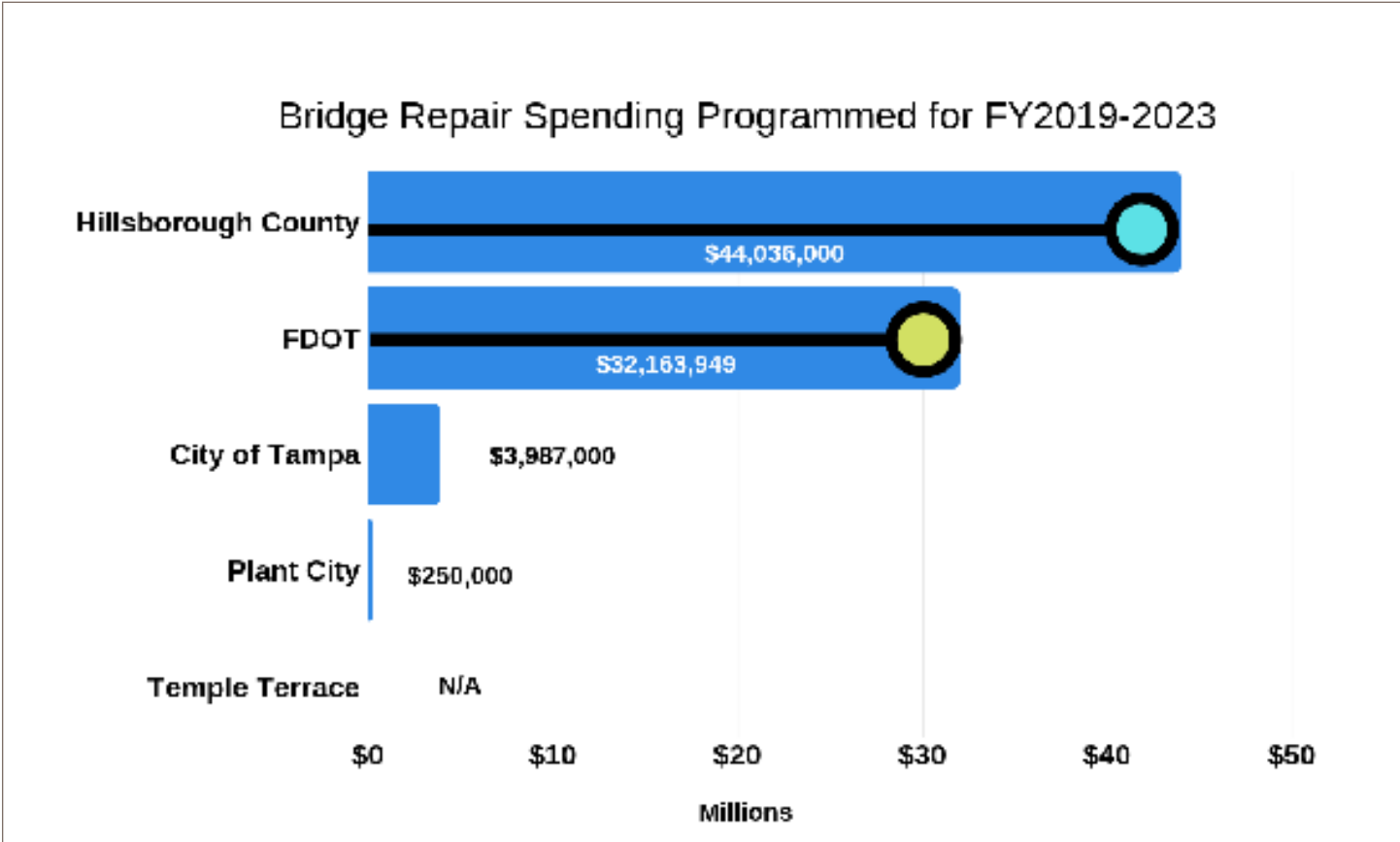
Bridge Owner	Total Bridges	Not Deficient	
		Total	% of Total
FDOT	377	340	90%
Hillsborough County	250	206	82%
THEA	65	60	92%
City of Tampa	34	23	68%
Turnpike	17	17	100%
Hillsborough County Aviation Authority	12	5	42%
Busch Gardens	1	0	0%
Tampa Sports Authority	1	1	100%
Total	757	652	86%



In 2016, the total cost to repair or replace bridges in Hillsborough County was estimated to be about **\$31 million per year**. The current Capital Improvements Programs of Hillsborough County, the cities of Tampa, Temple Terrace and Plant City, and FDOT allocate a total of \$80 million over a five-year period, averaging just over **\$16 million per year**. (See page 6) This amounts to only half of what is needed to adequately address desired major repairs and/or bridge replacements.



A portion of the Courtney Campbell Causeway is currently being reconstructed to create a channel through the bridge. This will improve circulation in Tampa Bay and improve water quality. The project will be completed before the end of 2019.



State of Good Repair & Resiliency

The Hillsborough Area Regional Transit Authority (HART) serves the population of Hillsborough County's transit needs. Due to its large service area, HART's passenger buses accumulate mileage very quickly. HART buses accumulate, on average, 320,000 miles in the first 7 years of operation. When a bus reaches that mileage, a mid-life overhaul is performed by the agency's expert mechanics, allowing the vehicle to continue serving passengers for another 300,000 to 400,000 miles. At that point, the bus has met its useful-life benchmark and must be replaced.

Preserving the transit fleet is important to ensure that buses run on time; however, the likelihood of mechanical failures increases as transit vehicles age.

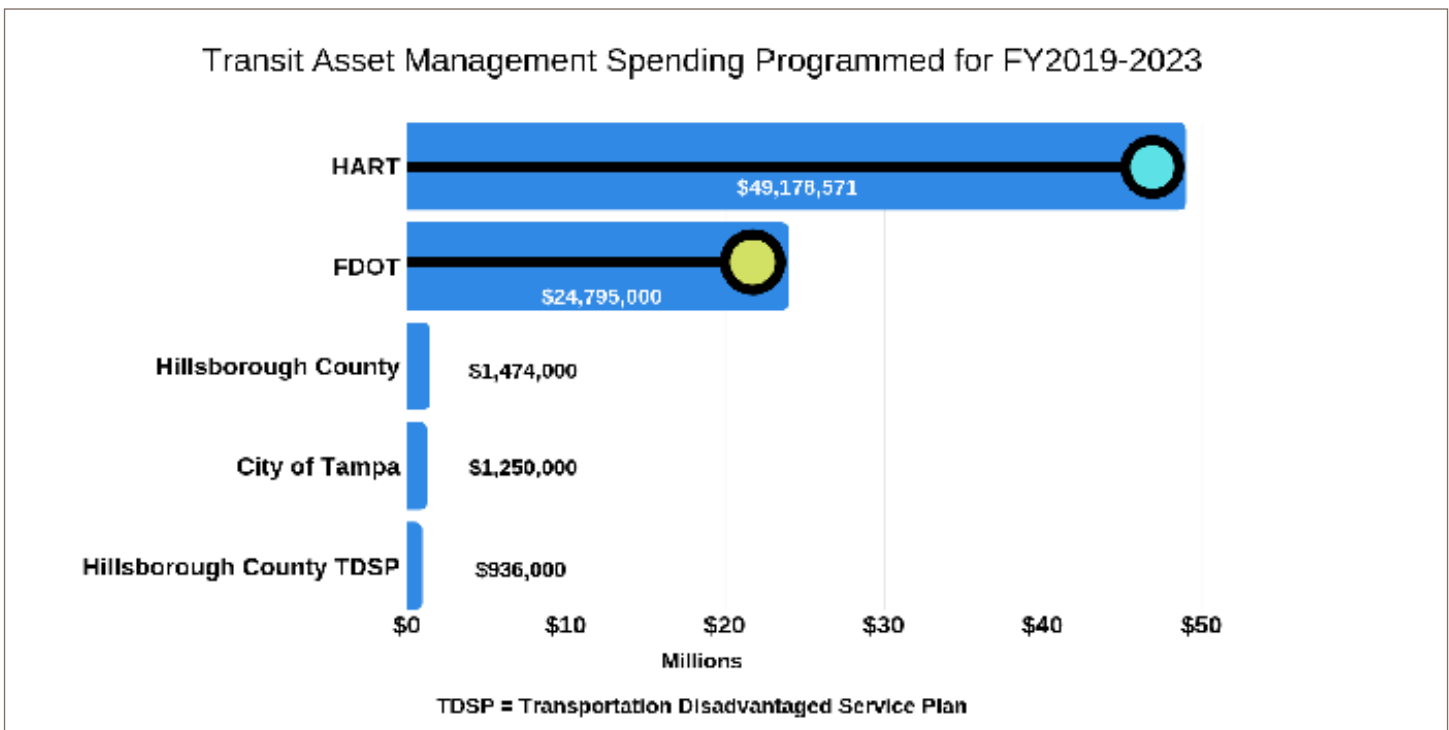
On October 30, 2018, the Hillsborough MPO agreed to support the Hillsborough Area Regional Transit Authority's transit asset targets. One of the short-term, pre-referendum targets based on existing conditions is to maintain no more than 22% of passenger vehicles in need of repairs. HART set the transit asset targets on August 23, 2018.

The Hillsborough County Sunshine Line is a service which provides transportation for those who do not have the means or ability to transport themselves and who require access to healthcare, employment, education, shopping, and other life-sustaining services. The Sunshine Line has a goal to reduce its number of passenger vehicles not in a state of good repair from 35% to 25%.

The Current Capital Improvements Programs (CIPs) of the agencies listed below include many transit asset management projects to be programmed over the next five years. The dollar values below represent investments that were programmed prior to approval of the countywide surtax referendum. Collectively, these jurisdictions have budgeted over **\$12 million per year**, which is 40% more than what was identified in the *Imagine 2040 Plan* baseline spending trend. These investments are critical to ensuring that transit service runs smoothly, efficiently, and cost-effectively.

PERFORMANCE TARGETS		Actual 2018
≤ 22%	Rolling stock (buses & vans) meeting or exceeding useful life benchmark	22%
≤ 81%	Equipment (support vehicles) meeting or exceeding useful life benchmark	81%
0%	Rail fixed guideway track with performance restrictions	0%
≤ 10%	Passenger & parking facilities rated below 3 on TERM scale	10%

Adopted by the Hillsborough MPO on October 30, 2018
NHS = National Highway System



State of Good Repair & Resiliency

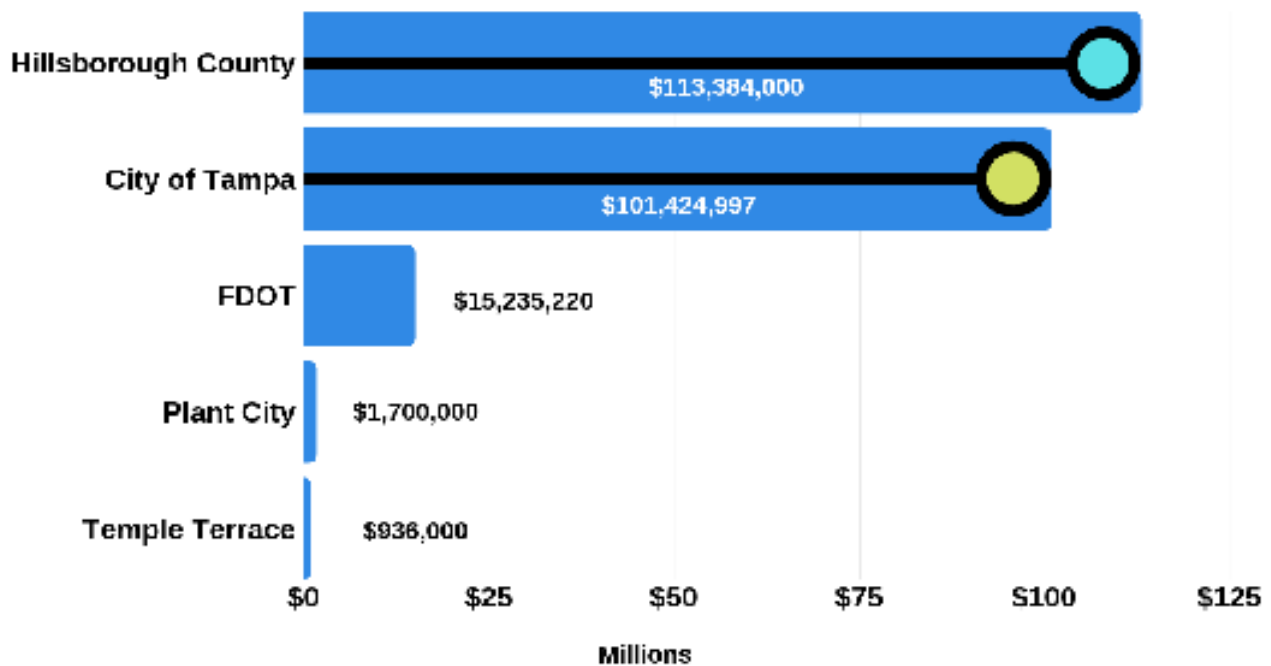
Due to Hillsborough County's location along the coast of the Gulf of Mexico, and Tampa Bay reaching into the heart of the County, the area is vulnerable to storm surges, flooding from hurricanes, and sea-level rise. In 2012, Tropical Storm Debby dropped 20 inches of rain on the Tampa Bay region and parts of Bayshore Boulevard were completely underwater. In 2013, the Weather Channel ranked Tampa as the city "most vulnerable and overdue for a direct hit hurricane."

