

Scope of Services

2050 Metropolitan Transportation Plan (MTP) Update

DRAFT - February 14, 2022

Mission Statement

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

Vision Statement

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

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LIST OF ACRONYMS

ATMS	Advanced Traffic Management System
CAC	Citizens' Advisory Committee
CFP	Cost Feasible Plan
CSAC	Complete Streets Advisory Committee
E+C	Existing plus Committed
EJ	Environmental Justice
ETAT	Environmental Technical Advisory Team
ETDM	Efficient Transportation Decision Making
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTP	Florida Transportation Plan
FDOT	Florida Department of Transportation
GIS	Geographic Information System
GOMs	Goals, Objectives and Measures of Effectiveness
ITS	Intelligent Transportation System
LCB	Transportation Disadvantaged Local Coordinating Board
LOS	Level-of-Service
LRTP	Long Range Transportation Plan
MAZ	Micro Area Zone
MPO	Metropolitan Planning Organization
NHS	National Highway System
O&M	Operations & Maintenance
PM	Project Manager
PPP	Public Involvement Plan
RTP	Regional Transportation Plan
SC	Steering Committee
SEFTC	Southeast Florida Transportation Council
SFRPC	South Florida Regional Planning Council
SFRTA	South Florida Regional Transportation Authority
TAD	Traffic Analysis District
TAZ	Traffic Analysis Zone
TAC	Technical Advisory Committee
TCQSM	Transit Capacity and Quality of Service Manual
TIP	Transportation Improvement Program
TPM	Transportation Performance Management
TR	Technical Report
TSM&O	Transportation System Management and Operation

GUIDING PRINCIPLES

About the Broward MPO

The Broward Metropolitan Planning Organization (MPO) is a federally-designated agency that is responsible for making policy about local transportation and deciding how to spend federal money on transportation projects within Broward County (“planning area”). The Broward region, defined as the urbanized area of Broward County within the Miami UZA, has a population of over 1.8 million full time residents. The Broward MPO’s role is to determine how to prioritize the available funds to address overall mobility and best meet the transportation needs and aspirations of residents, businesses and visitors.

Broward MPO’s MISSION STATEMENT: To collaboratively plan, prioritize and fund the delivery of diverse transportation options.

Broward MPO’s VISION STATEMENT: Our work will have measurable positive impact by ensuring transportation projects are well selected, funded and delivered.

It is the intent of the Broward MPO to develop the Metropolitan Transportation Plan consistent with the guiding pillars set forth in the Broward MPO’s Strategic Business Plan (May 2020):

- Mission Achievement
- Efficient Decision-Making
- Effective Administration

2050 MTP Scope Overview

The CONSULTANT and the Broward Metropolitan Planning Organization (MPO) mutually agree to furnish, each to the other, the respective services, information, and items as described herein necessary to prepare the Broward MPO’s 2050 Metropolitan Transportation Plan (MTP) Update in accordance with the requirements of the USDOT’s Fast Act, or the current transportation bill; the Metropolitan Transportation Planning regulations contained in 23 CFR Part 450 and 49 CFR Part 613; the requirements of section 339.175 of the Florida Statutes; and the provisions and specifications herein. The MTP will be adopted by the Broward MPO no later than December 2024.

The MTP will use 2050 as the horizon year and document the assessment of multimodal transportation facilities, services and policy needs over the next 25 years. Importantly, it will continue the new paradigm established in the previous plan updates (2040 and 2045) to provide a balanced transportation system that achieves optimum mobility and supports economic growth through improvements in multiple modes, with emphasis on mass transit and transit-supportive land uses.

The 2050 MTP will look to implement new and innovative transportation system performance measures that de-emphasize traditional road “congestion” in lieu of broader desirable transportation outcomes. The update process will consider a wide range of social, mobility, freight, safety, infrastructure, environmental, energy, equity, resiliency and economic factors reflected by the MTP’s Goals, Objectives and Measures/Performance Measures (GOM) to identify future transportation needs. Transportation “needs” may go beyond infrastructure investments to include changes in policy and legislation necessary to support the necessary future investments to support one of the largest metropolitan areas in the United States. The MTP will weigh and balance the cost of various transportation investments against anticipated future funding to ensure the MTP is a financially feasible plan for Broward County’s next 25 years.

Additionally, the MTP update will consider the most recently published [FHWA/FTA Planning Emphasis Areas](#) (12/30/2021):

- Tackling the Climate Crisis – Transition to a Clean Energy, Resilient Future
- Equity and Justice40 in Transportation Planning
- Complete Streets
- Public Involvement
- Strategic Highway Network (STRAHNET)/U.S. Department of Defense (DOD) Coordination
- Federal Land Management Agency (FLMA) Coordination
- Planning and Environment Linkages (PEL)
- Data in Transportation Planning

Southeast Florida and Broward County continue to face tremendous population growth. Additionally, the County will face global climate change impacts resulting in sea-level rise and more frequent severe weather events. These factors continue to place a strain on Broward’s current transportation network. Further, transportation technology is evolving at a rapid pace and the public sector is lagging behind in providing the necessary infrastructure and policy framework to meet the demands of Automated, Connected, Electric, Shared (ACES) vehicles. Finally, transportation and housing costs continue to disproportionately affect parts of the population (minorities, low-income households, etc.). Now, more than ever, Broward must plan for a transportation system that is multimodal, effective, efficient, and affordable for all residents. As a result, the 2050 MTP will include four (4) key emphasis areas in the development of the 2050 MTP

- Safety
- Resiliency
- Emerging Technologies
- Housing Attainability/Accessibility

This Scope of Services specifies the tasks that may be issued, in part or whole, to the CONSULTANT to support MPO staff in the development of the 2050 MTP. During contract negotiations, additional tasks and work elements may be added or deleted at the discretion of the PM. The PM must approve initiation of work tasks, which may be one or more task identified in the Scope of Service in writing before the CONSULTANT may perform work. The CONSULTANT will prepare a final work plan (to be included in the contract). All work will be completed no later than December 2025.

The MTP will include long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods. In keeping with the intent and requirements of the FAST ACT or current transportation bill, and the requirements stipulated by the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Florida Department of Transportation (FDOT) (as described in Chapter 4 of FDOT's Metropolitan Planning Organization Program Management Handbook), this plan update will be multimodal in nature. It will include: public transportation; pedestrian facilities; bikeways; waterborne transportation; highways; transportation system management and operations (TSMO); and freight transportation.

The MTP will include safety and security elements to meet the Federal requirements indicated in 23 CFR 450.322(h).

The update will include a robust Public Participation Plan (PPP) to provide interested parties opportunities to participate in the MTP update process. This update shall also be developed in consultation with Federal, State, Tribal, and local agencies responsible for: land use management, natural resources, environmental protection, conservation and historic preservation.

Broward MPO will assign a Project Manager (PM) to manage the CONSULTANT and MTP project. The overall update process and policy decisions will be guided by the MPO Board and its subcommittees. The Broward MPO Technical Advisory Committee (TAC) will serve as the Steering Committee for development of the 2050 MTP. The Broward MPO will coordinate development of the 2050 MTP with the adjacent TPO/TPA of Miami-Dade and Palm Beach, respectively, as well as the 2050 Regional Transportation Plan (RTP).

PROJECT TASKS

The following tasks will be completed by the CONSULTANT in adherence to both the Guiding Principles and Project Tasks contained in the Scope of Services.

SCOPE OF WORK

Task 1 – Project Management

Task 2 – Project Schedule and Coordination

Task 3 – Public Education and Outreach

Task 4 – Data

Task 5 – Goals, Objectives and Measurements/Performance Measures

Task 6 – Revenue and Finance

Task 7 – MTP Emphasis Areas – Safety, Resiliency, Emerging Technologies, and Attainable Housing/Accessibility

Task 8 – Model Support

Task 9 – Needs Assessment

Task 10 - Efficient Transportation Decision Making

Task 11 – Financially Feasible Plan

Task 12 – Equity

Task 13 – Regional Transportation Plan Coordination

Task 14 – 2050 Metropolitan Transportation Plan Adoption

Task 15 – General Planning Services to Support the Metropolitan Transportation Plan

TASK 1 – PROJECT MANAGEMENT

The CONSULTANT will assign a single person to serve through the life of the contract as CONSULTANT Project Manager (CONSULTANT PM). The CONSULTANT PM must be the person identified in the selected firm's proposal and may not be changed without prior written approval of the Broward MPO's designated Project Manager (PM). The CONSULTANT PM is responsible for overall project management necessary to ensure the satisfactory completion of Broward MPO's 2050 MTP, on-time and on-budget, in accordance with the scope of services. The CONSULTANT PM will serve as a single point of contact and will be expected to ensure the CONSULTANT team is properly managed, adequate resources are available, submittals are timely and quality control reviewed, and disadvantaged business enterprise (DBE) firms, if any, are utilized for maximum benefit and paid in a timely fashion.

The CONSULTANT PM is responsible for the quality of all work completed under this contract and is expected to ensure high standards for all submittals, both draft and final.

The CONSULTANT PM will work closely with the PM to ensure strong communication and coordination through the life of the contract. Communication will include mandatory written monthly progress reports with an updated actual schedule versus planned schedule, task progress, identification of critical path tasks, and actual expenditures versus budget report. Beyond normal phone and email communication, the CONSULTANT and MTP PM will generally be expected to meet in person monthly (at a minimum) to review the progress report and monitor progress.

The CONSULTANT PM will submit monthly invoices in a form and with documentation acceptable to the PM within 15 business days following the end of each month throughout the life of the contract. Invoices must include the monthly progress report.

The MPO retains all rights and ownership to the data, reports, presentations, maps, video and figures delivered by the CONSULTANT in order to complete the tasks documented in this *Scope of Services*. All reports shall be of high quality and reproducible and maps shall be provided in a GIS platform compatible with the MPO's computer software and hardware.

MPO staff shall:

- Conduct a technical review and/or assist in coordinating the review of all data, reports, presentations, maps, video and figures by appropriate planning partners; and
- Deliver comments to the CONSULTANT within 15 working days from the date that the preliminary data, reports, presentations, maps, video and figures are received from the CONSULTANT.
- The CONSULTANT shall:
 - Review and check all data, reports, presentations, maps, video and figures for accuracy, quality and consistency, and adherence to Americans with Disability Act

- (ADA) accessibility guidelines prior to review by MPO staff and other relevant planning partners;
- Deliver one electronic copy of preliminary materials for distribution to the MPO Board of Directors, the Technical Advisory Committee (TAC), the Citizens' Advisory Committee (CAC), the Local Coordinating Board (LCB), the Freight Transportation Advisory Committee (FTAC), the and the Complete Streets Advisory Committee (CSAC) for review and comment;
- Revise preliminary data, reports, presentations, maps, video and figures to address comments provided within 15 working days of the date that the comments are delivered to the CONSULTANT;
- Request from the RTP Consultant and deliver the FSUTMS users' files for the 2050 horizon year and the 2025 and 2035 interim years in a digital format compatible with the MPO's computer hardware and software;
- Deliver one electronic copy, on a USB Flash Drive, and 50 printed copies of the *2050 Metropolitan Transportation Plan Executive Summary (high quality, bound)*; and
- Deliver one electronic copy, on a USB Flash Drive, and 50 printed copies of the *2050 Metropolitan Transportation Plan (high quality, bound)*.

