

Urban Mobility Strategies in Miami-Dade County

FINAL REPORT

TPO GPC Work Order #GPC VII-08

October 2020



Miami-Dade Transportation
Planning Organization

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EXECUTIVE SUMMARY

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INTRODUCTION

Background and Objective

This study is being completed at the behest of the Miami-Dade County Transportation Planning Organization's (TPO) Urban Mobility Task Force (UMTF), which directed TPO staff to conduct a study that identifies strategies and procedures to address the following topics which will be explored in this report:

A. Improve project development process

- Intra-agency coordination and communication
- Improve intra-agency data sharing

B. Minimize impacts during roadway construction

- Improve project implementation
- Increase public engagement

C. Identify industry best practices

- Streamline project scoping
- Stakeholder coordination and communication

The study, which started in July 2019, has focused on how to improve project development processes throughout the county. The study team has identified how projects in Miami-Dade are planned, designed, and built, and has formulated recommendations on how to streamline and improve this process. This has been done through extensive Study Advisory Group (SAG) feedback, a comprehensive literature review, an analysis of national best practices, and in-depth interviews with existing stakeholders at the State, County, and Municipal levels.

Coordination

A Study Advisory Group (SAG) was formed to help review and guide the study's development. The members of the SAG were appointed by representatives from the UMTF and were joined by representatives from different TPO citizen advisory committees. The study team held three different SAG meetings between November 2019 and April 2020, obtaining insightful information. Some of the ideas expressed at the SAG meetings included the following:

- Determine the existing project development process.
- Make recommendations to streamline project development processes.
- Develop guidelines to provide project process information during different phases.
- Create a data repository that aggregates information in a standardized manner from all public agencies and private entities that work within the right of way.
- Define a conflict resolution process for utilities that is finalized during the early design phase and set up a system to facilitate utility coordination.
- Include a contingency plan in the project development process to minimize jurisdictional disputes.
- Establish an interagency project coordination meeting framework that would focus on countywide project scheduling and phasing to minimize construction impact and reduce redundant work.

LITERATURE REVIEW

State and National Guidelines

This study reviewed various documents to gather best practices in roadway design and construction focused on creating safe, accessible and inclusive streets for all types of road users in urban areas from entities such as US Department of Transportation (US DOT), Florida Department of Transportation (FDOT), American Association of State Highway and Transportation Officials (AASHTO), Smart Growth America (SGA), National Association of City Transportation Officials (NACTO), National Complete Streets Coalition (NCSC) and the American Association of Retired Persons (AARP). These documents address different aspects of urban mobility and the project development process and recommend the following practices:

Designs and Standards:

- Flexible context-sensitive designs and guideline application.
- Executing Road Diets, Lane Diets, Medians and Intersection Improvements to implement Complete Streets retrofits.
- Bicycle lanes must be a minimum of 4' wide and must be provided an additional foot if located adjacent to a curb, barrier, parking or street with high truck traffic (>10%) or posted speed limit exceeding 50 mph.

Planning & Policies:

- Continually update design standards and guidelines.
- Use Multimodal LOS (MMLOS) which considers bicycle, pedestrian and transit LOS during traffic analysis for planning purposes.
- Set aside specific funds for Complete Streets projects implementation.
- Develop a training program for planners, engineers, and other government staff to teach Complete Streets principles and methods of implementation consistent with state and local standards and policies.

Project Scoping:

- Multidisciplinary input during the scoping phase either via meetings or review committees.

- Utilization of a fine-tuned cost estimator that considers historical data and assesses project specific risks.
- Thorough scoping phase that has multiple checkpoints where the budget and overall plans are reassessed.
- Defining a process for scope creep assessment and evaluation.
- Engaging the public throughout the scoping process with an online project management and data sharing process.

Utility coordination:

- Right-of-way acquisition and utility identification and relocation decision occur during the planning phase.
- Utility coordination should be a continuous process that occurs from the planning to construction of the project.
- Above ground utility infrastructure must leave a minimum of 48" (4 feet) of uninterrupted sidewalk width.
- Forming a coordination council consisting of members from the utility companies, government agencies, contractors, and other support companies, that meets frequently.
- Offering financial incentives to ensure on-time utility relocation.
- Creating an electronic permitting system and coordination website to streamline the process.

STAKEHOLDER INTERVIEWS

The study team met with individuals who work in the project development process to collect feedback and develop an understanding of how projects are conceived, planned, designed, and built in the county. The team spoke to individuals working for private sector firms, and public agencies at the state, and county level. The feedback received in these conversations is summarized here and was used to shape recommendations in the later sections of this report.