While the Tampa Bay region has not been directly impacted by a major hurricane in nearly 100 years, a series of close calls (most recently experienced during Hurricane Irma in 2017) indicate the looming threat of a major hurricane event for the region. Hillsborough County, along with Pinellas and Pasco Counties in the Tampa Bay region, have been progressively planning for post-disaster redevelopment and hazard mitigation.

Reducing transportation vulnerabilities and enhancing resiliency to major weather events is important because much of the transportation infrastructure in Hillsborough County is located within zones susceptible to storm surges and sea level rise. The impacts of flooding can be reduced by funding stormwater and roadway improvement projects to increase the resiliency of the transportation system. This could potentially reduce the one-time economic loss from a major storm from **\$266 million** to **\$119 million**.

Current Capital Improvements Programs (CIPs) of the jurisdictions listed below show a determined focus on upgrading stormwater and resiliency projects to be programmed over the next five years. Countywide, more than \$232 million will be spent over the next five years, amounting to roughly **\$46 million per year**. These resources will be invested in canal dredging and upgrading and replacing culverts to alleviate flooding along roads. This includes a \$72 million project by the City of Tampa to study, model, and construct a regional watershed improvement to address chronic flooding for a large area in South Tampa.

Resiliency Spending Programmed for FY2019-2023





State of Good Repair & Resiliency

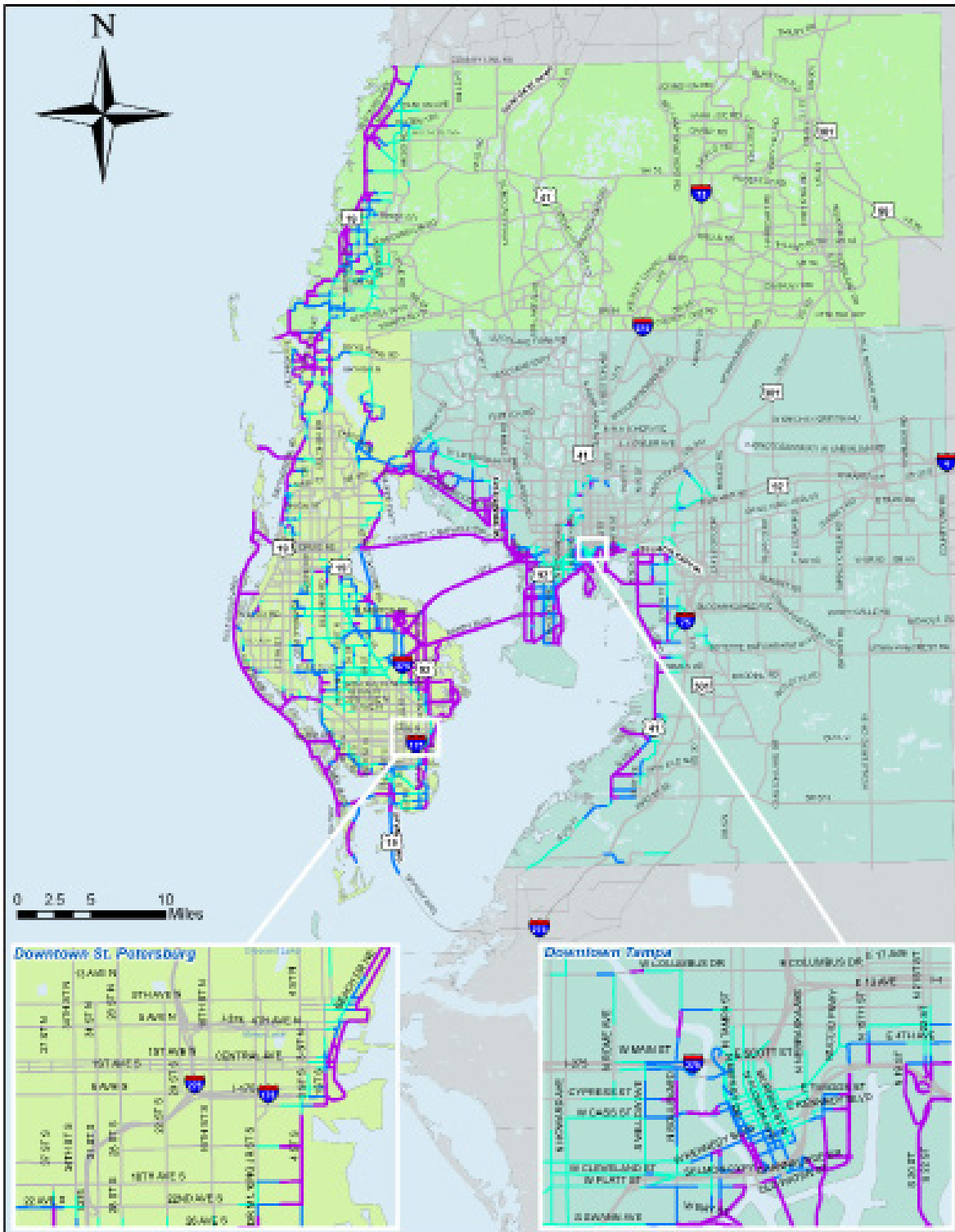
TESTING RESILIENCY

The Hillsborough County Local Mitigation Strategy working group (LMSWG) is a group of experts tasked with identifying strategies to mitigate the impacts of natural hazards.

In 2018, the Hillsborough County MPO, Planning Commission, Hillsborough County Public Works-Hazard Mitigation Section, the University of South Florida, and the Tampa Bay Regional Planning Council received a grant from the Federal Highway Administration (FHWA) to conduct a pilot project to assess the resiliency of the transportation system in Hillsborough County.

Federal, State DOT, and local resiliency planning information will be used to assess the transportation network's vulnerability to sea-level rise, storm surge, and inland flooding.

The map to the left shows critical transportation facilities at risk of floods from a Category 3 storm.



**Transportation Facilities Vulnerability
Category 3 Storm plus 2045 High Sea Level Rise Projection**

Inundation Depth (inches)	Counties
— Not Inundated	Outside Study Area
Light Blue	Hillsborough
Medium Blue	Polk
Dark Blue	Pinellas
	Water Bodies



Date: 1/25/2019



PERFORMANCE TARGETS

		Actual 2014-2018
≤ 188	Fatalities, 5-yr rolling average (2015-2019)	187
≤ 1,354	Serious injuries, 5-yr rolling average (2015-2019)	1,435
≤ 229	Nonmotorized fatalities & serious injuries, 5-yr rolling average (2015-2019)	234
≤ 1.33	Fatalities per 100M vehicle miles traveled, 5-yr rolling average (2015-2019)	1.35
≤ 9.55	Serious injuries per 100M vehicles miles traveled, 5-yr rolling average (2015-2019)	10.43

Adopted by the Hillsborough MPO on February 5, 2019

Vision Zero refers to a vision of zero traffic deaths. Vision Zero programs address traffic safety for drivers, pedestrians, cyclists, and all other road users.

Prioritizing safety projects and programs that can effectively reduce crash rates requires a data-driven approach based on historical crash trends and future benefits forecasting. Hillsborough has frequently ranked among some of the nation's most dangerous counties for road users. To improve performance in that area, on February 5, 2019, a safety target not to exceed **163** fatalities was adopted for Calendar Year 2019. Aside from fatalities, MPOs must track performance for five other safety measures and set targets for the upcoming calendar year. Federal reporting requirements prescribe that measures and targets be calculated using a 5-year rolling average ending prior to the year targets are due. For calendar year 2019, safety targets must be calculated using data spanning from 2014-2018, and projections must be made for 2019.

The 2019 short-term safety performance targets were based upon data collected within the MPO planning area for previous years related to safety performance measures and benefits forecasting. If the targets are achieved, a 20-51% fatal and serious injury crash reduction by 2040 is possible.

2016 was the single worst year for fatal crashes in the history of Hillsborough County. The year-end fatality total of 226 represents a 15% increase from the previous year. The National Highway Traffic Safety Administration reported that nationally, deaths due to distracted and drowsy driving declined, while other

reckless behaviors - speeding, intoxication, and not wearing seat belts – increased. Of the 206 fatal crashes in Hillsborough during 2016:

- 62 involved an intoxicated person
- 24 involved driver speeding
- 136 occurred at nighttime
- 113 involved a vulnerable user
- At least 32 involved an aggressive driver
- 26 involved a distracted driver (although the real number of distracted¹ and aggressive² drivers is probably much higher)

These statistics highlight the importance of education programs, streetlight investments, and strategies to reduce speed and aggressive driving behaviors.

During 2017, Hillsborough County witnessed a slight reduction in the number of automobile-related fatalities. Crashes involving vulnerable users – such as cyclists and pedestrians - also declined following the historically high fatalities suffered in 2015 and 2016. Despite the slight reduction, overall crashes remain unacceptably high.



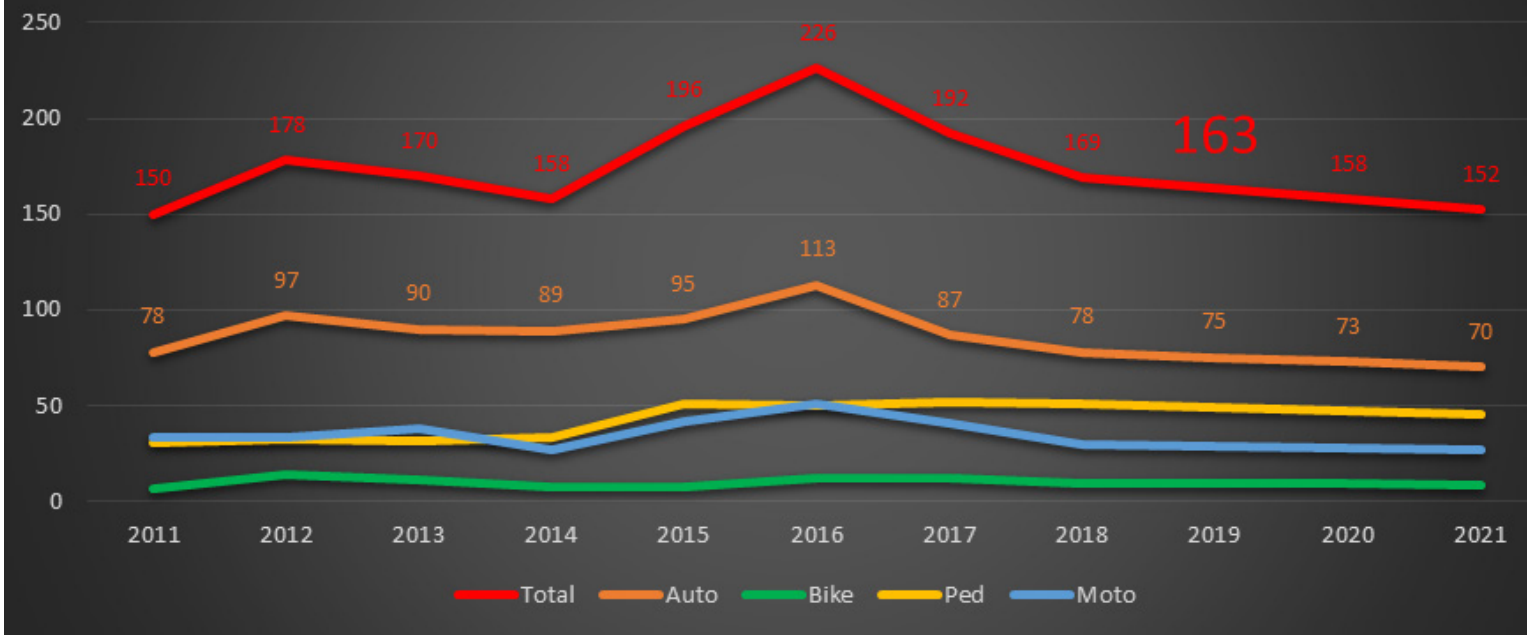
Serious injury crashes are down by more than 60% along a 3-mile stretch of Fletcher Ave between Nebraska Ave and 50th St. From 2010-2013, there were 93 fatal and serious injury crashes along the high crash corridor, that number fell to 38 from 2015-2018, following intensive "Complete Streets" safety improvements.

