Lane Repurposing Guidebook

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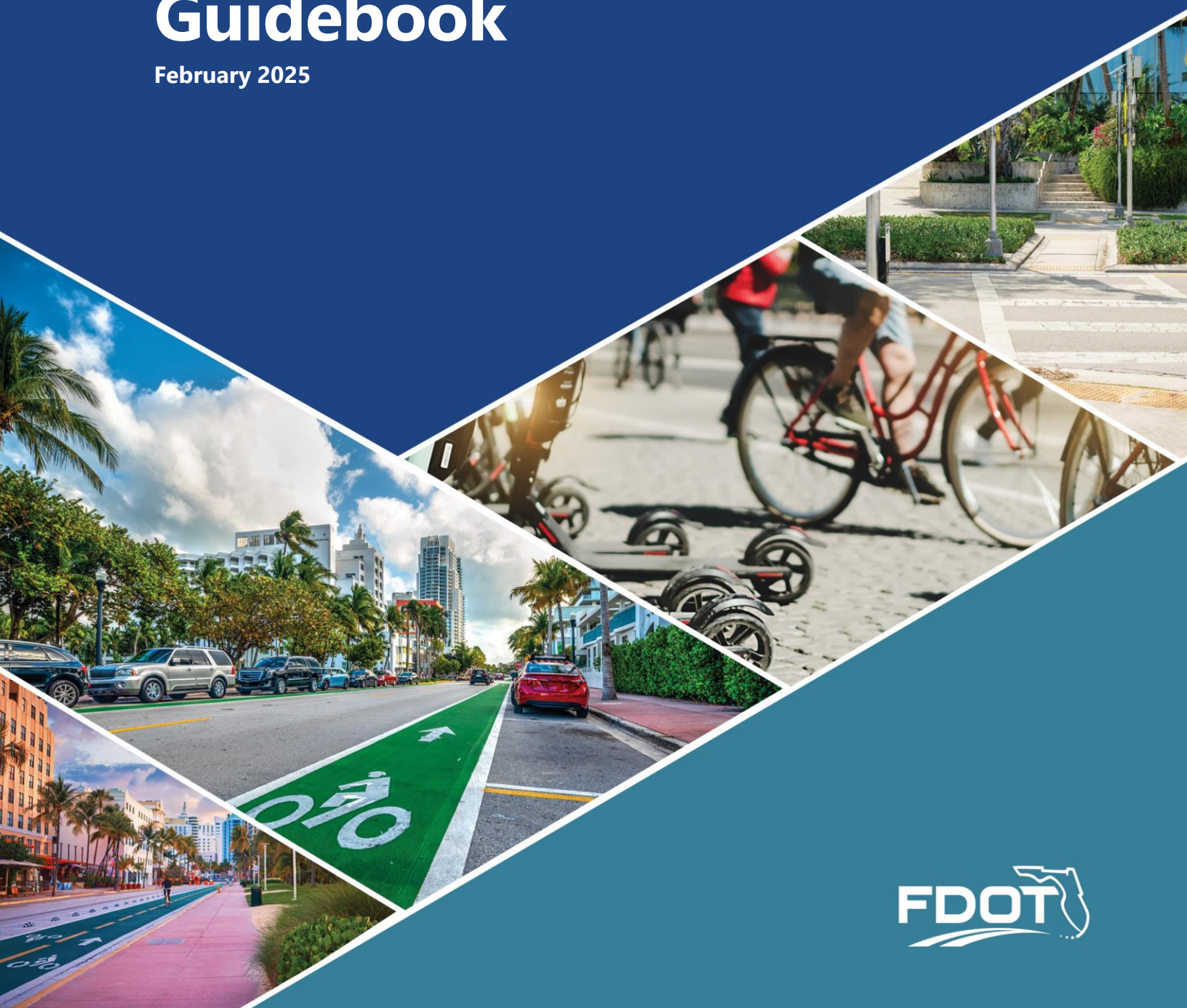

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1. INTRODUCTION

Lane repurposing is the technique of reassigning roadway space by reducing the number of through movement traffic lanes and allocating the space for other uses such as bicycles, pedestrian facilities, or transit (refer to Figure 1). Lane repurposing aims to improve safety, accessibility, quality of life, and often to accommodate other modes of transportation. However, implementation of lane repurposing projects may create unintended congestion issues causing traffic diversion to the surrounding roadway network. In order to meet the current and future needs of the State Highway System (SHS) and to mitigate any adverse operational or safety impacts, the Florida Department of Transportation (FDOT) has developed an application process that allows counties and local municipalities to propose lane repurposing projects for the Department's review and approval.