MEETINGS

All MPO Board of Directors, TAC, CAC, LCB, FTAC, and CSAC meetings will be held at the offices of the MPO at 100 West Cypress Creek Road, Suite 650, Fort Lauderdale, FL 33309, unless otherwise noted at the time of meeting announcement. Workshops and meetings with civic associations and local groups will be located throughout the MPO's planning area. The CONSULTANT shall prepare the necessary material, exhibits, presentation, advertising, and handouts for meetings and workshops. The CONSULTANT shall prepare meeting summaries, including documentation of comments from the public, staff and elected officials. The CONSULTANT is expected to be present in-person for MTP related agenda items to the advisory committees and MPO Board. Virtual meeting attendance will be handled on a case-by-case basis with approval from the PM.

MONTHLY MEETINGS

The CONSULTANT shall be available to meet with the Project Manger at least twice a month to discuss the contents of the monthly progress reports, to discuss the schedule of future activities and to ensure the project schedule is maintained (at least 1 of 2 meetings held each month will be in person). The CONSULTANT will work closely with MPO staff to schedule in-person project management meetings on the mornings of the TAC meetings at which the CONSULTANT project manager is scheduled to present.

TECHNICAL PRESENTATIONS

The CONSULTANT shall make the necessary arrangements to present to the MPO Board of Directors, TAC, CAC, Resiliency and Attainable Housing Committee, LCB, FTAC, and the CSAC (60 presentations). It is anticipated that the number of presentations for each forum will include the following:

- MPO Board (6) – to be handled by the CONSULTANT Project Manager
- Technical Advisory Committee (TAC) (18) – to be handled by the CONSULTANT Project Manager
- Citizens' Advisory Committee (CAC) (12 with each to occur on the same day as a TAC meeting to not require an additional trip) – to be handled by the CONSULTANT Project Manager
- Resiliency and Attainable Housing Committee (8) – to be handled by the CONSULTANT Project Manager
- Local Coordinating Board (LCB) (4) – to be attended by CONSULTANT staff to answer questions
- Freight Technical Advisory Committee (FTAC) (4) – to be attended by CONSULTANT staff to answer questions
- Complete Streets Advisory Committee (CSAC) (3) - to be attended by CONSULTANT staff to answer questions
- Additional Presentations as Needed (5) – to be attended by CONSULTANT staff

Deliverables:

- Monthly progress reports
- Monthly invoices
- Meetings and presentations
- Meeting materials

TASK 2 – PROJECT SCHEDULE AND COORDINATION

The CONSULTANT will develop and maintain, through the life of the contract, a detailed schedule in Microsoft Project. This schedule will include MTP tasks, sub-tasks, external tasks that feed into and/or affect the project or schedule (i.e., SEFTC's Regional Transportation Plan (RTP), FDOT's revenue projections and SERPM), identification of responsible agency or person, key partner agency meetings, MTP deadlines, Broward MPO and subcommittee meetings, and other details helpful to the management of the MTP. The CONSULTANT will create an initial "base" project schedule which, once approved by the PM, all subsequent project schedules will be compared to assist in project management and identification of "critical path" tasks and associated responsible party. The CONSULTANT will be expected to update the project schedule on a regular basis to account for changes in project tasks and deliverables.

The CONSULTANT PM is expected to use the project schedule as an important management tool to identify schedule issues, critical dates, early start items, provide feedback on impacts of proposed schedule changes or late delivery of key deliverables or inputs, and convey project status and issues to MTP PM. The CONSULTANT will use Microsoft Project to develop reports and figures as needed to support the PM, prepare project progress reports, facilitate coordination with partners, etc.

The CONSULTANT will support the PM in coordinating with the Miami-Dade TPO and Palm Beach TPA MTP development efforts to ensure consistency. Likewise, the CONSULTANT will be required to coordinate with SEFTC's Regional Transportation Plan (RTP). The CONSULTANT will identify complementary tasks in the various planning efforts to avoid duplication of effort, maximize use of existing resources, share results, coordinate activities, and minimize schedule conflicts

The CONSULTANT will coordinate with FDOT, their Consultants and the RTP Consultant team responsible for the development of key MTP inputs, including SERPM with associated base socio-economic files and revenue projections.

The Broward MPO TAC will serve as the MTP steering committee and will be tasked with providing feedback and recommendations to the MPO Board on key issues and deliverables throughout the duration of the contract. Key decisions will be made by the PM and CONSULTANT and reported as appropriate at TAC meetings. The CONSULTANT and PM will strive to always present materials in a clear, concise, and coherent manner that avoids overly jargon filled or technical materials. The CONSULTANT will be expected to provide defensible recommendations to the TAC and avoid asking open ended questions.

Potential areas of conflict will be identified by the CONSULTANT as early as possible, brought to the PM's attention for timely resolution or decision making.

The CONSULTANT shall complete a draft *2050 Metropolitan Transportation Plan* no later than April 2024 to allow for public review, workshops and presentations to interested parties. The

CONSULTANT will be responsible for developing and adhering to a schedule that allows Broward MPO adoption of the 2050 MTP no later than December of 2024.

Deliverables:

- Project Schedule in Microsoft Project
- Progress Reports and Figures

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TASK 3 – PUBLIC EDUCATION AND OUTREACH

The CONSULTANT will develop a Public Participation Plan (PPP) for the 2050 Metropolitan Transportation Plan. (MTP). The PPP will outline the process by which the public will be engaged throughout the development of the MTP update, from inception to completion. The MTP is the “public’s plan,” so input from the public is a very important part of plan development.

The PPP must provide appropriate opportunities for public participation and input during the MTP update process. The CONSULTANT shall undertake outreach efforts to various populations within the MPO boundary. The public involvement team should utilize the *Broward MPO’s Title VI Transportation Planning Equity Assessment* - <https://browardmpo.org/title-vi-transportation-planning-equity-assessment> (or an alternative tool) as a resource to help prepare and implement the Public Participation Plan, and to ensure traditionally under-represented groups are included in the planning process.

The CONSULTANT shall organize a public involvement team to develop a detailed PPP, including strategies to promote proactive public participation in accordance with the MPO’s adopted PPP procedures. At a minimum, the PPP should include goals, targets, expected outcomes, measures of effectiveness, target groups (based on the Transportation Planning Equity Assessment) and strategies to reach these groups.

SUBTASK 3.1 - INTRODUCTORY VIDEO

The CONSULTANT will prepare a video to introduce the public to the MTP update. This video should be easy to understand and relatively simple to produce. The video should have branding consistent with the overall Broward MPO 2050 Metropolitan Transportation Plan. The video length will be no longer than 60 seconds.

SUBTASK 3.2 - OUTREACH

OUTREACH MEETINGS & EVENTS - MPO staff shall hold twenty (20) meetings with the appropriate local groups, civic associations local governments, and participate in other outreach events as necessary to solicit input regarding vision and community values during the MTP update. New and innovative outreach techniques should be explored for these meetings including (but not limited to) virtual participation, live polling, and digital surveys. The CONSULTANT will be responsible for scheduling and preparing materials for all meetings and will be expected to participate in ten (10) of these meetings to support MPO staff in this effort. .

WORKSHOPS – The CONSULTANT shall prepare for and facilitate ten (10) workshops during the course of MTP update. Five (5) workshops may be held in the beginning of the project with the public and elected officials to solicit input regarding visioning, potential controversial transportation improvements, and to establish the evaluation criteria and the Goals, Objectives and Measures (GOMs). The other five workshops will be held after completing the draft *2050 Metropolitan Transportation Plan* and should leverage a public platform as part of existing, large

community events such as an Art Walk or National Night Out event. New and innovative outreach techniques should be explored for these meetings including (but not limited to) virtual participation, live polling, and digital surveys. The CONSULTANT shall prepare the necessary material, exhibits, presentation, advertising, and handouts for the workshops. The CONSULTANT shall produce a short (1-page) summary of the workshop and document any comments or feedback from the public, staff, and elected officials.

E-TOWNHALLS – Up to 3 E-Townhalls, as needed, will also be used to solicit public feedback and increase awareness of the MTP. These E-Townhalls should be scheduled at strategic points in the MTP process to ensure efficient use of the public’s time and resources. The CONSULTANT will be responsible for the procurement, planning, and execution of all E-Townhalls.

SUBTASK 3.3 - PUBLIC OPINION SURVEY

The CONSULTANT will procure a statistically-significant public opinion survey to be completed during the MTP process to gain insight into the public’s thoughts on transportation options and desired goals of the 2050 MTP. The survey will build upon the statistically significant survey questions used for the 2045 MTP and potentially include additional questions to capture public sentiment on emerging issues. Survey questions should be developed by the CONSULTANT with input from Broward MPO staff. Survey results should be communicated to the Broward MPO MTP team early in the process, allowing the team to reach a diverse cross section of Broward’s population. Results should be presented in user friendly formats for distribution to the public. Key findings should be presented and delivered to policy makers who can make use of such input as they speak to their constituents and peers.

SUBTASK 3.4 - MEDIA OUTREACH

Media outreach will be on-going throughout the MTP update. The CONSULTANT shall arrange for news releases and promote coverage in local newspapers, television stations, radio stations, and online media. The CONSULTANT shall inform the media ongoing outreach and opportunities for the public to comment on the MTP, especially at key times, such as before a scheduled E-Townhall. The CONSULTANT shall take advantage of available cost effective media outlets to reach the public. The CONSULTANT should also utilize digital media as appropriate to achieve maximum reach to the population of Broward.

SUBTASK 3.5 - STAKEHOLDER ENGAGEMENT

The CONSULTANT shall be responsible for ensuring outreach and engagement efforts with key partners and stakeholders. Those partners and stakeholders should at a minimum include: Federal partners such as the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), Broward’s 31 municipalities, relevant Broward County Government departments (Transit, Planning, Engineering, Aviation and Environmental Management, Port Everglades, etc.), Broward County Commission, the Florida Department of Transportation (FDOT), the Seminole Tribe of Florida, Florida’s Turnpike Enterprise, and the State Historic Preservation Office (SHPO). This outreach should ensure that stakeholder input is incorporated

into all elements of the MTP and should be ongoing. The final MTP list of funded and unfunded needs should reflect robust engagement with planning partners throughout the process. To the maximum extent possible, efforts will be made to reach stakeholders through meetings identified in Task 1 and Task 3.2. This subtask includes additional staff time to fill in gaps identified in the stakeholder engagement that occurs as part of other tasks in this scope of services (largely through e-mail and telephone communications but also up to 5 in-person meetings with key stakeholders in Broward County).