1 2016. Ige, J., Banstola, A. and Pilkington, P. Mobile phone use while driving: Underestimation of a global threat. Journal of Transport & Health, Vol. 3, Issue 1, pp. 4-8.

2 2016. AAA Foundation for Traffic Safety. Prevalence of Self-Reported Aggressive Driving Behavior: United States, 2014.



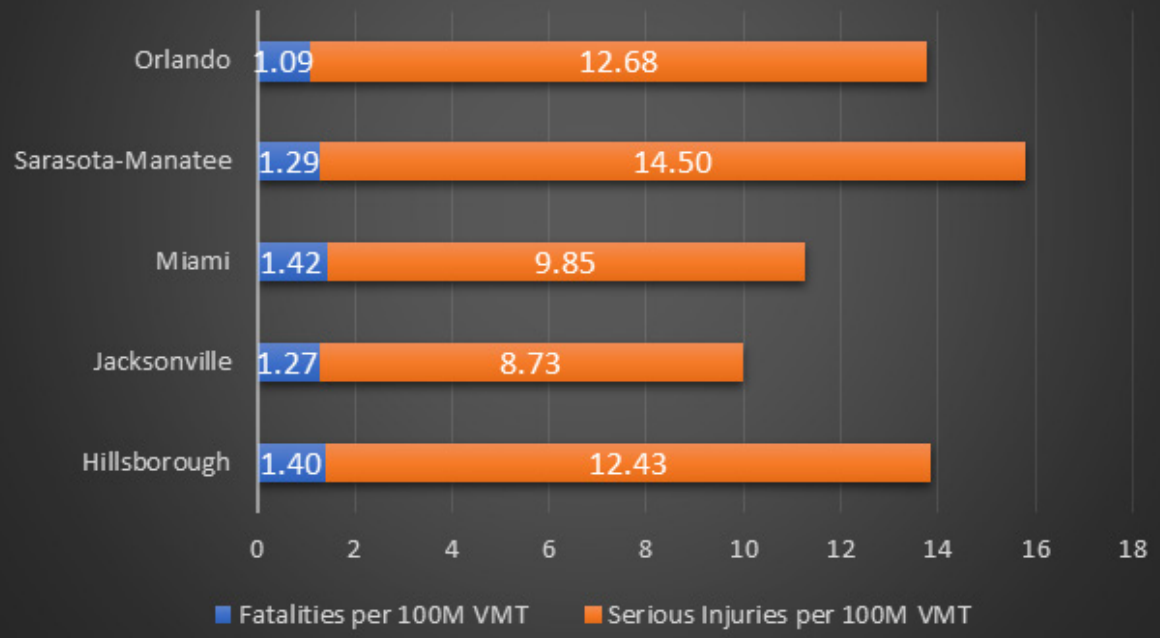
Trends: Traffic Fatalities by Mode



The graph above shows traffic fatalities broken out by mode over time. The projections for years 2019, 2020, and 2021 are based on a 3.4% annual reduction commensurate with an increase in safety funding equivalent to a 1-cent sales tax.

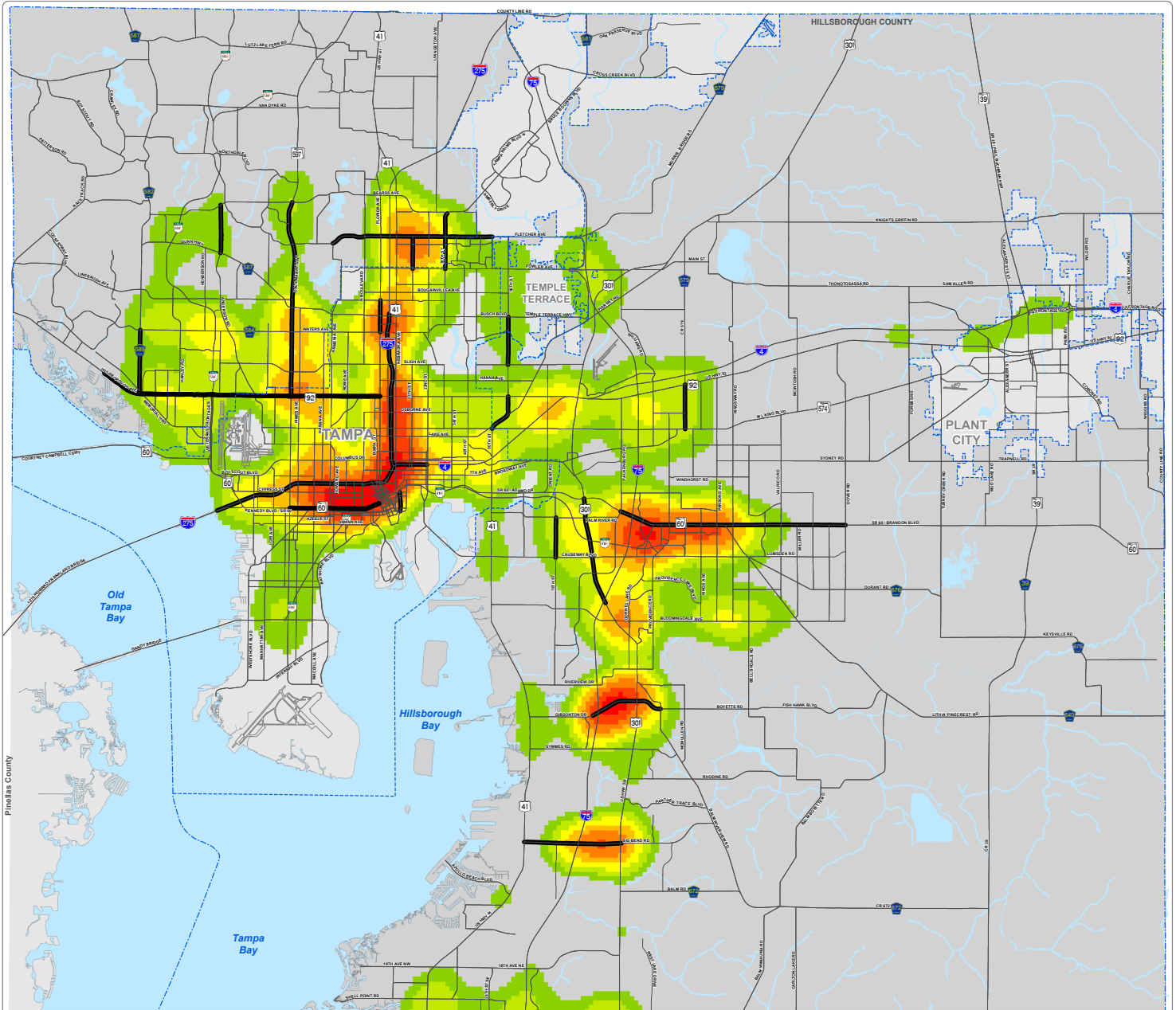
Achieving a 50% crash reduction by the year 2040 means that Hillsborough County must reduce crashes by 3.4% every year, requiring investments in safety improvement projects that target high-crash areas and hazardous behaviors.

How Hillsborough Fatality & Serious Injury Rates Compare to Other Major Metro Areas in Florida





A large number of the crashes, and subsequent fatalities and serious injuries, occur at certain *hot spots*. The map below reflects the roadways with the highest number of severe injury crashes per mile. The heat map uses the most recent five years of data (2014-2018) and is overlaid with black lines that represent the top 20 severe injury crashes per mile from the data set used in the development of the Vision Zero Action Plan (2012-2016). We will continue to monitor the severe injury network and anticipate crashes will begin to decline as safety investments are made on these roadways. For a more detailed look at the corridors and the types and number of crashes, check out the *Vision Zero Corridor Profiles* online at: planhillsborough.org/vision-zero-action-plan/.



HILLSBOROUGH COUNTY, FLORIDA
SEVERE INJURY CRASHES

LEGEND

- VISION ZERO TOP 20 SEVERE INJURY CRASHES PER MILE (2012 - 2016)
- SEVERE INJURY CRASHES PER MILE (2014 - 2018)
High : 150 - 200
Low : 1 - 50
- CITY LIMIT
- COUNTY BOUNDARY
- MAJOR ROADS
- AIRPORTS
- BAY & WATER
- CREEKS, STREAMS, RIVERS
- PINELLAS COUNTY
- TEMPLE TERRACE
- HILLSBOROUGH COUNTY
- PLANT CITY
- TAMPA

SEVERE INJURY CRASHES = CRITICALLY INJURED AND FATALITIES



Vision Zero

Investments

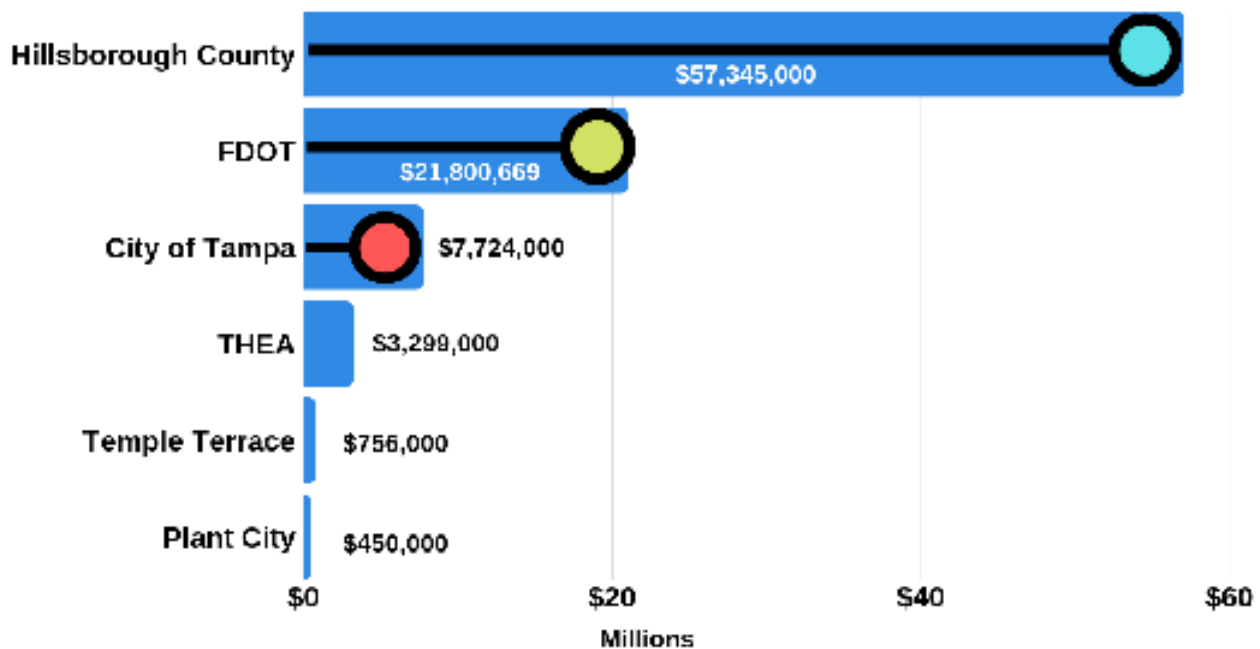
The ultimate goal of Vision Zero is to eliminate traffic fatalities by introducing evidence-based traffic improvements to minimize crash risk to zero.

