

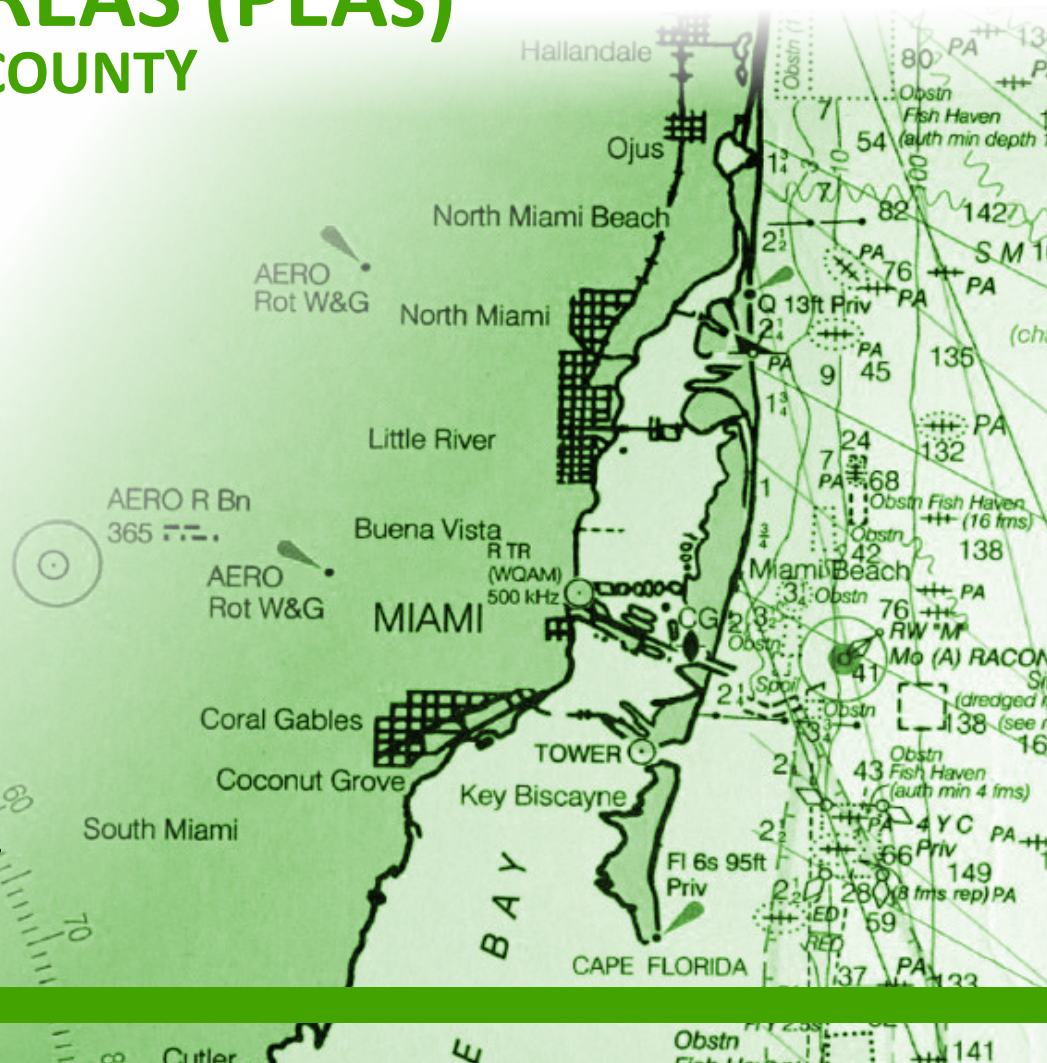


FEDERAL PLANNING EMPHASIS AREAS (PEAs) FOR MIAMI-DADE COUNTY

PREPARED FOR



PREPARED BY



NOVEMBER 2017



FEDERAL PLANNING EMPHASIS AREAS (PEAs) FOR MIAMI-DADE COUNTY

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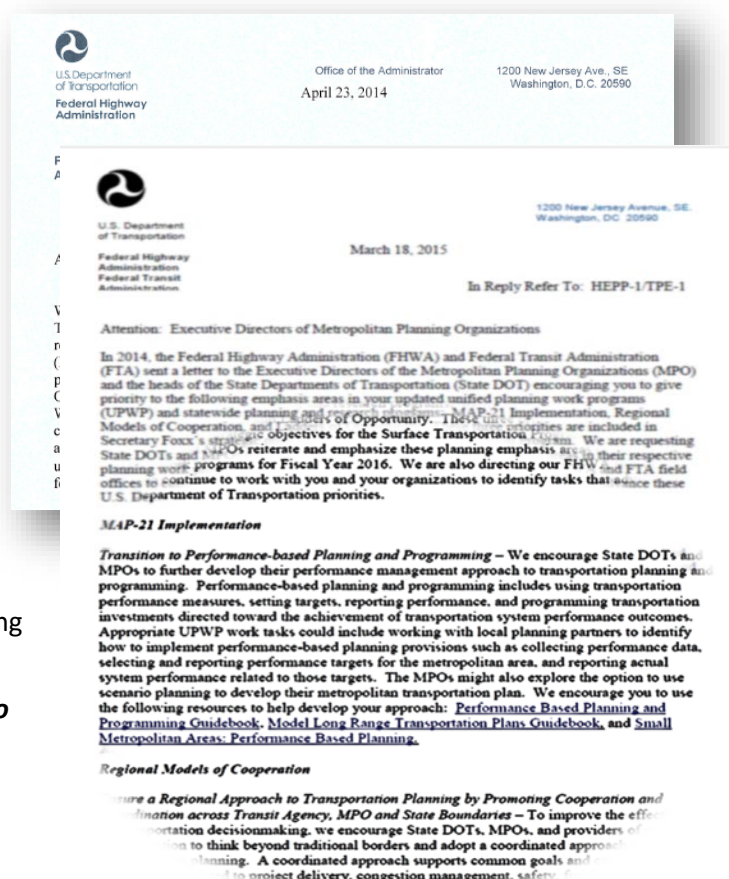
FEDERAL PLANNING EMPHASIS AREAS (PEAs) FOR MIAMI-DADE COUNTY

EXECUTIVE SUMMARY

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) jointly issued a set of federal Planning Emphasis Areas (PEAs) in 2014 to encourage Metropolitan Planning Organizations (MPO) and State Departments of Transportation to emphasize planning in three key areas – for MPOs within their unified planning work programs (UPWP), and for State Departments of Transportation within their statewide planning and research work programs, in response to United States Secretary of Transportation Foxx's strategic objectives for the Surface Transportation Program and pending transportation planning regulations. The federal PEAs include:

- **MAP-21 Implementation – Transition to Performance-Based Planning and Programming**
- **Regional Models of Cooperation – Ensure a Regional Approach to Transportation Planning by Promoting Cooperation and Coordination across Transit Agency, MPO and State Boundaries**
- **Ladders of Opportunity – Access to Essential Services**

In 2015, FHWA and FTA sent a follow-up letter to MPOs and State Departments of Transportation encouraging them to give priority to these PEAs in their respective work programs. The purpose of this study, is to develop process improvement recommendations to ensure that the federal PEAs are



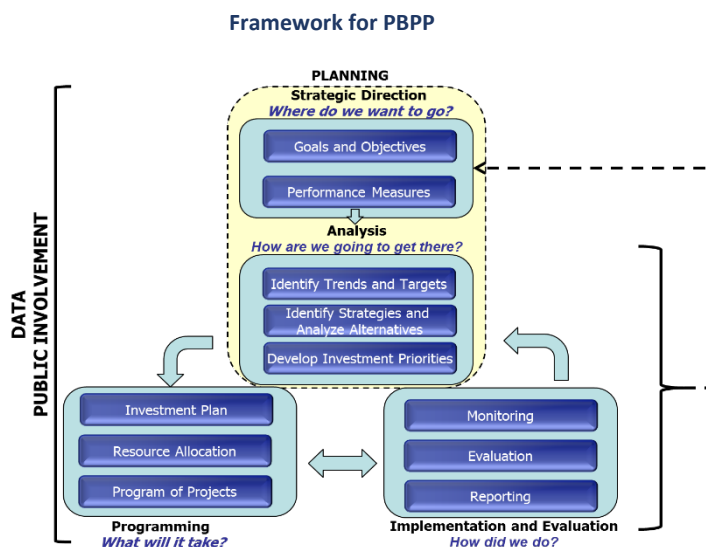


addressed in the Miami-Dade TPO's 3-C planning process; a process that is cooperative, continuous, and comprehensive. This Executive Summary provides a brief overview of the PEAs and summarizes the requirements and recommendations.

All three federal PEAs contribute to improving the effectiveness of transportation decisionmaking. Of the three Federal PEAs, *MAP-21 Implementation – Transition to Performance-Based Planning and Programming* is the only one that is mandated by federal law. The other two, *Regional Models of Cooperation* and *Ladders of Opportunity* are encouraged by FHWA and FTA. The recommendations below are based on the requirements of the law, national publications, implementation of PEAs by peer MPOs, and consideration of existing practices by the Miami-Dade TPO.

MAP-21 Implementation

MAP-21 established a focus on performance-based planning and programming (PBPP) that required the metropolitan (and statewide) planning process to incorporate goals, measures, and targets to identify needed transportation improvements and to select projects. Performance-based planning is integrated throughout the metropolitan planning process and in the development of LRTPs.



Source: FHWA Performance-Based Planning and Programming Guidebook, Page iv.

Performance measures guide and support the performance-based planning process and are incorporated throughout the planning process. They are used in measuring success in achieving the plan's goals, scenario planning, system performance, and project evaluation.



Performance measures are used to:

- 1. Clarify the definition of goals
- 2. To monitor or track performance over time
- 3. As a reference for target setting
- 4. As a basis for supporting policy and investment decisions by comparing alternative options
- 5. To assess the effectiveness of projects and strategies ^{ES-1}

The MAP-21 National Goals and the Federal Planning Factors must be considered in developing the plan goals, objectives, and especially the performance measures of the LRTP.

Goal Area	MAP-21 National goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

Source: [23 USC 150(b)]

The National Performance Management Measures are based on the National Goals and are also required to be addressed in the system performance report in the LRTP.

National Performance Management Measure- Safety
1. No. of Fatalities
2. Fatality Rate per 100 million VMT
3. No. of Serious Injuries
4. Serious Injury Rate per 100 million VMT
5. No. of Combined Non-Motorized Fatalities and Serious Injuries
6. No. of Fatalities

Source: 23 CFR §924, 23 CFR § 490

National Performance Management Measure- Infrastructure
1. % of Interstate System Pavement in Good Condition
2. % of Interstate System Pavement in Poor Condition
3. % of Non-Interstate NHS Pavement in Good Condition
4. % of Non-Interstate NHS Pavement in Poor Condition
5. % of NHS Bridge Deck Area in Good Condition
6. % of NHS Bridge Deck Area in Poor Condition

Source: 23 CFR § 490

^{ES-1} Performance-Based Planning and Programming Guidebook, U.S. Department of Transportation, Federal Highway Administration, September 2013, Page 40.



National Performance Management Measure- System Performance	
1.	% Person-Miles Traveled on the Interstate that are Reliable
2.	% Person-Miles Traveled on the Non-Interstate NHS that are Reliable
3.	% Change in Tailpipe CO ₂ (greenhouse gas) Emissions on the NHS Compared to the Calendar Year 2017 Level
4.	Truck Travel Time Reliability (TTTR) Index
5.	Annual Hours of Peak Hour Excessive Delay Per Capita
6.	% Non-SOV Travel
7.	Total Emissions Reduction

Source: 23 CFR § 490

The Fixing America’s Surface Transportation Act (FAST Act), signed into law on December 4, 2015, supports and continues the overall performance program established under MAP-21.

Requirements and Recommendations

Address the two new Federal Planning Factors in the Planning Process:

- *Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation*
 - *Include a member or members from the following agencies to the planning process through the LRTP Steering Committee: Miami-Dade Office of Emergency Management, and the Miami-Dade Office of Resilience*
 - *Consider the location of flood zones and flood plains*
- *Enhance travel and tourism*
 - *Include a member or members from the following agencies to the planning process through the LRTP Steering Committee: Miami-Dade Visitors Bureau, and the Beacon Council, Miami-Dade County Economic Partnership*
 - *Enhance tourism – consider connections from major hotel clusters to major tourist attractions.*

Include a description of performance measures and performance targets used in assessing the performance of the transportation system in the LRTP in accordance with the National Goals.

- *Continue consideration of the National Goals in the development of the LRTP’s goals, objectives, and performance measures; describe the performance measures; and develop targets for the performance measures based on the National Goals that are assessing the transportation system.*
- *Evaluate the need to include near-term or mid-term targets.*

Integrate the goals, objectives, performance measures, and targets described in other State transportation plans and transportation processes including: The State asset management plan for the NHS, and the Transit Asset Management Plan.



- *Incorporate the goals, objectives, performance measures, and targets from other state transportation plans and transportation processes into the metropolitan planning process including: the State Asset Management Plan and the Transit Asset Management Plan.*

Include a system performance report in the LRTP and in subsequent updates evaluate the condition and performance of the transportation system with respect to the performance targets, and progress achieved in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data.

- *Develop a System Performance Report to be incorporated into the Miami-Dade TPO 2045 LRTP, and in subsequent updates in coordination with FDOT.*

The Transportation Improvement Plan (TIP) shall also address the effect projects in the TIP will have toward achieving the performance targets, as identified in the LRTP. The TIP should also link the investments of those projects to the performance targets.

- *The TIP shall include a description of the anticipated effect projects in the TIP will have on achieving the targets of the National Performance Management Measures. First, identify projects in the TIP that are related to: Safety, Bridge, Pavement, System Performance, and Congestion*
- *Link the investments of the identified projects to the performance targets.*

If multiple scenarios are considered in the development of the LRTP.

- *Analyze how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets.*

Additional Recommendations

Develop performance measures that have data available and are quantifiable.

- *As performance measures are developed, identify how they will be used in the planning process, to measure success in achieving the plan's goals, scenario planning, system performance, and/or project evaluation.*

Identify base conditions so performance can be tracked.

- *Expand the system performance measures to include those required under the National Performance Management Measures; Assessing Performance of the National Highway system, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program. Identify other system performance measures early in the process. Coordinate with the SEFTC RTTAC Modeling Subcommittee as to the information that can be provided by the Southeast Florida Regional Planning Model (SERPM) to measure system performance.*



Regional Models of Cooperation

Regional Models of Cooperation is the process for effective communication across traditional boundaries among transportation agencies to support common transportation planning goals including: congestion management, safety, freight, livability, economic development, and efficient project delivery. Regional Models of Cooperation enhances coordinated activities across jurisdictions such as data collection and sharing, travel demand modeling, and air quality modeling. Joint transportation plans and programs, corridor studies, and project planning may also be coordinated. Effective communication, improved decisionmaking, time savings, and reduced costs are some of the mutual benefits of agencies working together through Regional Models of Cooperation.

As a result of growth in South Florida and the 2000 Census, the Miami Urbanized Area was defined as the tri-county area of Palm Beach, Broward, and Miami-Dade counties which solidified their relationship. The Southeast Florida Transportation Council (SEFTC) was created to formalize regional coordination while maintaining their individual county MPO contexts. The SEFTC is made up of elected officials from the three MPOs. The Regional Transportation Technical Advisory Committee (RTTAC) is a working group that provides staff support and recommendations to the SEFTC Policy Board on technical issues. Three subcommittees support the RTTAC as staff-level working groups and includes:

- **RTTAC – Modeling Subcommittee**
- **RTTAC – Public Participation Subcommittee**
- **RTTAC – Transportation System Management & Operations (TSM&O) Subcommittee**

The Regional Models of Cooperation Handbook prepared by the United States Department of Transportation (USDOT), FHWA, and FTA, December 2016, showcases notable practices used by State Departments of Transportation, MPOs, transit agencies, and other transportation planning partners that work across jurisdictions to enhance transportation planning at a regional scale. The SEFTC is one of twenty notable practices in cross-jurisdictional transportation planning collaboration highlighted in this handbook.

Takeaways (From the Regional Models of Cooperation Handbook)

- SEFTC's successes are the results of over 10 years of continuous improvement in collaborative planning.
- SEFTC produces a regional LRTP and freight plan every five years.
- Each MPO maintains its own LRTP in addition to the SEFTC LRTP.
- Rotating hosting duties for meetings allows SEFTC's membership to travel throughout the region and achieve adequate representation.
- One of SEFTC's greatest accomplishments was the implementation of the 95 Express Lanes project.
- SEFTC jointly owns the Southeast Regional Planning Model, which is housed by FDOT District 4; moving forward, they will work to improve MPOs access to the tool via a cloud-based system.

