



Hillsborough TPO
Transportation
Planning Organization

2050 LRTP Needs Assessment for State of Good Repair and Resilience

presented to

Hillsborough TPO and Committees

presented by

Cambridge Systematics, Inc.

Outline

- Objectives
- Data and Assumptions
- Needs Assessment Results
 - » Pavement Asset Needs
 - » Bridge Asset Needs
 - » Transit Asset Needs
 - » Resilience Needs
- Main Conclusions
- Q&A

Scope - Objectives

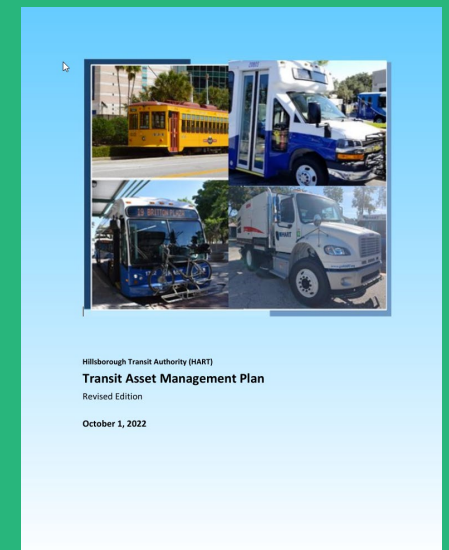
- Perform a State of Good Repair (SGR) and Resilience analysis as part of 2050 LRTP update
 - » Analysis of current and future needs to achieve **SGR** of pavement, bridges, and transit assets
 - » Assessment of investment needs to increase **resiliency** of assets to natural disasters and extreme weather



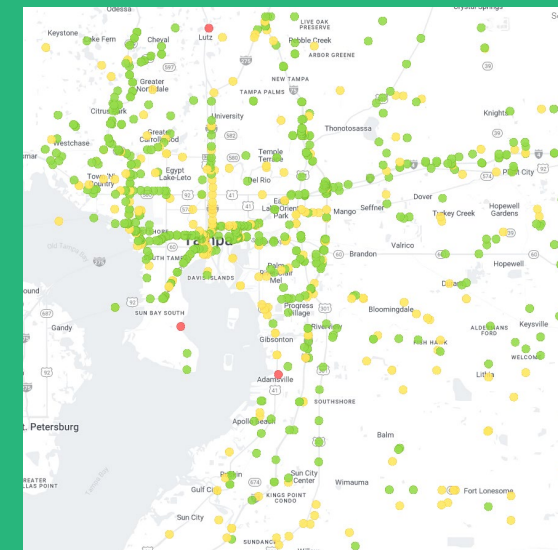
Cover of the 2045 LRTP Good Repair Needs Assessment

Data and Assumptions

- Data requested on pavement, bridge, and transit assets from each stakeholder
 - » Including condition, maintenance, costs, and budget information
- When data was not available, gaps were filled with assumptions informed by official documents and external sources, such as
 - » Budget from 2050 LRTP baseline spending, compiled by TPO
 - » Preservation unit costs from 2022 FDOT Transportation Asset Management Plan
 - » Bridge ownership from FHWA LTBP InfoBridge



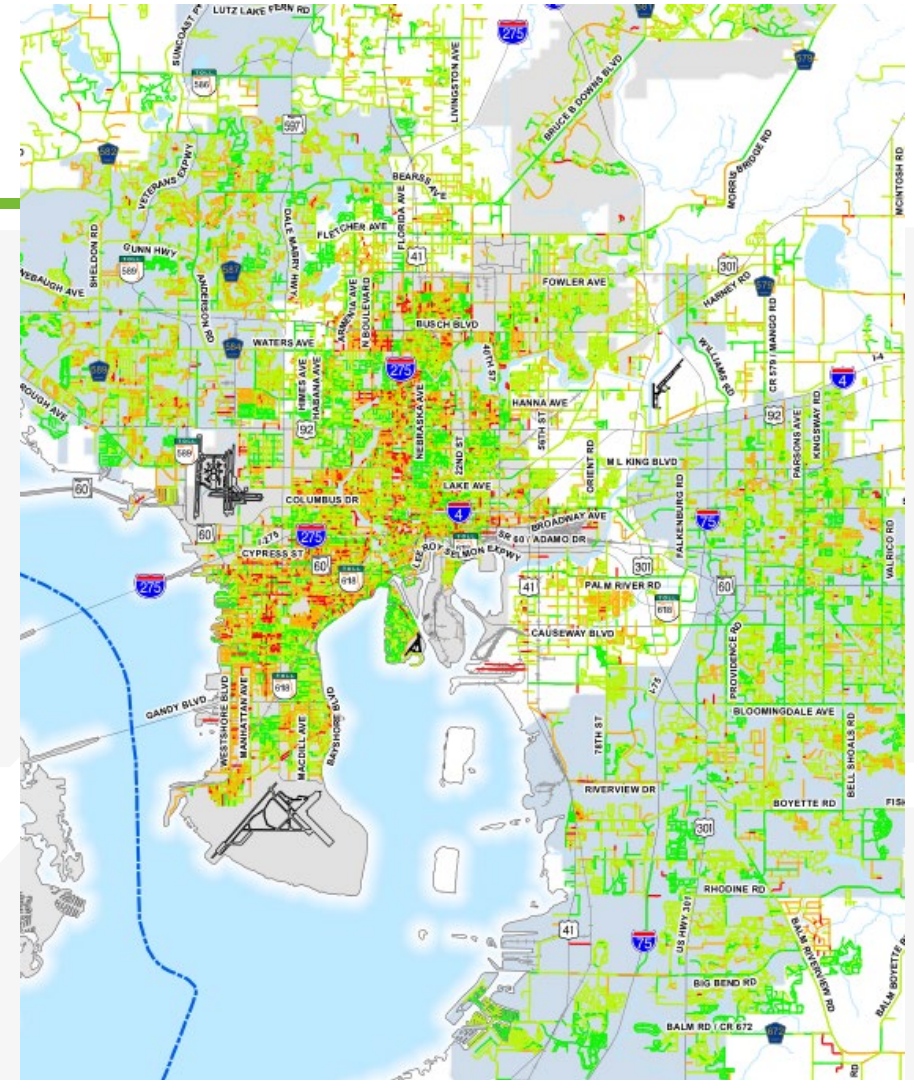
Covers of FDOT's Transportation Asset Management Plan and HART's Transit Asset Management Plan