To support progress toward approved highway safety targets, the Long Range Transportation Plan includes a number of key safety investments. Assessing spending trends through 2014, a total of \$498 million was identified in the *Imagine 2040 Plan* for baseline improvements to highway safety, averaging approximately **\$25 million per year** and resulting in a 10% reduction in crashes. Moving beyond the baseline, the MPO projected that with a funding source equivalent to a 1-cent sales tax, total crashes could be reduced by 21-50%.

The current Capital Improvements Programs (CIPs) of Hillsborough County, the cities of Tampa, Temple Terrace and Plant City, FDOT, and THEA include many safety investments to be programmed over the next five years. These investments are illustrated below and represent allocations programmed prior to approval of the countywide surtax referendum. Over the next five years, the jurisdictions within Hillsborough County have budgeted more than \$91 million for safety projects, or an average of **\$18 million per year**. This is about 30% less than the baseline investment level identified in the *Imagine 2040 Plan*, and thus, **presents a challenge to reducing crashes 10% by 2040**.



Vision Zero Spending Programmed for FY2019-2023





PERFORMANCE TARGETS

≥ 75%

Interstate NHS network with a level of travel time reliability less than 1.50

Actual
2018

71%

≥ 50%

Non-interstate NHS network with a level of travel time reliability less than 1.50

63%

≤ 2.00

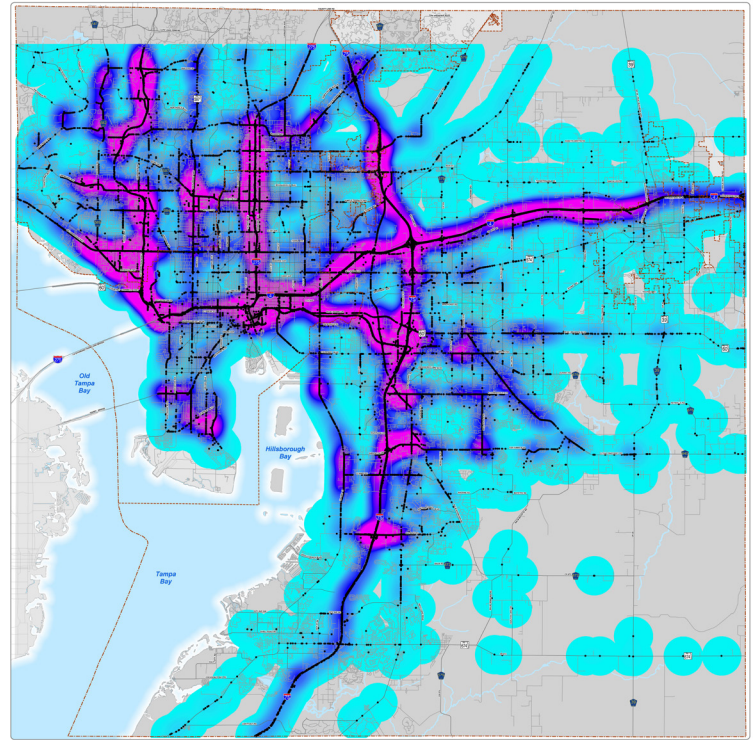
Truck travel time reliability index score

2.08

Adopted by the Hillsborough MPO on October 30, 2018
NHS = National Highway System

The focus of the Hillsborough MPO's Smart Cities program is developing strategies to alleviate congestion and improve safety at key intersections.

Operational improvements along some of the main roads in Hillsborough come in two forms: traditional intersection treatments like adding turn lanes, crosswalks, and signal modifications; and technology like signal re-timings, dynamic speed limits, ramp meters, active rerouting, active traffic management, and other emergent technologies found in some of the world's smartest cities.



Non-traditional data sources like Waze allow the Hillsborough MPO to accurately track congestion and travel reliability issues, based on user accounts of traffic conditions experienced in real-time. This map shows user-reported traffic congestion during morning rush hour, which is approximately 6-9am. Purple indicates that these roads are hotspots for congestion complaints during that time period.



Traffic management centers (TMCs), allow traffic engineers to play an active role in congestion relief and incident response. Non-traditional data sources, such as Waze and Twitter, open lines of communication between roadway users and engineers. The TMC can respond rapidly to congestion, minimizing the impact along the corridor.



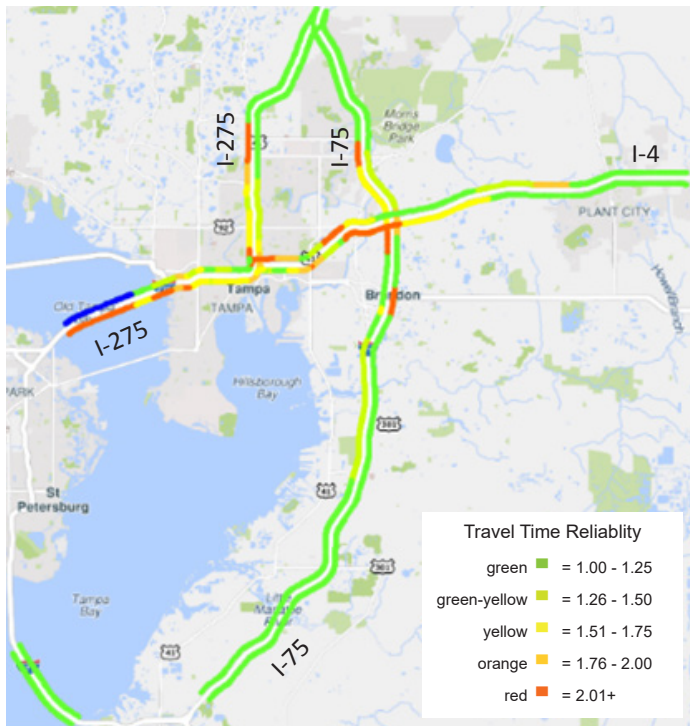
Smart Cities

Travel Time Reliability on Interstates

Travel Time Reliability (TTR) is an important metric for assessing dependability of travel times and extent of non-recurring congestion caused by crashes, weather, special events, or construction. While it is unrealistic to eliminate all congestion, the goal of reliable travel times allows travelers to make better decisions about their time and minimizes aggravation experienced when a normal 30-minute commute home suddenly turns into a 2-hour delay due to game day traffic clogging up the network.

The map on the left below shows portions of the interstate offering reliable travel at least 75% of the time. The goal of FDOT is for 75% of all miles on the interstate network to have less than a 50% time penalty on heavily congested days, and the MPO supported that goal on October 30, 2018. The MPO also agreed to support the statewide target for truck travel times on the interstate to not exceed a 100% increase on the most severely congested days.

While reliability on the majority of the interstate is meeting the statewide standard, the portions running through the urban core are moderately-to-severely unreliable, meaning that at certain times of day, travel time may increase by 50-100% through these segments. A 20-minute travel time could turn into 30 minutes or more.



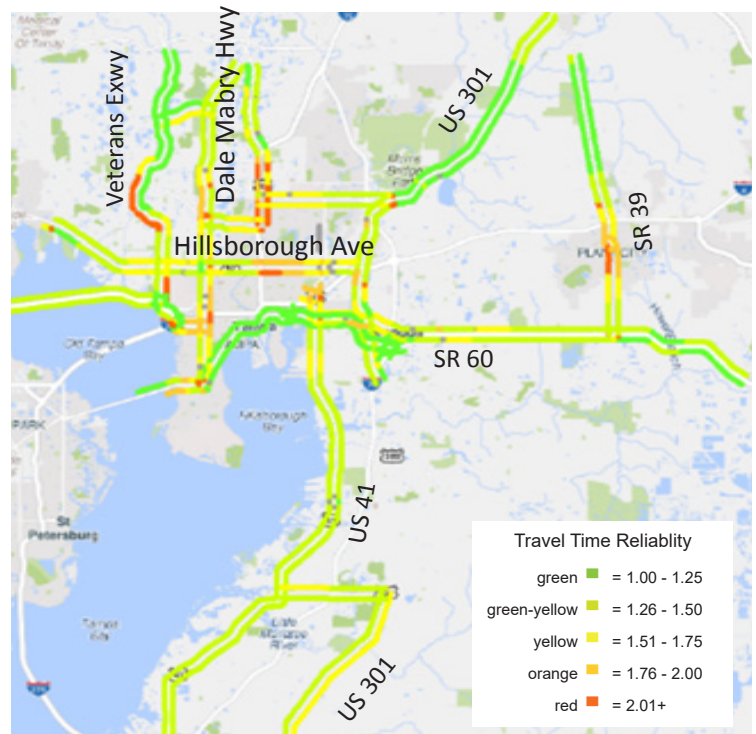
As of 2016, travel time reliability on the interstate is not meeting the statewide target. Unreliability through the urban corridor is a challenge due to the excessively high volumes of single occupant vehicles.

Travel Time Reliability

Travel Time Reliability on Non-interstate National Highway System

While many of the long-distance trips made both within and across counties are served by the Interstate system, the non-interstate National Highway System (NHS) makes up a much greater proportion of the roads in Hillsborough County. The map on the right below shows that some of the least reliable interstate segments are found **Northbound** on I-275 from the Howard Frankland Bridge throughout the urban core all the way past the downtown interchange; I-75 near Brandon Blvd; **Southbound** on I-275 from Bearss Ave to Fowler Ave; I-75 from Fletcher Ave to MLK Jr Blvd; and I-4 both **Eastbound and Westbound** throughout the urban core.

The statewide target for Travel Time Reliability on the non-interstate NHS is to have 50% of the network providing for reliable travel times. On October 30, 2018, the Hillsborough MPO agreed to support this target. With this target, most of the non-interstate roads are meeting this criterion, and they are shown in green on the maps. Roads shown in yellow are moderately reliable, and those shown in red are unreliable.



As of 2016, travel time reliability on the non-interstate National Highway System is exceeding the statewide target, but may drop below 50% by the end of 2019.