Organization	Topics discussed
Department of Transportation and Public Works (DTPW)	•Maintenance of Traffic •Develop a Work Program • Streamline Project Development Process •Procurement Schedules •Scoping Process •Construction Schedule Alignments •Road Impact Fees •Utilities Conflicts
Florida Department of Transportation (FDOT)	•Project Expediency •Right-of-Way •Maintenance of Traffic •Utility Coordination •Permitting •Coordination with County
Friends of the Underline	•Multi-jurisdictional challenges - Preparation of MOU for coordination with multiple agencies
Miami-Dade Department of Regulatory and Economic Resources (RER)	•Application Process •One-stop-shop for manuals, outline of the process for applications and collect comments from county agencies (Energov)
Private Sector	•Traffic Control Devices •Planning Phase •Utility Conflicts •As-Builts •Design Standards •Scope and Budget

Stakeholder Interview Summary

The information obtained from the interviews covered myriad topics. However, there were several common themes that emerged from these conversations. These can be classified into the following categories:

- A need for more complete Utility Coordination and conflict resolution.
- Better-defined Project Development process – Project Scoping and Work Programming.
- The county should adopt better processes to implement alternative transportation projects (bicycle lanes, pedestrian scrambles, walking, bicycling), to ensure that more vulnerable road users are considered in the process.
- Improved cross-jurisdictional coordination and construction schedule timing to limit the incidence of repeated construction impacts on communities.

BEST PRACTICES

Summary Table

		Planning	Design	Construction
SDOT	Seattle Streets Illustrated	This is a comprehensive online manual with policies, guidelines, design standards and tools for right-of-way projects to developers, designers, engineers and community advocates. It centralizes information and defines the different processes and identifies point of contact information of key personnel.	The manual integrates Complete Streets principles and provides context-sensitive design standard. It also is focused on safety and lays out a vision for how the city can achieve its 2030 vision zero goal.	The manual provides guidelines for the construction process and guidelines for locating underground utilities.
	Complete Streets Checklist	The Complete Streets checklist is a component of the Complete Streets screening process which evaluates the extent to which a project improves user experience for each mode. All projects costing \$500,000 or more must complete the City's Complete Streets Checklist while preparing the initial scope.	N/A	One of the checklist elements is to evaluate the pavement conditions in a project area. This ensures coordination with right-of-way maintenance projects.
WSDOT	Construction Impact Analysis	WSDOT established a multi-agency construction planning process which outputs detailed maps of scheduled projects, and prepares Gantt charts, which lay out proposed schedule timelines.	WSDOT has a process for working with utilities. Each region has individuals designated to oversee project coordination. Utility companies seeking to occupy WSDOT right-of-way, must submit a utility accommodation application. Similarly, when WSDOT projects impact a utility company's infrastructure, they must enter into a project development agreement with the utilities.	The tool is used to facilitate maintenance of traffic and helps identify construction "hot spots" where frequent coordination meetings occur (ex: every two months for downtown Seattle).
NYCDOT	Street Design Manual	This document supplements existing guidelines, standards, regulation, laws, rules, and requirements provided by the Green Book, MUTCD, and ADA Standards for Accessible Design.	The second chapter of the manual provides guidelines and recommendations on how and where to incorporate certain streets design elements. It provides New York City specific examples of its applicability when possible.	The Department of Design and Construction (DDC) coordinates with utilities for capital projects and holds "alignment" meetings with private utilities during the final designs to minimize construction schedule disruption.
	Streets Works Manual	N/A	This manual contains the policies and procedures for works in city streets. The second chapter outlays the procedure for providing notices and coordinating with utilities.	The fourth chapter provides guidelines for the execution of the work and the site condition during and after the construction.
NYSDOT	CAM §11-102	N/A	N/A	This policy gives the State of New York Department of Transportation (NYSDOT) the authority to enforce utility relocation when they interfere with their contracted work or do not adhere to safety standards and or other policies. It also allows for NYSDOT to fine and sanction the noncooperative utilities (the process to do is defined by CAM § 105-06.

