



**Broward Metropolitan Planning Organization
Commitment 2045
Metropolitan Transportation Plan**

**Technical Report #2a
Data Compilation
and Review**

February 2018

MPO MISSION STATEMENT

To collaboratively plan, prioritize, and fund the delivery of diverse transportation options.

MPO VISION STATEMENT

Our work will have measurable positive impact by ensuring transportation projects are well selected, funded, and delivered.

CONTENTS

DATA COMPILATION OVERVIEW	1
PURPOSE AND OVERVIEW	1
DATA COMPILATION.....	1
ELECTRONIC DATA INVENTORY	2
ABOUT THE DATA.....	2
SOCIOECONOMIC.....	2
PEDESTRIAN, BICYCLE, AND GREENWAYS	4
WATERBORNE TRANSPORTATION NETWORK	4
FREIGHT TRANSPORTATION NETWORK	5
TRANSIT	6
TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS	10
OTHER DATA.....	10

Core Products of the Broward MPO



Data Compilation Overview

Purpose and Overview

The Data Compilation and Review Technical Report #2a of Commitment 2045 is the first of two data reports. The data compiled support the analysis of the Metropolitan Transportation Plan (MTP), including relevant geographic information system (GIS) shapefiles, transportation data, and planning documents at the state, regional and local level. This report details how the list of data was developed and how the quality of the data was verified for accuracy and consistency. Documents and data pertaining to Commitment 2045 are generally grouped into the following categories:

- Socioeconomic
- Pedestrian, Bicycle, and Greenways
- Waterborne Transportation Network
- Freight Transportation Network
- Transit
- Transportation System Management and Operations
- Other types of data such as ITS

The Broward County socioeconomic data and review of the data have not yet been completed, they will be included in Technical Report #2b.

Data Compilation

An initial list of data needs was identified for the aforementioned categories. The data were compiled and organized in a spreadsheet using a variety of sources, including agency websites and in-house data. Some data elements include GIS shapefiles that were created based on PDF versions of planning documents, as needed.

Electronic Data Inventory

After the list of data was finalized, the data were downloaded and indexed. The indexing process included:

- Data name
- Source/agency
- Website from which data were downloaded
- Year that data or documents were created
- File type (e.g., .pdf, shapefile, KML, Excel, jpg)
- Summary description
- Attributes – key words for search function

Data were uploaded to a SharePoint website developed for the MTP and indexed for search purposes. Additional data pertaining to the MTP will be included and maintained throughout the life of the project. As a result, data added throughout the project may not be documented in this report.

About the Data

The following is a description of the data and, if applicable, how the quality will be checked for accuracy and consistency. A working table listing the data, agency, website source, file type, summary description, and key attributes is provided in Appendix A.

Socioeconomic

The 2010–2040 socioeconomic data initially developed by Broward County is used in the Southeast Florida Regional Planning Model (SERPM) to forecast automobile and transit trips in Palm Beach, Broward, and Miami-Dade counties. The socioeconomic data forecast for the horizon year, 2045, consist of population and household data and employment data. Employment data include hotel and school enrollment data.

Population and Household Data

Traffic Analysis Zone (TAZ) data of population and household data will be forecasted to 2045. Data will be reviewed for any anomalies and inconsistencies found in the County’s forecasts and the University of Florida’s Bureau of Economic and Business Research (BEBR) forecasts. The forecasted control totals will be submitted to MPO staff for review and approval. Upon approval of the control totals, the TAZ-level data will be allocated to Micro Analysis Zone

(MAZ) geographies, as appropriate. Population and household data contain the following attributes:

- Household size (1, 2, 3, 4+)
- Household income
- Number of employed household members (0, 1, 2, 3+)
- Households by presence of children (0, 1+)
- Dwelling unit type (i.e., single-family, multi-family, mobile home)
- Group quarter status
- Households by type of housing unit
- Age of population in households
- Race/ethnicity of population of households
- Gender of population in households
- Worker occupation of population of households.

Employment Data

The TAZ-level forecast of the Broward County employment data for the horizon year 2045 will be developed by reviewing 2015 base year employment data.