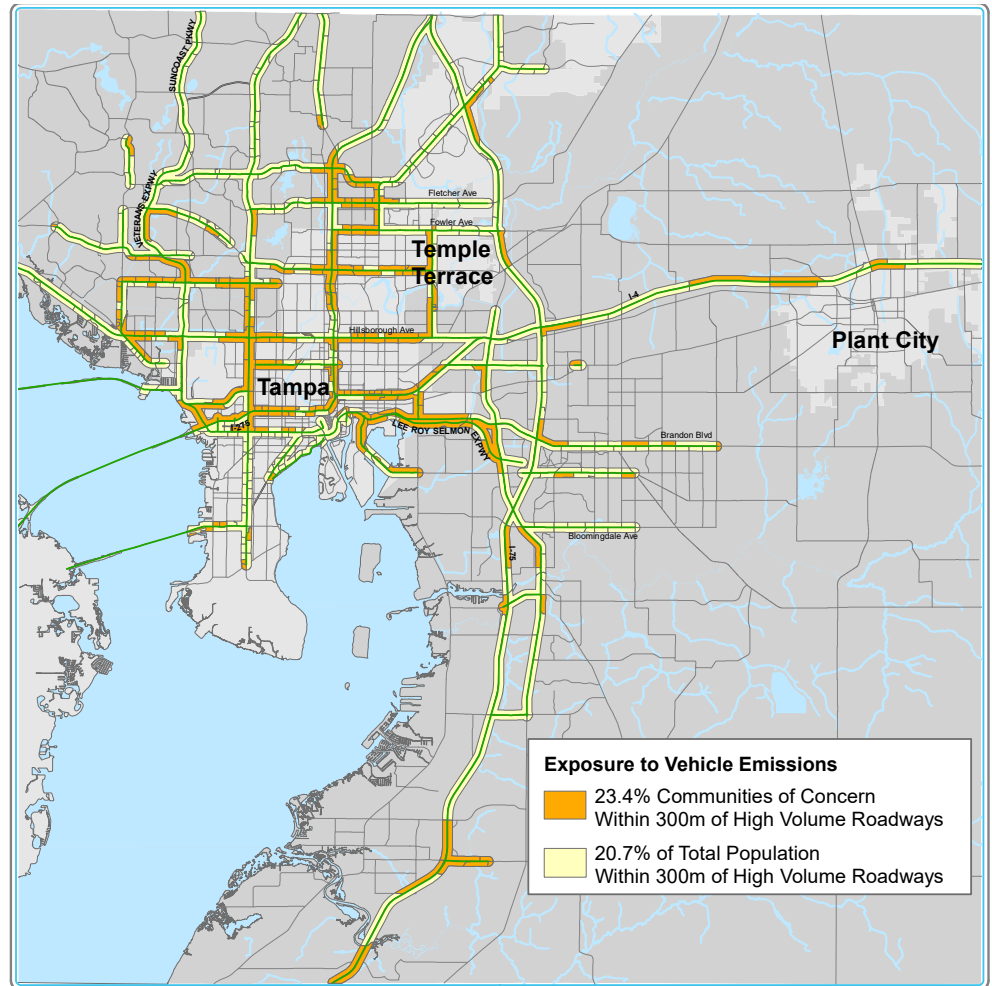


Air Quality

Air pollution is directly related to traffic volume and congestion, and is a public health threat in almost every urbanized area of the United States.

National air quality standards are enforced at the state and local levels by the Florida Department of Environmental Protection and the Environmental Protection Commission of Hillsborough County (EPC). The MPO plays a role in meeting our air quality standards by adopting transportation policies that support local pollution control.

According to the EPC, over the past 4-5 years, the number of days when Hillsborough County had unhealthy days due to ozone has remained generally unchanged. While alternative fuels are gaining popularity, increases in vehicle miles traveled (VMT) and traffic congestion are offsetting ozone emissions savings that could be gained from electric vehicle use.



In both 2016 and 2017, Hillsborough County experienced 3 days per year with ozone readings greater than 70 parts per billion, which is the current health-based standard. Ground level ozone, also known as smog, is created when Nitrogen Oxides (NOx) from gasoline combustion react with Volatile Organic Compounds in the sunlight. Areas of high automobile traffic often witness smog in the air, as the amount of NOx emissions can be high, which can impair breathing among those with asthma, older adults, young children, and people who are active outdoors.³

Though air quality across all of Hillsborough County continues to meet the health-based standard, the County's **adult asthma rate of 9.2% ranks the highest among other large counties in Florida.**⁴ Health studies show a clear link among asthma rates, traffic volumes, and proximity to major roadways. Concentration of traffic pollutants is highest at the tailpipe and diminishes to background levels at a range of between 150 to 300 meters, depending on traffic volume. This means those living within 150 meters of roads with >30,000 vehicles per day, approximately 4% of the total US population, have the greatest exposure to traffic-related air pollution. **11% of Hillsborough County's population lives within 150 meters of a high volume road.**

Nearly one-fifth of Hillsborough County's total population lives within 300 meters, and this figure is even higher among vulnerable populations. Approximately one-quarter of those living within a Community of Concern (a community experiencing any combination of low-income, high proportion of racial minorities, zero-vehicle households, limited English proficiency, individuals with disabilities) also live within 300 meters of a high volume road. The health effects of living near high volume roads are exacerbated by the amount of congestion along those corridors.

³ 2018. US Environmental Protection Agency. Health Effects of Ozone Pollution. <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>.

⁴ 2018. Florida Department Of Health Community Health Assessment 2015/2016.



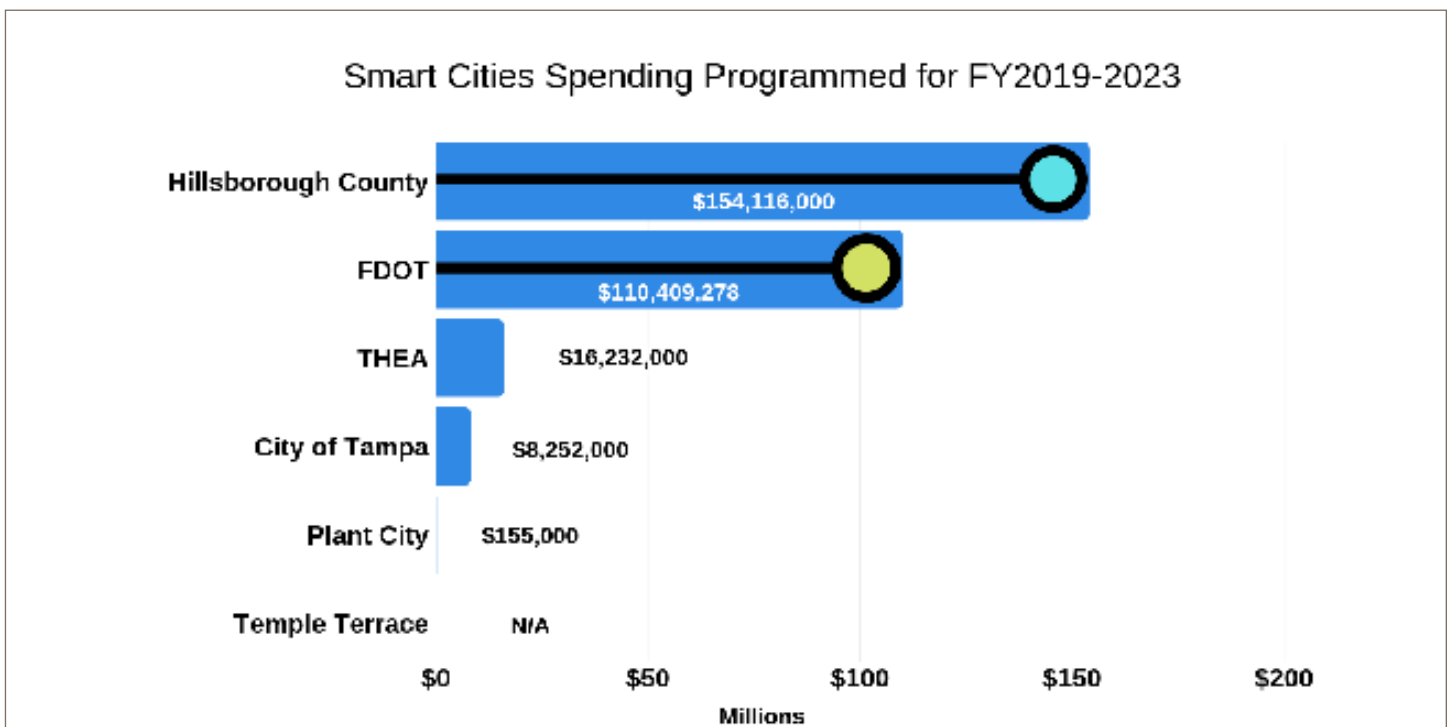
Even if we were able to build all of the costly road widening projects, we would still be facing congested roads. For this reason, the federal government requires a congestion management process with strategies other than road widening. In the *Imagine 2040 Plan*, the Hillsborough MPO identified 640 intersections needing improvements. Examples include turn lanes at congested intersections; real-time traffic monitoring and management; and, dynamic and responsive traffic signals.

The current Capital Improvements Programs (CIPs) of Hillsborough County, FDOT, THEA, and the cities of Tampa and Plant City include many Smart Cities investments in operations and other capacity management projects. These investments will be programmed over the next five years.

Over that time period, the jurisdictions within Hillsborough County have budgeted more than \$298 million for Smart Cities projects, amounting to an average of **\$60 million per year**. These allocations were programmed prior to approval of the countywide surtax referendum, meaning that future investments in this program category will be higher than what is represented below.



An innovative solution to congestion is planned for I-4. This corridor will be instrumented with technology to proactively inform users of traffic jams and quickly deploy resources to clear incidents.



Real Choices When Not Driving



Communities of Concern

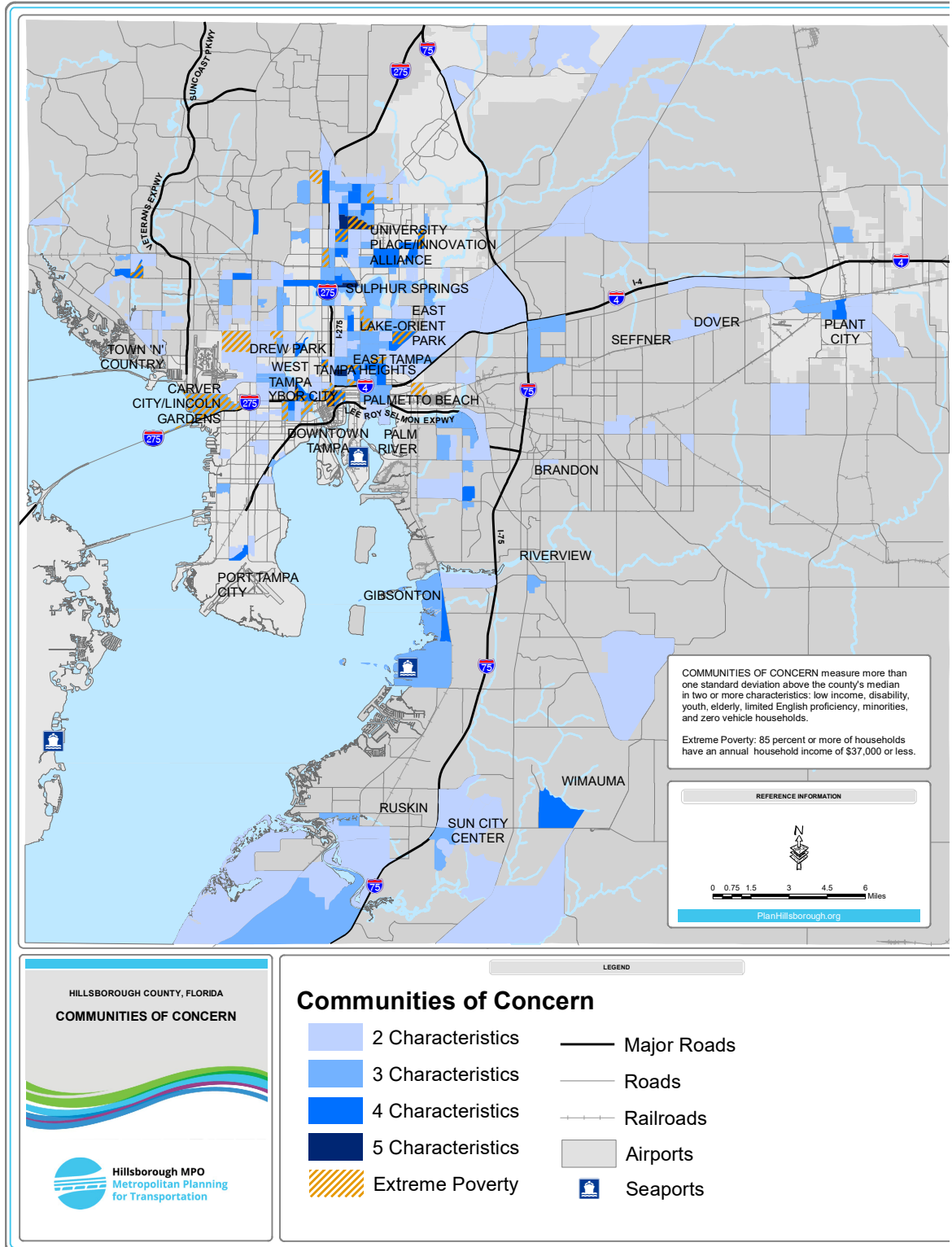
An important aspect of the Real Choices When Not Driving program is to provide independence for those who cannot drive or do not own a car.