Map of bridges in Hillsborough County, from FHWA's InfoBridge website

Pavement Asset Needs

- Trend Spending
if existing spending levels continue to 2050
 - » \$136.2M annually for pavement preservation
 - » Funding shortfall results in only **28% of roads achieving goal** to resurface once every 12–20 years
 - » Funding shortfall varies significantly across stakeholders
- Performance Spending
existing spending + additional funding sources
 - » **Additional \$86.9M annually** will result in all roads resurfaced within the target resurfacing cycle
 - » Typical roads would be **resurfaced once every 18 years**



Pavement condition map from Hillsborough County 2021
State of the System

Bridge Asset Needs

- **Trend Spending Level**
if existing spending levels continue to 2050
 - » \$19.0M annually for bridge preservation
 - » Funding shortfall results in **72% of bridges achieving goal** of rehabilitation every 40 years
 - » Funding shortfall varies significantly across stakeholders

- **Performance Spending Level**
existing spending + additional funding sources
 - » **Additional \$7.4M annually** will result in all bridges preserved within the target preservation cycle



Transit Asset Needs

- HART operating scaled-back service
(fleet 32% smaller, compared to 2019)
- Trend Spending Level
if existing spending levels continue to 2050
 - » \$12.0M annually for bus replacement
 - » Fleet of 132 buses and **0% older than 10 years**
 - Average bus fleet age of 4.6 years
 - 3.8 road calls each weekday
 - » The Administration and the Heavy Maintenance buildings are overdue for replacement
- Performance Spending Level
existing spending + additional funding sources
 - » **Trend Fleet Spending Level must be sustained** to meet FTA recommended benchmarks
 - » **Over \$105 million of backlogs** in transit building maintenance

Resilience Needs

- Trend Spending Level
if existing spending levels continue to 2050
 - » Stormwater
 - Current funding: \$1.6M per year
 - » Road Maintenance
 - Current funding*: \$82.3M per year
- Performance Spending Level
existing spending + additional funding sources
 - » Stormwater Resiliency Improvements:
 - Critical roads that are moderately to highly vulnerable: 71 miles
 - Additional \$14.8M annually for 20 years
 - » Road Resiliency Improvements (*hardening pavement & sub-base, raising profile of road, shoreline preservation*):
 - Critical roads that are moderately to highly vulnerable: 71 miles
 - Additional \$67.4M annually for 20 years

* Local government capital improvement programs & Florida DOT Work Program

Main Conclusions

➤ Pavement and Bridge Asset Needs

- » Overall **current spending levels are insufficient** to maintain pavement and bridges in the Hillsborough region at target preservation cycles
- » **Additional \$94M annually** would achieve goal of all pavement resurfaced every 12–20 years and all bridges rehabilitated every 40 years

➤ Transit Asset Needs

- » **Over \$105 million of backlogs in transit building maintenance**, including replacement of HART's heavy maintenance facility, which is already past the end of its useful life and in marginal condition
- » **Current spending is sufficient to maintain current bus fleet**; HART operating scaled-back service compared to 2019, with reduction in bus fleet size (32% smaller). Additional analysis will need to be conducted if fleet need changes.

➤ Resilience Needs

- » Current spending on stormwater only accounts for **11% of the funding needed to improve stormwater/drainage** on critical roads that are moderately to highly vulnerable
- » **Funding needed** to harden/protect critical roads that are moderately to highly vulnerable **is about 82% of the entire current road maintenance budget**

Q&A

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