		Planning	Design	Construction
MassDOT	Complete Streets Funding Program	Complete Streets Funding Program provides technical assistance and construction funding to eligible municipalities.	MassDOT published a Separated Bike Lane Planning and Design Guide in 2015.	
DVRPC		The Delaware Valley Regional Planning Commission (DVRPC) developed a Municipal Implementation toolbox. This compiles many interdisciplinary resources to help local governments implement the goals of their 2045 long-range plan; Connections 2045.	N/A	Congestion Management Process is one of the notable tools provided in this toolbox. It is used by engineers, policy makers and interested members of the public and outputs a reports maps and other items to help study an area.
ICT	Best Management Practices and Incentives to Expedite Utility Relocation	The Illinois Center for Transportation 2017 report on Best Management Practices and Incentives to Expedite Utility Relocation surveyed national and international DOT procedures and outlined the best practices. It identifies best practices to expedite and streamline the utility coordination process and determines their cost and adherence to federal and Illinois regulations. These practices are a mix of administrative, right-of-way management, contract type changes and field and information technology solutions. All these approaches incentivize multi-agency coordination, information sharing and standardizing, communication and permitting centralizing and digitization and process clarification and simplification. In addition, it also presents financial incentives to motivate all stakeholders to adhere to schedules.		
BCDOT	Baltimore City Code Article 26, Subtitle 40 (Ordinance 17-0102)	Legally obligates the transportation department to construct a "Complete Streets Transportation System" that accommodates "all travel modes, that ensures the safety, security, comfort, and convenience of all users". Creates an Advisory Council which influences project selection by promoting interagency cooperation, reviewing project proposals, and recommending project prioritization levels. The Complete Streets Manual raises the required level of public involvement to include community engagement policies that overcome barriers to engagement associated with race, income, age, disability, language, and access to vehicles.	Ordinance 17-0102 obligated the Transportation Department to adopt a Complete Streets Manual and requires the transportation department use the latest and best design standards available from NACTO, AASHTO, FHA, ITE, and NCHRP reports. The Manual must include a hierarchy of travel modes, indicating the priority to be given to each.	N/A
MNDOT	Mitigating Construction Impacts on Local Businesses (May 2019)	This study by the Minnesota Department of Transportation (MN DOT) identified three construction related tools and strategies that help minimize the impact of construction on small businesses: on-site signage (ex: businesses still open, business this way), alternative parking for affected businesses, staging incentives (ex: detour rental fees, intersection closing time limits.). On-site signage was ranked the most effective and alternative parking the least. They evaluated the effectiveness of different communication tools. Of the traditional communication tools construction project websites and preconstruction meeting received the higher score on the scale of effectiveness. When evaluating the different social media platforms using the same metrics, it found Twitter and Facebook to be the most effective and LinkedIn the least used and least effective. The study also looked at different business accommodation tools, including a Project Hotline, Construction Activity Timing, Financial Compensation for Loss of Business, and Advertising Campaigns. The study found that the most effective tool was the construction activity timing and the least and effective used tool was the financial compensation for loss of business and advertising campaigns.		

STRATEGIES AND PLAN

Recommended Strategies

This section focuses on strategies to improve project development processes in Miami-Dade County. The recommendations here are derived from a combination of the literature review research, identified best practices, stakeholder interviews and the SAG feedback.

The topics of focus laid out by the study's objectives formed the basis of recommendations in this chapter. The table below summarizes how each focus topics correspond to the recommendations in this chapter. Each of the recommendations builds off best practices identified during the research conducted for this study, and input from the study advisory group members and professional staff interviewed.

Recommendation	Improve project development process	Minimize impacts during roadway construction	Identify industry best practices
Create a County Project Scoping Committee to streamline the project development process	✓		✓
Coordinate construction schedules to minimize impacts to the community		✓	✓
Implement a utility conflict resolution process	✓	✓	✓
Create a County Facilities Improvement Website	✓		✓
Increase Community Engagement Opportunities	✓	✓	✓

The recommendations laid out in this chapter are each paired with a recommended action plan. Each action plan identifies four components - the steps to be taken, responsible parties, timeframe, and resources needed, for the recommendation to be implemented.

Create a County Project Scoping Committee to streamline the project development process

- Implement a formalized project development process to improve interagency coordination and communication. This has been identified as a best practice at the state level, where FDOT district offices convene scoping committees that incorporate feedback from members of all district departments. This process can also bridge the gap between a project's planning and design phases, setting the framework for the development of a scoping report, which further identifies design elements to be implemented.
- Once the scoping committee is established, projects moving forward in the County's pipeline will be used to establish clear work program.
- The creation of a project scoping committee would ensure that projects entering the work program are synchronized, obtaining input from all involved agencies and utilities, as well as being properly scheduled and funded.