According to a 2015 US Census Bureau estimate, nearly 93% of residents in Hillsborough County live in a household with a vehicle. Allowing the 7.1% of individuals without a vehicle - **nearly 100,000 people** - to access jobs, schools, health services, and grocery stores is a significant challenge to overcome.

Access to transit, trails, and safe pedestrian networks provides real transportation options for residents living in Communities of Concern (COCs), which often have the fewest mobility options. Transportation disadvantaged residents often rely on transit, walking, and biking options to get to their destinations.

Residents living in these areas are at a 20% greater risk of being in a severe crash than those who don't live in a COC.

By mapping out the COCs, we are better able to respond to their mobility needs. Community characteristics include income, disability, youth, elderly, limited English proficiency, minorities, and zero-vehicle households. More information is available in the MPO's Inclusivity Plan.



Real Choices When Not Driving

Transit Level of Service & Walk/Bike Level of Traffic Stress



To provide real choices for commuters other than just a car, it is important that both their home and job be located near good facilities. The data in the bar charts below show that despite 57% of job opportunities being located near bus facilities, transit access for employees is severely limited. Only 30% of the county's population has access to a facility, regardless of level of service, and about half of that population only has access to a facility with poor service.

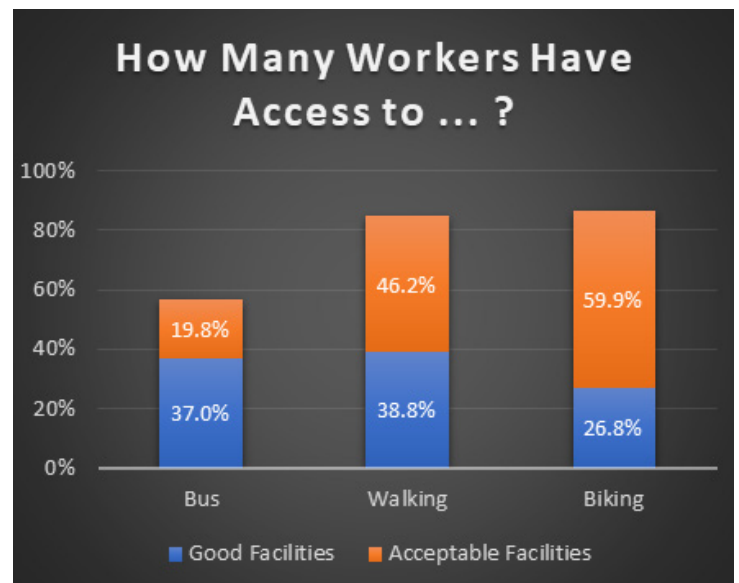
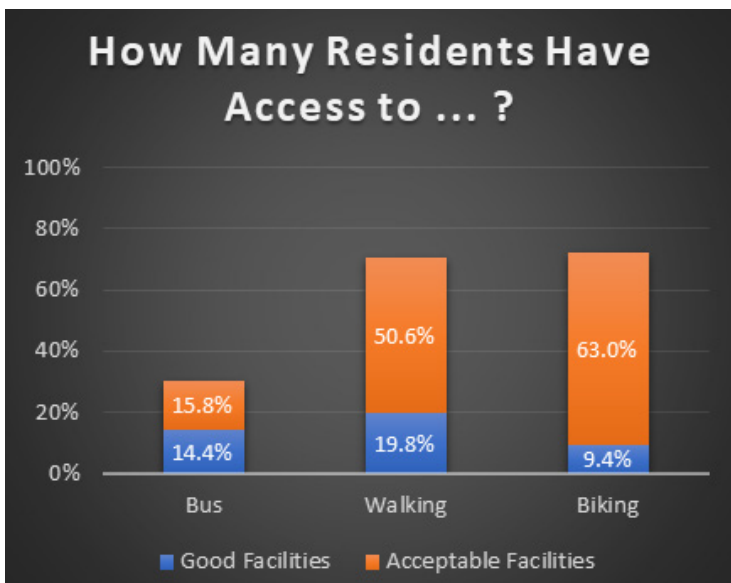
Walking/Biking Facilities Availability

The MPO established a Level of Traffic Stress (LTS) standard to more accurately assess walk & bike facilities by looking at factors like facility separation, signal timing at crosswalks, and others. This new standard will provide a way for the MPO to highlight corridors and intersections which are performing well, and those which could be enhanced for safety, comfort, and convenience. Bicycle and pedestrian LTS scores range from 1-4 with 1 being the best and 4 being the worst. **Only 20% of Hillsborough County's population lives near a good or excellent pedestrian facility (PLTS 1 or 2)**, and another 50% only have access to facilities ranked 3 or 4. For bicycle facilities, less than 10% of the County's population lives near a good or excellent facility, such as a multi-use trail, while almost 60% only have access to facilities ranked 3 or 4. View the percentages of population and jobs within ¼ mile of facilities in the charts below.

Transit Service Availability

The Hillsborough MPO's Transit Level of Service (TLOS) is an assessment standard developed from guidelines of FDOT's Quality/Level of Service Handbook. It is a way of measuring the quality of transit service on specific roadways using variables like rush hour traffic volumes on roads servicing HART buses, road capacity, travel speed, and bus service frequency. Roadways with transit service are then ranked on a scale from A to F.

Countywide, just over **14% of residents have access to good bus service**, defined as living within ¼ mile of a facility with the quality of Transit LOS ranked as either A or B. And only 37% of total employment opportunities across the county are within ¼ mile of good transit facilities.

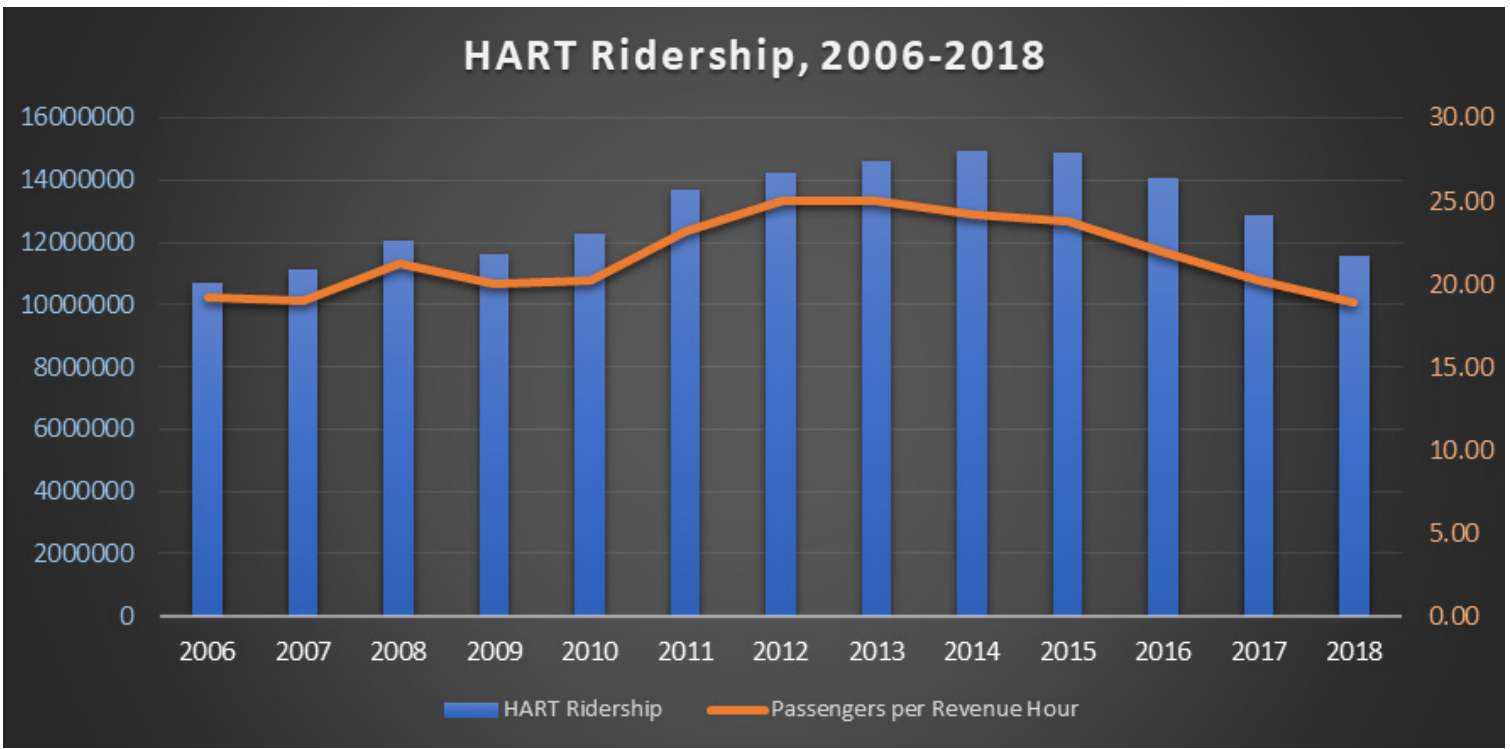


Real Choices When Not Driving

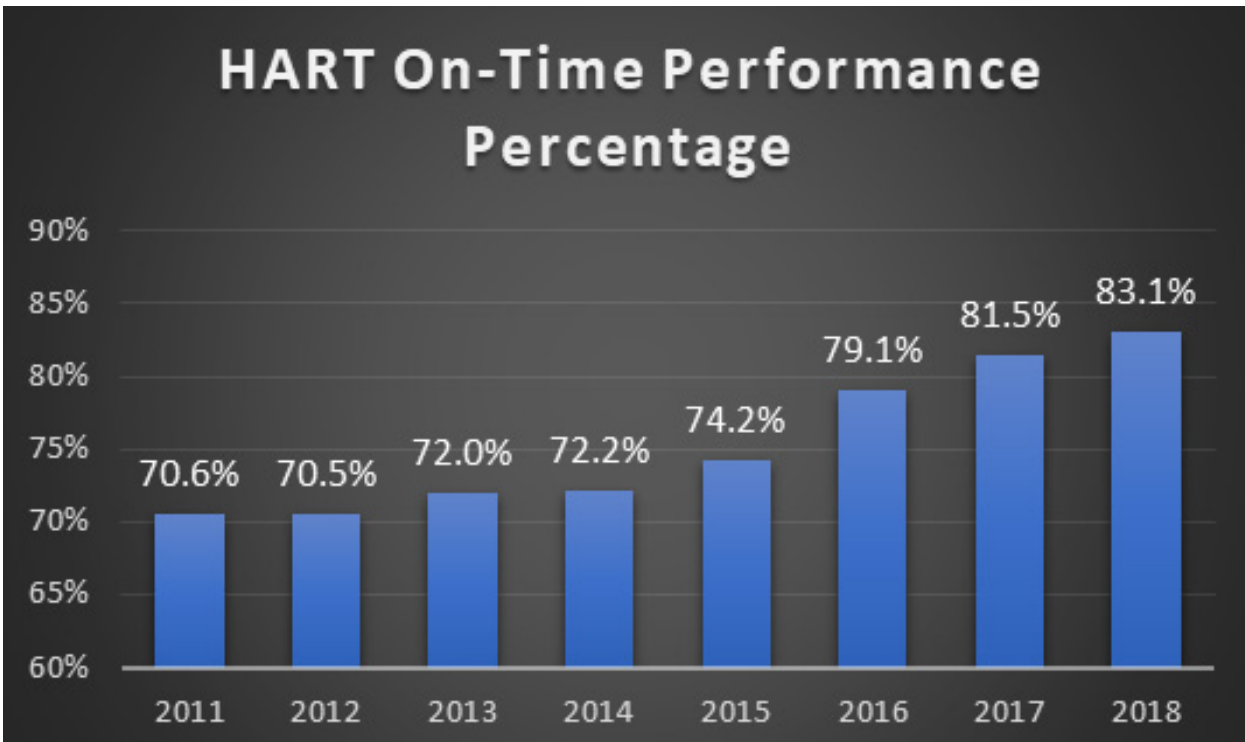


People and Jobs Served by the Bus System

Transit will continue to be a focus as people look to other transportation options beyond single occupancy vehicles.