Figure 1: Example Before and After Lane Repurposing

1.1 Florida Statutes

Section 334.61, Florida Statutes (F.S.), Traffic Lane Repurposing, was enacted in 2024 and requires government entities to prepare the following in support of a lane repurposing request.

> (1) When a governmental entity proposes any project that will repurpose one or more existing traffic lanes, the governmental entity shall include a traffic study to address any potential adverse impacts of the project, including, but not limited to, changes in traffic congestion and impacts on safety.
>
> (2) If, following the study required by subsection (1), the governmental entity elects to continue with the design of the project, it must notify all affected property owners, impacted municipalities, and the counties in which the project is located at least 180 days before the design phase of the project is completed. The notice must provide a written explanation regarding the need for the project and information on how to review the traffic study required by subsection (1) and must indicate that all affected parties will be given an opportunity to provide comments to the proposing entity regarding potential impacts of the change.

(3) The governmental entity shall hold at least one public meeting, with at least 30 days prior notice, before completing the design phase of the project in the jurisdiction where the project is located. At the public meeting, the governmental entity shall explain the purpose of the project and receive public input, including possible alternatives, to determine the manner in which the project will affect the community.

(4) The governmental entity shall review all comments from the public meeting and take the comments and any alternatives presented during the meeting into consideration in the final design of the project.

Furthermore, Section 341.051(2)(c), F.S., requires that any lane elimination or lane repurposing, recommendation, or application relating to public transit projects must be approved by a two-thirds vote of the transit authority board in a public meeting to be held after a 30-day public notice.

To meet these requirements, FDOT has established the Corridor Capacity Policy (Topic Number 000-525-075) and provided this guidebook as a resource for local governments to understand and follow these requirements.

1.2 FDOT Corridor Capacity Policy

The Department's mission is to enhance and maintain the capacity of the SHS in order to promote efficient movement of people and goods. It is the policy of the Department that any proposed improvements must meet the current and future needs of the SHS, and any adverse operational and safety impacts be mitigated. Lane repurposing projects must be requested by counties or local municipalities with a commitment to conduct the required analysis. The required analysis must consider both congestion and safety impacts of the proposed improvements on the subject facility and the surrounding transportation network. Lane repurposing proposals involving public transit projects shall provide a transit ridership analysis demonstrating congestion relief. The proposed project must be approved by a two-thirds vote of the transit authority board in a public meeting. In the event that local applicants withdraw support for lane repurposing projects within five years of construction, state funds must be restored. The Department may implement lane repurposing projects that demonstrate significant safety benefits or are of compelling state interest on the SHS. Lane repurposing on the Strategic Intermodal System will not be considered.

1.3 Purpose

This guidebook provides guidance for local, regional, and statewide transportation agency partners in the requirements for developing lane repurposing projects to satisfy Section 334.61 F.S. The review and approval process contained in this guidebook represents the FDOT review and approval process for lane repurposing requests on the SHS. Projects not on the SHS (off-system) must also comply with these statutory requirements. Notify FDOT if or when the repurposing of county or city roads impacts the SHS (e.g., when an off-system lane repurposing corridor crosses a SHS). This guidebook supersedes all previous guidance on lane repurposing from the Department as the requirements have substantially changed.

1.4 Resources

Lane repurposing applicants may utilize the following FDOT resources when developing their applications.