Source: Regional Models of Cooperation Handbook, US Department of Transportation, Federal Highway Administration, Federal Transit Administration, December 2016



Recommendations

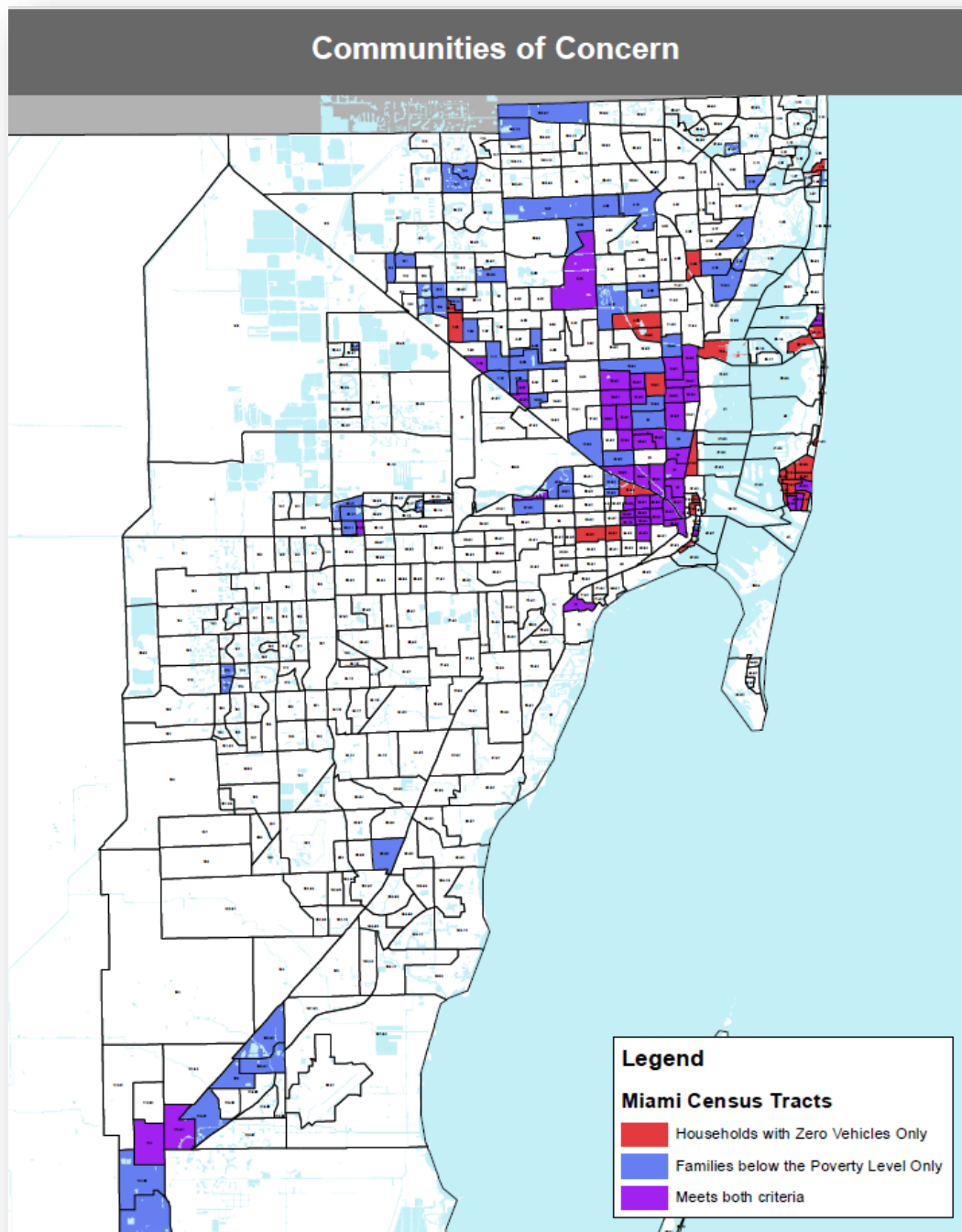
- ***Continue active and successful participation with the SEFTC and subcommittees.***
- ***Consider coordination with through the SEFTC in identifying performance targets and to coordinate performance approaches. Performance targets may be shared or coordination may help understand how the impacts from one TPO/MPOs may affect the other two TPO/MPOs. Also consider emerging technologies at the regional level through discussions and agreed upon assumptions for the region for planning and modeling for CAV.***

Ladders of Opportunity

Ladders of Opportunity, a policy initiative created by the USDOT in 2014, focuses on enhancing economic opportunities for underserved and disadvantaged populations (minorities, low-income populations, persons with disabilities, older adults, and individuals with limited English proficiency) by providing people safe, reliable, and affordable connections to essential services such as employment, education, healthcare, healthy food, and recreation through investments in transportation projects. FHWA and FTA agree that the transportation system is critical to make these connections to create economic growth and community revitalization for underserved/disadvantaged populations. Ladders of Opportunity connect people and promote opportunities within communities, ensure transportation projects connect and strengthen communities, and that transportation projects incorporate input from all people and communities in which they are located. Ladders of Opportunity encourage MPOs to: Consider connectivity and access for the traditionally underserved populations to essential services; and include an analysis of connectivity gaps with the development of their transportation plan and Transportation Improvement Plan (TIP) for funded work program activities. Communities of Concern were identified as census tracts that were at least one standard deviation above the average percentage and/or average density of Families below the Poverty Level or Households with Zero Vehicles.

Recommendations

- ***During the development of the LRTP, consider infrastructure and operational projects that provide connections of the Communities of Concern to essential services***
- ***Analyze connectivity gaps during the development of the 2045 LRTP and the 2018 – 2023 TIP for funded work program activities***
- ***Evaluate the effectiveness of public participation plans for engaging transportation disadvantaged communities in the transportation decisionmaking process***
- ***Update Section 5310 Coordinated Human Service Public Transportation Plans***
- ***Assess the safety and condition of pedestrian and bicycle facilities, and***
- ***Evaluate compliance with Americans with Disabilities Act, particularly around schools, concentrations of disadvantaged populations, social services, medical, and transit facilities.***



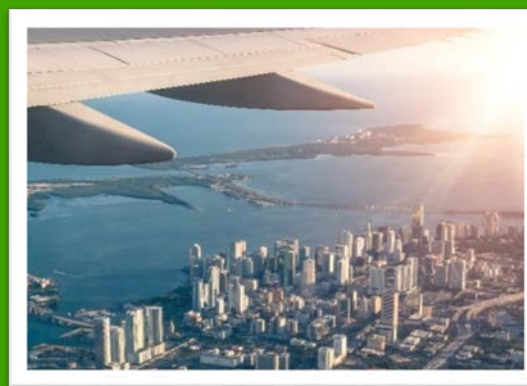
Data Source: US Census Bureau, MySidewalk, Miami-Dade County



FEDERAL PLANNING EMPHASIS AREAS FOR MIAMI-DADE COUNTY

01

INTRODUCTION





1. Introduction

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) jointly issued a set of federal Planning Emphasis Areas (PEAs) in 2014 to encourage Metropolitan Planning Organizations (MPO) and State Departments of Transportation to emphasize planning in three key areas – for MPOs within their unified planning work programs (UPWP), and for State Departments of Transportation within their statewide planning and research work programs, in response to United States Secretary of Transportation Foxx’s strategic objectives for the Surface Transportation Program and pending transportation planning regulations. The federal PEAs include:

- **MAP-21 Implementation – *Transition to Performance-Based Planning and Programming***
- **Regional Models of Cooperation – *Ensure a Regional Approach to Transportation Planning by Promoting Cooperation and Coordination across Transit Agency, MPO and State Boundaries***
- **Ladders of Opportunity – *Access to Essential Services***

In 2015, FHWA and FTA sent a follow-up letter to MPOs and State Departments of Transportation encouraging them to give priority to these PEAs in their respective work programs. The 2014 and 2015 letters from FHWA and FTA to MPOs and State DOTs are in the **Appendix**. The purpose of this study, is to develop process improvement recommendations to ensure that the federal PEAs are addressed in the Miami-Dade TPO’s 3-C planning process; a process that is cooperative, continuous, and comprehensive.

All three federal PEAs contribute to improving the effectiveness of transportation decisionmaking.



FEDERAL PLANNING EMPHASIS AREAS FOR MIAMI-DADE COUNTY

02

PLANNING EMPHASIS AREAS

CHAPTER HIGHLIGHTS:

- MAP-21 IMPLEMENTATION
- REGIONAL MODELS OF COOPERATION
- LADDERS OF OPPORTUNITY





2. Planning Emphasis Areas

The three PEAs described in this section are related to MPOs. This report does not attempt to cover all aspects and requirements related to State Departments of Transportation, transit agencies, or others.

MAP-21 Implementation

Moving Ahead for Progress in the 21st Century Act (MAP-21), signed into law on July 6, 2012 by President Obama, established a framework for performance-based planning and programming that required the metropolitan (and statewide) planning process to incorporate performance goals, measures, and targets; to identify needed transportation improvements; and to select projects. In addition, long range transportation plans (LRTPs) must identify and describe performance measures and targets to assess system performance and progress in achieving the plan's performance targets.

FEDERAL REQUIREMENTS FOR PERFORMANCE-BASED PLANNING

Metropolitan transportation planning: "[MPOs]..., in cooperation with the State and public transportation operators, shall develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning." 23 USC § 134(c)(1); 49 USC § 5303(c)(1). "The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals...." 23 USC §134(h)(2); 49 USC § 5303(h)(2)



The development of the National Goals for the Federal-aid highway program is the framework for the performance-based program. By states investing in their own projects, MPOs and states together can make progress towards the National Goals. The National Goals are listed below in **Table 1: National Goals**.

The National policy in support of performance management states that; “Performance management will transform the Federal-aid highway program and provide a means to the most efficient investment of Federal transportation funds by refocusing on national transportation goals, increasing the accountability and transparency of the Federal-aid highway program, and improving project decisionmaking through performance-based planning and programming.”[§1203; 23 USC 150(a)].

Table 1: National Goals

Goal Area	National goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies’ work practices

Source: [23 USC 150(b)]

MAP-21 also required performance measures and targets to be established as a collaborative effort between FHWA, States, MPOs, and other stakeholders for the areas listed below.

- Fatalities and serious injuries—both number and rate per vehicle miles traveled, on all public roads
- Combined fatalities and serious injuries for non-motorized travelers
- Pavement condition on the Interstate System and the National Highway System (NHS)

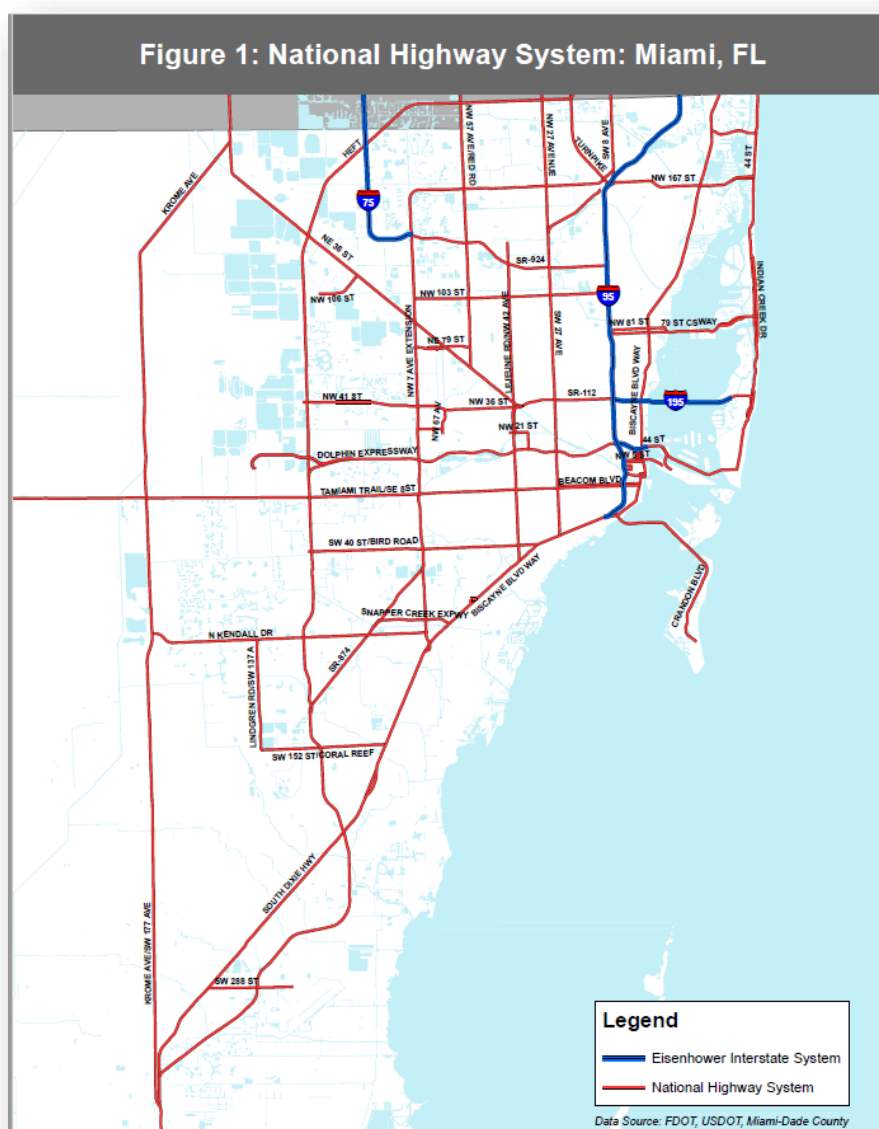


- Performance of the Interstate System and the NHS
- Bridge condition on the NHS
- Traffic congestion
- On-road mobile source emissions (for non-attainment and maintenance areas)
- Freight movement on the Interstate System

Figure 1: National Highway System: Miami FL depicts the Interstate and National Highway Systems in Miami-Dade County. The Interstate System is incorporated in the NHS.

The performance reporting requirements for LRTPs and TIPs are outlined in 23 CFR Part 450. LRTPs are required to describe the performance measures and performance targets and include a system performance report. The system performance report will address the condition and performance of the transportation system with respect to the performance targets that will be established; progress achieved towards meeting the performance targets compared to the baseline; and in subsequent reports compared to previous reports.

If MPOs implement scenario planning in the development of their LRTPs, the plan must include an analysis of how the preferred scenario improves the conditions and performance of





the transportation system and how changes in local policies and investments effect the costs necessary to achieve the performance targets. TIPs “shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan, linking investment priorities to those performance targets.” 23 CFR Part 450.326 (d). Also, as part of the quadrennial certification of a Transportation Management Area (TMA¹), each MPO must meet the requirement that it includes a performance-based approach within the metropolitan transportation planning process (see 23 USC 134(h)(2)).

The Fixing America's Surface Transportation Act (FAST Act), signed into law December 4, 2015 by President Obama, supports and continues this overall performance program and includes the National Performance Management Measures. The Federal Rules that establish these measures applicable to MPOs and State Departments of Transportation are:

- **Safety-** Highway Safety Improvement Program/Safety Performance Management Measures [23 CFR §924, 23 CFR § 490]
- **Infrastructure-**Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program [23 CFR § 490]
- **System Performance-**Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program [23 CFR § 490]

A table of the National Performance Management Measures can be found in the **Appendix**, which identifies the final rules, performance measures, effective date, State and MPO target dates, and how and where the measures should be reported. A summary of the National Performance Management Measures can be seen in **Table 2: National Performance Management Measures – Safety**; **Table 3: National Performance Management Measures – Infrastructure**; and **Table 4: National Performance Management Measures - System Performance** identified below.

Table 2: National Performance Management Measures - Safety

National Performance Management Measure- Safety		Applies To
1.	No. of Fatalities	All public roads
2.	Fatality Rate per 100 million VMT	All public roads
3.	No. of Serious Injuries	All public roads
4.	Serious Injury Rate per 100 million VMT	All public roads
5.	No. of Combined Non-Motorized Fatalities and Serious Injuries	All public roads
6.	No. of Fatalities	All public roads

Source: 23 CFR §924, 23 CFR § 490

¹ MPOs that serve an urbanized population greater than 200,000 people.



Table 3: National Performance Management Measures - Infrastructure

National Performance Management Measure- Infrastructure	Applies To
1. % of Interstate System Pavement in Good Condition	Interstate System
2. % of Interstate System Pavement in Poor Condition	Interstate System
3. % of Non-Interstate NHS Pavement in Good Condition	Non-Interstate NHS System
4. % of Non-Interstate NHS Pavement in Poor Condition	Non-Interstate NHS
5. % of NHS Bridge Deck Area in Good Condition	NHS
6. % of NHS Bridge Deck Area in Poor Condition	NHS

Source: 23 CFR § 490

Table 4: National Performance Management Measures - System Performance

National Performance Management Measure- System Performance	Applies To
1. % Person-Miles Traveled on the Interstate that are Reliable	Interstate System
2. % Person-Miles Traveled on the Non-Interstate NHS that are Reliable	Non-Interstate NHS System
3. % Change in Tailpipe CO ₂ (greenhouse gas) Emissions on the NHS Compared to the Calendar Year 2017 Level	NHS
4. Truck Travel Time Reliability (TTTR) Index	Interstate System
5. Annual Hours of Peak Hour Excessive Delay Per Capita	The NHS in urbanized areas with a population over 1 million for the first performance period and in urbanized areas with a population over 200,000 for the second and all other performance periods that are also in nonattainment or maintenance areas for ozone (O ₃), carbon monoxide (CO), or particulate matter (PM ₁₀ and PM _{2.5}).
6. % Non-SOV Travel	The NHS in urbanized areas with a population over 1 million for the first performance period and in urbanized areas with a population over 200,000 for the second and all other performance periods that are also in nonattainment or maintenance areas for ozone (O ₃), carbon monoxide (CO), or particulate matter (PM ₁₀ and PM _{2.5}).
7. Total Emissions Reduction	All projects financed with CMAQ funds in areas designated as nonattainment or maintenance for ozone (O ₃), carbon monoxide (CO), or particulate matter (PM ₁₀ and PM _{2.5})

Source: 23 CFR § 490



Regional Models of Cooperation

Regional Models of Cooperation is the process for effective communication across traditional boundaries among transportation agencies to support common transportation planning goals including: congestion management, safety, freight, livability, economic development, and efficient project delivery. Regional Models of Cooperation will enhance coordinated activities across jurisdictions such as data collection and sharing, travel demand modeling, and air quality modeling. Joint transportation plans and programs, corridor studies, and project planning may also be coordinated. Effective communication, improved decisionmaking, time savings, and reduced costs are some of the mutual benefits of agencies working together through Regional Models of Cooperation.

The Miami-Dade TPO, Broward MPO, and Palm Beach TPA have a long history of a cooperative working relationship. As a result of growth in South Florida and the 2000 Census, the Miami Urbanized Area was defined as the tri-county area of Palm Beach, Broward, and Miami-Dade counties which solidified their relationship. The Southeast Florida Transportation Council (SEFTC) was created to formalize regional coordination while maintaining their individual county MPO contexts. An interlocal agreement under Florida Statutes Chapter 339.175 was enacted by the three counties in January 2006 and the first SEFTC meeting was held soon thereafter. The SEFTC serves as a forum for policy coordination to develop and implement coordinated regional planning efforts, including the development of a:

- Regional long range transportation plan covering the tri-county region
- Regional project prioritization and selection process
- Regional public involvement process
- Performance measures to assess the effectiveness of regional coordination

The SEFTC is made up of elected officials from the three MPOs. The Regional Transportation Technical Advisory Committee (RTTAC) is a working group that provides staff support and recommendations to the SEFTC Policy Board on technical issues. The RTTAC includes staff from the three MPOs, Florida Department of Transportation (FDOT) Districts 4 and 6, Florida Turnpike Enterprise (FTE), Miami-Dade Expressway Authority (MDX), South Florida Regional Transportation Authority (SFRTA), Miami-Dade County Department of Transportation and Public Works, Broward County Transit, Palm Tran, South Florida Regional Planning Council, and the Treasure Coast Regional Planning Council. Three subcommittees support the RTTAC as staff-level working groups and includes:

- **RTTAC – Modeling Subcommittee-** This group focuses on developing guidelines, policies, and technical applications for travel demand modeling activities throughout the Southeast Florida region.



- **RTTAC – Public Participation Subcommittee-** This group focuses on regional-level public involvement activities for a coordinated regional approach and effective outreach strategies for current and future transportation investments.
- **RTTAC – Transportation System Management & Operations (TSM&O) Subcommittee-** This group coordinates the integration of TSM&O projects into the region’s planning process and promotes program resources to support these projects.