SUBTASK 3.6 - EDUCATION & OUTREACH MATERIALS/PUBLICATIONS

The CONSULTANT shall create a theme and branding to produce education and outreach materials and publications that inform the public about the Plan and ways to provide input. The theme and branding should be included on all materials. Potential materials to produce should include, but are not limited to: brochures, fact sheets, informational booklets, rack cards, and flyers. Digital materials and web-based platforms to disseminate the material should also be considered in place of print materials/publications where appropriate. These materials should be branded with the MPO's logo, website, phone number, and other appropriate information. The CONSULTANT will translate any of these materials into Spanish, Creole, or Portuguese upon request by the MPO. The materials produced should be easily useable by stakeholder partners in their own outreach activities e.g. e-blasts, website and newsletters.

All presentations made to the Broward MPO Board and subcommittees, whether oral or using media (e.g., PowerPoint), will include an education component to ensure Board and Subcommittee members are provided adequate background and context for the information they are being provided and/or decisions they are being asked to make. All presentations must conform to Americans with Disabilities Act (ADA) Accessibility guidelines and be approved by the PM.

SUBTASK 3.7 - DIRECT MAILINGS

The CONSULTANT shall produce and distribute up to three pieces of literature to be mailed at key times informing the public of the MTP and outlining ways to participate in the process. A baseline mailing list for this effort will be provided by the MPO, but the CONSULTANT should build on this effort to find additional mailing addresses to send the information. The CONSULTANT shall ensure that the mailing list includes county and municipal elected officials and transportation agencies. The CONSULTANT will be responsible for the development of information, as well as procurement of the printing and mailing services for this effort. The CONSULTANT should be prepared to translate this literature as needed.

SUBTASK 3.8 - PROJECT WEBSITE

The Broward MPO will host the 2050 MTP website as a page on www.BrowardMPO.org, and will be responsible for maintaining that page. The Broward MPO will be responsible for purchasing a website domain that is easy to print and setting up a website to redirect to the main MTP webpage on the Broward MPO website. The CONSULTANT will also be responsible for providing Broward MPO staff with content and graphics for the MTP webpage. In addition,

the CONSULTANT shall consider the production of an interactive map for the 2050 MTP where members of the public can click on an area on the map and leave comments.

SUBTASK 3.9 - SOCIAL MEDIA

The CONSULTANT will provide facts and information from the plan development to support social media outreach. The CONSULTANT will produce content, short videos, pictures, and infographics for placement on various Broward MPO social media platforms, including: Twitter, Facebook, YouTube, and Instagram

SUBTASK 3.10 - EVALUATION OF PUBLIC PARTICIPATION PLAN

The CONSULTANT will conduct an evaluation of the public involvement activities of the MTP to assess how effectively the public has been educated, informed, and encouraged to actively participate in the MTP process, as well as to obtain feedback on improving and increasing the effectiveness on future public participation efforts. As part of this evaluation, the CONSULTANT should ensure outreach to non-traditionally represented groups occurs (using the Transportation Planning Equity Assessment as a foundation). The CONSULTANT will be responsible for tracking and analyzing the following:

- Outreach Meetings/Committee Meetings/E-Townhalls
 - The CONSULTANT will track the number of attendees at each meeting, and log each comment received.
 - The CONSULTANT will develop questions to evaluate participation from different communities in the Broward region, such as requesting zip code information.
 - The CONSULTANT shall analyze the extent to which input and comments received are pertinent and applicable to the MTP process, showing understanding of the projects as a result of the information provided.
- Project Website
 - The Broward MPO will provide data on the following 2050 MTP website information:
 - Site visits and page views
 - New vs. returning visitors
 - Site referred to the website
 - The Google translator feature, and track the extent to which it is used, if possible
 - Provide a “lessons learned” website report to document outreach efforts and results
- Social Media
 - The Broward MPO shall be responsible for pulling information from various Broward MPO social media platforms (including Facebook, Twitter, Instagram, and YouTube), and analyzing the impact of the MTP posts on those platforms, such as number of views.

SUBTASK 3.11 - DOCUMENTATION

The CONSULTANT shall prepare Technical Report #1, a summary of all outreach activities undertaken as part of the 2050 MTP update. Technical Report #1 will include a comprehensive summary of all public comments received during the development of the Plan. This should be a comprehensive report of all outreach activities, large and small, as part of the 2050 MTP. Technical Report #1 should be produced in an easy-to-understand manner, so that future outreach plans can gain insight from this effort. This document should be part of the appendix of the final 2050 MTP Update.

Deliverables:

- Public Participation Plan
- Introductory Video
- Meetings with Local Groups
- Workshops
- Outreach Meetings
- E-Townhalls
- Public Opinion Survey
- Media Outreach
- Stakeholder Engagement
- Education and Outreach Materials/Publications
- Direct Mailings
- Project Website
- Social Media
- Evaluation of Public Participation Plan
- Technical Report #1: MTP Outreach Evaluation

TASK 4 – DATA

The CONSULTANT shall compile and review all documents and data pertaining to Broward's multimodal transportation system and existing and forecast travel activities in the area. These documents may include, but are not limited to, base and horizon year socio-economic data developed by the MPO, state and federal statutes, airport master plans, seaport master plans, 2045 RTP, transit on-board survey data, roadway data, local and statewide and local freight and goods movement studies, Broward County Transit (BCT) and South Florida Regional Transportation Authority (SFRTA) Transit Development Plans, Transit Asset Management Plans, BCT's Public Transportation Agency Safety Plan, Broward County Mobility Advancement Program (MAP), MPO Bicycle/Pedestrian Safety Action Plan, 2060 Southeast Florida Regional Vision Blueprint report, Florida Transportation Plan (FTP), State Strategic Highway Safety Plan (SHSP), FDOT's Strategic Intermodal System (SIS) plan and environmental plans such as the Southeast Florida Regional Climate Change Action Plan.

The CONSULTANT shall review and summarize these documents and data in terms of their impact and relevance to the MTP particularly state and federal legislation and include any potential conflicts or inconsistencies that must be addressed. The CONSULTANT shall prepare a MTP Checklist that reflects the elements of the scope and summarizes the state and federal requirements of long transportation plans.

Data necessary to support development and measurement of GOMs will be compiled by the CONSULTANT. The data will be managed and applied in creative ways to support the 2050 MTP. No new primary data collection efforts are anticipated for this task. The CONSULTANT is expected to identify GIS and other mapping data needs early in the project schedule to support analysis and other MTP tasks. The CONSULTANT is responsible for collecting relevant GIS layers, mapping and data. The MPO will provide the CONSULTANT a list of available GIS layers, maps and data and supply requested materials electronically, when feasible, to the CONSULTANT.

SUBTASK 4.1 - SOCIOECONOMIC DATA

The socioeconomic data is used in the regional travel model to forecast auto and transit trips and is divided into the following sections:

- Household size (1,2,3,4+);
- Household income;
- Number of workers in household (0,1,2,3+);
- Households by presence of children (0,1+);
- Group quarter status;
- Households by type of housing unit;
- Age of population in households;
- Gender of population in households;

- Race/Ethnicity of population in households; and
- Worker occupation of population in households.

MPO staff will prepare a draft socioeconomic data forecast for 2020 (base-year) within the MPO planning area. The CONSULTANT shall check this data for accuracy, consistency and suggest corrections or modifications as necessary.

The CONSULTANT shall prepare the socioeconomic data forecast for the 2050 (horizon-year). The 2050 forecast will consist of three parts: Population and Household data, Employment data and Hotel/Motel and School enrollment data.

SUBTASK 4.1.1 - POPULATION AND HOUSEHOLD DATA

The CONSULTANT shall obtain the 2050 population and household data forecasts by TAZ developed by the Broward County and shall use those forecasts as the starting point for this task. The CONSULTANT shall review those forecasts and document any anomalies and/or inconsistencies found in the County's forecasts. The CONSULTANT shall also ensure that this data is consistent with the University of Florida's Bureau of Economic and Business Research (BEBR) forecasts. The CONSULTANT shall submit the forecasted control totals to MPO staff for review and approval. Upon approval of the control totals, the CONSULTANT shall then allocate the data to the Traffic Analysis Zone (TAZ) and Micro Analysis Zone (MAZ) geographies as appropriate.

SUBTASK 4.1.2 - EMPLOYMENT DATA

The CONSULTANT shall also develop a forecast of employment for the horizon year 2050. The CONSULTANT shall develop and use a methodology approved by the BMPO. The CONSULTANT shall start this task by reviewing the 2020 base year employment data. The CONSULTANT shall use appropriate sources to develop the forecast of employment. The CONSULTANT shall also review and incorporate future land use development data from the Broward County Planning Council (BCPC) and municipalities into their forecasts. The CONSULTANT shall develop control totals from appropriate sources. The CONSULTANT shall submit the forecasted data to MPO staff for review and approval. Upon approval of the forecast by the MPO, the CONSULTANT shall then allocate the data to the TAZ and MAZ geographies as appropriate.

SUBTASK 4.1.3 - HOTEL/MOTEL SCHOOL ENROLLMENT DATA

The CONSULTANT shall develop a forecast of school enrollment and Hotel/Motel units for the horizon year 2050. The CONSULTANT shall use all appropriate sources to update the hotel/motel data. The CONSULTANT shall coordinate with the Broward County School Board and the local universities to develop the school enrollment data forecast. Upon approval of the forecast by the MPO, the CONSULTANT shall then allocate the data to the TAZ and MAZ geographies.

The CONSULTANT shall utilize Geographic Information System (GIS) applications to prepare maps and graphs showing socioeconomic variables by TAZ and MAZ for 2020 and 2050. The

GIS maps should be based on density (per square mile) to avoid bias due to the difference in TAZ areas.

SUBTASK 4.2 - PEDESTRIAN, BICYCLE AND GREENWAYS DATA

The pedestrian, bikeways and greenway data will be used to inventory the existing pedestrian facilities and bikeways networks within the MPO planning area. MPO staff in cooperation with the MPO's Mobility Team and FDOT will transmit to the CONSULTANT the available sidewalk and bikeway data. The CONSULTANT will be responsible for ensuring that this information is both accurate and up to date and for suggesting corrections or modifications as necessary. Depending upon the review of these databases, suggested corrections and modifications may be beyond this scope of services. If this were to happen, the MPO PM will be notified immediately to jointly determine the best solution. The CONSULTANT shall use GIS to produce the existing pedestrian, greenways and bikeway facilities maps. The CONSULTANT shall identify on these maps major traffic generators for pedestrian and bicycle trips such as schools, beaches, major employers and others.

SUBTASK 4.3 - WATERBORNE TRANSPORTATION NETWORK DATA

The waterborne transportation data are used to inventory the existing waterborne transportation network which could be used to provide successful and efficient waterborne transportation service. The CONSULTANT will identify existing and potentially navigable waterways within the MPO planning area. The CONSULTANT will also be responsible for ensuring that this information is both accurate and up to date and for suggesting corrections or modifications as necessary. The CONSULTANT shall use GIS to produce the maps showing the waterways, known operational constraints such as manatee protection zones and speed controls.