- The FDOT Design Manual (FDM) has several chapters that provide general guidance and the necessary forms to support application, as well as various checklists which guide applicants during the process. The FDM identifies procedures for FDOT projects and establishes geometric and design criteria for SHS facilities. FDM Chapter 126 provides an overview of the general purpose and requirements for lane repurposing projects.
- The FDOT Complete Streets website provides resources and guidance on developing facilities that put the right street at the right place. Complete streets are designed and constructed to meet the needs of transportation users of all ages and abilities, including pedestrians, bicyclists, transit users, motor vehicles, and freight users.
- The Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook) provides criteria for public streets, roads, highways, bridges, sidewalks, curbs and curb ramps, crosswalks, bicycle facilities, underpasses, and overpasses used by the public for vehicular and pedestrian travel.
- The FDOT Multimodal Access Management Guidebook incorporates context classification into access management approaches and documents FDOT access management standards.
- Level of Service Targets for the State Highway System, Topic Number 000-525-006 provides the Level of Service (LOS) targets on the SHS.
- The Transportation Data and Analytics Office provides various datasets that can be used in the development of lane repurposing projects.
- Florida Traffic Online is a source of historical traffic counts and other traffic related information throughout the SHS.
- The FDOT Project Traffic Forecasting Handbook offers guidelines and techniques for corridor traffic forecasting.
- The FDOT Traffic Analysis Handbook provides guidance on conducting traffic operational analyses.
- FDOT's Safety Engineering webpage contains safety methods and resources for use in various project types.
- The Road Jurisdiction Transfers handbook and procedure shall be used for roadways that go through a jurisdictional transfer.
- The Project Development and Environment (PD&E) Manual outlines the environmental review process for compliance with the federal National Environmental Policy Act (NEPA)

and associated federal and state laws and regulations for all SHS facilities and Local Agency Program (LAP) projects off the SHS.

- The Public Involvement Handbook contains guidance and requirements for community engagement.
- The MPO Program Management Handbook contains guidance for planning consistency requirements.

2. LANE REPURPOSING CONCEPT REPORT

This section provides guidance for completing the various parts of the Concept Report which is required for all lane repurposing projects on the SHS. The Concept Report will evaluate the proposed changes and document the traffic operational analysis, safety, design criteria, lane repurposing impacts, and mitigation measures which are necessary for FDOT to make an informed decision. Projects not on the SHS (off-system) may utilize the outlines and forms contained herein for guidance in developing a report to support a request for lane repurposing; however, this is not a requirement, and the applicant should coordinate with the local agency with jurisdiction over the roadway in question.

Projects are evaluated on a case-by-case basis for lane repurposing. Lane repurposing projects typically function well in areas with a robust local roadway network that can absorb diverted traffic from the repurposing project; however, care must be taken to understand the impacts of that diverted traffic.

Regional connectivity needs for traffic circulation are an important consideration. Roadways which serve as hurricane evacuation and/or freight routes are not the best candidates for lane repurposing without plans in place to reroute the evacuation and/or freight traffic. Strong consideration must be given to potential impacts when deciding whether these roadways are the appropriate locations for a lane repurposing project. Lane repurposing on the Strategic Intermodal System will not be considered.

Lane repurposing projects remove one or more existing through movement traffic lanes from either a roadway segment or an entire corridor. In a lane repurposing project, changes to roadway characteristics are included as necessary to meet the purpose of the project, and may include design modifications such as:

- alterations to design speed
- reduced lane widths
- median changes
- access modifications
- intersection modifications
- bicycle lanes
- new or wider sidewalks
- shared-use paths
- on-street parking
- transit only lane
- loading zones

The traffic operational analysis for the lane repurposing project must demonstrate satisfactory performance based on the established measures of effectiveness (MOE)s for the study and the adopted LOS targets for the SHS. Lane repurposing projects may consider design enhancements and additional features to improve the mobility and safety, as well as to address community needs such as pedestrian enhancements and landscaping. Enhancements to

landscaping require local government agreements to continue the maintenance and upkeep, typically through a Memorandum of Understanding (MOU) with the Department.

Lane repurposing projects may be evaluated through the NEPA process or the state environmental review process as required by the FDOT PD&E Manual. During the Project Initiation, any required environmental review and the anticipated Class of Action will be discussed with the Office of Environmental Management (OEM).

2.1 Project Description

A project description is critical for providing information on the current conditions of the roadway and the proposed changes to be made. A project description also includes information as to why a lane repurposing project is needed and outlines the purpose of the project.

Purpose

Lane repurposing projects are proposed for various reasons based on factors such as traffic calming, safety improvements, multimodal accommodation, economic development, livability and community enhancements, and efficient utilization of space.

In general, there are key factors that must be analyzed when considering the need for lane repurposing projects. The following list provides an overview of key factors that must be considered when justifying a candidate lane repurposing project.

- Access Management: Lane repurposing requires an analysis of potential conflict points created by medians, median openings, and driveways. The analysis includes consideration of various access management issues such as the operation of intersections; driveway locations; access to private property and businesses; accessibility for pedestrians, bicyclists, and transit users; curb ramps; and the location of new medians or refuge islands (if applicable). Refer to FDOT's Multimodal Access Management Guidebook and FDM 214 for further guidance.