The three MPOs rotate hosting duties of the SEFTC and RTTAC subcommittees allowing their members to travel throughout the region.

The Regional Models of Cooperation Handbook prepared by the United States Department of Transportation (USDOT), FHWA, and FTA, December 2016, showcases notable practices used by State Departments of Transportation, MPOs, transit agencies, and other transportation planning partners that work across jurisdictions to enhance transportation planning at a regional scale. The SEFTC is one of twenty notable practices in cross-jurisdictional transportation planning collaboration highlighted in this handbook.

Ladders of Opportunity

Ladders of Opportunity, a policy initiative created by the USDOT in 2014, focuses on enhancing economic opportunities for underserved and disadvantaged populations (minorities, low-income populations, persons with disabilities, older adults, and individuals with limited English proficiency) by providing people safe, reliable, and affordable connections to essential services such as employment, education, healthcare, healthy food, and recreation through investments in transportation projects. FHWA and FTA agree that the transportation system is critical to make these connections to create economic growth and community revitalization for underserved/disadvantaged populations. Ladders of Opportunity connect people to opportunities and promotes opportunities within communities, ensures transportation projects connect and strengthen communities, and that

Takeaways (From the Regional Models of Cooperation Handbook)

- SEFTC’s successes are the results of over 10 years of continuous improvement in collaborative planning.
- SEFTC produces a regional LRTP and freight plan every five years.
- Each MPO maintains its own LRTP in addition to the SEFTC LRTP.
- Rotating hosting duties for meetings allows SEFTC’s membership to travel throughout the region and achieve adequate representation.
- One of SEFTC’s greatest accomplishments was the implementation of the 95 Express Lanes project.
- SEFTC jointly owns the Southeast Regional Planning Model, which is housed by FDOT District 4; moving forward, they will work to improve MPOs access to the tool via a cloud-based system.

Source: Regional Models of Cooperation Handbook, US Department of Transportation, Federal Highway Administration, Federal Transit Administration, December 2016



transportation projects incorporate input from all people and communities they are in. Ladders of Opportunity encourage MPOs to:

- Consider connectivity and access for the traditionally underserved populations to essential services; and
- Include an analysis of connectivity gaps with the development of their transportation plan and Transportation Improvement Plan (TIP) for funded work program activities.

The Ladders of Opportunity PEA suggest the following tasks:

- UPWP work tasks to include developing and implementing analytical methods to identify gaps in the connectivity of the transportation system
- Developing infrastructure and operational solutions that provide the public, especially the traditionally underserved populations, with adequate access to essential services
- Evaluating the effectiveness of public participation plans for engaging transportation disadvantaged communities in the transportation decisionmaking process
- Updating Section 5310 Coordinated Human Service Public Transportation Plans
- Assessing the safety and condition of pedestrian and bicycle facilities, and
- Evaluating compliance with Americans with Disabilities Act (ADA), particularly around schools, concentrations of disadvantaged populations, social services, medical, and transit facilities

**The FAST Act continues the support of
Ladders of Opportunity**

“provisions intended to improve transportation options, redevelop communities, and expand employment opportunities – particularly for low-income individuals, minorities, and persons with disabilities.”

*Source: The FAST Act: Increasing Transportation Choices and Opportunities,
Federal Highway Administration, Federal Transit Administration,
<https://www.transportation.gov/fastact/opportunities-factsheet>*

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FEDERAL PLANNING EMPHASIS AREAS FOR MIAMI-DADE COUNTY

03

EXPLORING EMPHASIS AREAS

CHAPTER HIGHLIGHTS:

- **NEW YORK**
 - PERFORMANCE-BASED PLANNING AND PROGRAMMING
 - MODELS OF REGIONAL COOPERATION
 - LADDERS OF OPPORTUNITY
- **ATLANTA**
 - PERFORMANCE-BASED PLANNING AND PROGRAMMING
 - MODELS OF REGIONAL COOPERATION
 - LADDERS OF OPPORTUNITY
- **SAN FRANCISCO**
 - PERFORMANCE-BASED PLANNING AND PROGRAMMING
 - MODELS OF REGIONAL COOPERATION
 - LADDERS OF OPPORTUNITY
- **BALTIMORE**
 - PERFORMANCE-BASED PLANNING AND PROGRAMMING
 - MODELS OF REGIONAL COOPERATION
 - LADDERS OF OPPORTUNITY



3. Exploring Emphasis Areas

Research was conducted on the background, rules/suggestions, and inclusion/application of the PEAs. The MAP-21 Implementation is the only PEA that is guided by federal law as outlined in MAP-21 and continued in the FAST Act. Four (4) Long Range Transportation Plans (LRTPs) were reviewed in detailed for the inclusion and application of the PEAs. Note that two of the LRTPs were adopted prior to the FAST Act and identification of the MAP-21 Implementation, Regional Models of Cooperation, and Ladders of Opportunity PEAs. However, these PEAs were a focus area and or addressed in the LRTPs selected for review which include:

- *New York Metropolitan Planning Council (NYMTC), New York, New York Plan 2040, The Regional Transportation Plan, A Shared Vision for a Sustainable Region*
- *The Atlanta's Regions Plan, Transportation (Also, referred as the Regional Transportation Plan, RTP), Atlanta, Georgia*
- *Plan Bay Area, Strategy for a Sustainable Region, San Francisco, California*
- *Maximize 2040: A Performance-Based Transportation Plan for a Greater Baltimore Region, Baltimore, Maryland*

New York

New York Metropolitan Planning Council (NYMTC)

Plan 2040, Regional Transportation Plan(RTP), A Shared Vision for a Sustainable Region

Adopted: September 4, 2013

Performance-Based Planning and Programming

At the time MAP-21 was signed into law (July 6, 2012), the NYMTC was well into the development of their 2040 RTP (NYMTC's LRTP). The RTP acknowledges the major changes to the metropolitan transportation planning process to include performance-based planning and performance management for both highways and public transportation.

The seven National Goals are identified and the requirements for states to establish performance targets and MPOs to set targets within 180 days after the relevant state or public transportation provider sets performance targets are noted. Other specific information was not detailed nor known at the time of the development of the RTP. The RTP states that the NYMTC will work toward addressing the MAP-21 performance measure requirements.

The NYMTC's Plan 2040 developed goals and objectives based on programs and review of goals and objectives from partner agencies. Desired Outcomes and Near-Term Actions are identified for each goal and are detailed in Chapter 1: The Shared Vision, Shared Goals.



The Shared Goals are:

- *Enhance the regional environment*
- *Improve the regional economy*
- *Improve the regional quality of life*
- *Provide a convenient and flexible transportation system within the region*
- *Enhance the safety and security of the transportation system for all users*
- *Build the case for obtaining resources to implement regional investments*
- *Improve the resiliency of the regional transportation system*

Performance Measures are used in the Congestion Management Process (CMP) to assess the effectiveness and efficiency of the roadway system and reported in the CMP status report which is prepared with each RTP cycle. The commonly used measures identified include: Demand-to-Capacity Ratio, Vehicle Hours of Delay, Person Hours of Delay, Average Travel Speed, Lane-Miles of Congestion, and Travel Time Index. The New York Best Practice Model (BPM) - NYMTC's in-house methodology for forecasting travel patterns and a CMP Post-Processor are used as the analysis tools to assess the performance measures.

Models of Regional Cooperation

The NYMTC is the MPO for the New York City Region including the five boroughs of New York City: Bronx, Brooklyn, Manhattan, Staten Island, and Queens and five counties including: Nassau, Suffolk, Westchester, Putnam, and Rockland. To promote regional collaboration within the NYMTC planning area, the ten-county region is divided into three sub-regions called Transportation Coordinating Committees (TCCs) and include: New York City (the five boroughs), Mid-Hudson South (also referred to as Lower Hudson Valley including: Putnam, Rockland, and Westchester counties); and Nassau-Suffolk (counties). These three TCCs provide a forum for planning at a localized level within the larger metropolitan region. The MPO regional coordination process is listed in Chapter 1: The Shared Vision, NYMTC Overview.

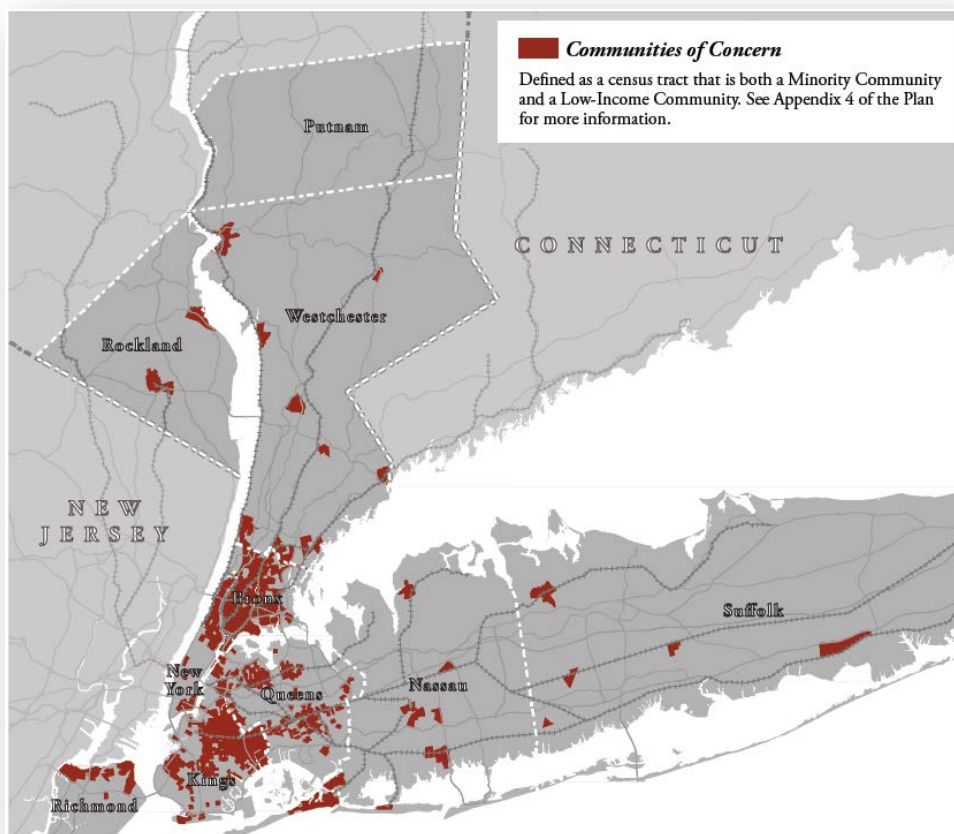
The NYMTC is part of a megaregion with other MPOs in the Northeast. As part of this effort, “NYMTC is part of a coordinated transportation planning Memorandum of Understanding (MOU) between the North Jersey Transportation Authority (NJTPA), the South Western Region Metropolitan Planning Organization (SWRMPO), the Greater Bridgeport / Valley Metropolitan Planning Organization (GBVMPO), and the Housatonic Valley Council of Elected Officials (HVCEO). The MOU recognizes that these metropolitan regions are interdependent of each other and share ecosystems, environments, transportation systems, and are socio-economically related. The implementation of this MOU is partially facilitated by the Metropolitan Area Planning (MAP) forum that is working on issues such as data exchange, information sharing on regional projects, and other transportation planning issues common to the MPOs.”²

² Plan 2040, *The Regional Transportation Plan, A Shared Vision for a Sustainable Region*, New York Metropolitan Planning Council (NYMTC), Chapter 1: The Shared Vision, page 29.



Ladders of Opportunity

To address Environmental Justice and Title VI, the RTP defines Communities of Concern as census tracts that have both a minority population and a low-income population. Minority communities were identified as census tracts that had 56 percent (the regional average) or greater of persons who are American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian and other Pacific Islander. Low income communities were identified as census tracts that have 15% (the regional average) or greater of persons at or below the poverty level. Census tracts that met both of these criteria were designated as Communities of Concern. Thirty percent, or 924 census tracts, were identified as Communities of Concern.



Source: Plan 2040 Regional Transportation Plan: A Shared Vision for a Sustainable Region, NYMTC, pg. 7-6

Communities of Concern were analyzed based on travel characteristics – mode of travel, travel time to work, and linguistic isolation – as defined by the US Census Bureau, “no person 14 years old and over speaks only English and no person 14 years old and over who speaks a language other than English speaks



English very well.” Steps were taken through the region to make sure that identified Communities of Concern throughout the region were included in the public involvement process.

Atlanta

Atlanta Regional Commission (ARC)

The Atlanta’s Regions Plan, Transportation (Also, referred as the Regional Transportation Plan, RTP)

Adopted: February 2016

Updated: May 2017

Performance-Based Planning and Programming

The RTP identified the MAP-21 Planning Factors and acknowledges that the FAST Act adds two additional planning factors. The ARC states that they make every effort to go above and beyond the minimum federal requirements whenever possible. Their process for the 2040 RTP was established to address the intent of the draft rules and regulations. Since the FAST Act was signed into law during their review and approval process, they addressed how the next update will address the changes enacted with the FAST Act in the RTP Future chapter. The RTP identifies the eight federal planning factors identified in MAP-21. The overarching goal of the *Atlanta Region’s Plan Transportation Element* is “ensure a comprehensive transportation network, incorporating regional transit and 21st Century technology”. The RTP is supported by seven objectives and 23 policies as defined below in **Figure 2: ARC’s Transportation Objectives and Policies**:

Figure 2: ARC’s Transportation Objectives and Policies³

1. Maintain and operate the existing transportation system to provide for reliable travel.
 - 1.1 Prioritize data-supported maintenance projects over expansion projects.
 - 1.2 Promote system reliability and resiliency.
 - 1.3 Promote transit and active transportation modes to improve access.
2. Improve transit and non-SOV options to boost economic competitiveness and reduce environmental impacts.
 - 2.1 Establish effective transit services that provide regional accessibility.
 - 2.2 Prioritize transit projects in areas with transit-supportive land use, plans and regulations.
 - 2.3 Promote bicycle transportation by developing safe and connected route options facilities.
 - 2.4 Promote pedestrian-friendly policies and designs.
3. Strategically expand the transportation system while supporting local land use plans.
 - 3.1 Prioritize solutions that improve multimodal connectivity.

³Plan 2040, *The Regional Transportation Plan, A Shared Vision for a Sustainable Region*, New York Metropolitan Planning Council (NYMTC), Chapter 1: The Shared Vision, page 47.



- 3.2 Direct federal funding for road capacity expansion to the regional strategic transportation system, including the managed lanes system.
- 3.3 Road Expansion projects in rural area should support economic competitiveness by improving multi-modal connectivity between centers.
- 3.4 Implement a complete streets approach on roadway projects that is sensitive to the existing community.
- 4. Provide for a safe and secure transportation system.
 - 4.1 Promote and enhance safety across all planning and implementation efforts, including support for the state strategic highway safety plan.
 - 4.2 Coordinate security and emergency preparedness programs across transportation modes and jurisdictions.
- 5. Promote an accessible and equitable transportation system.
 - 5.1 Maintain and expand transportation options that serve the region's most vulnerable populations.
 - 5.2 Improve connectivity around transit stations and bus stops for all users.
 - 5.3 Increase funding for Human Services Transportation (HSR) and Medicaid transportation services.
 - 5.4 Increase access to areas with essential services, including healthcare, education, recreation, entertainments, and commercial retail.
- 6. Support the reliable movement of freight and goods.
 - 6.1 Provide safe and reliable access to freight land uses and major intermodal freight facilities.
 - 6.2 Promote the use of information technologies to foster the most efficient movement of freight.
 - 6.3 Preserve industrial land uses in proximity to existing freight corridors.
- 7. Foster the application of advanced technologies to the transportation system.
 - 7.1 Pursue the application and use of advanced technologies.
 - 7.2 Encourage the application of passenger information technologies.

The RTP has a chapter titled **Performance** to ensure projects and programs are wise investments and “to demonstrate how well the plan does in providing a world class infrastructure, supporting the economy and contributing to healthy and livable communities.”⁴ This is graphically summarized in the RTP with the heading, *How the Atlanta's Region Plan Transportation Element* contributes to Winning the Future and shown in **Figure 3 : How the Atlanta Region's Plan Transportation Element Contributes to Winning the Future** graphic on the next page. The points listed under each heading and are interrelated.

⁴ Atlanta Regional Commission, The Atlanta Region's Plan, Transportation, February 2016, Page 178.



Figure 3: How the Atlanta Region's Plan Transportation Element Contributes to Winning the Future⁵

World Class Infrastructure (System)	Competitive Economy	Healthy Livable Communities
<input checked="" type="checkbox"/> Maintain and operate the existing system →	Provides good stewardship of limited resources	Improves safety
<input checked="" type="checkbox"/> Expands the transit system →	Expands economic opportunities	Creates opportunity for more efficient land use
<input checked="" type="checkbox"/> Expands the managed lane network →	Increases trip reliability	Reduces stress caused by traffic congestion
<input checked="" type="checkbox"/> Focuses on interchange bottlenecks →	Reduces delay, especially for trucks	Ensure on-time delivery of products and services
<input checked="" type="checkbox"/> Strategically adds capacity to the highway network →	Increases access to job centers	Enhances a community when complete street principles are used
<input checked="" type="checkbox"/> Defines a vision for a regional greenway trail system →	Helps attract and retain young people	Provides exercise opportunities and a great quality of life amenity
<input checked="" type="checkbox"/> Responsive to advances in technology →	Maximizes efficiency	Provides custom solutions to fit various lifestyles
<input checked="" type="checkbox"/> Provides services to those with specialized needs →	Helps keep the disabled and elderly active and engaged	Reduces costs to society when all citizens are active and engaged

The ARC has a System Performance Analysis that is based on three scenarios as identified in Appendix I of their RTP:

- **2015 Base Scenario** – This scenario simulates to near current conditions in the Atlanta region. Population, employment, and the transportation network are held at projected 2015 levels.
- **2040 No-Build Scenario** – This scenario assumes no transportation projects are built after the year 2015 through the year 2040. Population and employment are set at forecasted 2040 levels. This helps to create a worst-case scenario. Due to the complex nature of transit in the Activity Based Model, some of the transit measures do not have a No-Build Scenario metric available.
- **The Atlanta Region's Plan Constrained Scenario (2040 Build Scenario)** – This scenario is the financially constrained portion of The Atlanta Region's Plan. Funding for transportation infrastructure improvements is limited to what can reasonably assumed to be available based on

⁵ Atlanta Regional Commission, The Atlanta Region's Plan, Transportation, February 2016, Page 179.



expected federal, state and local sources. Population and employment are set at forecasted 2040 levels.