SUBTASK 4.4 - FREIGHT TRANSPORTATION NETWORK DATA

The 2020 and 2050 highway network will be used to identify projects that would provide for the safe and efficient movement of freight and goods. MPO Staff will transmit to the CONSULTANT the freight and goods movement data available to the MPO such as the *Southeast Florida Regional Freight Plan*, *Urban Freight/Intermodal Mobility Study* and from other outreach initiatives to the freight industry. The CONSULTANT will be responsible for ensuring that this information is both accurate and up to date and for suggesting corrections or modifications as necessary. Depending upon the review of these databases, suggested corrections and modifications may be beyond this scope of services. The MPO Project Manager will be notified immediately to jointly determine the best solution. The CONSULTANT shall coordinate the above mentioned activities with the Southeast Florida Transportation Council (SEFTC) and the Regional Freight Study CONSULTANT for consistency and to avoid duplication of efforts.

SUBTASK 4.5 - TRANSIT DATA

The CONSULTANT shall assemble relevant, recently completed plans and study documents to inform the development of the transit element of the MTP, including:

- a. Broward MPO's Commitment 2045 Metropolitan Transportation Plan (MTP)

- b. Broward MPO's Mobility Hub Program
- c. SEFTC Regional Transportation Plan
- d. Broward County Transit Comprehensive Operational Assessment reports
- e. Origin-Destination survey reports for Tri-Rail, Broward County Transit, Florida DOT, and community bus services
- f. SFRTA Strategic Regional Transit Plan (SFRTA)
- g. Transit Development Plans (TDP) – SFRTA and BCT
- h. Broward County Mobility Advancement Program (MAP)
- i. Broward County Transit System Plan
- j. Broward Commuter Rail Study
- k. A Framework for Transit Oriented Development in Florida (www.fitod.com)
- l. FDOT District 4's preliminary regional transit plan background research (2011) consisting of regional transit plans conducted throughout North America and plans completed in recent years in the Southeast Florida region
- m. FDOT's transit passenger on-board surveys
- n. Transportation Elements of County and local Comprehensive Plans
- o. Fort Lauderdale-Hollywood International Airport Master Plan Update
- p. Port Everglades 2018 Master/Vision Plan
- q. Transit System Maps from BCT, SFRTA, MDT, Palm Tran
- r. Community Bus Services system maps
- s. Other plans and reports

The CONSULTANT shall collect geographic information system (GIS) data that can be used to support analysis and prepare specialized maps and presentation materials throughout the life of the project. The CONSULTANT will collect, catalog, and map transportation related infrastructure from the project partners and other agencies, including but not limited to existing roads, airports, rail lines, right-of-way, park and ride lots, transit centers/Mobility Hubs/super stops, transit emphasis corridors, intermodal centers, and freight corridors in the region. The latest available aerials will also be included as a GIS layer. The CONSULTANT will make maximum use of existing public databases. The CONSULTANT will convert or digitize collected data not in electronic format.

The CONSULTANT and study partners shall utilize the previously completed plans for the Southeast Florida region to develop an existing-plus-committed transit network for Broward County, which will serve as the baseline for this project. All fixed guideway and premium transit corridors planned or currently under study within the region should be identified and current information collected (e.g., LRTP/MTPs and plans listed above). GIS data for the existing, committed, planned, and proposed transit projects in the Southeast Florida region will be collected and shown on GIS maps. Activities and findings of this task (data collection and development of baseline transit network) shall be summarized in a technical memorandum.

SUBTASK 4.6 - TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS DATA

The CONSULTANT shall assemble and summarize local, regional, state and national Transportation System Management and Operations (TSM&O) initiatives, projects and studies, including, but not limited to, FHWA's Connected Vehicles Initiative, IBM's Smarter Planet initiative, FDOT TSM&O research, and the Southeast Florida Regional ITS Architecture.

SUBTASK 4.7 - ELECTRONIC DATA INVENTORY

The CONSULTANT shall create an "Electronic Data Inventory" (EDI) of all identified, available, and reviewed documents and data relevant to the MTP. The EDI will include an index with title, source, year, summary description, and other key descriptors helpful as a sort key. The EDI will include all electronically available documents and data and will be updated regularly throughout the life of the contract. GIS based data and data sets will be obtained and consolidated by the CONSULTANT as mutually agreed to by the MTP PM.

This task covers the development of data needed to run the regional travel demand model, which is used mainly to develop the highway and transit networks. Other data include but are not limited to planning for transit, land use, bikeway, pedestrian, waterborne transportation, ITS and freight.

SUBTASK 4.8 - DOCUMENTATION

The CONSULTANT shall prepare Technical Report #2 titled *Data Compilation and Review*. Technical Report #2 will provide detailed information on how the data were developed and quality checked for accuracy and consistency. The CONSULTANT shall be responsible for the contents and the accuracy of the maps and the GIS data should be maintained in the *State Plane Coordinate System (NAD83)*.

Deliverables:

- MTP Requirements Checklist
- 2050 Socioeconomic Data Sets
- Electronic Data Inventory
- Technical Report #2: Data Compilation and Review

TASK 5 – GOALS, OBJECTIVES AND MEASURES/PERFORMANCE MEASURES

The purpose of this task is to identify the 2050 MTP goals, objectives and measures of effectiveness/performance measures (GOMs). The 2050 MTP will look to implement new and innovative transportation system performance measures that de-emphasize traditional road “congestion” in lieu of broader desirable transportation outcomes. The update process will consider a wide range of social, mobility, freight, safety, infrastructure, environmental, energy, and economic factors reflected by the MTP’s GOMs to identify future transportation needs. Transportation “needs” may go beyond infrastructure investments to include changes in policy and legislation necessary to support the future, not past, investments to support one of the largest metropolitan areas in the United States.

The 2050 MTP GOMs should further the vision set forth by the MPO Board of Directors that “Our work will have measurable positive impact by ensuring transportation projects are well selected, funded and delivered.” In addition, the MPO’s “Vision Zero” efforts should be included comprehensively throughout the GOMs.

The 2050 MTP should be innovative in its approach to Broward’s transportation needs and recognize the mature nature of the road network and look beyond traditional measures that focus primarily on roads. Key areas of focus should include public transportation, freight, pedestrians, bicycles, complete streets, funding, financing, extreme weather resiliency, seasonal tidal flooding, other flooding, health, age-friendly initiatives, or others as recommended by the CONSULTANT and supported by subcommittees of the Broward MPO. This task should also consider the four (4) Emphasis Areas outlined in Task 7.

SUBTASK 5.1 - CURRENT TRANSPORTATION LAW REVIEW

The CONSULTANT will conduct a comprehensive review of the most current transportation law (produced from the Infrastructure Investment and Jobs Act) and identify elements of the law that will directly and indirectly impact the development of the 2050 MTP. This should include a review of new transportation funding programs, transportation emphasis areas, and performance measurement. Additionally, the review should consider how the 2050 MTP can leverage and respond to the new transportation law and position the Broward MPO for federal discretionary funding. The CONSULTANT will coordinate with the RTP development team to compare findings on the new transportation law and ensure consistency at a regional level.

SUBTASK 5.2 - GOALS, OBJECTIVES AND MEASURES REVIEW

The CONSULTANT will research, consider, document and apply “best practices” from other MPOs nationwide to identify alternatives to traditional congestion measures such as volume/capacity and level of service that attempt to “solve congestion.” For example, measuring “accessibility” to destinations (e.g., home, work, recreation, shopping, etc.) may provide a more meaningful measure of the transportation system’s overall performance.

GOM development requires strong public input to ensure adopted GOM/PMs address perceived areas of need or deficiency.

The Broward MPO's 2045 MTP GOMs can serve as a starting point, but the CONSULTANT is expected to research and propose new and innovative measures while ensuring applicable federal planning factors are included, along with requirements of the FAST ACT (or most recent transportation legislation including the Federal Transportation Performance Management Measures (PM1, PM2, PM3, Transit Asset Management, and Public Transit Agency Safety Plan). The CONSULTANT shall refine and/or revise them as necessary to develop GOMs for the MTP update in accordance with input from the public involvement process. The GOMs must incorporate the FAST Act guidance, Federal Transportation Performance Management Measures (PM1, PM2, PM3, Transit Asset Management, and Public Transit Agency Safety Plan), FHWA/FTA Planning Emphasis Areas, FHWA's LRTP Expectations, FDOT's Planning Emphasis Areas, and the guidelines in FDOT's latest *Metropolitan Planning Organization Program Management Handbook*. The GOMs will serve as the basis for policies, programs and investments identified in the MTP.

The CONSULTANT will ensure pedestrian; bicycle; other non-motorized transportation; transit; extreme weather and coastal and inland flooding mitigation; freight; greenways; and other transportation options are fully considered and incorporated. Safety will be considered through the lens of the MPO's "Vision Zero" initiative and its efforts to comprehensively include "safety" into all aspects of the 2050 MTP's GOMs. The CONSULTANT will consider new and emerging areas such as automobile fleet electrification, car sharing, and automation. To the extent possible, measures should be quantitative using readily available data and information. However, it is understood qualitative measures may be necessary or appropriate in some cases and may be recommended. To the maximum extent possible, the CONSULTANT will calculate current values for all measurable objectives. Current values will be compared against known and available targets.

The CONSULTANT shall review local plans for applicable performance metrics and considerations. The review shall include professional literature, research reports, local governments' comprehensive plans, FDOT policies contained in the *Florida Transportation Plan* (FTP), and other sources, which may have concepts applicable to the MTP development. The review of the GOMs must consider the Federal Transportation Performance Management Measures set forth in the various MAP-21 transportation management programs and FAST Act, as applicable. Performance standards for non-highway and highway modes must be developed if not available in local comprehensive plans or ordinances. The CONSULTANT shall investigate the applicability of the latest FDOT's Quality/ Level of Service Handbook and the Transit Capacity and Level of Service Manual, or other publications in developing these standards.

The CONSULTANT shall be responsible for obtaining and compiling, for the PM's review, ideas from the public outreach, MPO Board of Directors, the TAC, the CAC, the CSAC, the LCB, the FTAC, the Broward TSM&O Task Team and other interested parties regarding the GOMs and

performance standards. The CONSULTANT shall keep records of information-gathering efforts in an easily presented and understood manner.

The CONSULTANT shall review the GOMs of neighboring MPOs such as Palm Beach and Miami-Dade and the Regional Transportation Plan (RTP) to identify any potential conflicts and to ensure regional consistency between the three MPOs. MPO staff will assist in acquiring available documents from the neighboring MPOs.

SUBTASK 5.3 - EVALUATION CRITERIA

The CONSULTANT shall develop evaluation criteria based on the GOMs, community values and requirements outlined in *the FAST Act*, or current transportation bill. The criteria will be used to evaluate and prioritize the proposed transportation improvement projects recommended in the Needs Assessment and Financially Feasible Plan (FFP). Criteria will be both objective and subjective as appropriate. Examples of objective criteria include cost, Level-of-Service (LOS) and similar numeric assessments based on current or forecast conditions. Subjective criteria include quality-of-life measures, perceived value, consistency with the goals and objectives of partner agency plans, etc.