Employment data contain the following attributes:

- Population
- Number of households
- Total employees
- Employees by industry type (e.g., agriculture, construction, retail, transportation, health)
- School enrollment by school type (i.e., elementary school, high school, private school, university)
- Number of hotels

Upon approval of the forecast by the MPO, the TAZ-level data will be allocated to MAZ geographies, as appropriate.

Interpolation will be used to develop two interim-year zonal data sets for 2025 and 2035. The methodology used to verify the socioeconomic data will be further summarized in Technical Report 2b.

Pedestrian, Bicycle, and Greenways

Pedestrian, bikeways, and greenways data will be used to inventory existing pedestrian facilities and bikeway networks within the MPO planning area. GIS shapefiles for pedestrian, bicycle, and greenways were obtained from the Florida Department of Transportation (FDOT) Transportation and Analytics GIS website, including:

- Shared Path Width and Separation
- Sidewalk Barriers
- Sidewalk Width and Separation
- Bicycle Lanes
- Bicycle Slots

A GIS shapefile for sidewalks, bicycle lanes, and greenways has been requested from Broward County. Data from Broward County and FDOT will be verified for accuracy and overlapped using Google Earth aerial photography.

Waterborne Transportation Network

Waterborne transportation data are used to inventory the existing waterborne transportation network, which could be used to identify successful and efficient waterborne transportation service. These data were developed using National Oceanic and Atmospheric Administration (NOAA) navigational chart Nos. 11470 and 11467 and manatee protection zone data from Florida Fish and Wildlife, Broward County, and the Florida Administrative Code.

Existing and potentially navigable waterways, defined as those having a depth of seven feet or more on NOAA charts, were marked in Google Earth Pro. Known operational constraints including manatee protection zones and speed zones also were indicated. Potential landing sites such as public parks (as indicated in Google Earth Pro) located on navigable waterways were marked and labeled.

The following waterway GIS shapefiles were obtained:

- Links (shipping lanes or representative paths in open water)
- Nodes
- Port facilities and boundaries

- Locks
- Manatee Protection Zones

In addition, the following plans in PDF form were downloaded:

- City of Hollywood Marine Waterway Master Plan
- Broward County Manatee Protection Plan
- Broward County Manatee Protection Areas and Boating Restricted Areas
- NOAA Chart 11470
- NOAA Chart 11467

Freight Transportation Network

Freight transportation network data will be used to inform the Freight element of the MTP. The 2015 and 2045 highway network will be used to identify projects that would provide for the safe and efficient movement of freight and goods.

Freight transportation network plans, including those for the Strategic Intermodal System (SIS), were obtained from agency websites including the Broward MPO, I-95 Corridor Coalition, FDOT, and Broward County. The following plans were obtained:

- Southeast Florida Regional Freight Plan, 2014 Update
- Southeast Florida Regional Freight Plan Roadway Needs Plan Projects
- Broward County ITS Intermodal Plan, Final Report
- Broward County Urban Freight/Intermodal Mobility Study, Final Report (2007/08)
- Port Everglades 2014 Master/Vision Plan
- 2040 Vision for the I-95 Coalition Region: Supporting Economic Growth in a Carbon-Constrained Environment, Final Report, I-95 Corridor Coalition
- Port Everglades 2014 Master/Vision Plan Appendix C: Traffic Data
- Southeast Rail Operations (SEROps) Phase I, Summary Report
- Southeast Rail Operations Study, Phase II, Tasks 1 and 2: Strategic Corridor Identification and Mapping
- FHWA Connected Automation Research
- Florida Freight Mobility and Trade Plan: Policy Element
- Florida Freight Mobility and Trade Plan: Investment Element
- Florida Motor Carrier System Plan