- Capacity: Maintaining and enhancing the capacity of the SHS is critical to the Department's mission. Lane repurposing projects must consider congestion impacts of the proposed improvements on the subject facility and the surrounding transportation network. Refer to Section 2.4 Traffic Analysis of this guidebook for additional details.

- Design Criteria: The FDM 126 outlines FDOT design criteria and the American Association of State Highway Transportation Officials (AASHTO) requirements and expectations for lane repurposing projects. Information on Design Exceptions and Design Variations can be found in FDM 122.

- Functional Classification: Federal Functional Classification is the roadway classification recognized by FDOT and must be referenced when a lane repurposing project is being considered. A lane repurposing project may potentially impact the functional classification of a roadway, which could have many implications including federal funding eligibility on the National Highway System (NHS), state and federal performance reporting requirements, project prioritization, and traffic analysis.

- Right of Way: Lane repurposing infers the re-use of roadway right of way (ROW) (for other applications such as serving pedestrians, bicyclists, and transit users. Typically, there is no need for ROW acquisition as improvements are done within the existing ROW. However, in certain conditions, new ROW may be needed to accommodate turning lanes, landscape enhancements, etc. The project should consider how the existing ROW can be maximized to support the new uses.

- Safety: Safety considerations include an analysis of safety-related elements such as lane widths, turn lanes, crossing distances for pedestrians, bicycle lanes, accessibility to transit stops/stations, the Americans with Disabilities Act (ADA) accommodations, sidewalk location and width, intersection design, and on-street parking. Refer to Section 2.5 Safety Analysis of this guidebook for additional details.

Project Location

Information regarding the project location should be included in the Concept Report, such as the roadway segment identification number, map of the project area showing project limits, milepoint limits, major roadways, key landmarks or destinations, north arrow and scale, and legend explaining any symbols or color coding. The project location map should clearly communicate the scope and extent of the proposed changes, allowing reviewers to understand how the project will impact the overall corridor and surrounding area.

2.2 Existing Conditions Analysis

The purpose of the existing conditions analysis is to gather and document roadway characteristics, including the following:

- Roadway typical section
- Intersection configuration
- Roadway functional classification
- Roadway context classification
- Evacuation route
- Access management classification and standards
- Existing ROW width
- Existing design speed, target speed, and posted speed limit
- Traffic data
- Crash data
- Signalized Intersections
- Utilities

The existing conditions analysis helps the lane repurposing project applicants and reviewers determine if a project is feasible and appropriate for addressing the identified issues. This analysis provides the background data to justify the project and to design an effective solution.

Typical Section

Existing typical section analysis for lane repurposing projects involves evaluating the current lane widths, number of lanes, median type and width, sidewalk width, parking lane width, and

presence of roadway furniture. This analysis is a baseline for determining how the existing roadway space can be reallocated to other users. Existing traffic volumes and crash data are analyzed in conjunction with the typical section to assess the roadway's suitability for lane repurposing. For more information on these elements, please refer to FDM 913.

Roadway Functional Classification

Lane repurposing could impact the functional classification of the roadway. A change in roadway functional classification could be significant as it could result in a gap in the continuity and connectivity of the overall system and affect planning, funding, traffic analysis, project prioritization, and state and federal performance reporting requirements. As such, changes to functional classification are a key consideration in reviewing lane repurposing projects.

The primary guide for managing functional classifications for federal reporting purposes is the Highway Functional Classification Concepts, Criteria and Procedures - 2023 Edition document. The federal functional classification system is the only functional classification recognized by FDOT. Other agencies and local governments in Florida may have their own functional classification systems.

The FHWA guidance is supplemented by FDOT's 2020 Urban Area Boundary and Functional Classification Handbook, which describes the process for assigning and revising functional classifications. Changes to FHWA functional classifications related to lane repurposing projects may originate with FDOT District staff, an MPO/TPO, or a local government. Local government requests for federal functional classification changes typically occur through an MPO/TPO. The changes must be reviewed and approved by FDOT and then by FHWA.

Roadway Context Classification

FDOT uses a context-based approach to planning, designing, constructing, and operating the SHS and has a roadway classification system comprised of eight context classifications for all non-limited access SHS roadways. The context classification and transportation characteristics of a roadway will determine key design criteria for all non-limited access SHS roadways. The context classification system broadly identifies the various built environments existing in Florida. FDOT's context classification system describes the general characteristics of the land use, development patterns, and roadway connectivity along a roadway, providing cues as to the types of uses and user groups that will likely utilize the roadway. Roadway design features will be selected based on the context classification of the roadway.