MAP-21 and the *FAST Act* established national performance goals for federal highway and transit programs that the MTP should demonstrate:

- *Safety* - To achieve a significant reduction in traffic fatalities and serious injuries on public roads;
- *Security* - To increase the security of the transportation system for motorized and non-motorized users.
- *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 (NHS);
- *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 including impacts to air quality;
- *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;
- *Transit Asset Management* - to preserve and expand transit investments. Having well maintained, reliable transit infrastructure – track, signal systems, bridges, tunnels, vehicles and stations – will help ensure safe, dependable and accessible services; and
- *Transit Safety* - to improve public transportation safety by guiding transit agencies to more effectively and proactively manage safety risks in their systems.

Performance Measures should also include the integration and interconnectivity of non-motorized modes of transportation per federal statute.

MPO staff must be able to report to FHWA and FTA on progress in achieving these targets and the evaluation criteria selected for the MTP must help to satisfy that requirement.

SUBTASK 5.4 - BROWARD MPO PROJECT PRIORITIZATION PROCESS

The CONSULTANT will work with the PM and Broward MPO staff to develop a clear and defensible approach to a project prioritization process (and associated documentation), prepare a partner process guidance/education piece on the process, and recommend and develop a spreadsheet or database program to implement the process and create reports and maps. The prioritization process will consider GOMs, project readiness, type of funding required versus available, economic benefit analysis and other metrics as recommended by the CONSULTANT for consideration. Ideally, this task should be developed in conjunction with the MPO's Needs Assessment and Call for Projects to ensure appropriate information can be collected for the scoring criteria.

The Broward MPO and its funding partners wish to incorporate resolutions of support and clear project descriptions (i.e., scope of work) for all projects included in the MTP. The CONSULTANT will, with MPO support, work with the "project sponsors" to develop clear project descriptions. MPO Staff will be responsible for working with the "project sponsors" to obtain resolutions once a draft MTP is accepted, but prior to MTP adoption.

The CONSULTANT will examine existing Broward MPO and national "best practices" processes for prioritization and make recommendations for changes as necessary.

SUBTASK 5.5 - DOCUMENTATION

The CONSULTANT shall prepare Technical Report #3 summarizing the new transportation law and Technical Report #4 titled *Goals, Objectives and Measures of Effectiveness* to describe the development of GOMs and the relationship of Goals and Objectives to the Performance Measures/Measures of Effectiveness and how the GOMs will be used as a guide to plan development and how Performance Measures will be used to prioritize projects.

In addition, the CONSULTANT will prepare Technical Report #5 titled *Broward MPO Project Prioritization Process*.

Deliverables:

- Technical Report #3: Current Transportation Law Overview (title TBD)
- Technical Report #4: Goals, Objectives, and Measures of Effectiveness
- Technical Report #5: Broward MPO Project Prioritization Process

TASK 6 – FINANCIAL RESOURCES

The CONSULTANT shall develop a Financial Resources deliverable for the period through 2050 that describes revenue projections and assumptions supporting the projections. This analysis is crucial to the accuracy of the financially feasible plan development. The financial feasibility report shall include at minimum the following:

- Public and private sources reasonably expected to be made available; and
- Innovative financing techniques to fund existing project costs as well as the capital and Operations and Maintenance (O&M) costs of proposed projects (i.e., techniques may include new starts, tolls, taxing districts, new funding sources, local option tax, other local funding sources (i.e. concurrency, enterprise funds, etc.), private funding and congestion value pricing).
- An evaluation of existing funding in the Transportation Improvement Program (FY 2024-2028) comprising the first five (5) years of the MTP cost feasible plan.
- Coordination with FDOT on the revenue forecast for the Strategic Intermodal System through 2050.
- Opportunity to leverage new federal transportation discretionary funding programs identified in the new transportation law (originating from the Infrastructure Investment and Jobs Act). All revenue sources identified by the Regional Transportation Technical Advisory Committee (RTTAC) Funding Sub-Committee needed for regional consistency in the Regional Transportation Plan (RTP).
- Broward County’s Mobility Advancement Program (MAP) revenues

This task will be led by the CONSULTANT. However, the CONSULTANT shall use any data available from the MPO, FDOT, RTTAC, Broward County, and other agencies involved in planning and funding of transportation projects. The task will assess the financial resources that may be available for funding transportation improvements during the MTP planning period. The work will consist of the identification and evaluation of existing and prospective transportation improvement funding sources, assessment of funding levels available during each of the interim years of the MTP planning period, and assembly of broad schedules of financial capacity between the present and 2050 to help guide the development of the MTP.

The CONSULTANT shall identify funding eligibility for each source used in the plan. For example, regional funds can be spent on regional facilities, and Florida Intrastate Highway System (FIHS)/Strategic Intermodal System (SIS) funds cannot be spent on local roads. The CONSULTANT shall investigate the use of “flex” funding as allowed to shift from funding highway projects to other modes such as mass transit and/or from capital to O&M. In addition, the CONSULTANT should evaluate the eligibility and applicability of available funding resources within each of the established MTP funding programs and assess the percentage allocation to each MTP funding program based on feedback from the MPO Board, advisory committees, and MPO staff.

To support the project prioritization process, it is important the CONSULTANT carefully review, identify and confirm with the responsible agency the types of projects that may be funded or not within a given fund type

Based on the above information, the CONSULTANT shall forecast potential financial resources for interim and horizon years 2035, 2040, and 2050 (consistent with the MPOAC LRTP Funding Timeframe Guidance) and using the inflation factors as specified by the FDOT Revenue Forecast to build transportation improvements as documented in the Needs Assessment.

The CONSULTANT will document that funds are available that match the costs of transportation improvement projects recommended for inclusion in the 2050 MTP. This includes both capital and operations and maintenance funding. This approach will help ensure construction can be reasonably expected to be completed in the MTP timeframe.

The CONSULTANT shall incorporate a sub-section in the Financial Resources Task to discuss new potential revenue sources that may be available for the implementation of improvements identified in the Needs Assessment, which are not included in the Financially Feasible Plan. This should include a review of new federal transportation federal discretionary programs. The CONSULTANT shall estimate the amount of revenues expected to be generated from these sources. The CONSULTANT should coordinate with the RTP Consultant on this Task since they are required to prepare substantial financial revenue research and documentation.

SUBTASK 6.1 - DOCUMENTATION

The CONSULTANT shall document the financial resources task in Technical Report #6 titled *Financial Resources*. The report shall include detailed analysis of types of available and potential funding sources allocated for transportation improvement during the MTP planning period, i.e., FY 2025 through 2050 (transportation improvements between FY2024 and 2028 will be committed in the TIP).

Deliverables:

- Technical Report #6: Financial Resources

TASK 7 – MTP EMPHASIS AREAS – SAFETY, RESILIENCY, EMERGING TECHNOLOGIES, AND HOUSING ATTAINABILITY/ACCESSIBILITY

The purpose of this task is to build on the transportation planning emphasis areas established by FHWA, FDOT, and the Broward MPO. The Broward MPO has grouped these emphasis areas into four (4) main categories: Safety, Resiliency, Emerging Technologies, and Housing Attainability/Accessibility. Each of these emphasis areas should inform various components of the final MTP from a planning, policy, and project needs perspective.

The Broward MPO has already made great strides in the realm of safety and resiliency. Building off of the work from the 2045 MTP, safety and resiliency considerations will be a fundamental component of the 2050 MTP. These subtasks will focus on conducting countywide analyses to identify deficiencies in the transportation network and identifying target areas for further study using the project development frameworks established for both of these emphasis areas. Additional planning and policy work should center on coordination with partner agencies who have developed supporting reports, studies, and projects to support these emphasis areas. Locations with high vulnerability (from both a safety and resiliency perspective) will be identified for use in the MTP Needs Assessment (Task 9).

Emerging technologies focus on supporting infrastructure for Automated, Connected, Electric, Shared (ACES) vehicles and smart city technology. This technology is continuing to gain momentum nationwide and MPOs are uniquely positioned to encourage regional coordination and collaboration in this realm. FDOT and Broward County have completed extensive work through the development of a Countywide EV Master Plan and the TSM&O Master Plan. Coordinating with these partner agencies and their ongoing work will be fundamental in developing a comprehensive approach to preparing for ACES and smart city technology through 2050. Work in this emphasis area will center on developing a countywide master plan for ACES and smart city technologies. Additional planning and policy recommendations should be developed in order to guide the MPO's role in this realm.

Housing attainability and accessibility to community resources are inextricably linked to transportation. The recent federal transportation legislation has increased focus on establishing measures of livability which include housing attainability, accessibility, and transportation equity (including access to transportation options, transportation costs, and transportation efficiency). The Broward MPO has established the "Resiliency and Attainable Housing Committee" to support efforts in this realm. This group will serve as an advisory committee for all work in this emphasis area. Work in this emphasis area will include a review of the new transportation legislation as it relates to housing affordability and evaluating land use policies and scenarios which promote increased housing affordability, transportation accessibility, and equity. In addition, an alternative land use modeling scenario will be developed to evaluate the impact of concentrating attainable housing along transit corridors identified in the 2045 Needs and Vision 2100 transit plans.

SUBTASK 7.1 - SAFETY

The CONSULTANT shall conduct a countywide crash assessment and develop a prioritization process to rank locations by crash severity. Consideration should be given to on-system and off-system project and the potential revenue sources each of these locations could leverage during the project development phase. An effort should be made to group high-crash locations for project development and delivery. The final ranked list of high-crash locations should include all the information necessary for consideration in the MTP Needs Assessment and the MPO's annual Roadway Safety Audit (RSA) process developed in coordination with FDOT.

Additionally, the CONSULTANT shall explore the use of predictive crash analytics to inform the final ranked list of high-crash locations and support a proactive approach for addressing safety throughout the County. The CONSULTANT shall also evaluate non-infrastructure countermeasures to address safety throughout the county and provide policy recommendations to help reduce the incidence of fatal and severe crashes, consistent with the MPO's Complete Streets Master Plan, Vision Zero Initiative, FHWA's Safe System Approach, and federal TPM measures. The CONSULTANT will support MPO staff in coordinating with agency partners to ensure consistency with proposed planning efforts and policy recommendations.

The CONSULTANT shall document the countywide crash assessment, final ranked list of high crash locations, predictive crash analyses, planning/policy recommendations, and additional work in Technical Report #7 titled MTP Safety Assessment.

SUBTASK 7.2 - RESILIENCY

The CONSULTANT shall develop a countywide resiliency network for targeted mitigation/management funding. The resiliency network should include transportation facilities vulnerable to sea level rise/extreme weather events through 2050 (including interim years of 2030, 2035, and 2040). The resiliency network will utilize the previous work from the South Florida Climate Change Vulnerability and Adaptation Pilot Project, Extreme Weather and Climate Change Risk to the Transportation System in Broward County, Broward MPO's Transportation Resiliency Framework Study, and other state and local planning studies. This work will also incorporate the findings from the joint South Florida Rail Corridor Resiliency Study which is anticipated to be complete by June 2023. The CONSULTANT shall develop a prioritized list of locations for targeted resiliency mitigation/management funding for use in the MTP Needs Assessment and the Broward MPO's Transportation Resiliency Framework to develop resiliency projects.