- Florida Seaport System Plan
- Florida Waterways System Plan
- Florida Statewide Aviation Economic Impact Study Update Technical Report
- Fort Lauderdale-Hollywood International Airport Master Plan Update
- 2045 Strategic Intermodal System Funding Strategy: Long Range Cost Feasible Plan 2024–2040 (Present Day Costs), 2014 Edition
- SIS Funding Strategy: Long Range Cost Feasible Plan 2024–2040, Present Day Costs and Year of Expenditure, 2014 Edition, SIS Multi-Modal Unfunded Needs Plan
- Freight Connector Operational Quick Fixes FY 2016/17 through FY 2021/22
- SIS 2045 Multimodal Unfunded Needs Plan: FDOT District 4 Projects Presentation

The following Freight Transportation Network GIS shapefiles were obtained:

- SIS State Roads
- SIS Adopted 5-Year Plan Multimodal Capacity Improvement Projects FY2017/2018 to FY2021/2022 (July 2017)
- SIS Approved 2nd Five-Year Plan Multimodal Capacity Improvement Projects, FY2022/2023 to FY2026/2027
- 2045 SIS Multi-Modal Unfunded Needs Shapefile
- SIS 2040 Cost Feasible Plan Year of Expenditure Shapefiles

Transit

The transit data compiled for the MTP will be used to inform the Transit element of the MTP. Relevant and recently-completed plans/studies were compiled from agencies including the Broward MPO, Southeast Florida Transportation Council (SEFTC), Broward County Transit (BCT), Miami-Dade Transit (MDT), PalmTran, South Florida Regional Transportation Authority (SFRTA), and municipalities within Broward County. The following plans were obtained:

- Broward Commitment 2040 Long Range Transportation Plan
- 2040 Southeast Florida Regional Transportation Plan
- MDT Transit System Map

- PalmTran Transit System Map
- Tri-Rail Coast Link Study
- Tri-Rail Coast Link Station Area Opportunities
- SFRTA Transit System Map
- SFRTA Strategic Regional Transit Plan
- SFRTA Forward Plan: FY 2014–2023 Transit Development Plan
- SFRTA Forward Plan: FY 2018–2027 Transit Development Plan
- BCT Transit System Map
- Broward County Transit Comprehensive Operational Assessment reports
- BCT Stop Ridership by City Commission, January 2014–March 2014
- BCT US1 Transit Study: Transit Scenarios Development, Technical Memorandum
- BCT Connected Transit Development Plan, Annual Update 2017–2026
- BCT Transit Development Plan, Annual Update 2018–2027
- Fort Lauderdale Transit Master Plan
- Hollywood/Pines Congestion Management Process/Livability Planning Project
- University Drive Mobility Improvements Planning Study, Final Summary Report
- SR 7 Multimodal Improvements Corridor Study
- Oakland Park Boulevard Alternatives Analysis, Final Report
- Broward Boulevard Corridor Transit Study, Final Report
- Central Broward East-West Transit Fact Sheet
- Broward A1A Scenic Highway: Five-Year Corridor Management Plan Update
- Framework for Transit Oriented Development in Florida
- Regional Transit Plan Case Studies
- Pompano Education Corridor Transit Study: Existing Conditions, Technical Memorandum #1
- Pompano Education Corridor Transit Study: Existing Transportation Conditions and System Opportunities, Technical Memorandum #2
- Pompano Education Corridor Transit Study: Transit Service Alternatives with Capital and O&M Costs, Technical Memorandum #3
- Hollywood/Pines Blvd Multimodal Corridor Study