HART ridership increased in the years following the great recession, and since then has declined to pre-recession levels. In October of 2017, HART implemented a comprehensive system redesign called Mission Max. The redesign was intended to deliver more efficient service by increasing frequencies on routes with higher-demand and enhancing connectivity by reducing trip times. As riders continue to adjust to the changes, longer-term results of HART's modifications will be seen in future years.



- HART bus passenger per revenue hour has fluctuated, but consistently exceeded goals
- On-time performance has increased from 70% to more than 83% in just 7 years



Real Choices When Not Driving

Access to Healthcare, Fresh Produce & Education

Physically healthy communities are key components of economically vibrant and successful communities. The prevalence of adult obesity in Hillsborough County, however, stands at 28%, which amounts to a 2% increase since 2010.

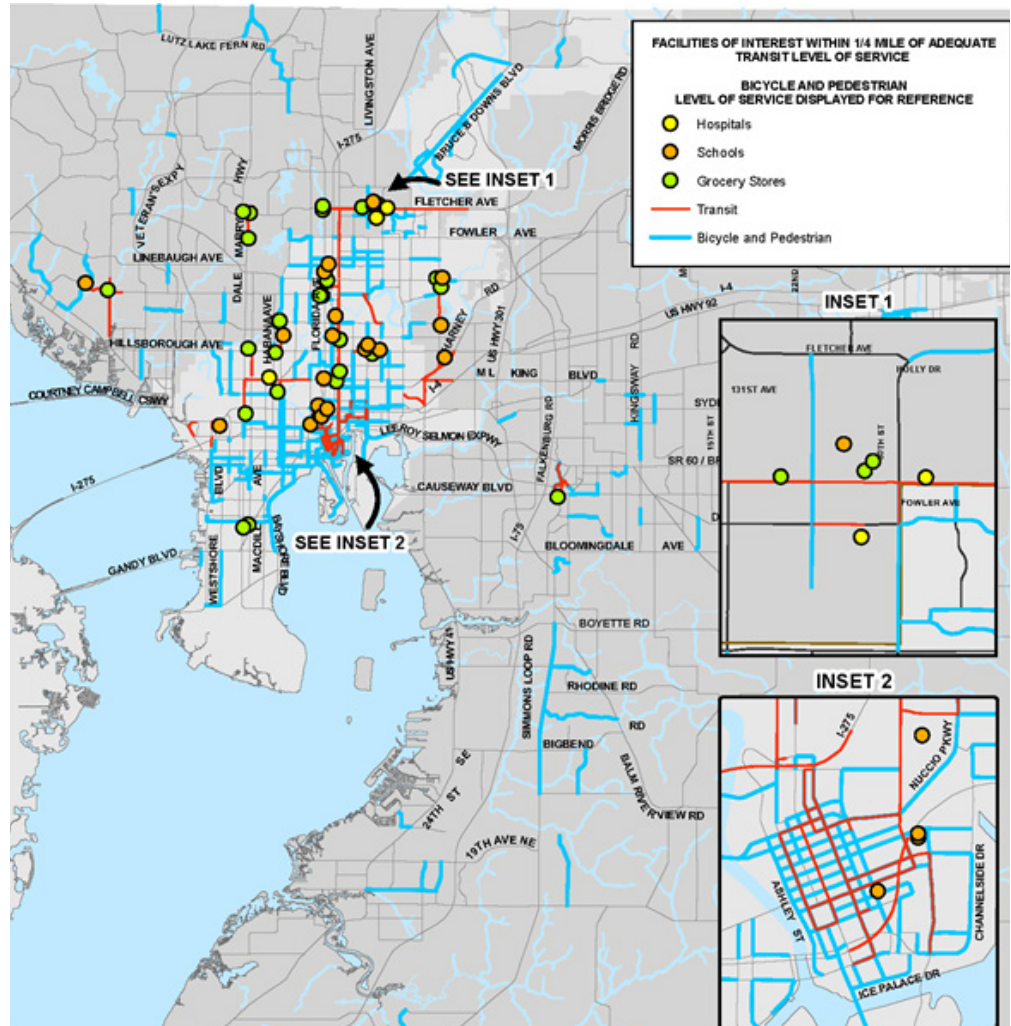
Hillsborough County's obesity rate, cancer incidence rate, and hypertension deaths are all higher than other large counties in Florida, including Broward, Miami-Dade, Orange, and Palm Beach. Type 2 diabetes is also on the rise within Hillsborough County. In 2010, 11.7% of adults had been diagnosed with the disease. By 2016, that number increased to 12.4%. Both physical inactivity and poor access to healthy food are risk factors for obesity and Type 2 diabetes.

With **only 16% of residents reporting that they eat adequate servings of healthy foods and about 25% reporting physical inactivity**, promoting greater physical activity by planning for pedestrians and cyclists is a key to improving health across the community.

Facilities that allow people to access health destinations, including hospitals, schools, and grocery stores, contribute to healthy communities. Level of Service and Level of Traffic Stress are important metrics because transit and active transportation modes are cost-efficient options for the transportation disadvantaged (TD) population, which includes:

- Persons with disabilities – physical or mental impairment that limits life activities
- Older adults – losing ability to drive on their own
- Individuals with lower incomes – may not have access to a personal car
- Children at risk – unaware of the traffic movements around them

Convenience, comfort, and safety are critical to ensure that Hillsborough County residents use alternative modes of transportation. For TD populations, paratransit services like Hillsborough County's Sunshine Line and HARTPlus may also provide options for eligible residents who have disabilities or limitations. Depending on the needs of the passenger, the services may taxi them to their destination or drop them to an accessible fixed route bus stop. With the transportation disadvantaged population expected to increase, the long range transportation plan estimates a **\$20 to \$32 million annual operating cost for paratransit services by 2040**.

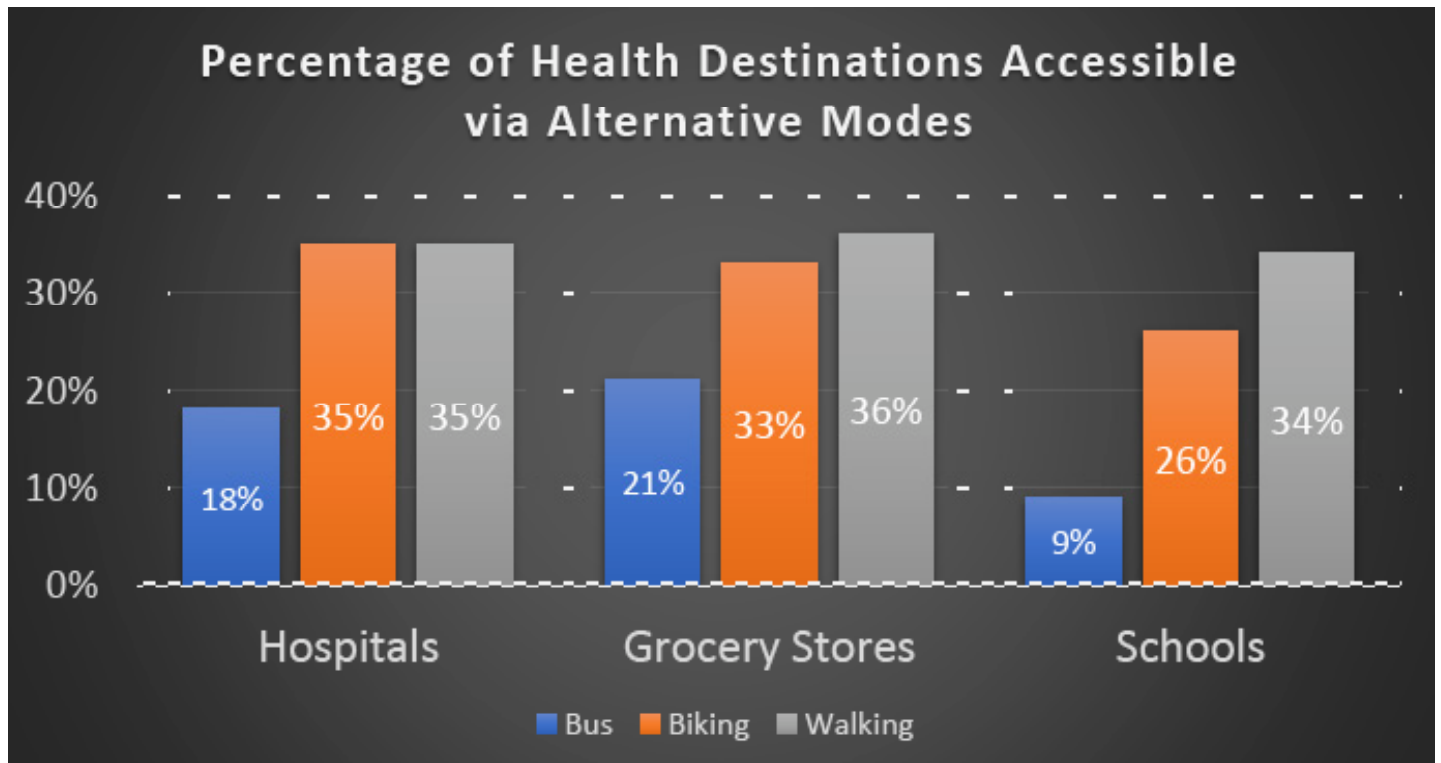


Real Choices When Not Driving



Access to Healthcare, Fresh Produce & Education

Within Hillsborough County, there are 17 hospitals, 136 grocery stores, and 280 schools. The bar chart below shows that for an average resident who relies on walking as their primary mode of transportation, approximately one-third of these destinations are accessible via good facilities. Cyclists have similar access to grocery stores and hospitals as pedestrians, but only about one-quarter of schools are accessible via good trails or sidepaths. For the average resident who relies on transit service, accessibility is limited compared to the other modes of travel. Only 9% of schools, 21% of grocery stores, and 18% of hospitals are accessible via good bus service. Multimodal accessibility is defined as having transit service, sidewalks, and trails or sidepaths located within ¼ mile of the intended destination.