The analysis for System Performance includes Regional Performance Measures to address Mobility, Connections/Accessibility, Economic Growth, and Safety. The associated indicators came from the ARC's Activity Based Model (ABM) for the 2015 base year, 2040 no-build, and 2040 cost feasible plan. The Performance Emphasis Areas and Measures are:

- Mobility
 - Average commute travel time in minutes by auto
 - Average commute travel time in minutes by transit
- Connectivity/Accessibility
 - Access to employment centers within 45 minutes by car
 - Access to employment centers within 45 minutes by transit
 - Average number of jobs within 45 minutes of home for typical person
 - Jobs within 45 minute transit ride from Equitable Target Areas (ETAs)
- Economic Growth
 - Total congestion cost per person
 - Commercial vehicle delay cost per mile
 - Number of daily reliable trip
 - Number of reliable trips in PM peak
 - Number of transit trips in PM peak period
 - Number of transit trips from ETAs
 - Highway vehicle miles traveled in PM peak period
 - Average congested speed in general purpose freeway lanes
 - Average congested speed in managed lanes
- Safety
 - Percent of all regional crashes on RTP project corridors
 - Percent of RTP projects that intersect above average crash rate fatalities

The ARC has a web-based application, Project Evaluation Visualization, to evaluate individual projects. The web application uses sophisticated software and data sources to estimate benefit-cost ratios and individual performance metrics. For the 2040 plan, ARC made changes to the methodologies to promote transparency, objectivity, and greater accuracy. Measures are identified for both Needs and Performance and then weighted based on a sensitivity test of the ARC's goals and objectives. The Needs Performance Measures include: congestion, accessibility, safety, air quality, reliability, equity, and freight. Performance Measures include: congestion, accessibility, freight, air quality, deliverability, and impact.



Models of Regional Cooperation

The ARC is the region's planning and intergovernmental coordination agency including the coordination of aging, community services, environmental planning, governmental services, job training, land use and public facilities, and transportation planning. The ARC is also the designated MPO for the Atlanta Region, with a primary responsibility to develop a multi-modal, financially constrained transportation plan that meets all federal transportation and Clean Air Act planning requirements.

The ARC's Comprehensive Transportation Plan (CTP) program helps to incorporate local issues into the RTP's recommendations as the bases of regional transportation planning. The purpose of this voluntary program for counties and municipalities is to ensure that transportation infrastructure has a positive impact on strengthening the economy and communities at the local and regional levels. The ARC provides federal funding to assist the counties and municipalities in the development of joint long range transportation plans that are updated on a 5 to 7 year cycle.

Ladders of Opportunity

The ARC understands the need to provide multiple transportation options to disadvantaged populations to provide connections to jobs and services. Their commitment is shown by the following from the RTP, "We must bring together the components of community development, transportation, education, and workforce development in our planning. Community health is determined by these interconnected disciplines. When one is lacking or not addressed, it impacts the whole. Ladders of Opportunity gives ARC a framework to unite these areas of planning to work with local governments to build healthy places that provide residents the connections, quality of life and opportunity that they want."⁶

One of the seven objectives of the RTP addresses transportation equity as: "Promote an accessible and equitable transportation system." Environmental Justice and transportation equity are incorporated throughout the RTP. The ARC uses an Equitable Target Areas (ETA) Index to understand environmental justice communities and connectivity. The ETA Index measures the impacts of investments and programs of the Plan on ETAs and provides input for project prioritization, evaluation, and monitoring.

ETAs are based on census tracts, data, low income, and minority communities. The variables are:

- Percent of population in Census Tract considered to be in Poverty
- Percent of population in Census Tract that responded as African American
- Percent of population in Census Tract that responded as Asian
- Percent of population in Census Tract that responded as Hispanic
- Percent of population in Census Tract that responded as another race that is not White

⁶ *The Atlanta Region's Plan, Transportation Element*, Atlanta Regional Commission, February 2016, Page 195.

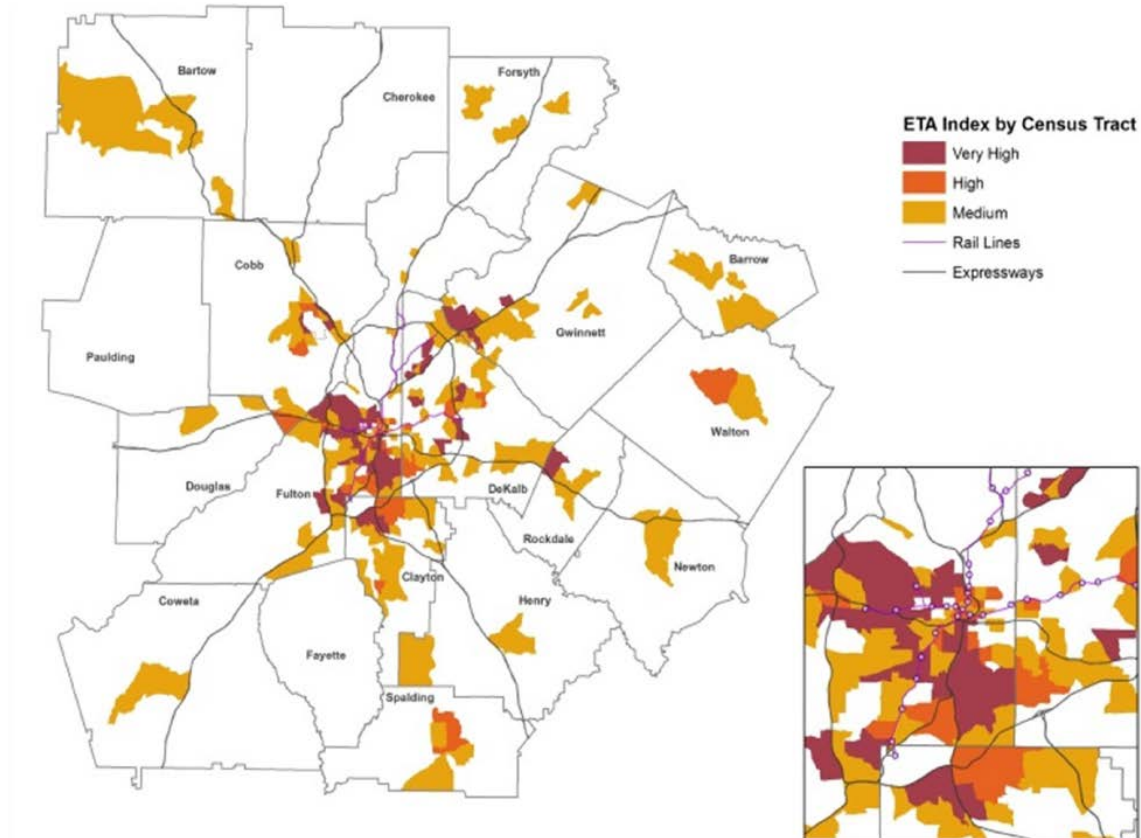


Categories were created based on standard deviations from the mean (e.g., the average).

- Category 1 - if its percentage exceeded the highest standard deviation
- Category 2 - if its percentage was between the second highest and highest standard deviation
- Category 3 - if its percentage was below the second highest standard deviation.

The full ETA Methodology is listed in Appendix J of ARC's RTP.

Equitable Target Areas Using Standard Deviation



Source: The Atlanta Region's Plan Transportation Element, ARC, Appendix J

The evaluation of a competitive economy also included mapping the RTP list of projects in ETA communities to compare the financial commitment as compared to non-ETA communities. The results were, that over one-half of the regional projects will directly serve ETA communities. The RTP acknowledges that additional work will need to be done in future plans to identify investments that are beneficial and/or detrimental to communities.



The RTP also outlines the Livable Centers Initiative (LCI) to focus on growth in established communities. The goals of the LCI are to:

- Encourage a diversity of housing, employment, commercial, shopping and recreation land uses at the transit station, local and regional center level accessible by people of all ages, abilities and incomes levels.
- Enhance access to a range of travel modes including transit, roadways, walking and biking and increase roadway connectivity to provide optimal access to all uses within the study area.
- Foster public-private partnerships and sustained community support through an outreach process that promotes the involvement of all stakeholders, including those historically underserved or underrepresented.⁶

The RTP notes that future updates will consist of an analysis of Ladders of Opportunity and addressed under the **Extending Ladders of Opportunity** in the **Future** chapter.

The ARC also has a Building Opportunity Workshop Series, initiated “to engage leaders and community groups that represent Equitable Target Areas in authentic, thoughtful ways about how growth and development takes place. Forums have focused on transportation access and poverty, livability through an equitable lens, and economic opportunity.”⁶

San Francisco

Metropolitan Transportation Commission (MTC)

Plan Bay Area, Regional Transportation Plan and Sustainable Communities for the San Francisco Bay Area, 2013-2040

Adopted July 18, 2013

Performance-Based Planning and Programming

Plan Bay Area, Regional Transportation Plan and Sustainable Communities for the San Francisco Bay Area (referred to as *Plan Bay Area*) does not mention or reference the Federal Planning Factors or MAP-21 National Performance Management Measures. MAP-21 is referenced a handful of times in the document for example: the new Asset Management requirements in the freight section.

To evaluate the performance of the *Plan Bay Area*, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) adopted 10 targets reflecting input from the broad range of stakeholders. The targets “reflect the plan’s emphasis on sustainability including environmental impacts from greenfield development and vehicle emissions, equity impacts from displacement and low-income household affordability, and economic impacts from regional competitiveness.”⁷ By integrating

⁷ *Plan Bay Area, Regional Transportation Plan and Sustainable Communities for the San Francisco Bay Area*, Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), page 18.



the three E's – environment, equity, and economy through its targets, *Plan Bay Area* measures the success of creating sustainable communities. The targets include mandated and voluntary targets:

Mandated by California Senate Bill 375, enacted in 2008

- Climate Protection
 - Reduce per-capita CO2 emissions from cars and light-duty trucks by 15%
- Adequate Housing
 - House 100% of the region's projected growth (from 2010 base line year) by income level (very-low, low, moderate, above-moderate) without displacing current low-income residents.

Voluntary

- Healthy and Safe Communities
 - Reduce premature deaths from exposure to particulate emissions
 - Reduce by 50% the number of injuries and fatalities from all collisions (including bike and pedestrian)
 - Increase the average daily time walking or biking per person for transportation by 705 (for an average of 15 minutes per person per day)
- Open Space and Agricultural Preservation
 - Direct all non-agricultural development within the urban footprint (existing urban development and urban growth boundaries, baseline year is 2010)
- Equitable Access
 - Decrease by 10% (to 56%, from 66% the share of low-income and lower-middle income residents' household income consumed by transportation and housing)
- Economic Vitality
 - Increase gross regional product (GRP) by 110 percent – an average annual growth rate of approximately 2% (in current dollars)
- Transportation System Effectiveness
 - Increase non-auto mode share by 10% (to 26% of trips), Decrease automobile vehicle miles traveled per capita by 10%
 - Maintain the transportation system in a state of good repair

How these targets perform is outlined in Chapter 5 of the plan. Detailed information on performance is documented in the Performance Assessment Report.

At the project level, a project performance assessment was conducted based on the benefit-cost ratio and a project target score. The benefit-cost is a measure of cost-effectiveness, while the target score is a measure of how well the project contributes to achieving the *Plan Bay Area's* Performance targets. All major projects were also analyzed using the regional travel demand model. This process eliminated ineffective projects, identified tradeoffs among competing priorities, and prioritized projects for funding.



Plan Bay Area, Regional Transportation Plan and Sustainable Communities for the San Francisco Bay Area has a Project Performance Dashboard that displays the results of the benefit-cost, target, confidence, and equity assessment by project. The Target Assessment evaluates individual projects based on support or adverse impact of the targets.

Models of Regional Cooperation

A regional initiative, FOCUS was created by the ABAG and the MTC to support local coordination efforts in the *Plan Bay Area* region. This initiative helps link local community development aspirations with regional land use and transportation planning objectives.

Ladders of Opportunity

The *Plan Bay Area* addresses equity by identifying Communities of Concern and Equity Performance Measures. *Plan Bay Area* defines Communities of Concern “as those neighborhoods with notably high concentrations of four or more of the following: minority persons; low-income individuals; persons who are Limited English Proficient; seniors age 75 and over; persons with disabilities; households without cars; single-parent households; and renters paying more than 50 percent of household income on rent.”⁷ Approximately 20 percent of the Bay Area region’s population live in Communities of Concern. The Equity Performance Measures adopted by the MTC and ABAG are outlined in **Table 5: Equity Performance Measures**:

Table 5: Equity Performance Measures

Equity Issue		Performance Measure
1.	Housing and Transportation Affordability	% of income spent on housing and transportation by low-income households
2.	Potential for Displacement	% of rent-burdened households in high-growth areas
3.	Healthy Communities	Average daily vehicle miles traveled per populated square mile within 1,000 feet of heavily used roadways
4.	Access to Jobs	Average travel time in minutes for commute trips
5.	Equitable Mobility	Average travel time in minutes for non-work based trips

Source: Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area, 2013-2040, MTC, pg. 115

The Equity Analysis attempts to determine how the plan’s proposed investments distribute benefits and burdens to these communities relative to the remainder of the region.



Baltimore

Baltimore Regional Transportation Board (BRTB)

Maximize 2040: A Performance-Based Transportation Plan for a Greater Baltimore Region

Adopted November 24, 2016

Performance-Based Planning and Programming

Maximize 2040: A Performance-Based Transportation Plan for a Greater Baltimore Region, (referred to as *Maximize 2040*) the name of the LRTP for the Baltimore Regional Transportation Board (BRTB) emphasizes their commitment for performance-based planning. *Maximize 2040* was developed based on MAP-21 and other federal, state, regional, and local requirements. The Federal Planning Emphasis Areas and MAP-21 National Goals are listed and referenced in the document. *Maximize 2040* highlights performance-based planning at the project and system levels.

The BRTB emphasis on performance-based planning is incorporated in their goals, strategies, performance measures, and targets to guide and evaluate the effectiveness of the investments identified in *Maximize 2040*.

“In developing goals, strategies, measures, and targets, the BRTB considered:

- Federal, state, regional, and local requirements and policies, including MAP-21 (the federal authorizing legislation) and its regulations (described in Chapter 1)
- Factors that could affect how the region’s transportation systems will perform over the next 25 years (discussed in Appendices B and C)
- Comments and recommendations from the public at large and from BRTB advisory groups, including the Public Advisory Committee.”

BRTB’s Regional Transportation Goals are:⁸

- 1. Improve System Safety**
Make conditions safer for pedestrians, bicyclists, transit riders, and motorists.
- 2. Improve and Maintain the Existing Infrastructure**
Improve the conditions of existing transportation facilities; systematically maintain and replace transportation assets as needed.
- 3. Improve Accessibility**
Help people of all ages and abilities to access specific destinations.
- 4. Increase Mobility**
Help people and freight to move reliably and efficiently.
- 5. Conserve and Enhance the Environment**

⁸ *Maximize 2040: A Performance-Based Transportation Plan for a Greater Baltimore Region*, Baltimore Regional Transportation Board, page 2-1.



Pass on to future generations the healthiest natural and human environments possible.

6. Improve System Security

Provide a secure traveling environment for everyone; improve the region's ability to respond to natural or man-made disasters.

7. Promote Prosperity and Economic Opportunity

Support the revitalization of communities, the development of activity centers, and the movement of goods and services.

8. Foster Participation and Cooperation Among Stakeholders

Enable all interested and affected parties to participate and cooperate to find workable solutions.

9. Promote Informed Decision Making

Ensure that adopted transportation policies and performance measures guide the regional decision making process.

BRTB's Regional Performance Measures are:⁸

Regional Performance Measures – Emphasis Areas Required by MAP-21

System Safety – Roadways (the following safety measures apply to all public roads)

- Reduce serious injuries per 100 million vehicle miles traveled (VMT) to 3.0 by 2040.
- Reduce fatalities per 100 million VMT to zero by 2040.
- Reduce number of serious injuries to 676 by 2040.
- Reduce number of fatalities to zero by 2040.

System Safety – Transit (the following measure applies to both MTA and local transit agencies)

- Reduce number of preventable crashes per 100,000 revenue vehicle miles to zero by 2040.

System Conditions – Roadways and Bridges

- Maintain portion of state-owned roadway miles with acceptable ride quality at 82% or above.
- Maintain portion of structurally deficient state and local bridges below 5.0%.

System Conditions – Transit

- Maintain average age of MTA and local transit agency bus fleets below 7.0 years.

System Performance – Congestion

- Maintain portion of VMT in congested conditions on state-owned arterials during the evening peak hour (5-6 PM) below 25%.

System Performance – Freight

- Maintain average truck turnaround time at Seagirt Marine Terminal below 58 minutes.

System Performance – Emissions

- Maintain levels of VOC, NOx, PM2.5, and CO emissions at levels less than motor vehicle emission budgets in the State Implementation Plan.



Measures Beyond MAP-21 Requirements – Accessibility

- Increase percentage of urban area state-owned directional roadway miles that have sidewalks (both sides of the roadway) to 25% by 2040.
- Increase bicycle/walk-to-work mode share to 5.0% by 2040.
- Increase average weekday MTA and local agency transit ridership (all modes) to 500,000 by 2040.

Based on the above measures a detailed evaluation was conducted on the region’s transportation assets and system conditions and presented in Chapter 2 as the Performance Report – State of the System. The BRTB is committed to annually monitoring the progress of the Plan based on the performance measures and targets. Additional details may be found in Chapter 2: Goals and Performance Measures and Appendix D: Regional Goals and Strategies.

Projects were evaluated based on a Technical Score and a Policy Score. Technical Scores were determined by technical staff based on the goals, criteria, and methodology. Policy Scores are provided by jurisdictions and agencies based on priority. The project goals, policy scoring, and criteria are listed below:

Goals

Goal: Safety

1. Highway, Crash severity (injuries and fatalities)

Goal: Accessibility

2. Highway, Complete Streets features
3. Highway, Access to Job/Activity Centers
4. Transit, Transit Station/Stops
5. Transit, Access to Job/Activity Centers

Goal: Mobility

6. Highway, 2020 Level of Service (LOS)
7. Highway, 2040 LOS
8. Transit, Transit Options
9. Transit, Transit Ridership

Goal: Environmental Conservation

- Highway and Transit, Effects on Ecologically Significant Lands / Historical Properties
- Highway and Transit, Emissions and Greenhouse Gas (GHG) Reductions

Goal: Security

- Highway, Evacuation Route or Parallels

Goal: Economic Prosperity

- Highway and Transit, Connection to Priority Funding Area (PFA)
- Highway and Transit, Connection to Sustainable Community

Policy Score Criteria

- High Priority (up to 5 projects can have this rating) – 30 points



- Medium Priority (up to 4 projects can have this rating) – 20 points
- Low Priority (an unlimited number of projects can have this rating) – 10 points
- Demonstrated MDOT Financial Support – 10 points added to priority score

The total project score is the sum of the Technical and Policy scores. Additional information on project evaluation may be located in *Maximize 2040*, Appendix F: Project Evaluation and Scoring.