Strategy/Goal	Actions	Responsible Party	Timeframe	Resources Needed
Create a County Project Scoping Committee to streamline the Project Development Process	I. Develop a scoping methodology that works for DTPW. The County is currently developing a process based on the state model II. Implement scoping committee on a limited basis to initially evaluate effectiveness III. Assess effectiveness, make changes as necessary IV. Expand the process to incorporate projects in the county's pipeline	DTPW	Initiate Pilot Scoping Committee ASAP	Support from County departments; Coordination with external agencies (FDOT, municipalities)

Coordinate construction schedules to minimize impacts to the community

- Align construction project schedules that fall under the County's purview to minimize impacts on neighborhoods and minimize project costs. Coordinated project schedules have the potential to shorten the overall construction period and reduce impacts to neighborhoods. This approach will require close communication between Miami-Dade departments, as well as municipalities, agencies, and private entities.
- The county should also develop a tool that can serve as a central hub for coordinating projects. Such a tool should include visual resources, including maps and Gantt charts of the projects so that work can be tracked spatially and temporally.

Strategy/Goal	Actions	Responsible Party	Timeframe	Resources Needed
Coordinate construction schedules to minimize impacts to the community	I. Develop a Construction Coordination Tool (CCT) to coordinate roadway construction schedules and provide information to the public II. Draft Memorandums of Understanding between agencies with overlapping projects III. Designate scheduling coordinators within participating entities	DTPW in collaboration with WASD, FDOT, Municipalities, Utilities, & Private Sector	12-18 months	IT support to develop the software Assignment of dedicated scheduling coordinator

Implement a utility conflict resolution process

This process would resolve permitting and utility issues during the design phase and promptly address unexpected challenges during project construction.

- Engage utility owners to provide utility location and comments as early as possible (between 30 and 60 percent) in the design phase.
- Create a contractual structure identifying schedule-based incentives. These can include cash bonuses, cost sharing, and contractor-based incentives to encourage utility owners to promptly relocate conflicting utilities.

Strategy/Goal	Actions	Responsible Party	Timeframe	Resources Needed
Implement a utility conflict resolution process	I. Create incentives that encourage utilities to collaborate with County before the 60% design phase. Techniques to consider could include Cash bonuses, cost sharing, or contractor-based incentives II. Execute agreements with utilities based on type of incentive III. Prepare construction utility work schedules to minimize project delays	DTPW in collaboration with utility companies	12-18 months	Funding for incentives

Create a County Facilities Improvement Website

The website would be structured as a one-stop shop that combines and organizes existing facility improvement requirements and standards. This website would provide clear guidance and lay out processes for how to design, build, and manage transportation projects within the county right-of-way (ROW).

The website would encapsulate each step of the project development process from transportation planning through engineering and construction. This website would include clearly illustrated guidelines on how to request and successfully initiate requests for infrastructure improvements. The website will provide:

- Guidance on how to implement bicycle and pedestrian infrastructure.
- A central clearing house for data and standards that are regularly updated.
- Processes for creation of pilot projects to test innovative transportation.

Strategy/ Goal	Actions	Responsible Party	Timeframe	Resources Needed
Create a County Facilities Improvement Website	I. Create a one-stop website that combines and organizes existing ROW improvement standards and requirements II. Prepare guidance and processes for how to design, build, and manage projects within the county ROW III. Continue county's effort to draft updated standards for Complete Streets IV. Continually update and revise the information to respond to the evolving needs	DTPW	12-24 months	Assignment of staff to collaborate on content development and web design IT and graphical support

Increase Community Engagement Opportunities

Enable residents and business owners to provide feedback from project development to construction.

- Develop a publicly accessible tool, to obtain information about projects throughout the project development process. Existing tools should be evaluated to see if they could be repurposed to serve this need. This tool would:
 - 1) Communicate project information to the community, including project location, ownership, construction schedules, projects in the vicinity and points of contact.
 - 2) Provide a platform with readily available data in Miami-Dade County to the public, which can include maps in GIS format, traffic, planning data, and permitting information.
- Provide a forum to discuss public issues related to the project development process, and coordinate distribution of timely information to the public. This coordination is recommended to occur within public information key staff within key agencies, at the state, county, and local level.

Strategy/ Goal	Actions	Responsible Party	Timeframe	Resources Needed
Increase Community Engagement Opportunities	I. Create a publicly accessible component of the Construction Coordination Tool (CCT) that: * Communicates project information including location and schedule, points of contact and ownership * Provides GIS data and readily available information to the public * Provides opportunity for public input II. Create opportunities for input during the design phase III. Quarterly meetings between public information officers from key agencies (FDOT, county, municipalities)	Public Information Officers from key agencies	18 months (dependent on implementation of CCT)	Development of CCT, support from public agencies