Real Choices When Not Driving

Investments

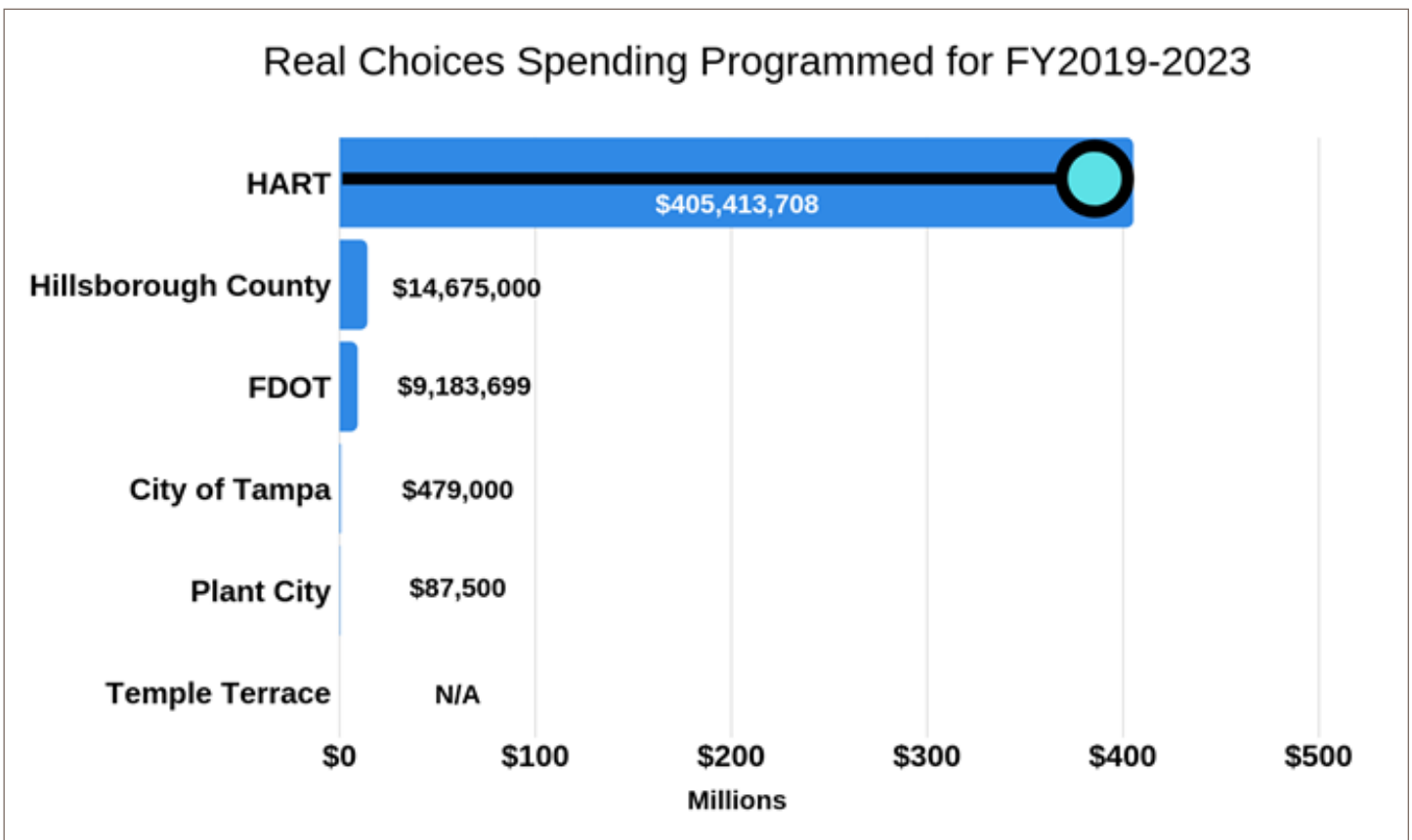
To support mobility for those who cannot or do not drive, the *Imagine 2040 Plan* includes a number of key investments: bus service expansion, transportation disadvantaged services expansion, and trail and protected sidepath network projects.

The current Capital Improvements Programs (CIPs) of Hillsborough County, Plant City, and

FDOT include many Real Choices investments in multimodal travel and other capacity management projects, averaging nearly **\$112 million per year**. These investments are programmed over the next five years, and the allocations are illustrated in the chart below. These allocations were programmed prior to approval of the countywide surtax referendum, meaning that future investments in this program category should be higher than what is represented below. Over the next five years, the jurisdictions within Hillsborough County have budgeted more than **\$552 million** for Real Choices When Not Driving projects, about 70% more than the 5-year total identified in the *Imagine 2040 Plan* for baseline improvements.



Real Choices Spending Programmed for FY2019-2023



Major Projects



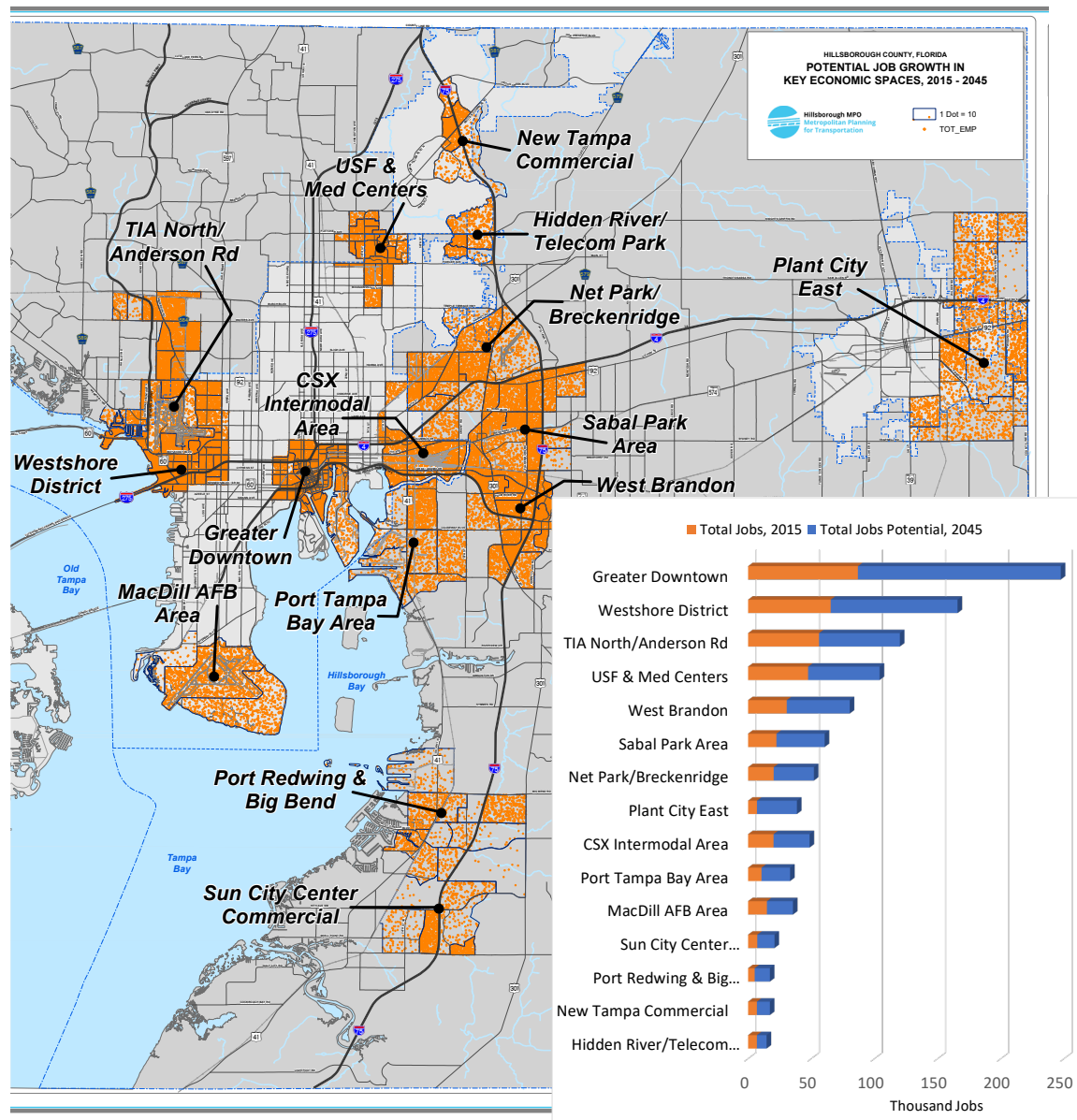
Investments for Economic Growth: Key Economic Spaces

Investing in transportation infrastructure is critical to growing an area's economy. Safe, reliable, and efficient transportation infrastructure must be in place in order for people and goods to move from one place to another. Growth is desirable, yet it also presents challenges. Like many other metropolitan areas, the Tampa Bay region suffers from congestion with 43% of interstates and 24% of other roads currently over capacity. According to one estimate, congestion on National Highway System roads cost drivers more than \$2 billion in lost productivity in 2016.⁵ With population projected to increase 40% by 2045, it is clear that this problem will intensify in the future.

For the *Imagine 2040 Plan*, capacity projects were defined as widening or extending major roads or building new fixed-guideway transit systems. To better focus limited resources on economic vitality and severe congestion, the MPO's list of capacity needs was screened by level of congestion and by proximity to employment centers. This means that the costliest projects are focused on corridors serving clusters of at least 5,000 jobs and major roads which are well beyond "full."

Over the next five years, \$1.14 billion will be spent to add capacity to the transportation network. This is an average of **\$227 million per year**. Some of the major projects include:

- Widening segments of US301, SR574, I275, SR60, I-75, Big Bend Rd, 19th Ave NE, and Lithia Pinecrest Rd
- Extending Citrus Park Drive, Davis Rd, and the Selmon Expressway
- New or major reconstruction of interchanges, such as US41 at the CSX rail crossing and I-75 at Big Bend Rd



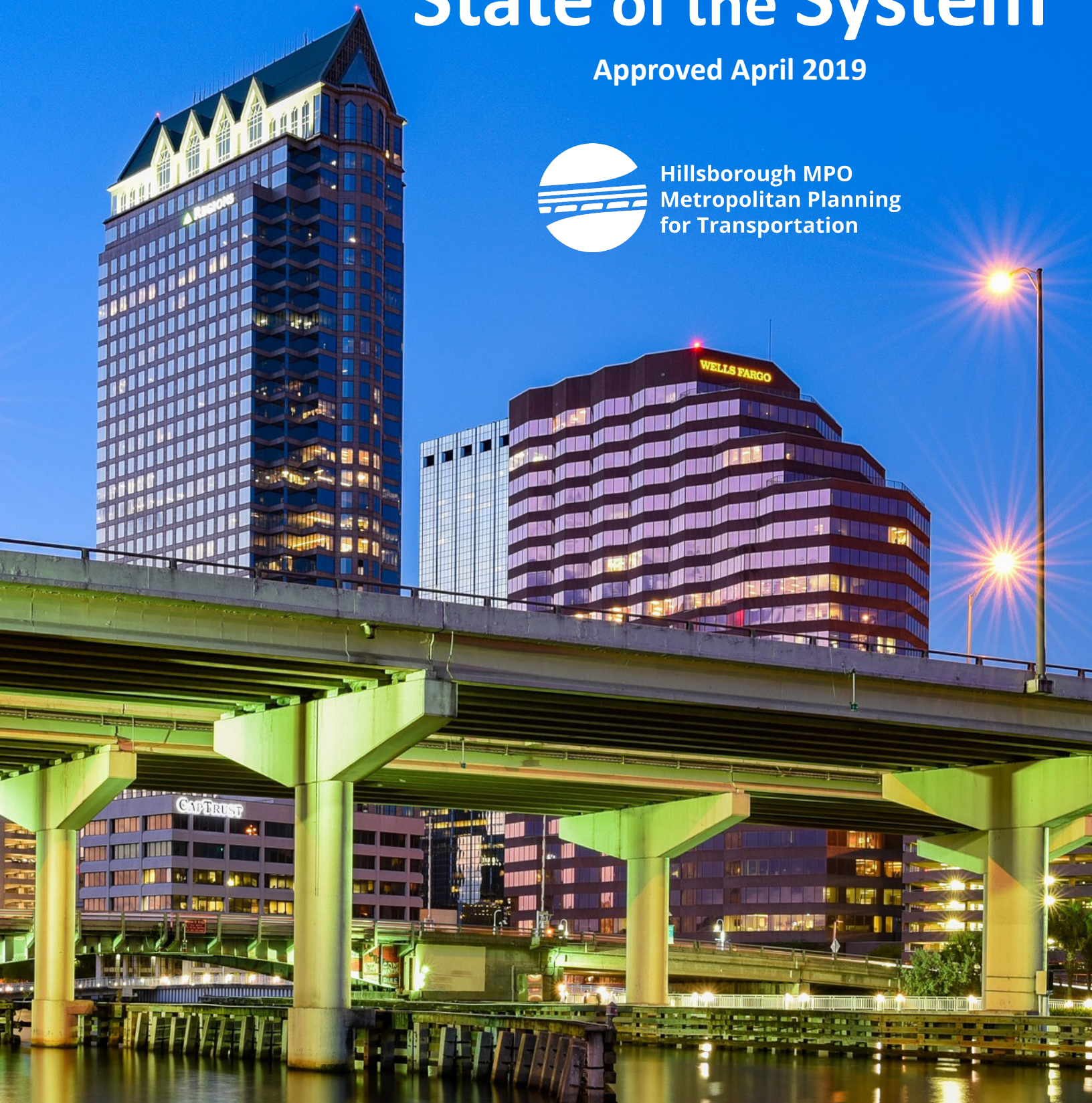
⁵ Estimates were produced using NPMRDS Analytics software, assuming an hourly passenger vehicle cost of \$17.91, hourly commercial vehicle cost of \$100.49, and a 90/10 passenger/truck split.

State of the System

Approved April 2019



Hillsborough MPO
Metropolitan Planning
for Transportation



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