Models of Regional Coordination

As the MPO for the Baltimore Region, BRTB encompasses a five-county region consisting of Anne Arundel, Baltimore, Carroll, Harford, and Howard counties. The BRTB Board is made up of representatives from these five counties, along with Baltimore City, City of Annapolis, Maryland Departments of Transportation: Environment and Planning, and the Maryland Transit Administration. Additional regional coordination is not addressed in *Maximize 2040*.

Ladders of Opportunity

Ladders of Opportunity in *Maximize 2040* are addressed through the Regional Plan for Sustainable Development developed by the Opportunity Collaborative, a consortium responsible for developing Baltimore's *Regional Plan for Sustainable Development* (RPSD). The RPSD links the region's housing, transportation, and workforce development plans and investments.

The recommendations for the RPSD include:

RPSD Goal: Improve Transportation Access to Career, Training, and Education Opportunities⁸

- Strategy 1: Improve Transit Service to Connect Workers with Jobs and Training Opportunities in Suburban Job Centers.
 - Enhance public transit services that connect low-income neighborhoods and areas of residential growth with job centers.
 - Leverage transportation infrastructure, such as rapid transit services, to revitalize housing, employment, and retail in weak-market areas.
- Strategy 2: Increase Transportation Options to Jobs and Education for Households.
 - Promote vanpooling, shuttle, and ridesharing programs to and from training centers and jobs.

BRTB's commitment to Ladders of Opportunity is shown through their Small-Programs Set-Aside by allocating \$100,000,000 for the twenty-year period from 2020-2040 for Ladders of Opportunity. Chapter 4: Major Projects and Programs of *Maximize* has more information on this program.

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FEDERAL PLANNING EMPHASIS AREAS FOR MIAMI-DADE COUNTY

04

IMPLEMENTATION & RECOMMENDATIONS

CHAPTER HIGHLIGHTS:

- **MAP-21 IMPLEMENTATION**
 - PERFORMANCE MEASURES
 - FEDERAL REQUIREMENTS
 - ADDITIONAL PERFORMANCE MEASURES FOR CONSIDERATION
 - SAFETY AND HEALTH
 - FUTURE TECHNOLOGIES
 - SYSTEM PERFORMANCE REPORT
 - SCENARIO PLANNING
- **REGIONAL MODELS OF COOPERATION**
- **LADDERS OF OPPORTUNITY**





4. Implementation & Recommendations of Federal PEAs

Of the three Federal PEAs, *MAP-21 Implementation – Transition to Performance-Based Planning and Programming* is the only one that is mandated by federal law. The other two, *Regional Models of Cooperation* and *Ladders of Opportunity* are encouraged by FHWA and FTA. The recommendations below are based on the requirements of the law, national publications, implementation of PEAs by peer MPOs, and consideration of existing practices by the Miami-Dade TPO.

MAP-21 Implementation

MAP-21 emphasizes a focus on performance-based planning. Performance-based planning is integrated throughout the metropolitan planning process and in the development of LRTPs. **Figure 4: Framework for Performance-Based Planning and Programming (PBPP)** outlines the structure and process for performance-based planning and programming and consists of the following:

- Strategic Direction – provides the direction of the plan; and answers the question, “Where do we want to go?”
- Analysis – based on data, public involvement, and policy; and answers the question, “How are we going to get there?”
- Programming – selecting and allocating resources; and answers the question, “What will it take?”
- Implementation and Evaluation – includes, monitoring, evaluation, and reporting; and answers the question, “How did we do?”

Figure 4: Framework for PBPP



Source: FHWA Performance-Based Planning and Programming Guidebook, Page iv.



Performance-Based Planning Terminology

Goal – a broad statement that describes a desired outcome, guiding principle

Objective – a specific, measurable statement that supports achievement of a goal

Performance Measure – a specific metric to assess progress towards meeting a goal

Target – a specific level to be reached within a specified timeframe⁹

The PBPP encompasses the development of goals, objectives, performance measures, and targets; all which are interrelated and build off of each other.

Performance Measures

Performance measures guide and support the performance-based planning process and are incorporated throughout the process. They are used in measuring success in achieving the plan's goals, scenario planning, system performance, and project evaluation. Performance measures are used to:

- 1. Clarify the definition of goals** – Performance measures are a tool that is used in converting broad goals into measurable objectives.
- 2. To monitor or track performance over time** – Metrics are used to track performance on regular basis (e.g., yearly, monthly).
- 3. As a reference for target setting** – Metrics are used as the basis for selecting a target that is intended to be achieved.
- 4. As a basis for supporting policy and investment decisions by comparing alternative options** – Metrics are used as a basis for comparing alternative investments or policies in order to make decisions.
- 5. To assess the effectiveness of projects and strategies** – Metrics are what enable measurement to assess whether projects and strategies have worked to further goals.⁹

Federal Requirements

The MAP-21 National Goals and the Federal Planning Factors must be considered in developing the plan goals, objectives, and especially the performance measures of the LRTP.

⁹ *Performance-Based Planning and Programming Guidebook*, U.S. Department of Transportation, Federal Highway Administration, September 2013, Page 40.



Requirement: Performance-Based Approach

The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decision making to support the national goals described in section 150(b) of title 23 and the general purposes described in section 5301. 49USC 5303(h)(2)(A)

The FAST Act added two new planning factors that should be considered for the 2045 LRTP:

- “Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
- Enhance travel and tourism,” (23 USC 134(h)(1)).

The intent of these planning factors is to add agencies and officials responsible for natural disaster risk reduction and tourism in the planning process to consult with and in consideration of their planning activities.

Requirement: Scope of Planning Process

FACTORS. In formulating the transportation plan, the metropolitan planning organization shall consider factors described in subsection (h) as the factors relate to a 20-year forecast period. 49 USC 5303 (i)(2)(A)(ii)

The metropolitan planning process for a metropolitan planning area under this section shall provide for consideration of projects and strategies that will—

- (1) Support the economic vitality of the metropolitan area especially by enabling global competitiveness, productivity, and efficiency;
- (2) Increase the safety of the transportation system for motorized and non-motorized users;
- (3) Increase the security of the transportation system for motorized and non-motorized users;
- (4) Increase accessibility and mobility of people and freight;
- (5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- (6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- (7) Promote efficient system management and operation;
- (8) Emphasize the preservation of the existing transportation system;
- (9) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- (10) Enhance travel and tourism.

49 USC 5303 (h)(1)



The Miami-Dade 2040 LRTP had objectives and performance measures that addressed both resiliency and tourism, as follows:

- **Goal 8 – Maximize and Preserve the Existing Transportation System**
 - Objective 8.6 Reduce the vulnerability and increase the resilience of critical infrastructure to the impacts of climate trends and events
 - Performance Measure
 - Highway lane and centerline miles within the 100 year flood plain
- **Goal 4 – Support Economic Vitality**
 - Objective 4.2 Enhance tourist travel and access opportunities
 - Performance Measures
 - Highway lane and centerline miles within .25 mile of tourist attractions
 - Transit service route miles within .25 miles of tourist attractions

The Miami-Dade 2040 LRTP included the MAP-21 National Goals. The goals, objectives, and measures of the plan were developed in consideration of the Federal Planning Factors and addressed the MAP-21 National Goals.

Recommendations: Expand consideration of Federal Planning Factors: “to improve the resiliency and reliability of the transportation system, and reduce or mitigate stormwater impacts to surface transportation” and “enhance travel and tourism.” Include, as appropriate associated goals, objectives, and performance measures.

- **Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation**
 - Include a member or members from the following agencies to the planning process through the LRTP Steering Committee:
 - Miami-Dade Office of Emergency Management
 - Miami-Dade Office of Resilience
- **Enhance travel and tourism**
 - Include a member or members from the following agencies to the planning process through the LRTP Steering Committee:
 - Miami-Dade Visitors Bureau
 - Beacon Council, Miami-Dade County Economic Partnership

Most MPOs have not addressed the new Federal Planning Factors through performance measures in their LRTPs to date, though they are mentioned in their plans.



As an example, the *Macon Area Transportation Study, 2040 Long Range Transportation Plan Update*, included the following performance measures to address the two new Federal Planning Factors:

Enhance travel and tourism

- Increase funding and identify greater variety of funding sources for transportation projects such as pedestrian and bicycle facilities, recreational trails, community and improvements such as historic preservation and vegetation management.

Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation

- Reduce the number of bridges and roadways vulnerable to natural disaster.
- Enhance environmental mitigation related to storm water management and habitat connectivity.

For example, the *Mapping the Future: The Southwestern PA Plan*, by the Southwestern Pennsylvania Commission included two tourism-related performance measures:

- Tourism Spending
- Tourism Industry Employment Impacts

Recommendations: Consider other potential performance measures for the two new Federal Planning Factors:

- **Resiliency and reliability – identify the location of flood zones and flood plains.**
- **Enhance tourism – identify connections from major hotel clusters to major tourist attractions.**

Requirement: Performance Targets

Each metropolitan planning organization shall establish performance targets that address the performance measures described in section 150(c) of title 23, where applicable, to use in tracking progress towards attainment of critical outcomes for the region of the metropolitan planning organization. 49 USC 5303(h)(2)(B)

Recommendations: In the development of the LRTP, continue consideration of the National Goals in the development of the LRTP's goals, objectives, and performance measures; describe the performance measures; and develop targets for the performance measures based on the National Goals to assess the transportation system.

The performance measures in the Miami-Dade 2040 LRTP were developed as metrics to assess the objectives that in turn supported the plan goals, which support the National Goals. The performance measures were also used in the project evaluation process.



Both the *Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area*, by the Metropolitan Transportation Commission (MTC) and *Maximize 2040: A Performance-Based Transportation Plan for a Greater Baltimore Region*, by the Baltimore Regional Transportation Board (BRTB) that were reviewed and documented in the **Exploring Federal Planning Emphasis Area** section above provide examples of identifying targets for performance measures. For example, both plans addressed the Safety National Goal in different ways as follows:

- ***Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area***
Healthy and Safe Communities
 - Reduce premature deaths from exposure to particulate emissions
 - Reduce by 50% the number of injuries and fatalities from all collisions (including bike and pedestrian)
 - Increase the average daily time walking or biking per person for transportation by 70% (for an average of 15 minutes per person per day)
- ***Maximize 2040: A Performance-Based Transportation Plan for a Greater Baltimore Region***
System Safety
 - Reduce number of preventable crashes per 100,000 revenue miles to zero by 2040

Requirement: Integration of Performance-Based Plans

A metropolitan planning organization shall integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in other State transportation plans and transportation processes, as well as any plans developed by recipients of assistance under this chapter, required as part of a performance-based program. 49 USC 5303(h)(2)(D)

Recommendations: Incorporate the goals, objectives, performance measures, and targets from other state transportation plans and transportation processes into the metropolitan planning process. As referenced in 23 CFR 450.306(d) this includes: the State Asset Management Plan and the Transit Asset Management Plan.

The Miami-Dade 2040 LRTP did consider and acknowledged the importance of consistency with other plans and policies that affect transportation issues. Federal, state, and local/regional plans were reviewed as part of the LRTP process. (The State and Transit Asset Management Plans were not included since they were not enacted at that time.) The National Goals were included in the process and documented.



Additional Performance Measures for Consideration

The following performance measure recommendations are not based on federal law. They are recommendations to enhance the Performance Management Process and to cover a wide spectrum of topics.

With the fast-paced advancements in technology, many MPOs are focusing on the first 10 years of the plan. Identifying near-term or short-term targets can put a focus on specific performance measures to help implement the plan.

Recommendations:

- **Evaluate the need to include near-term or mid-term targets.**
- **Consider incorporating the goals and associated objectives and performance measures from the SMART Plan into the LRTP process. Associated near-term and/or mid-term goals should be incorporated.**

Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area identifies a target earlier than the 2040 horizon year as required by a California State statutory requirement.

- Climate Protection – Performance Target: Reduce per-capita CO₂ emissions from cars and light-duty trucks by 15% (Statutory requirement is for 2035, per SB 375).

The *Plan 2040: Regional Transportation Plan- A Shared Vision for a Sustainable Region* by the New York Metropolitan Transportation Council (NYMTC) outlines desired outcomes and near-term actions for each goal. Specific projects are identified under near-term actions. Below is a sample of desired outcomes and near-term actions for the Goal: Provide a Convenient and Flexible Transportation System within the Region.

Desired Outcomes

NYMTC hopes to achieve the following outcomes by working towards this goal:

- A sufficient array of transportation choices;
- Expanded connections, particularly across modes and between communities;
- Increased reliability for passenger and freight trips; and
- Increased transit ridership.

Near-Term Actions (Examples)

- Advance the congestion management process and complete planning and/or environmental assessments for the following vision projects:
 - East River crossing and Hudson River crossing bus/HOV capacity
 - Cross Bronx Expressway improvements



- Additional NYC Select Bus Service routes
- Long Island Expressway HOV/Active Transportation Demand Management
- Suffolk County Bus Rapid Transit Feasibility Study: Route 110, Sagtikos Parkway, CR97 transit improvement
- Central Avenue Bus Rapid Transit, Westchester County
- Continue planning for ferry service enhancements and station access improvements
- Implement congestion-related improvements and enhancements in the 2014-2018 TIP;
- Implement programmed strategic regional transportation investments related to system preservation:
 - Tappan Zee Hudson River Crossing project
 - Cross Bronx Expressway-Grand Central Parkway interchange
 - Implement preservation-related projects in the 2014-2018 TIP;
 - Complete planning and/or environmental assessments for the following projects:
 - Staten Island Ferry vessels
 - Kew Gardens interchange
 - Cross County Parkway-Saw Mill River Parkway interchange
 - MTA NYCT Queens Communications-Based Train Control
 - MTA NYCT vehicle fleet, depot and station expansion, and sustainability investments
 - Port Jervis Line improvements
 - MTA MNR Penn Station Access
 - Several bridge replacements and rehabilitation were named.

Recommendation: Develop performance measures that have data available and are quantifiable.

The *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* by the Southern California Association of Governments (SCAG) includes several examples:

- Person hours of delay by facility type (mixed flow, HOV, arterials) (Defined as excess travel time resulting from the difference between a reference speed and actual speed)
- Travel time distribution for transit, SOV, and HOV modes for work and non-work trips (Defined as travel time distribution for transit, SOV, and HOV modes)
- Share of transportation system usage (Defined as the comparison of transportation system usage by mode for low income and minority households in relation to each group's population share in the greater region)
- Geographic distribution of transportation investments (Defined as the examination of the spatial distribution of transit, roadway, and active transportation infrastructure investments in various communities throughout the region)



Recommendations:

- **As performance measures are developed, identify how they will be used in the planning process, to measure success in achieving the plan's goals, scenario planning, system performance, and/or project evaluation.**
- **Identify base conditions so performance can be tracked. For the Miami-Dade 2045 LRTP, the base conditions will be for 2015. Previous data may also be used for tracking purposes.**
- **Expand the system performance measures to include those required under the National Performance Management Measures; Assessing Performance of the National Highway system, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program. Identify other system performance measures early in the process. Coordinate with the Southeast Florida Transportation Council (SEFTC) Regional Transportation Advisory Committee (RTTAC) Modeling Subcommittee as to the information that can be provided by the Southeast Florida Regional Planning Model (SERPM) to measure system performance. A computer program can be developed to obtain requested information that is not readily available from the model.**

The 2040 LRTP also addressed system performance for the baseline (Year 2010) and for the horizon year 2040 and included: vehicle miles traveled, vehicles hours traveled, peak period speed, percent lane miles with LOS F, and transit boardings.

Safety and Health

The *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* by the SCAG includes several examples:

- Daily amount of walking and biking related to work and non-work trips (Defined as the percent of the population who had walk or bike trips during the day; and average number of minutes of walking and biking for those who had walk or bike trips)
- Percent of residents within ½ mile walk to parks and open space (Defined as the share of regional population that lives within walkable distance to a park)
- Number of acres of parks per 1,000 residents
- Asthma incidence (Defined as the share of population in the region who were ever diagnosed with asthma)
- Asthma exacerbation (Defined as the share of population in the region already diagnosed with asthma who had asthma-related emergency room visits in the last 12 months)



Future Technologies

Connected and Autonomous Vehicles (CAV) are meant to reduce crash rates over time. Performance measures related to the reduction in crashes, as well as fatalities/serious injuries can help to monitor the progress of future technologies.

An example that is applicable to CAV is a performance measure taken from the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* by the SCAG:

- Collision rates by severity by mode (Defined as the collision rate involving fatalities and serious injuries per 100 million vehicle miles by mode; and number of fatalities and serious injuries by mode (all, bicycle/pedestrian))

System Performance Report

A System Performance Report is required to be incorporated into the Miami-Dade TPO 2045 LRTP, and in subsequent updates. The System Performance Report is required to include an evaluation of the transportation system based on the performance targets of the National Goals (See **Table 1: National Goals** on page 5) and the National Performance Management Measures.

- **Safety**- Highway Safety Improvement Program/Safety Performance Management Measures [23 CFR §924, 23 CFR § 490]
- **Infrastructure**-Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program [23 CFR § 490]
- **System Performance**-Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program [23 CFR § 490]

The System Performance Report shall follow a format that is agreed upon by FDOT and the state's MPOs. This format has not been established to date. FDOT will provide the resulting data for the required National Performance Management Measures.

Requirement: System Performance Report

A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in subsection (h)(2), including: (i) progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports; and (ii) for metropolitan planning organizations that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets. 49 USC 5303(i)(2)(c)



Recommendations:

In the interim period prior to an established format for the System Performance Report, the following may be considered to be included:

- **Description of each of the National Performance Management Measures and each measure**
- **Identify state target for each measure**
- **Identify the TPO targets or that the TPO adopts the state targets**
- **Report by each measure**
- **Map data as appropriate, if data is provided/available in a GIS format**
- **Identify projects by priority band that address or contribute to the improvement of each performance measure**
- **Identify performance achieved in meeting the performance targets, from previous reports and baseline data**
- **Identify areas (locations) that fall below the targets for each measure and use in developing the needs plan and prioritizing projects in the LRTP. By addressing areas that fall below the target, progress can be measured toward achieving the targets.**
- **Assessing Performance of the National Highway system, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program**
 - **Identify areas on the interstate that are not reliable, if this can be obtained from the data provided**
 - **Identify areas on the non-interstate NHS that are not reliable, if this can be obtained from the data provided**
- **National Performance Management Measures: Highway Safety Improvement Program**
 - **Identify areas that have high crash rates for serious injuries and fatalities**
- **National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program**
 - **Identify areas of roadways and bridges that fall below good condition.**
- **Keep the history of each performance measure and show the history of each measure over time and progression toward meeting or achieving the targets**

Requirement: Performance Target Achievement for TIPs

The transportation improvement program shall include, to the maximum extent practicable, a description of the anticipated effect of the transportation improvement program toward achieving the performance targets established in the metropolitan transportation plan, linking investment priorities to those performance targets. 49 USC 5303(j)(1)(D)



The Transportation Improvement Plan (TIP) shall also address the effect projects in the TIP will have toward achieving the performance targets, as identified in the LRTP. The TIP should also link the investments of those projects to the performance targets.