The CONSULTANT shall also identify projects, locations, and policy recommendations to enhance electric vehicle infrastructure capacity. This effort will utilize the work completed by FDOT and Broward County through their respective EV Master Plans. Additionally, the CONSULTANT shall evaluate the feasibility and cost (at a planning level) of rail (SFRC and FEC) and Port electrification. The CONSULTANT will be responsible for coordinating with the respective partner agencies to understand future EV needs and ensure consistency in identified projects and policy recommendations. A portion of this subtask will overlap with Subtask 7.3 with the development of an ACES/Smart City Master Plan for the County.

This subtask will be directly coordinated with the Broward MPO's Resiliency and Attainable Housing sub-committee. The CONSULTANT shall develop presentations, materials, and solicit feedback for these meetings (see Task 1).

The CONSULTANT shall document the resiliency subtask in Technical Report #8 titled "MTP Resiliency Assessment." The report shall include a detailed review of resiliency network methodology, prioritized list of locations, EV infrastructure assessment (including policy and project recommendations), rail/port electrification, and other data/maps/charts/graphs to support this analysis.

SUBTASK 7.3 - EMERGING TECHNOLOGIES

The CONSULTANT shall conduct a nationwide scan of best practices on the implementation of Automated, Connected, Electric, Shared (ACES) vehicle and Smart City infrastructure. This scan shall include a review of the MPO's role in planning and implementing this infrastructure and how the Broward MPO can best position itself to support its implementation partners. The review shall also consider the type, scale, and results of the technology implementation and identify lessons learned from peer agencies.

Building upon the work above, the CONSULTANT shall develop a countywide master plan for Automated, Connected, Electric, Shared (ACES) vehicle and Smart City infrastructure for use in the MTP. This plan shall consider the existing body of work completed by the Broward MPO (Hollywood/Pines Smart Corridor Pilot Project and Smart Corridor Implementation Strategy), Broward County (MAP and Traffic Engineering), and FDOT (TSM&O Master Plan) to produce a prioritized list of projects for federal funding in the MTP. To the greatest extent possible, the plan should include future smart city efforts and technology specifications for countywide implementation. The CONSULTANT shall develop a prioritized list of infrastructure projects for consideration in the MTP Needs Assessment

The CONSULTANT shall document the emerging technologies subtask in Technical Report #9 titled "MTP Emerging Technologies Assessment." The report shall include the nationwide scan, guidance on MPO leadership in implementation, summary of partner agency efforts, a master plan of ACES and smart city improvements for the MTP (including prioritized list of projects), and other data/maps/charts/graphs to support this analysis.

SUBTASK 7.4 - HOUSING ATTAINABILITY/ACCESSIBILITY

The CONSULTANT shall review new transportation legislation with emphasis on the nexus between attainable housing and transportation. The review shall include a summary of planning emphasis areas, federal funding programs to support attainable housing and transportation, and how to enhance projects outcomes to housing attainability. This portion of the subtask will be completed in conjunction with Subtask 5.1. Additionally, the CONSULTANT shall develop a Housing Coordination Plan consistent with Sec. 11201 of the Infrastructure Investment and Jobs Act.

The Housing Coordination Plan shall develop regional goals for the integration of housing, transportation, and economic development strategies to:

- Better connect housing and employment
- Align transportation improvements with housing needs
- Align planning for housing and transportation
- Expand housing and economic development within the catchment areas of existing transportation facilities and public transportation services
- Manage effects of growth of vehicle miles traveled experienced in the metropolitan planning area related to housing development and economic development
- Identify the location of existing and planned housing and employment, and transportation options that connect housing and employment
- Include a comparison of transportation plans to land use management plans, including zoning plans, that may affect road use, public transportation ridership, and housing development

The CONSULTANT shall utilize the information above to identify areas and corridors where there are opportunities for additional housing that serve the needs of Broward. This should be compared to existing land use policies at both the local and county level and include an evaluation of overlap and gaps in existing housing/land use policy. The CONSULTANT shall evaluate the effectiveness of land use changes and propose policy recommendations to support increased housing attainability and accessibility. Comparisons should be drawn with the land use scenarios from the 2045 Regional Transportation Plan (RTP) and the MPO's transit network identified in the Vision 2100 plan. Outcomes shall be measured using traditional LOS/mobility measures and the new accessibility measures identified in Subtask 8.4. The CONSULTANT will utilize the results from the alternative land use modeling scenario to identify publicly-owned parcels adjacent to high-capacity transit corridors for opportunities to construct attainable housing. Based on the analysis, the CONSULTANT will support MPO staff in coordinating with partner agencies to share the findings and recommended land use policy changes.

This subtask will be directly coordinated with the Broward MPO's Resiliency and Attainable Housing sub-committee. The CONSULTANT shall develop presentations, materials, and solicit feedback for these meetings (see Task 1).

The CONSULTANT shall document the housing attainability/accessibility subtask in Technical Report #10 titled "MTP Housing Attainability/Accessibility Assessment." The report shall include a summary of the new transportation legislation (with emphasis on the nexus between housing attainability and transportation), the Housing Coordination Plan, evaluation of outcomes and recommended policy changes, evaluation of publicly owned parcels for attainable housing, and other data/maps/charts/graphs to support this analysis.

Deliverables:

- Technical Report #7: MTP Safety Assessment

- Technical Report #8: MTP Resiliency Assessment
- Technical Report #9: MTP Emerging Technologies Assessment
- Technical Report #10: MTP Housing Attainability/Accessibility Assessment

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TASK 8 – MODEL SUPPORT

This task includes the review of the model structure, the transportation networks and the travel flows to ensure the forecasts used to build the MTP are reasonable. The CONSULTANT shall review and suggest, if necessary, model specification adjustments and highway and transit network coding updates to reflect 2030, 2040 and 2050 conditions in order to produce accurate and dependable travel forecast projections. The CONSULTANT shall coordinate with SEFTC and FDOT to ensure the regional transportation network reflects the MTP. Updating (coding) the network is the responsibility of the RTP's CONSULTANT. The CONSULTANT shall coordinate with neighboring MPOs and the RTP's CONSULTANT to ensure consistency and avoid duplication of efforts.

SUBTASK 8.1 - MODEL REVIEW AND ANALYSIS

The CONSULTANT shall review the model validation results to identify the strength and weakness of the travel model, identify links where the model tends to over report and under report trips and determine how the model output should be adjusted to develop the needs assessment and final MTP. Additionally, the CONSULTANT will utilize the outputs from the travel demand model (e.g., vehicle miles traveled [VMT], trips, VMT by speed class) to estimate greenhouse gas emissions at a county and region wide basis for use in the needs assessment, performance measures, and development of the final cost feasible plan for the MTP.

The SERPM model incorporates activity-based travel forecasting methods. These methods offer the potential for new project evaluation methodologies; however, these methodologies have not yet been fully tested in the context of transportation improvement policies. The CONSULTANT will perform sensitivity tests to verify both the capacity and reasonableness of this additional functionality. The CONSULTANT will communicate findings to the RTP's CONSULTANT to address any identified issues or concerns that would prevent successful application of the travel model.

SUBTASK 8.2 - EXISTING + COMMITTED NETWORK REVIEW

This task is primarily directed at compiling Existing + Committed (E+C) transit and highway networks for the Year 2027 condition, which is the end year in the latest available Transportation Improvement Program (TIP). Transportation projects in the TIP are considered committed. The CONSULTANT shall review the accuracy of the E+C network and suggest corrections or modifications as necessary to the RTP CONSULTANT, who is responsible for the coding of the E+C network. The CONSULTANT shall include all funded Mobility Advancement (MAP) projects as part of the E+C network. It is the responsibility of the CONSULTANT to coordinate modeling efforts with the RTP CONSULTANT.

SUBTASK 8.3 - FORECASTED TRIP PATTERNS REVIEW

It is the responsibility of the RTP CONSULTANT to identify and assess directional demand flows at multiple levels including:

- Counties
- Transit Adjacent Development
- Corridors

The CONSULTANT shall review these flows to ensure consistency and suggest corrections or modifications as necessary to the RTP CONSULTANT.

SUBTASK 8.4 - ACCESSIBILITY EVALUATION The CONSULTANT will be responsible for researching and developing measures of accessibility for Broward, applying accessibility measures to Broward's transportation network, and evaluating the final output. The CONSULTANT will coordinate with the RTP Consultant to ensure consistency at the regional level.

SUBTASK 8.5 - DOCUMENTATION

The CONSULTANT shall prepare Technical Report #11 titled *Travel Model Support* detailing guidelines required for those cases where model modifications should be performed or where alternative methods have been incorporated by the RTP CONSULTANT to improve model results.

Deliverables:

- Technical Report #11: Travel Demand Model Support

TASK 9 – NEEDS ASSESSMENT

The purpose of this task is to analyze the deficiencies of the E+C transportation facilities in coping with transportation demands in 2050 and develop a list of prioritized transportation needs/projects. The 2050 socioeconomic data, in addition to potential bicycle, pedestrian greenways and waterborne activities, will be used to develop the travel demand estimates. The Needs Assessment is an attempt to identify the transportation infrastructure needed to accommodate future travel demand and to address safety issues without regard to economic, local, or political considerations. The MPOs Vision Zero initiative shall be included as a core principle in the needs assessment process – all components of the needs assessment shall include an evaluation of safety impacts at a network and project level. In this task, the CONSULTANT should review the Broward MPO’s corridor plans, mobility hub plans, and current and proposed operational plans of the transit providers. The needs list will also consider measures to reduce greenhouse gas emissions (utilizing the analysis in Task 8.1), understand the potential climate change and health impacts of the transportation system (existing and proposed) on the population.

MPO staff will organize and facilitate meetings with all partner agencies (i.e., cities, county, SFRTA, FDOT, etc.) in order to obtain local prioritized lists of needed projects. The CONSULTANT and MPO Staff will coordinate a day-long work session to review and assess the prioritized lists of needed projects obtained from the partner agencies.

SUBTASK 9.1 - CALL FOR PROJECTS

The CONSULTANT shall support MPO staff in developing a “Call for Projects” process during the early phase of MTP development. The “Call for Projects” process should provide an opportunity for MPO member agencies to submit transportation needs for consideration in the final MTP, as well as targeted outreach to MPO member agencies based on a geographic review of the transportation network utilizing the Transportation Planning Equity Assessment. MPO staff will be responsible for conducting the outreach to member agencies, developing an application process for MPO member agencies to submit transportation needs, scheduling one-on-one meetings with member agencies, and developing a final database of project needs for the MTP. The CONSULTANT shall provide feedback on this process as it relates to project prioritization and cost feasible plan development. The CONSULTANT shall meet with MPO staff for one day to review submittals from the “Call for Projects” effort. Additionally, the CONSULTANT will be responsible for developing planning level cost estimates for projects identified during this effort.