Evacuation Route

Careful consideration must be given to the decision to eliminate a traffic lane along an evacuation route. Lane repurposing is not recommended on evacuation routes due to a need for high capacity during emergencies. A lane repurposing project that eliminates travel lanes may create a bottleneck during mass evacuation, especially at intersections or merge points. Evacuation is a special transportation circumstance that can be anticipated in areas especially prone to disasters, such as coastal areas (during hurricanes) and locations with specific security threats (institutional areas, heavily visited tourist attractions, and other venues/areas which hold

large crowds during special events). The Manual on Uniform Traffic Control Devices (MUTCD) calls for a state or locally developed contingency plan that considers “the use of all applicable roadways” in the event of an emergency evacuation. It also calls for “a controlled operation of certain designated highways” and “the establishment of traffic operations for the expediting of essential traffic.”

Access Management

Lane repurposing projects should include access management plans that eliminate, consolidate, and/or relocate driveways to reduce conflict points. Reducing conflict points typically improves traffic operations by facilitating smoother traffic flow and enhancing safety for all modes by reducing the number of turning movements. Conflict points along the corridor may be reduced by shared or joint accesses that limit the number of driveways, particularly in a downtown areas. This approach supports a pedestrian- and bicycle-oriented environment while enhancing vehicular traffic flow and safety. Another strategy for reducing the number of conflict points is the installation of raised medians, which can replace a center two-way left-turn lane. This approach visually narrows the roadway, allocates space for turning movements, and may incorporate green elements into the corridor.

Chapter 14-97, F.A.C., describes the access management classification system and access management standards for the SHS and the process for modifying a roadway's access management classification. The FDOT Multimodal Access Management Guidebook provides guidance for state and local transportation officials to better understand access management principles and FDOT standards.

Right of Way

Lane repurposing projects are typically completed within the available ROW of the roadway. The existing ROW limits should be obtained from the District ROW Office before proceeding with design to verify the available space.

Design Speed, Target Speed, and Posted Speed Limit

Data on the design speed and posted speed limits should be collected and reviewed as this information is used in the traffic and safety analyses of lane repurposing projects.

Target speed is the highest speed at which vehicles should operate on the roadway consistent with the level of multimodal activity generated by the surrounding land uses. The target speed for a lane repurposing project may be lower than the historical average speeds on the roadway.

Target speeds can influence the design elements of the lane repurposing project. For example, if average roadway speeds are significantly higher than the intended target speed, it may be necessary to discuss appropriate roadway elements to manage speed and improve safety (e.g., a separated bicycle lane may be more suitable than a painted bicycle lane).

Traffic Data

Traffic data is collected to analyze the impacts of a lane repurposing project and counts of up to two years old should generally be applicable unless otherwise justified. Traffic data collection will help determine the current and future impacts that a lane repurposing project may have on a roadway and the overall network. Traffic data includes annual average daily traffic (AADT), morning and afternoon peak hour volumes, directional design hour volumes, heavy vehicle percentages, bicycle and pedestrian counts, transit data (ridership and number of regularly scheduled transit vehicles), and any other data related to that corridor.

The best method for applicants to obtain this data is through the Florida Traffic Online, traffic count studies, and turning movement count studies. For bicycle and pedestrian count data, applicants can conduct field studies or use data or resources from the FDOT Non-Motorized Traffic Monitoring Program. It is also important for applicants to review the Project Traffic Forecasting Handbook and the Traffic Analysis Handbook for guidance on traffic data collection.

Crash Data

A complete crash data set should be compiled for the lane repurposing project, incorporating the most recent five-year crash history. Crash data is used to evaluate the project corridor for safety issues and prepare the required safety analysis for future conditions. Crash data from the most recent five-year period should be obtained from Signal Four Analytics. The applicant should follow the process detailed in the FDOT Safety Crash Data Guidance document to prepare the crash data for analysis.

Signalized Intersections

Signalized intersection data is important for lane repurposing projects as it provides information about existing operational characteristics and potential safety issues. Data on existing signal timing and phasing plans, queue lengths, and crashes are needed to understand issues that may be impacted or mitigated by a lane repurposing project. For example, it is important to document potential intersection impacts due to the proposed modifications in the Concept Report. Specifically, if could the proposed modification are likely to increase the delay of traffic moving through a signalized intersection; this could significantly impact not only the safety of the people using this roadway, but also the operational efficiency of the intersection.