Recommendations:

- **The TIP shall include a description of the anticipated effect projects in the TIP will have on achieving the targets of the National Performance Management Measures. First, identify projects in the TIP that are related to:**
 - **Safety**
 - **Bridge**
 - **Pavement**
 - **System Performance**
 - **Congestion**
- **Link the investments of the identified projects to the performance targets. Depending on available data, report qualitatively how much improvement is made towards meeting the performance targets. Include a section in the TIP and the Citizen's Guide on the National Performance Management Measures and targets.**

Scenario Planning

MPOs may voluntarily elect to conduct scenario planning during the development of their LRTPs. If scenario planning is incorporated into the LRTP process, the MPO must include an analysis of how the preferred scenario improves the condition and performance of the transportation system in the System Performance Report.

Requirement: Systems Performance Report – Scenario Planning

For metropolitan planning organizations that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets. 49 USC 5303(i)(C)(ii)

For performance-based planning, MAP-21 required the metropolitan (and statewide) planning process incorporate performance goals, measures, and targets to identify needed transportation improvements to select projects. In addition, LRTPs must identify and describe performance measures and targets to assess system performance and progress in achieving the plan's performance targets.



Recommendation: Since the TPO will incorporate scenario planning in the development of their 2045 LRTP, evaluate the system performance measures for the preferred scenario, identify the improvements, and analyze how the changes impact the costs to achieve the targets.

Regional Models of Cooperation

Regional transportation planning activities in the Miami Urbanized Area coordinated through the SEFTC along with the three participating MPOs: Miami Dade TPO, Broward MPO, and Palm Beach TPA. The SEFTC is a formalized mechanism for the regional coordination process. Regional transportation planning coordination has been ongoing successfully in Southeast Florida since 2006.

As one of twenty notable practices in cross-jurisdictional transportation planning collaboration, FHWA and FTA identified the SEFTC as a notable practice in *The Regional Models of Cooperation Handbook (2017)*.

Recommendation: Continue active and successful participation with the SEFTC and the RTTAC subcommittees.

Regional coordination may play an important role in performance-based planning and programming with the development of performance measures and emerging technologies in transportation i.e. autonomous vehicles/connected vehicles (CAV). Data and data collection are important to both of these concepts. The SEFTC is already coordinating data collection through the Southeast Regional Household Travel Survey.

Recommendations:

- Consider coordination through the SEFTC in identifying performance targets as well as to coordinate performance approaches. Performance targets may be shared or coordinated to help MPOs understand how the impacts may affect each MPO. Also consider emerging technologies at the regional level through discussions and agreed upon assumptions for planning and modeling related to CAV.
- As noted under performance measures above, coordinate with the RTTAC Modeling Subcommittee information needed from the model related to performance measures.

Ladders of Opportunity

The Ladders of Opportunity initiative provides underserved and disadvantaged populations economic opportunities through connections to essential services such as employment, education, healthcare, healthy food, and recreation through investments in transportation projects. Disadvantaged populations are defined as minorities, low-income populations, persons with disabilities, older adults, and individuals with limited English proficiency. The first step in this process is to identify the disadvantaged populations and the locations of where they live.



The L RTPs reviewed in Exploring Planning Emphasis Areas, provided background and insight on identifying areas of disadvantaged populations. Both *Plan 2040: Regional Transportation Plan- A Shared Vision for a Sustainable Region* and *Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area* referred to these areas as Communities of Concern. The *Atlanta Region's Plan Transportation Element* by the Atlanta Regional Commission (ARC) referred to these areas as Equitable Target Areas (ETA). For this study, these areas are referred to as “Communities of Concern.”

A summary of factors used to define these areas are summarized below:

Plan 2040: Regional Transportation Plan- A Shared Vision for a Sustainable Region

- Minority communities - census tracts that had 56% (the regional average) or greater of persons who are American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian and other Pacific Islander.
- Low income communities were identified as census tracts that have 15% (the regional average) or greater of persons at or below the poverty level.
- Census tracts that met both of these criteria were designated as Communities of Concern.
- Thirty percent or 924 census tracts were identified as Communities of Concern.

Atlanta Region's Plan Transportation Element

- Percent of population in Census Tract considered to be in Poverty
- Percent of population in Census Tract that responded as African American
- Percent of population in Census Tract that responded as Asian
- Percent of population in Census Tract that responded as Hispanic
- Percent of population in Census Tract that responded as another race that is not White

Categories were created based on standard deviations.

- Category 1 - if its percentage exceeded the highest standard deviation
- Category 2 - if its percentage was between the second highest and highest standard deviation
- Category 3 - if its percentage was below the second highest standard deviation.

Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area

Plan Communities of Concern were identified by neighborhoods with notably high concentrations or more of the following:

- Minority Persons
- Low-Income Individuals
- Persons who are Limited English Proficient
- Seniors age 75 and older



- Persons with Disabilities
- Households without Cars
- Single-Parent Households
- Renters paying more than 50% of household income on rent

To define and identify Communities of Concern for Miami-Dade County, several populations were analyzed at the census tract level, from ArcGIS data from the MySidewalk data. Populations included Families below the Poverty Level; Households with Zero Vehicles; and Minority, Senior (65 and older), and Disabled populations. For each dataset, two different types of analyses were conducted. In the first analysis, each dataset was normalized to show the percentage of the total in comparison to the total of that dataset per census tract. In the second analysis, the data was normalized by density using the absolute number of that dataset per census tract in comparison to the number of acres of each census tract. For example, for the Families below the Poverty Level, in the first analysis the data was normalized to show a percentage of Families below the Poverty Level in comparison to the total number of Families in that census tract. For the second analysis, the data was analyzed by density to show the absolute number of Families below the Poverty Level per census tract in relation to an acre of area in the census tract.

Standard Deviation was used to identify census tracts that have above average percentages and densities for each of the datasets identified. Census Tracts that are more than one standard deviation above the mean of the dataset were identified.

The premise for Miami-Dade County is that Families Below the Poverty Level and Households with Zero Vehicles, would be the most likely to need transportation connections. Several combinations of this data, along with other datasets were analyzed. The analysis showed Families below the Poverty Level and Households with Zero Vehicles to be the most influential datasets when determining locations of Communities of Concern. **Figure 5: Communities of Concern** shows the census tracts that are more than one standard deviation above the mean of the Families below the Poverty Level and the Households with Zero Vehicle datasets, when examining both percentage and density calculations. Of the 519 census tracts in Miami-Dade County, 134 (~26%) are identified as Communities of Concern. In comparison, NYMTC identified 30% of their census tracts and *Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area* identified 20% of their neighborhoods as Communities of Concern.

Next, geographic data was downloaded from Miami-Dade County, which includes the locations of hospitals, clinics, schools, low income housing units, and homes receiving Section 8 vouchers. A buffer analysis was conducted in ArcGIS to identify the location of each facility in relation to an associated census tract service area. The goal was to identify which census tracts are best served by the identified facilities and services and which are not. A 3-mile buffer was used for hospitals and a 1-mile buffer was used for



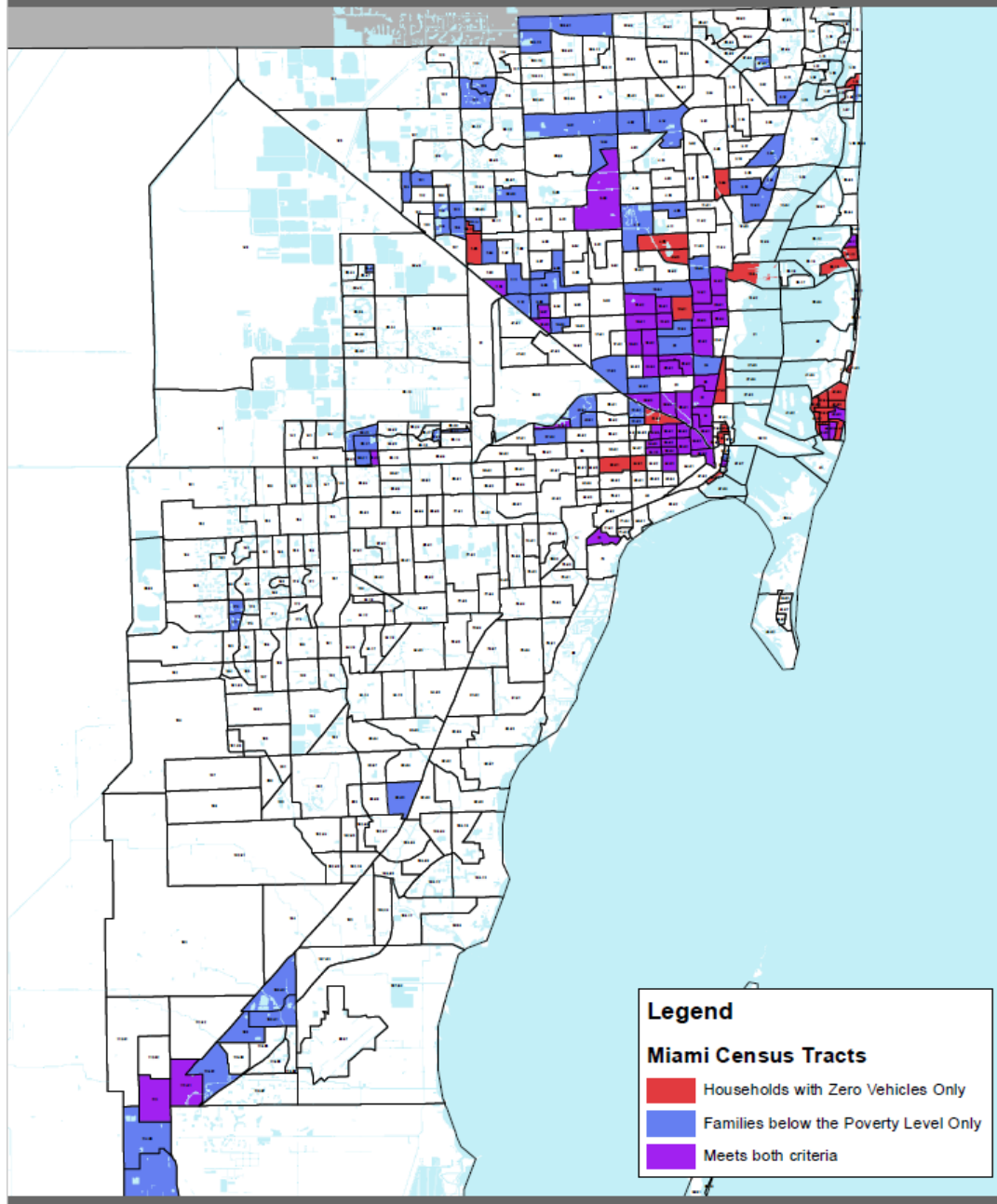
freestanding clinics. A 3-mile buffer was used for colleges; a 1-mile buffer was used for elementary, middle, and high schools (not including charter schools); and a 2-mile buffer was used for charter schools. For each census tract, level of food access was calculated based on ½ mile and 1 mile buffers. Maps depicting these results are shown in the **Appendix**.

Recommendations:

- During the development of the LRTP, consider infrastructure and operational projects that provide connections of the Communities of Concern to essential services
- Analyze connectivity gaps during the development of the 2045 LRTP and the 2018 – 2023 TIP for funded work program activities
- Evaluate the effectiveness of public participation plans for engaging transportation disadvantaged communities in the transportation decisionmaking process
- Update Section 5310 Coordinated Human Service Public Transportation Plans
- Assess the safety and condition of pedestrian and bicycle facilities, and
- Evaluate compliance with Americans with Disabilities Act, particularly around schools, concentrations of disadvantaged populations, social services, medical, and transit facilities.



Figure 5: Communities of Concern



Data Source: US Census Bureau, MySidewalk, Miami-Dade County



APPENDIX

CHAPTER HIGHLIGHTS:

- FEDERAL AND STATE REFERENCES
- FEDERAL PLANNING EMPHASIS AREAS
FY 2015
- FEDERAL PLANNING EMPHASIS AREAS
FY 2016
- NATIONAL PERFORMANCE
MANAGEMENT MEASURES MATRIX
- LONG RANGE TRANSPORTATION PLAN
REVIEW TABLE
- COMMUNITIES OF CONCERN MAPS



Federal and State References

Public Law

- Public Law 114-94
- Public Law 112-141

United States Code

- Title 23 United States Code Chapter 1 Section 134
- Title 23 United States Code Chapter 1 Section 150
- Title 49 United States Code Subtitle III Chapter 53 Section 5303

Code of Federal Regulations

- Title 23 Code of Federal Regulations Section 490
- Title 23 Code of Federal Regulations Section 450
- Title 23 Code of Federal Regulations Section 924

Additional Sources

Model Long-Range Transportation Plans: A Guide for Incorporating Performance-Based Planning. Federal Highway Administration. August 2014.

Performance-Based Planning and Programming Guidebook. Federal Highway Administration, September 2013.

Regional Models of Cooperation Handbook. US Department of Transportation, Federal Highway Administration, Federal Transit Administration, December 2016.

The FAST Act: Increasing Transportation Choices and Opportunities. Federal Highway Administration, Federal Transit Administration, <https://www.transportation.gov/fastact/opportunities-factsheet>



U.S. Department
of Transportation
**Federal Highway
Administration**

Office of the Administrator
April 23, 2014

1200 New Jersey Ave., SE
Washington, D.C. 20590

**Federal Transit
Administration**

In Reply Refer To:
HEPP-1
TPE-1

Attention: Executive Directors of Metropolitan Planning Organizations

With the renewed focus on transportation planning brought about by the MAP-21, Transportation Secretary Foxx, and the pending issuance of proposed transportation planning regulations, Federal Highway Administration (FHWA) and Federal Transit Administration's (FTA) Offices of Planning are jointly issuing Planning Emphasis Areas (PEAs). The PEAs are planning topical areas that we want to place emphasis on as the Metropolitan Planning Organizations (MPOs) and the State DOTs develop their respective planning work programs. We are asking our FHWA and FTA field offices to meet with their MPO and State DOT counterparts to discuss these emphasis areas and encourage the MPOs and the States to develop and identify work tasks associated with the planning emphasis areas for inclusion in their upcoming unified planning work programs and statewide planning and research work programs for Federal FY-2015. The planning emphasis areas for Federal FY-2015 include:

MAP-21 Implementation

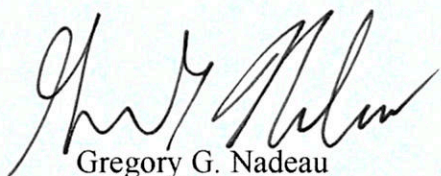
- *Transition to Performance Based Planning and Programming.* The development and implementation of a performance management approach to transportation planning and programming that supports the achievement of transportation system performance outcomes.

Models of Regional Planning Cooperation

- *Promote cooperation and coordination across MPO boundaries and across State boundaries where appropriate to ensure a regional approach to transportation planning.* This is particularly important where more than one MPO or State serves an urbanized area or adjacent urbanized areas. This cooperation could occur through the metropolitan planning agreements that identify how the planning process and planning products will be coordinated, through the development of joint planning products, and/or by other locally determined means. Coordination across MPO and across State boundaries includes the coordination of transportation plans and programs, corridor studies, and projects across adjacent MPO and State boundaries. It also includes collaboration among State DOT(s), MPOs, and operators of public transportation on activities such as: data collection, data storage and analysis, analytical tools, and performance based planning.

Ladders of Opportunity

- *Access to essential services - as part of the transportation planning process, identify transportation connectivity gaps in access to essential services.* Essential services include housing, employment, health care, schools/education, and recreation. This emphasis area could include MPO and State identification of performance measures and analytical methods to measure the transportation system's connectivity to essential services and the use of this information to identify gaps in transportation system connectivity that preclude access of the public, including traditionally underserved populations, to essential services. It could also involve the identification of solutions to address those gaps.



Gregory G. Nadeau
Deputy Administrator
Federal Highway Administration

Sincerely yours,



Therese W. McMillan
Deputy Administrator
Federal Transit Administration



U.S. Department
of Transportation

1200 New Jersey Avenue, SE.
Washington, DC 20590

**Federal Highway
Administration
Federal Transit
Administration**

March 18, 2015

In Reply Refer To: HEPP-1/TPE-1

Attention: Executive Directors of Metropolitan Planning Organizations

In 2014, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) sent a letter to the Executive Directors of the Metropolitan Planning Organizations (MPO) and the heads of the State Departments of Transportation (State DOT) encouraging you to give priority to the following emphasis areas in your updated unified planning work programs (UPWP) and statewide planning and research programs: MAP-21 Implementation, Regional Models of Cooperation, and Ladders of Opportunity. These three priorities are included in Secretary Foxx's strategic objectives for the Surface Transportation Program. We are requesting State DOTs and MPOs reiterate and emphasize these planning emphasis areas in their respective planning work programs for Fiscal Year 2016. We are also directing our FHWA and FTA field offices to continue to work with you and your organizations to identify tasks that advance these U.S. Department of Transportation priorities.

MAP-21 Implementation

Transition to Performance-based Planning and Programming – We encourage State DOTs and MPOs to further develop their performance management approach to transportation planning and programming. Performance-based planning and programming includes using transportation performance measures, setting targets, reporting performance, and programming transportation investments directed toward the achievement of transportation system performance outcomes. Appropriate UPWP work tasks could include working with local planning partners to identify how to implement performance-based planning provisions such as collecting performance data, selecting and reporting performance targets for the metropolitan area, and reporting actual system performance related to those targets. The MPOs might also explore the option to use scenario planning to develop their metropolitan transportation plan. We encourage you to use the following resources to help develop your approach: [Performance Based Planning and Programming Guidebook](#), [Model Long Range Transportation Plans Guidebook](#), and [Small Metropolitan Areas: Performance Based Planning](#).