SUBTASK 9.2 - IDENTIFY DEFICIENCIES IN THE EXISTING + COMMITTED NETWORK

The CONSULTANT shall analyze a highway and transit assignment to the regional E+C Network with the 2050 socioeconomic data to determine the deficiencies on the highway and transit networks that will occur by the Year 2050. This will represent the “do nothing alternative” since the E+C network includes committed improvements in the latest TIP but not beyond that.

The CONSULTANT shall use the output from the regional model (including the Accessibility Evaluation identified in Subtask 8.4), the most current Broward Roadway Capacity and Level of Service Report, the most current Highway Capacity Manual, the MPO's Transportation Planning Equity Assessment, the MPO's Congestion Management Process (CMP), the MPO's High Injury Network and other software necessary to perform this task. Capacity shortfalls will be identified using the GOMs and performance measures developed in Task 5, *Goals, Objectives and Measures of Effectiveness*. However, the analysis should aim to balance congestion relief with safety considerations based on the MPO's Vision Zero Initiative and Congestion Management Process (CMP). The MPO and its advisory committees, with guidance from the SC (as needed), will define the congestion levels at which a facility becomes "deficient." The adopted year 2045 cost feasible plan will be used as a starting point to develop a year 2050 needs assessment project list. Particular attention should be given to the potential inaccuracy of the validated model in simulating actual link traffic and transit ridership by route. The CONSULTANT shall develop adjustment factors to correct model forecast anomalies where applicable to improve projection results. These factors should be based on the validated model for base year 2020 and the same year traffic count and transit ridership by route information. The CONSULTANT shall also utilize the outputs from the Accessibility Evaluation produced in Task 8 to identify deficiencies from an accessibility perspective.

Capacity shortfalls for some of the above items such as the need for bikeways, pedestrian facilities, greenways and others cannot be directly evaluated using the regional travel demand model. However, the CONSULTANT may use other appropriate methods such as the results from the MTP Safety Assessment (Subtask 7.1), MTP Resiliency Assessment (Subtask 7.2), Emerging Technologies Assessment (Subtask 7.3), pedestrian and bikeway facilities development guide books, the proposed greenway plan, the Bicycle Suitability Map, the Complete Streets Master Plan, sidewalk inventory, input from the CSAC, Transit Capacity and Quality of Service Manual (TCQSM), ITS screening, and others to evaluate transportation needs that cannot be modeled. The CONSULTANT shall develop and examine future travel desire-lines using the regional model and an aggregate of the zonal structure to assess the needs for future transportation facilities. The CONSULTANT shall also utilize the outputs from the Accessibility Evaluation produced in Task 8 to identify deficiencies from an accessibility perspective.

SUBTASK 9.3 - EVALUATE MULTIMODAL DEFICIENCIES AND SOLUTIONS

The needs assessment must include multi-modal solutions, including those identified in Task 7, such as:

- New bus routes;
- Improvements to existing transit corridors;
- New or improved exclusive right-of-way transit service (i.e. light rail, BRT);
- ITS strategies and applications;
- Automated, Connected, Electric, Shared (ACES) vehicle infrastructure;
- Safety Improvements

- Resiliency improvements;
- Pedestrian walkways;
- Greenways and bikeway facilities;
- Waterborne transportation;
- Transportation disadvantaged services;
- High occupancy vehicle treatments;
- Intermodal linkage and access needs;
- Freight related transportation improvements; and Arterial intersection improvements.

SUBTASK 9.4 - TRANSIT AND ROADWAY NEEDS ASSESSMENT

The CONSULTANT shall identify transit and roadway needs based on the results produced by the regional model, the accessibility evaluation developed in Task 8.4, and the Broward MPO’s Congestion Management Process (CMP). The CONSULTANT shall also address congestion and mobility issues within specific corridors, which may require a separate planning-level analysis. Examples of these studies include but are not limited to the Strategic Intermodal System (SIS) Roadway and Transit components, Airport/Seaport People Mover, Central Broward East West Transit Study, Broward Commuter Rail Study and the Broward County Transit Systems Plan. The CONSULTANT shall coordinate the MTP update effort with the agencies managing those studies. Some of these studies have been completed or are underway. The CONSULTANT shall obtain a copy of each study from the appropriate agency and incorporate the study finding in the Needs Assessment process. With specific reference to the transit needs, the CONSULTANT will coordinate with Broward County’s Mobility Advancement Program (MAP) team to understand the planned surtax investment for the County’s transit network and identify opportunities to leverage federal discretionary programs for County identified transit projects.

The recommended transportation improvements shall be consistent with the GOMs developed in Task 5, the MPO’s Vision Zero Initiative, the MPO’s Congestion Management Process, and the input from the public, elected officials and other planning partners. The CONSULTANT shall coordinate this task with the neighboring MPOs and FDOT. The CONSULTANT in coordination with the RTP consultant, shall use the regional model to test transit and highway needs in the future condition (as included in Task 8). The CONSULTANT is responsible for providing data required for the coding of transportation network alternatives in Broward County to the RTP consultant. The coding of the transportation network alternatives is the responsibility of the RTP consultant.

SUBTASK 9.5 - ACCESSIBILITY ALTERNATIVE

The CONSULTANT shall utilize the outputs from the accessibility analysis in Subtask 8.4 and the RTP to identify multimodal transportation needs and enhance connectivity for key areas throughout the County. Depending on the outputs of accessibility analysis (at both the MPO and regional level), key areas could be identified as activity centers, equity areas, pedestrian/non-motorized priority areas, high crash locations, etc. The needs should consider innovative

transportation solutions that serve the specific multimodal needs in key areas identified through the accessibility analysis. These needs should be complementary to the traditional roadway, transit, and other multimodal needs explored through the remainder of this task.

SUBTASK 9.6 - TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS APPLICATIONS

In coordination with Task 9.4, *Transit and Roadway Needs Assessment*, and the findings from Task 4, *Data Review and Compilation*, the CONSULTANT shall identify areas in the transportation system where TSM&O strategies would be applicable and beneficial. The CONSULTANT shall recommend appropriate transportation improvement projects and include these projects in the Needs Assessment.

The CONSULTANT shall recommend the type of ITS application(s) appropriate for each situation and the operational and maintenance resource needs while working with the Broward County Traffic Engineering Division, FDOT Traffic Operations and other agencies to ensure compliance with the adopted ITS architecture and standards.

SUBTASK 9.7 - FREIGHT AND GOODS MOVEMENT NEEDS

The MTP will provide for an integrated transportation system to enhance the efficiency of freight movement on the surface transportation network. The CONSULTANT shall address freight and goods movement concerns through inclusion of a variety of surface transportation projects focused on improving truck-mediated goods movement throughout the County.

Fort Lauderdale-Hollywood International Airport and Port Everglades are recognized as two important facilities serving as regional economic engines. The CONSULTANT shall identify other major freight and goods generator facilities and evaluate truck traffic between these facilities and the rest of the county. The CONSULTANT shall recommend appropriate transportation improvement projects that would improve freight and goods movement over the life of the Plan and include these projects in the Needs Assessment. The CONSULTANT shall review available reports and ongoing freight studies such as the Southeast Florida Regional Freight Plan, "Urban Freight/Intermodal Mobility Study," the US 27 Multimodal Planning & Conceptual Engineering Study along with input from stakeholders and others to develop this task. The CONSULTANT shall coordinate with the Broward MPO's Freight Transportation Advisory Committee (FTAC) and the FDOT Freight Coordinator on potential project needs in the region.

SUBTASK 9.8 - PEDESTRIAN, BICYCLE AND GREENWAYS NEEDS

MPO staff will be updating the Complete Streets Master Plan prior to the completion of the MTP Needs Assessment. This plan should serve as the foundation for pedestrian, bicycle, and greenway needs for the MTP. The CONSULTANT shall coordinate with MPO staff on the development of the Complete Streets Master Plan and provide appropriate feedback on elements that may affect the MTP. The CONSULTANT, in cooperation with MPO staff and MPO member agencies, shall identify deficiencies in the bicycle/pedestrian network for inclusion in

the needs assessment through the work conducted as part of the Complete Streets Master Plan update.

Additionally, the CONSULTANT shall coordinate with MPO staff to review the available Bicycle Facilities Plan, the Bicycle Suitability Map, sidewalk inventory, greenway plan, most recently adopted Complete Streets Master Plan, Bicycle and Pedestrian Safety Action Plan, Multimodal Level of Service Tool, and coordinate with the CSAC and local governments to develop the Bicycle, Pedestrian and Greenway Needs Assessment. Multimodal policy recommendations and strategies to encourage the usage of bicycle and pedestrian transportation modes shall be included in the MTP and be consistent with the work of the Complete Streets Master Plan.

SUBTASK 9.9 - WATERBORNE TRANSPORTATION NEEDS

The CONSULTANT shall assess the feasibility of utilizing the existing network of coastal canals and waterways to accommodate some of the commuter, recreational and other trip purposes. This task will identify the appropriate waterways and supporting facilities that would provide for the efficient and safe mobility of people.

The CONSULTANT shall evaluate and identify the connectivity between the feasible waterway network and the activity centers and identify potential service routes.

SUBTASK 9.10 - MOBILITY HUBS

The CONSULTANT shall coordinate with Broward MPO staff on Mobility Hub-related projects. The MPO has updated and revised the criteria for mobility hubs. The MPO is currently establishing an annual cycle for Mobility Hub funding similar to CSLIP. The CONSULTANT shall incorporate any new information into the Plan.

SUBTASK 9.11 - MTP FUNDING PROGRAMS

The CONSULTANT shall support MPO staff in the development of MTP funding programs to categorize projects identified as part of the needs assessment and ensure available funding sources can be efficiently directed to applicable projects. The 2045 MTP funding programs may serve as a foundation for the new MTP funding programs. Using the information developed in Task 6, the CONSULTANT will be responsible for identifying the available financial resources for each funding program and will work with MPO staff, advisory committees, and the MPO Board to assign funding percentages to each funding program.

SUBTASK 9.12 - PRIORITIZATION PROCESS

The CONSULTANT shall apply the evaluation/prioritization criteria consistent with GOMS and earlier Tasks (Task 5) to rank projects by mode and/or funding program recommended in the Needs Assessment list of projects.

The CONSULTANT shall work with Broward MPO staff to develop evaluation/prioritization criteria that can be applied consistently across the MTP funding programs, including, but not limited to Roadway, Transit, CSLIP, the Complete Streets Master Plan, Mobility Hubs, Safety, and Resiliency.

SUBTASK 9.13 - COST ESTIMATES

The CONSULTANT shall include cost estimates for projects identified in the needs assessment, including capital, construction, right-of-way, operating and maintenance costs, and identify any uncertainty, where applicable. The cost estimates should be calculated at a planning level and utilize a consistent methodology agreed upon by MPO staff and FDOT (as an implementation partner).