- Hollywood/Pines Blvd Multimodal Corridor Study: Executive Summary
- Sunrise Boulevard Multimodal Corridor Study Congestion Management Process
- Oakland Park Boulevard Strategic Corridor Study (Phase 1)
- Subtropical Sustainable: A Context Sensitive Design Approach to Redevelopment in Broward County
- Oakland Park Boulevard Transit Corridor Study: From Sawgrass Expressway to SR A1A
- Broward County Comprehensive Plan (Transportation Element)
- City of Fort Lauderdale Comprehensive Plan (Transportation Element)
- City of Hollywood City-Wide Master Plan (Multi-Modal Transportation and Public Safety Policies)
- City of Pompano Beach Comprehensive Plan (Transportation Element)
- City of Plantation Comprehensive Plan (Transportation Element)
- City of Coral Springs Comprehensive Plan (Transportation Element)
- City of Davie Comprehensive Plan (Transportation Element)
- City of Sunrise Comprehensive Plan (Transportation Element)
- City of Miramar Comprehensive Plan (Transportation Element)
- City of Weston Comprehensive Plan (Transportation Element)
- City of Deerfield Beach Comprehensive Plan (Transportation Element)
- City of Hallandale Beach Comprehensive Plan (Transportation Element)
- City of Tamarac Comprehensive Plan (Transportation Element)
- City of Margate Comprehensive Plan (Transportation Element)
- City of Dania Beach Comprehensive Plan (Transportation Element)
- City of Oakland Park Comprehensive Plan (Transportation Element)
- City of Coconut Creek Comprehensive Plan (Transportation Element)
- City of Cooper City Comprehensive Plan (Transportation Element)
- City of Parkland Comprehensive Plan (Transportation Element)
- City of Lauderdale-by-the-Sea Comprehensive Plan (Transportation Element)
- City of Lauderdale Lakes Comprehensive Plan (Transportation Element)
- City of Lighthouse Point Comprehensive Plan (Transportation Element)
- City of Southwest Ranches Comprehensive Plan (Transportation Element)
- Fort Lauderdale-Hollywood International Airport Master Plan Update

- 595 Express Sunrise to Miami/Brickell (Route 110) Map
- 595 Express Sunrise to Miami Civic Center (Route 114) Map
- 95 Express Miramar (Route 106) Map
- 95 Express Hollywood (Route 107) Map
- 95 Express Pembroke Pines (Route 108) Map
- 95 Express Pembroke Pines/Miramar (Route 109) Map
- Route 95 Express Dade/Broward (Broward Boulevard) Map
- Proposed Sun Trolley Routes Map
- Coconut Creek Community Transit System Map
- Coral Springs Community Transit System Map
- Dania Beach Community Transit System Map
- Davie Community Transit System Map
- Deerfield Beach Community Transit System Map
- Fort Lauderdale Community Transit System Map
- Hallandale Beach Community Transit System Map
- Hillsboro Community Transit System Routes Map
- Hollywood Community Transit System Routes Map
- Hollywood Community Train to Trolley Shuttle Map
- Lauderdale-by-the-Sea Community Transit System Map
- Lauderdale Lakes Community Transit System Map
- Lauderhill Community Transit System Map
- Lighthouse Point Community Transit System Map
- Margate Community Transit System Map
- Miramar Community Transit System Map
- Pembroke Pines Community Transit System Map
- Pompano Beach Community Transit System Map
- Tamarac Community Transit System Map
- West Park Community Transit System Map
- The Wave Streetcar map
- The Wave Access Management Public Hearing Presentation

The following shapefiles were compiled and verified for accuracy by reviewing current transit schedules:

- SFRTA shuttle routes (2017)

- BCT existing local routes (2017)
- BCT bus stops (2017)
- Sun Trolley (2016)
- Broward County Community Buses (2017)
- The Wave proposed alignment (2016)

In addition, .kml files were created for several intercity transit service providers including:

- Greyhound bus station
- Megabus bus station
- Amtrak bus and train station
- GMG transport station
- Redcoach bus station

Transportation System Management and Operations

Transportation System Management and Operations (TSM&O) initiatives, projects, and studies at the local, regional, state, and national levels were assembled and compiled, including:

- Expanding TSM&O from Planning to Construction Primer, Final Report
- Developing and Sustaining a TSM&O Mission for Your Organization: A Primer for Program Planning
- AASHTO TSM&O Guidance
- ITS Research 2015-2019: Connected Vehicles; Fact Sheet
- IBM's Smarter Planet
- TSM&O 2017 Strategic Plan
- Expanding TSM&O from Planning to Construction Primer
- Statewide and Regional ITS Architectures
- Active Traffic Management (ATM) Implementation and Operations Guide
- Regional Integrated Transportation Information System
- FDOT 511

Other Data

Other data compiled that support the MTP effort include the following:

- Broward County Communitywide Greenhouse Gas Emissions Inventory
- Cypress Creek Mobility Hub
- Downtown Fort Lauderdale Mobility Hub Context Map
- Hollywood Blvd/State Road 7 Mobility Hub
- FHWA Performance Measures
- Transportation System and Infrastructure Surtaxes Interlocal Agreement
- Local Funding Options Fact Sheet
- AADT shapefile (April 2016)
- Bike Lanes shapefile (April 2016)
- Bike Slots shapefile (April 2016)
- Bridges shapefile (April 2016)
- Countyline shapefile
- FDOT District Boundaries shapefile
- Facility Crossings shapefile
- FDOT Roadway Functional Classification shapefile (April 2016)
- Large Quantity Generations of Hazardous Waste shapefile (April 2016)
- Major Highways shapefile (April 2016)
- MPO Boundary shapefile (May 2016)
- Number of Lanes in Roadways shapefile (April 2016)
- FDOT Off-System Roadways shapefile (2016)
- FDOT On-System Roadways shapefile (2016)
- Contaminated Sites shapefile (April 2016)
- Rail Crossings shapefile (April 2016)
- FDOT Roadways Characteristics Inventory shapefile (April 2016)
- Historic Bridges shapefile (April 2016)
- Historic Cemeteries shapefile (April 2016)
- Historic Resource Locations shapefile (April 2016)
- Historic Structures Locations shapefile (April 2016)
- Florida Shared-Use Nonmotorized (SUN) Trail Network shapefile (March 2016)

- Treaters, Storers and Disposers of Hazardous Water shapefile (April 2016)
- Census Urban Boundaries shapefile (2000)
- Broward MPO Urban Boundaries shapefile (2012)
- Mobility Projects shapefile (2017)
- Wastewater Facility Regulation Facilities shapefile (April 2016)
- Open and Closed Waste Cleanup Sites shapefile (2016)
- Traffic Analysis Zones (TAZ) 2010 Map
- Traffic Analysis Zones (TAZ) 2010 Shapefile
- Level of Service Spreadsheet 2013
- Traffic Signal Locations Maps
- Traffic Signal Locations Shapefile
- Year 2009 Traffic Count Report
- GIS Data for Traffic Counts
- 2013 Congestion Management Process (CMP) – Tier 1 Daily Existing Overcapacity Roadway Network
- 2013 Congestion Management Process (CMP) – Tier 1 Peak Existing Overcapacity Roadway Network
- 2013 Congestion Management Process (CMP) – Tier 2 Daily Existing Overcapacity Roadway Network
- 2013 Congestion Management Process (CMP) – Tier 2 Peak Overcapacity Roadway Network
- Transportation Alternatives Program 2018/2019 Work Program Cycle
- Transportation Alternatives Program 2017/2018 Work Program Cycle
- Transportation Alternatives Program 2016/2017 Work Program Cycle
- Transportation Alternatives Program 2015/2016 Work Program Cycle
- Transportation Alternatives Program 2014/2015 Work Program Cycle
- Uber – South Florida Hotspots for Pick-up
- Uber – South Florida Hotspots for Pick-up KML file
- Seven 50 Southeast Florida Prosperity Plan
- Unified Sea Level Rise Projection: Southeast Florida
- Regional Climate Change Action Framework: Implementation Guide
- Transportation Improvement Program FY 2017/18–FY 2021/2022
- Florida Strategic Highway Safety Plan

- Florida Highway Safety Improvement Program (HSIP) 2017 Annual Report
- FDOT 2018 adopted five-year transportation projects
- FDOT 2019 adopted five-year transportation projects
- FDOT 2020 adopted five-year transportation projects
- FDOT 2021 adopted five-year transportation projects
- FDOT 2022 adopted five-year transportation projects
- Major Roads shapefile
- Streets shapefile
- Electric Vehicles shapefile
- City of Seattle Department of Transportation TMP
- Commitment 2045 Metropolitan Transportation Plan Map Template
- Central Indiana Transit Plan 2016



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For more information on activities and projects of the Broward MPO, please visit
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