Regional Models of Cooperation

Ensure a Regional Approach to Transportation Planning by Promoting Cooperation and Coordination across Transit Agency, MPO and State Boundaries – To improve the effectiveness of transportation decisionmaking, we encourage State DOTs, MPOs, and providers of public transportation to think beyond traditional borders and adopt a coordinated approach to transportation planning. A coordinated approach supports common goals and capitalizes on opportunities related to project delivery, congestion management, safety, freight, livability, and

commerce across boundaries. Improved multi-jurisdictional coordination by State DOTs, MPOs, providers of public transportation, and rural planning organizations (RPO) can reduce project delivery times and enhance the efficient use of resources, particularly in urbanized areas that are served by multiple MPOs. The MPOs can revisit their metropolitan area planning agreements to ensure that there are effective processes for cross-jurisdictional communication among State DOTs, MPOs, and providers of public transportation to improve collaboration, policy implementation, technology use, and performance management. State DOTs and MPOs can explore the opportunity to partner with RPOs to conduct transportation planning in nonmetropolitan areas. We encourage you to visit FHWA's [Regional Models of Cooperation](#) and [Every Day Counts Initiative](#) Webpages for more information.

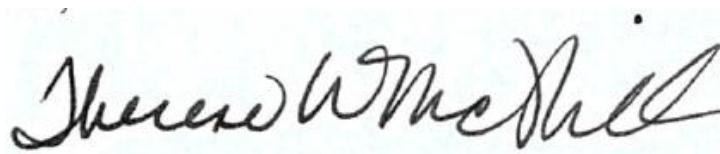
Ladders of Opportunity

Access to Essential Services – We encourage State DOTs, MPOs, and providers of public transportation, as part of the transportation planning process, to identify transportation connectivity gaps in accessing essential services. Essential services include employment, health care, schools/education, and recreation. Suggested UPWP work tasks include developing and implementing analytical methods to identify gaps in the connectivity of the transportation system and developing infrastructure and operational solutions that provide the public, especially the traditionally underserved populations, with adequate access to essential services. Other effective work tasks could include: evaluating the effectiveness of public participation plans for engaging transportation disadvantaged communities in the transportation decisionmaking process; updating the Section 5310 Coordinated Human Service Public Transportation Plans; assessing the safety and condition of pedestrian and bicycle facilities; and evaluating compliance with Americans with Disabilities Act, particularly around schools, concentrations of disadvantaged populations, social services, medical, and transit facilities.

Sincerely yours,



Gregory G. Nadeau
Deputy Administrator
Federal Highway Administration



Therese W. McMillan
Acting Administrator
Federal Transit Administration

National Performance Management Measures Matrix

Federal Performance Area	Federal Performance Measure	Performance Measures Applies To	Effective Date of Rule	Date when State DOTs must set Targets	Date when MPOs must set Targets	How/where Measures Must be Reported
Safety (PM 1)	1. No. of Fatalities	All public roads	April 14, 2016 (effective date)	By August 31, 2017 as part of the State's annual submission of its HSIP	February 27, 2018 (180 days after FDOT establishes its target)	<p>State Reporting – progress reported annually in the HSIP report due after 1-year from the effective date of the final rule.</p> <p>MPO Reporting – State and MPOs to coordinate together on how best to report annual progress. MPOs do not report to FHWA, but must have report available upon request from FHWA.</p> <p>Reporting occurs annually</p>
	2. Fatality Rate per 100 million VMT	All public roads				
	3. No. of Serious Injuries	All public roads				
	4. Serious Injury Rate per 100 million VMT	All public roads				
	5. No. of Combined Non-Motorized Fatalities and Serious Injuries	All public roads				
Infrastructure (PM 2)	1. % of Interstate System Pavement in Good Condition	Interstate System	May 20, 2017 (revised effective date)	May 20, 2018 (1 year after effective date)	November 16, 2018 (180 days after FDOT establishes its target)	<p>State DOTs – begin reporting 2-year and 4-year targets to FHWA by Oct. 1, 2018 as part of the <i>Baseline Performance Period Report</i>. State DOTs have the option to adjust the 4-year targets in their <i>Mid Performance Period Progress Report</i> due Oct. 1, 2020.</p> <p>State DOTs & MPOs – establish 2-year and 4-year targets.</p> <p>MPOs – will establish targets by either supporting the statewide target, or defining a target unique to the MPO.</p>
	2. % of Interstate System Pavement in Poor Condition	Interstate System				
	3. % of Non-Interstate NHS Pavement in Good Condition	Non-Interstate NHS System				
	4. % of Non-Interstate NHS Pavement in Poor Condition	Non-Interstate NHS				

Federal Performance Area	Federal Performance Measure	Performance Measures Applies To	Effective Date of Rule	Date when State DOTs must set Targets	Date when MPOs must set Targets	How/where Measures Must be Reported
	5. % of NHS Bridge Deck Area in Good Condition	NHS				<p>MPOs – are <u>not</u> required to provide a separate report to FHWA. However, State DOTs and MPOs will need to coordinate and mutually agree to an established reporting process.</p> <p>State DOTs & MPOs – coordination will be required between State DOTs and MPOs if a State adjusts its 4-year target at the midpoint of the performance period.</p>
	6. % of NHS Bridge Deck Area in Poor Condition	NHS				
System Performance (PM 3)	1. % Person-Miles Traveled on the Interstate that are Reliable	Interstate System	May 20, 2017 (revised effective date)	May 20, 2018 (1 year after effective date)	November 16, 2018 (180 days after FDOT establishes its target)	<p>Same as for the Infrastructure (PM 2) Rule (see above)</p> <p>MPOs shall report on targets and progress toward the achievement of their targets to the State DOT in a manner that is documented and mutually agreed upon by both parties.</p> <p>MPOs shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in their long range transportation plan (LRTP).</p> <p>If an MPO elects to establish a quantifiable target for the GHG measure, then the MPO shall report a description of its calculation methodology to the State DOT in a manner that is</p>
	2. % Person-Miles Traveled on the Non-Interstate NHS that are Reliable	Non-Interstate NHS System				
	3. % Change in Tailpipe CO ₂ (greenhouse gas) Emissions on the NHS Compared to the Calendar Year 2017 Level	NHS	<p>September 28, 2017</p> <p>Oct. 5, 2017 – FHWA published a proposed rulemaking (NPRM) to repeal the CO₂</p>			

Federal Performance Area	Federal Performance Measure	Performance Measures Applies To	Effective Date of Rule	Date when State DOTs must set Targets	Date when MPOs must set Targets	How/where Measures Must be Reported
			Emissions measure			documented and is mutually agreed upon by both the State DOT and the MPO. A NPRM was published on Oct. 5, 2017 to repeal the GHG emission measure. Comments on the GHG NPRM were due by Nov. 6, 2017.
	4. Truck Travel Time Reliability (TTTR) Index	Interstate System	May 20, 2017 (revised effective date)			
	5. Annual Hours of Peak Hour Excessive Delay Per Capita	The NHS in urbanized areas with a population over 1 million for the first performance period and in urbanized areas with a population over 200,000 for the second and all other performance periods that are also in nonattainment or maintenance areas for ozone (O ₃), carbon monoxide (CO), or particulate matter (PM ₁₀ and PM _{2.5}).				

Federal Performance Area	Federal Performance Measure	Performance Measures Applies To	Effective Date of Rule	Date when State DOTs must set Targets	Date when MPOs must set Targets	How/where Measures Must be Reported
	6. % Non-SOV Travel	The NHS in urbanized areas with a population over 1 million for the first performance period and in urbanized areas with a population over 200,000 for the second and all other performance periods that are also in nonattainment or maintenance areas for ozone (O ₃), carbon monoxide (CO), or particulate matter (PM ₁₀ and PM _{2.5}).				
	7. Total Emissions Reduction	All projects financed with CMAQ funds in areas designated as nonattainment or maintenance for ozone (O ₃),				



Federal Performance Area	Federal Performance Measure	Performance Measures Applies To	Effective Date of Rule	Date when State DOTs must set Targets	Date when MPOs must set Targets	How/where Measures Must be Reported
		carbon monoxide (CO), or particulate matter (PM ₁₀ and PM _{2.5})				



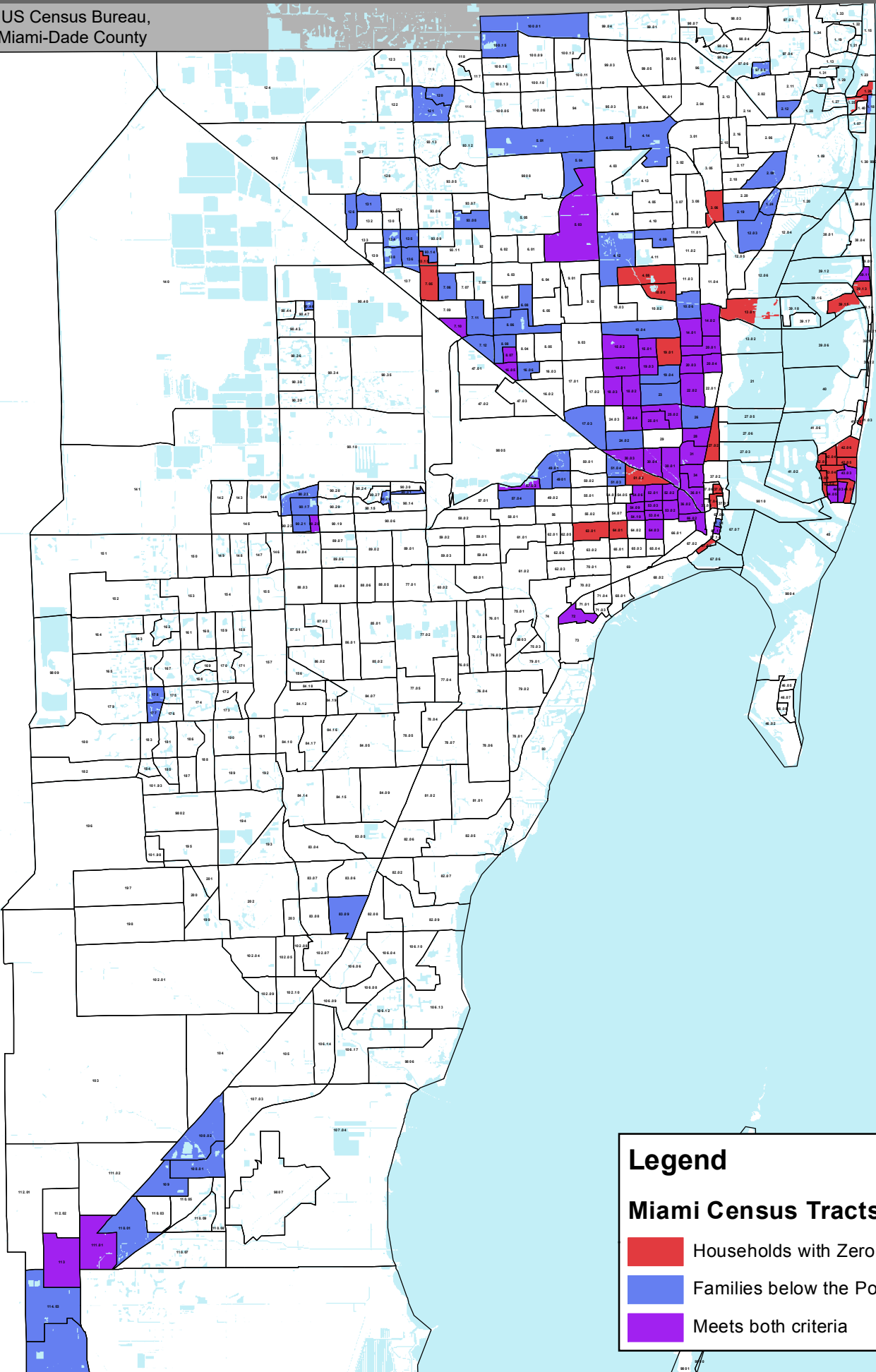
Federal Planning Emphasis Areas (PEAs) for Miami-Dade County Long Range Transportation Plan Review Matrix				
Criteria	Plan 2040: Regional Transportation Plan- A Shared Vision for a Sustainable Region, NYMTC	The Atlanta Region's Plan Transportation Element, ARC	Plan Bay Area, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area, 2013-2040, MTC	Maximize 2040: A Performance-Based Transportation Plan for a Greater Baltimore Region, BRTB
Performance Based Planning and Programming	<ul style="list-style-type: none">The RTP acknowledges the major changes to the metropolitan transportation planning process from MAP-21 to include performance-based planning and performance management in LRTP development.RTP states that the NYMTC will work toward addressing the MAP-21 performance measure requirements.Desired Outcomes and Near-Term Actions are identified for each goal. The Shared Goals are:<ul style="list-style-type: none">Enhance the regional environmentImprove the regional economyImprove the regional quality of lifeProvide a convenient and flexible transportation system within the regionEnhance the safety and security of the transportation system for all usersBuild the case for obtaining resources to implement regional investmentsImprove the resiliency of the regional transportation systemPerformance Measures are used in the Congestion Management Process (CMP) to assess the effectiveness and efficiency of the roadway system and reported in the CMP. The commonly used measures identified include: Demand-to-Capacity Ratio, Vehicle Hours of Delay, Person Hours of Delay, Average Travel Speed, Lane-Miles of Congestion, and Travel Time Index.	<ul style="list-style-type: none">MAP-21 Performance Measures are acknowledged, and ARC states that they make every effort to go above and beyond the minimum federal requirements.The overarching goal of the Atlanta Region’s Plan Transportation Element is “Ensuring a comprehensive transportation network, incorporating regional transit and 21st century technology”. It is supported by seven objectives and 23 policies.RTP has a chapter titled Performance to “ensure projects and programs are wise investments.” System performance, economic opportunity, and air quality are analyzed for three scenarios:<ul style="list-style-type: none">2015 Base Scenario2040 No-Build ScenarioConstrained Scenario (2040 Build Scenario)The Performance Emphasis Areas are:<ul style="list-style-type: none">MobilityConnectivity/AccessibilityEconomic GrowthSafetyARC has a web application, Project Evaluation Visualization, to evaluate individual projects. This methodology is a combination of benefit/cost ratio and criteria method of individual performance metrics. Performance Measures were established to determine needs and measures to determine the impact a projects will have on the region. The Needs Measures include: congestion, accessibility, safety, air quality, reliability, equity, and freight. Project Performance Measures include: congestion, accessibility, freight, air quality, deliverability, and impact.	<ul style="list-style-type: none">Plan Bay Area does not mention or reference the Federal Planning Factors or Map-21 National Performance Goals.To evaluate the performance of the Plan Bay Area, ABAG and MTC adopted 10 targets. The targets include mandated and voluntary targets:<ul style="list-style-type: none">Mandated by California Senate Bill 375, enacted in 2008<ol style="list-style-type: none">Reduce per-capita CO2 emissionsHouse 100% of the region’s projected growthVoluntary<ol style="list-style-type: none">Reduce premature deaths from exposure to particulate emissionsReduce by 50% the number of injuries and fatalities from all collisionsIncrease the average daily time walking or biking per personDirect all non-agricultural development within the urban footprintDecrease by 10% the share of low-income and lower-middle income residents’ household income consumed by transportation and housingIncrease gross regional product (GRP) by 110 percentIncrease non-auto mode share by 10%, Decrease VMT per capita by 10%Maintain the transportation system in a state of good repair:At the project level, projects are assessed based on the benefit-cost ratio and a target score. The cost-benefit is a measure of cost-effectiveness and the target score is a measure of how well the project contributes to achieving the Plan Bay Area’s Performance targets.Plan Bay Area 2040 has a Project Performance Dashboard for project evaluation that displays the results of the benefit-cost, target, confidence, and equity assessment by project.	<ul style="list-style-type: none">Maximize 2040 was developed based on MAP-21 and other federal, state, regional, and local requirements. Maximize 2040 highlights performance based planning at the project and system levels.BRTB’s Regional Transportation Goals are:<ol style="list-style-type: none">Improve System SafetyImprove and Maintain the Existing InfrastructureImprove AccessibilityIncrease MobilityConserve and Enhance the EnvironmentImprove System SecurityPromote Prosperity and Economic OpportunityFoster Participation and Cooperation Among StakeholdersPromote Informed Decision MakingBRTB’s Regional Performance Measures are:<ul style="list-style-type: none">System Safety – RoadwaysSystem Safety – TransitSystem Conditions – Roadways and BridgesSystem Conditions – TransitSystem Performance – CongestionSystem Performance – FreightSystem Performance – EmissionsMeasures Beyond MAP-21 Requirements – AccessibilityBased on the above measures a detailed evaluation was conducted on the region’s transportation assets and system conditions. The BRTB is committed to annually monitor the progress of the Plan based on the performance measures and targets.Projects have a Technical Score and a Policy Score. The total project score is the sum of the Technical and Policy scores.
Models of Regional Cooperation	<ul style="list-style-type: none">To promote regional collaboration within the NYMTC planning area, the ten county region is divided into three subregions called Transportation Coordinating Committees (TCCs) and include: New York City (the five boroughs), Mid-Hudson South (also referred to as Lower Hudson Valley, Putnam, Rockland, and Westchester counties), and Nassau-Suffolk (counties).Megaregional Planning - NYMTC is part of a coordinated transportation planning Memorandum of Understanding (MOU) including: North Jersey Transportation Authority (NJTPA), South Western Region Metropolitan Planning Organization (SWRMPO), Greater Bridgeport / Valley Metropolitan Planning Organization (GBVMPO), and the Housatonic Valley Council of Elected Officials (HVCEO).	<ul style="list-style-type: none">ARC is defined as a Regional Commission (RC) to assist local governments with the planning process and to prepare and to implement comprehensive regional plans. ARC is also the designated MPO.ARC’s Comprehensive Transportation Plan (CTP) program helps to incorporate local issues into the RTP’s recommendations as the bases of regional transportation planning. The purpose of this voluntary program for counties and municipalities is to ensure that transportation infrastructure has a positive impact on strengthening the economy and communities at the local and regional levels.	<ul style="list-style-type: none">A regional initiative, FOCUS was created by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) to support the local coordination efforts in the Plan Bay Area region. This initiative helps link local community development aspirations with regional land use and transportation planning objectives.	<ul style="list-style-type: none">As the MPO for the Baltimore Region, BRTB encompasses a five county region consisting of Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties. The BRTB Board is made up of representatives from these five counties and Baltimore City, City of Annapolis, Maryland Departments of Transportation: Environment and Planning, and the Maryland Transit Administration. Additional regional coordination is not addressed in Maximize 2040.
Ladders of Opportunity	<ul style="list-style-type: none">To address Environmental Justice and Title VI, the RTP identifies Communities of Concern as census tracts that have both a minority population and a low-income population. Minority communities were identified as census tracts that had 56% (the regional average) or greater of persons who are American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian	<ul style="list-style-type: none">Promoting an accessible and equitable transportation system is an objective of the plan.Environmental Justice and transportation equity are wound throughout the RTP. ARC uses an Equitable Target Areas (ETA) Index to understand environmental justice communities and connectivity. The ETA Index measures	<ul style="list-style-type: none">The Plan Bay Area addresses equity by identifying Communities of Concern and Equity Performance Measures. Plan Bay Area defines Communities of Concern “as those neighborhoods with notably high concentrations of four or more of the following: minority persons; low-income individuals; persons who are of limited English proficiency;	<ul style="list-style-type: none">Ladders of Opportunity in Maximize 2040 are addressed through the Regional Plan for Sustainable Development developed by the Opportunity Collaborative, a consortium responsible for developing Baltimore’s <i>Regional Plan for Sustainable Development</i> (RPSD). The RPSD links the region’s housing, transportation, and workforce