SUBTASK 9.14 - DOCUMENTATION

The CONSULTANT shall prepare Technical Report #12 titled *Needs Assessment* documenting the process by which the transportation needs for the year 2050 plan were identified including highway, transit, ITS, freight movement, and other modes. The CONSULTANT shall prepare a list of projects (in excel format) which will include the following information for each project: a clear scope of work, a need and purpose for the proposed improvement, and a cost estimate.

Deliverables:

- Technical Report #12: Needs Assessment

TASK 10 - EFFICIENT TRANSPORTATION DECISION MAKING

Efficient Transportation Decision Making (ETDM) creates linkages between land use, transportation and environmental resources through early interactive involvement of permitting and planning agencies. This involvement is expected to save resources and improve decision making by resolving project impact at an early stage. MPO Staff shall develop the information needed for review and comment by the Environmental Technical Advisory Team (ETAT). This information will be created for capacity related projects in the Needs Assessment in accordance with FDOT's guidelines for ETDM. MPO Staff shall develop the Purpose and Need Statement and a sociocultural profile for each project for inclusion in the ETDM planning screen. This task will be led by MPO staff with support from the Consultant

SUBTASK 10.1 - PLANNING SCREEN

The CONSULTANT shall identify projects for the ETDM Planning Screen and will provide the necessary project information required for submittal consistent with the ETDM Manual (Chapter 3, Section 3.4.1). MPO Staff shall electronically submit the created list of candidate projects and supporting information to the ETAT. The ETAT will conduct preliminary assessments of the impact of candidate projects on the environment using standardized formats and criteria. MPO Staff shall review comments from the ETAT and provide a recommended course of action to address these comments.

SUBTASK 10.2 - DOCUMENTATION

MPO staff shall develop Technical Report #14 titled *Efficient Transportation Decision Making* documenting the requirements and results of applying ETDM on the 20450 Needs Assessment and any environmental mitigation measures. This technical should include a comprehensive list of projects (in Excel format) and the required ETDM Planning Screen information (referenced above).

Deliverables:

- Technical Report #13: Efficient Transportation Decision Making (to be completed by MPO staff)

TASK 11 – FINANCIALLY FEASIBLE PLAN

The CONSULTANT shall prepare the Cost Feasible Plan (CFP) using the results from previous tasks. The CFP shall include transit, pedestrian facilities, greenways, bikeways, highways, waterborne transportation, ITS, freight transportation as identified in the needs assessment. The CFP will be financially feasible and reasonably accepted by the public and elected officials. The final CFP will be organized by MTP funding program as established in Task 9. The CONSULTANT shall ensure that the final plan continues to be multimodal in nature and the recommended projects are consistent with the MTP's vision, goals and objectives.

SUBTASK 11.1 - INTEGRATE PUBLIC COMMENTS

Public involvement is essential during the MTP development, especially at the beginning and end of the process. The CFP shall be finalized after sufficient policy review and public involvement. The CONSULTANT shall seek input from the MPO Board of Directors, its advisory committees, FDOT staff and other interested parties as part of the fulfillment of this task and as specified in Task 1, *Public Education and Outreach*. The CONSULTANT shall coordinate, schedule, and attend meetings, make presentations, take meeting minutes and keep records of information gathering efforts in such a way that is easily understood by the public and staff. MPO staff will be available to assist the CONSULTANT as specified in the PPP or as determined by the PM.

Preparation of the CFP must include documentation describing the efforts made to solicit public input and how it was used to help craft the MTP. The CONSULTANT shall identify how the proposed Cost Feasible Plan for the transportation system meets the performance standards included in the vision, goals and objectives. When significant written and oral comments are received on the draft *2050 Metropolitan Transportation Plan* as a result of the PPP, the CONSULTANT shall prepare a summary, analysis, and report on the disposition of comments which will be made a part of the final *2050 Metropolitan Transportation Plan*.

SUBTASK 11.2 - COST FEASIBLE PLAN DEVELOPMENT

As per Federal and State guidelines, the CFP must be implementable by the appropriate local and state agencies. The financial feasibility will be based on the reasonably estimated future revenues expected to be available from both private and public sources to carry out the plan in a timely manner, i.e., between the years 2020 and 2050. The period between 2024 (plan adoption year) and 2029 is covered in the five-year TIP and will be reflected in the CFP as committed improvements. The CONSULTANT is responsible for identifying all regionally significant projects in the FY 2024-2028 TIP to include as part of the first five (5) years of the CFP. In developing the CFP, the CONSULTANT shall demonstrate the consistency of proposed transportation investments with the projected sources of revenue identified in the Financial Resources. Using the Financial Resources Report and the cost data generated in Task 9, *Needs Assessment*, the CONSULTANT shall meet the requirements for a financial analysis as

specified in FDOT's Metropolitan Planning Organization Program Management Handbook, while maximizing funding based on eligible uses.

SUBTASK 11.3 - COMPARATIVE ANALYSIS

The CONSULTANT shall perform a comparative analysis between the Needs Assessment and the CFP and identify projects that will not make the CFP due to revenue shortfalls. The CONSULTANT shall identify and qualitatively evaluate the impacts on levels of service or appropriate performance measure of not being able to finance projects in the Needs Assessment. The comparative analysis should also consider the impact of CO2 emissions utilizing the model outputs in Task 8.

SUBTASK 11.4 - LIVABILITY PLANNING AND CONGESTION MANAGEMENT

The intent of livability planning and congestion management is to improve quality of life through the efficiency and effectiveness of the transportation system. As per Federal guidelines, the MPO should address livability planning and congestion management through corridor-specific strategies. The CONSULTANT shall identify appropriate livability planning and congestion management strategies to improve the movement of people and goods consistent with the MPO's Congestion Management Process. Such strategies shall be included in the CFP.

A Congestion Mitigation Plan will be developed as part of the 2050 MTP update in order to support to the Broward MPO's existing Congestion Management Process (CMP). The plan would provide information about existing congestion levels and would propose improvements and strategies to lower existing congestion for consideration as part of the ongoing CMP process.

SUBTASK 11.5 - CONSISTENCY WITH LOCAL PLANS

The CONSULTANT shall document how the CFP is consistent with the transportation element and future land use element of local government's plans. The CONSULTANT shall prepare a list identifying inconsistencies, if any, between the CFP and other plans. All projects considered for inclusion in the CFP will require a resolution of support from the local jurisdiction. MPO staff will be responsible for coordinating with the local jurisdictions and obtaining resolutions of support.

SUBTASK 11.6 - PREPARE INTERIM YEAR PLANS

Using the 2050 CFP, available funding sources and socioeconomic data for interim Years, 2031-2035, 2036-2040, and 2041-2050, the CONSULTANT shall develop interim year plans including project cost estimates for capital, maintenance and operations including amounts expended by FDOT and local partners on current transportation facilities. The CONSULTANT shall document the source and method used for all cost estimates, by project.

SUBTASK 11.7 - DOCUMENTATION

The CONSULTANT shall prepare Technical Report #14 titled *Cost Feasible Plan*, documenting the entire process of developing a CFP including the Interim Year Plans.

Deliverables:

- Technical Report #14: Financially Feasible Plan

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TASK 12 – EQUITY

The requirements of Environmental Justice (EJ), as outlined by the FHWA, are intended to ensure that the process of transportation planning is consistent with the provisions of Title VI of the Civil Rights Act of 1964 which prohibits discrimination on the basis of race, color, or national origin. These provisions will be incorporated into the 2050 MTP update, and adhered to throughout the public involvement task of this project. The work under this task will be consistent with the Broward MPO's Title VI/EJ policies, Transportation Planning Equity Assessment, PPP, and USDOT's Justice 40 Initiative.

The CONSULTANT with support from the MPO staff shall utilize the Transportation Planning Equity Assessment to identify geographic areas where traditionally underrepresented populations are located and consider the comparative impacts of proposed transportation projects on those populations. MPO staff shall perform an EJ analysis utilizing the Transportation Planning Equity Assessment and other demographic data using GIS. The CONSULTANT shall demonstrate through the EJ analysis that the proposed 2045 Financially Feasible Plan projects will not have a disproportionate adverse impact on low-income and minority populations and how it responded to concerns identified during the public outreach process.

SUBTASK 12.1 - DOCUMENTATION

The CONSULTANT shall develop Technical Report #15 titled *Environmental Justice* documenting the EJ analysis that the proposed 2045 Financially Feasible Plan projects will not have a disproportionate adverse impact on low-income and minority populations and how it responded to concerns identified during the public outreach process.

Deliverables:

- Technical Report #15: *Environmental Justice* (to be completed by MPO staff)

TASK 13 – REGIONAL TRANSPORTATION PLAN COORDINATION

The CONSULTANT will coordinate and cooperate with the CONSULTANT team leading the *2050 Regional Transportation Plan (RTP)* effort. The RTP will be developed in cooperation with the Palm Beach TPA and Miami-Dade TPO. This task will entail sharing data, analysis and other MTP materials with the RTP Consultant as well as obtaining RTP data and reports that may be useful in the development of the MTP. The CONSULTANT will be expected to meet and communicate with the RTP Consultant from time to time.

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TASK 14 – 2050 METROPOLITAN TRANSPORTATION PLAN ADOPTION

The CONSULTANT shall perform work necessary to obtain final adoption of the *2050 Metropolitan Transportation Plan* by the MPO Board of Directors no later than December 2024. In order to achieve this goal, a conceptual approval is required by April 2024. The CONSULTANT shall prepare necessary presentation materials and handouts to explain how the plan was developed in accordance with the vision, GOMs, community values and available funding sources. This work includes the development of the final plan update report including the contents of Technical Reports 1 through 15.

SUBTASK 14.1 - DOCUMENTATION

The CONSULTANT shall prepare Technical Report #16 titled *2050 Metropolitan Transportation Plan*. This report shall include three elements: an *Executive Summary*, a main MTP document, and MTP appendices. The CONSULTANT shall obtain the PM's approval for any software used to produce Plan documents. Upon completion of the Plan, the CONSULTANT shall furnish, at a minimum, one electronic copy (on a USB Flash Drive) and 60 printed copies of the *2050 Metropolitan Transportation Plan Executive Summary* as well as one electronic copy (on a separate USB Flash Drive) and 60 printed copies of the *2050 Metropolitan Transportation Plan*. This report shall be visually pleasing, easy to read, friendly to the public, and adhere to Americans with Disability Act (ADA) Accessibility Guidelines and all FHWA guidelines.

Deliverables:

- Technical Report #16: Metropolitan Transportation Plan

TASK 15 – GENERAL PLANNING SERVICES TO SUPPORT THE METROPOLITAN TRANSPORTATION PLAN

As requested, the CONSULTANT will provide general planning services to support the Metropolitan Transportation Plan development and adoption. The CONSULTANT will provide the requested services upon receiving a written Notice to Proceed (through e-mail) that documents the scope of the services to be provided and an agreed upon budget for the services.

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