	<p>and other Pacific Islander. Low income communities were identified as census tracts that have 15% (the regional average) or greater of persons at or below the poverty level. Census tracts that met both of these criteria were designated as Communities of Concern.</p> <ul style="list-style-type: none">• Communities of Concern were analyzed based on travel characteristics – mode of travel, travel time to work, and linguistic isolation – as defined by the US Census Bureau, steps were taken to make sure that identified Communities of Concern throughout the region were included in the public involvement process.	<p>the impacts of investments and programs of the Plan on ETAs and provides input for project prioritization, evaluation, and monitoring.</p> <ul style="list-style-type: none">• The full Equitable Target Area Methodology is listed in Appendix J.• It is noted that future updates will consist of an analysis of Ladder of Opportunity	<p>seniors age 75 and over; persons with disabilities; households without cars; single-parent households; and renters paying more than 50 percent of household income on rent. The Equity Issues are identified below. Performance Measures for each were adopted.</p> <ul style="list-style-type: none">- Housing and Transportation Affordability- Potential for Displacement- Healthy Communities- Access to Jobs- Equitable Mobility	<p>development plans and investments. The recommendations for the RPSD include:</p> <ul style="list-style-type: none">- RPSD Goal: Improve Transportation Access to Career, Training, and Education- Opportunities<ol style="list-style-type: none">1. Strategy 1: Improve transit service to connect workers with jobs and training opportunities in suburban job centers.2. Strategy 2: Increase transportation options to jobs and education for households. <ul style="list-style-type: none">• BRTB’s commitment to Ladders of Opportunity is shown through this Small-Programs Set-Aside by allocating \$100,000,000 for the twenty year period from 2020-2040 for Ladders of Opportunity.
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Figure 5: Communities of Concern

Data Source: US Census Bureau,
MySidewalk, Miami-Dade County



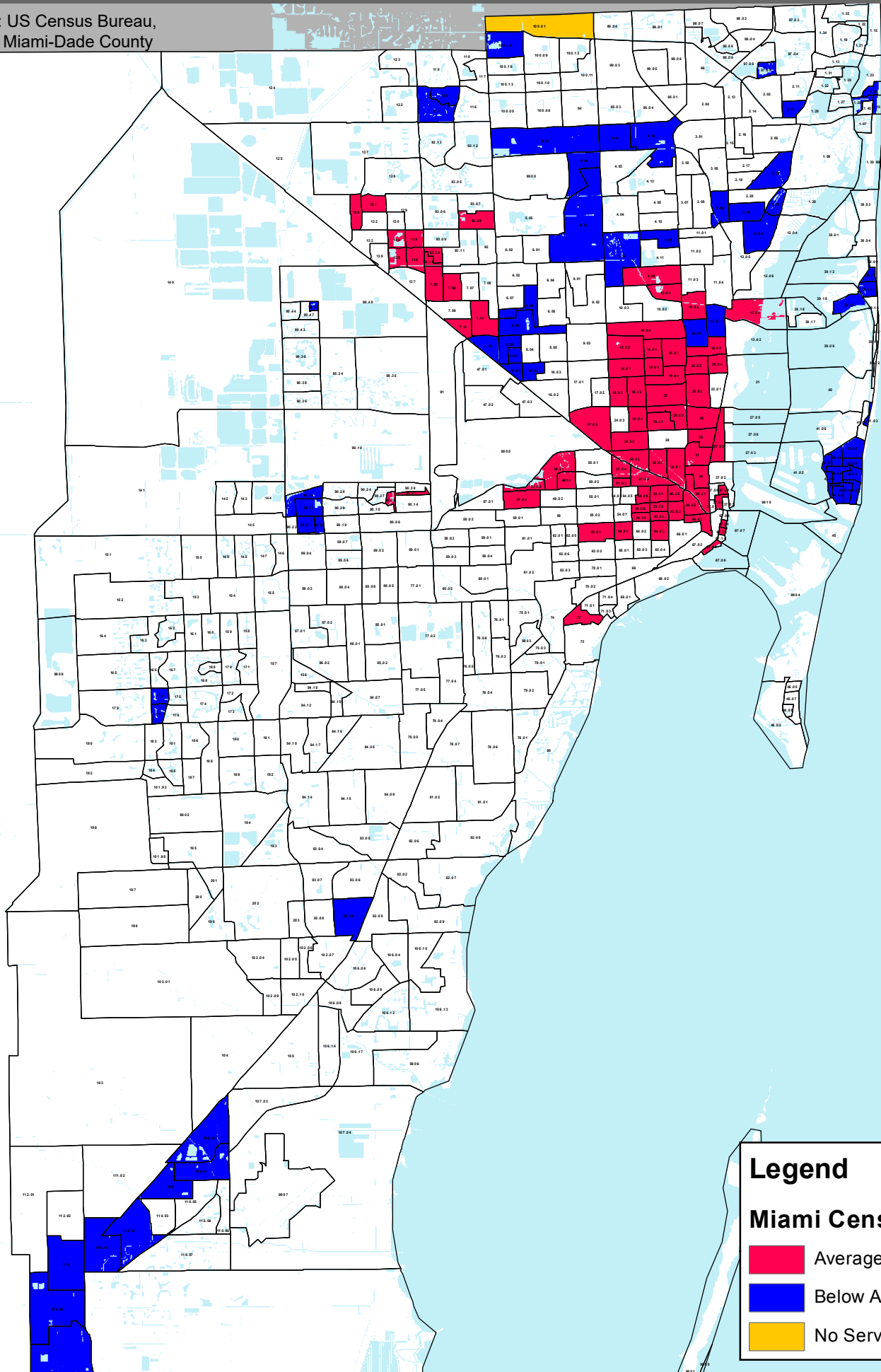
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Miami Census Tracts

- Households with Zero Vehicles Only
- Families below the Poverty Level Only
- Meets both criteria

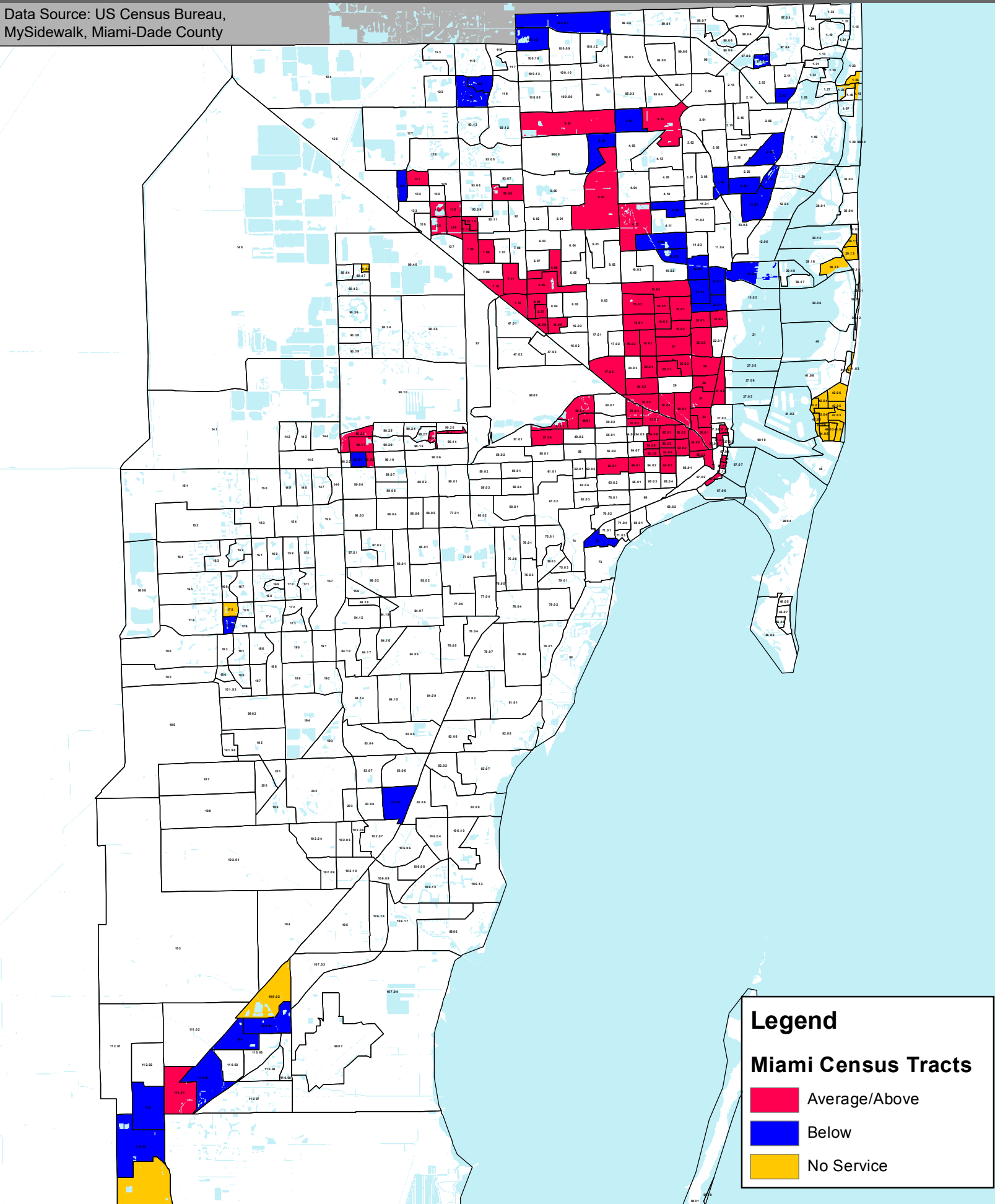
Communities of Concern- Hospital / Free Standing Clinic Service Density

Data Source: US Census Bureau,
MySidewalk, Miami-Dade County



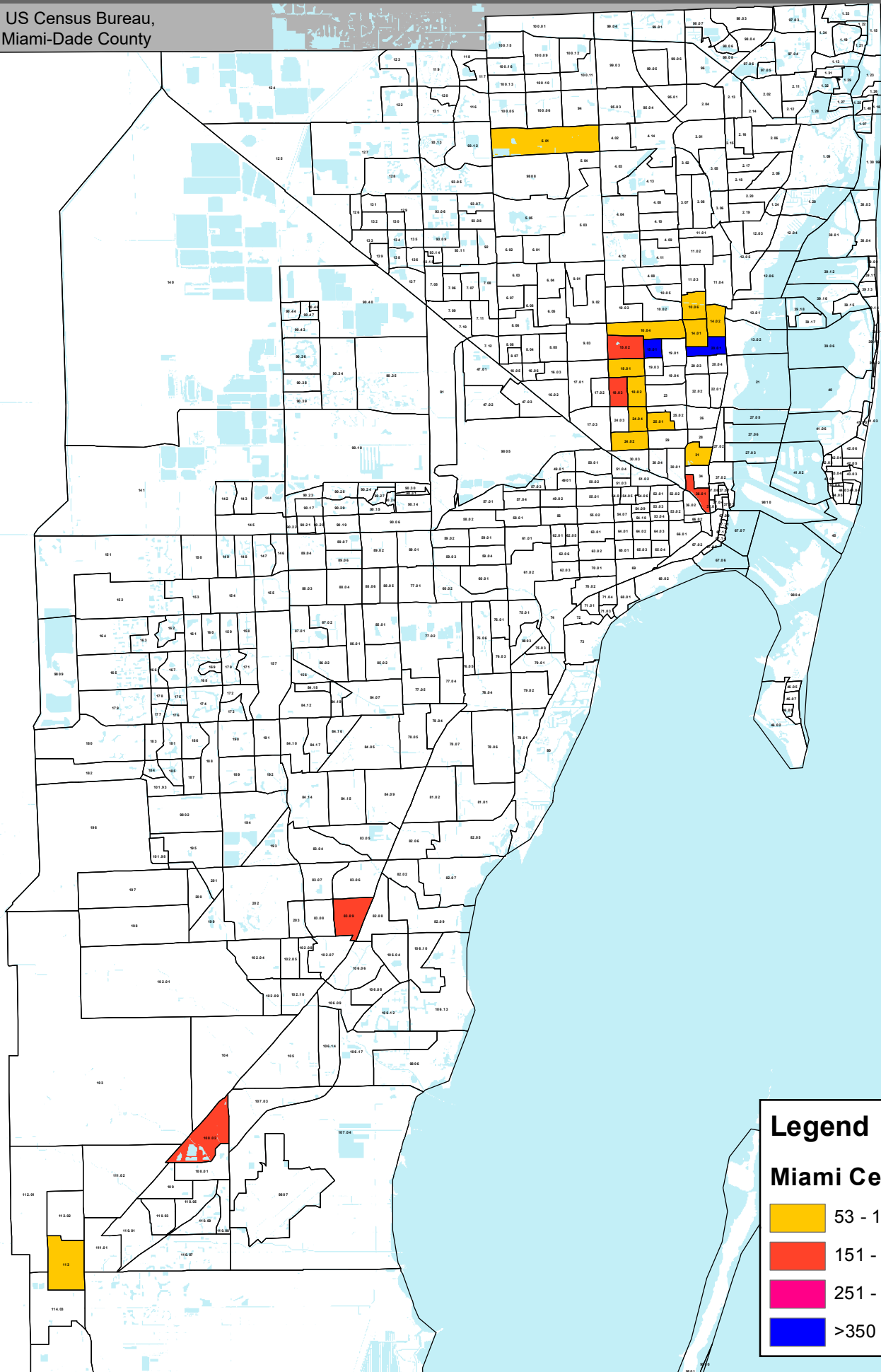
Communities of Concern-School Service Density

Data Source: US Census Bureau,
MySidewalk, Miami-Dade County



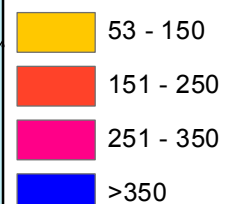
Communities of Concern- Low Income Housing

Data Source: US Census Bureau,
MySidewalk, Miami-Dade County



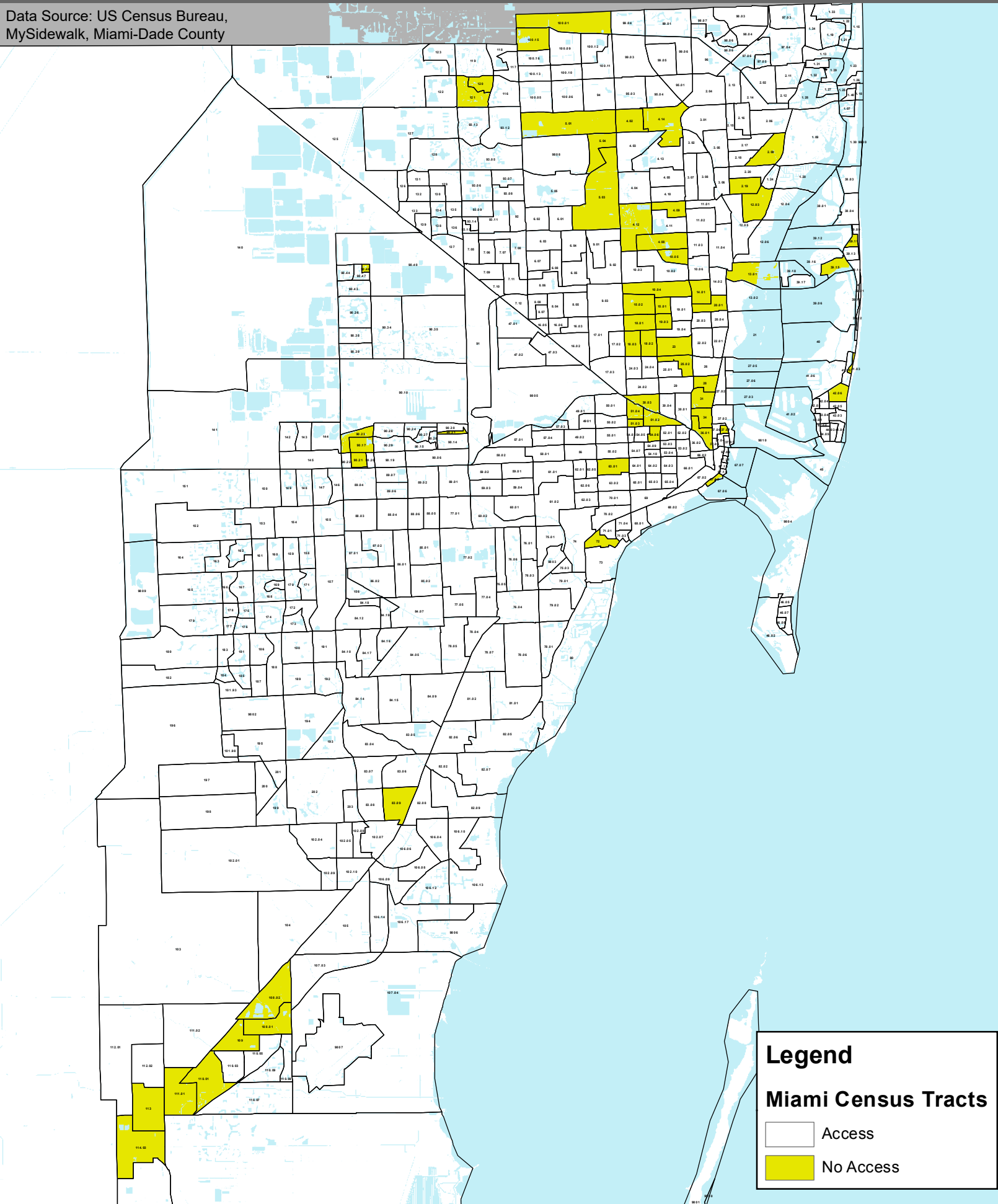
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Miami Census Tracts



Communities of Concern- Low Food Access (1/2 mile)

Data Source: US Census Bureau,
MySidewalk, Miami-Dade County



Communities of Concern- Low Food Access (1 mile)

Data Source: US Census Bureau,
MySidewalk, Miami-Dade County