Utilities

The location of all utilities should be obtained for the project corridor as they have the potential to impact project alternatives. This information should contain the utility type and location, and utility agency or owner (UAO) contact information.

2.3 Proposed Alternative

Lane repurposing project applicants must provide a detailed review of the proposed alternative (Build condition) of the roadway that is being studied. This includes a conceptual design of the roadway comprising a typical section, access modifications, intersection design, as well as any proposed changes to the design speed, target speed, and posted speed limits. This proposed alternative must also be consistent with statewide and local planning documents. Any known

design inconsistencies that require Design Variations or Design Exceptions must be discussed in the Concept Report.

Conceptual Design

Applicants must present a conceptual design that depicts the proposed modifications to the roadway in detail. This includes the roadway typical section, as well as any changes that are proposed at the intersections.

Typical Section

The Concept Report should include a Typical Section Package with the proposed typical sections of the lane repurposing project prepared according to the FDM 120 and signed by a Professional Engineer licensed in Florida. The typical section should show the proposed new arrangement of travel lanes, lane widths, median, bicycle and pedestrian facilities, on-street parking, landscaping and buffers, and right of way requirements, as appropriate (see Figure 2).

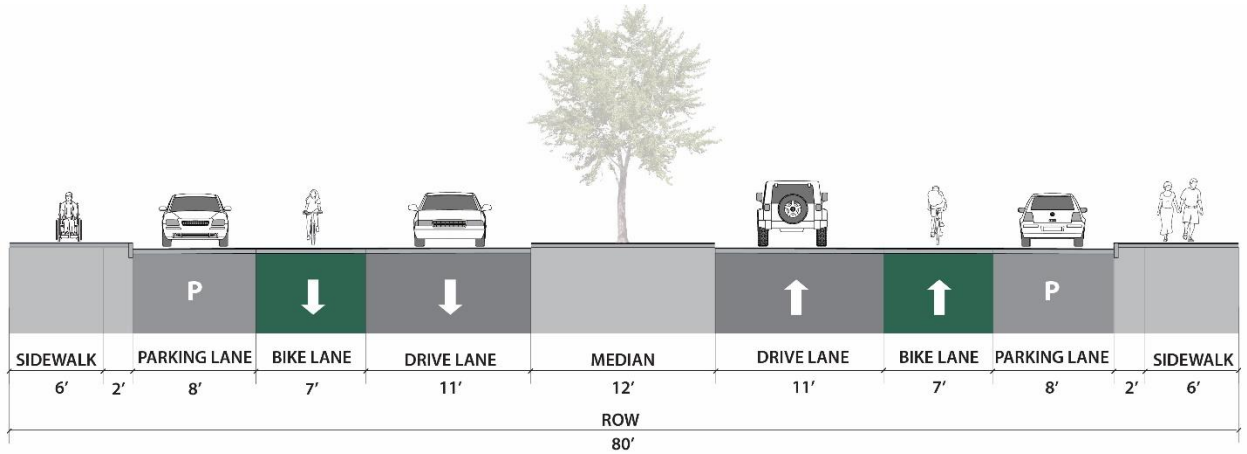

Figure 2: Typical Section Example

Intersection Design

Any changes to intersection design elements such as intersection geometry modifications, reduced lane widths, shorter crossing distances, improved sight distances, special bicycle and pedestrian enhancements or phasing, as well as corner clearance should be discussed in the Concept Report.

Changes in Design Speed and Posted Speed

The Concept Report should note and provide justification for any reduction in the design speed or posted speed limits of the lane repurposing corridor. A discussion on how the proposed measures will move the project towards meeting the target speed should also be included.

Design Variations and Design Exceptions

A Design Variation or Design Exception may be required due to either changes in standards since the roadway was first constructed or limitations inherent to the roadway. If the lane repurposing project is in the planning phase, then the anticipated Design Variations or Design

Exceptions should be listed within the Type 1 Traffic Analysis Methodology and Concept Report. The approval of Design Variation and Design Exception is required during the design phase. Refer to FDM 122 for additional information.

Impact to Interchange Ramp Terminals

It is important to note that if a lane repurposing proposal has the potential to impact interchange ramp terminal intersections, an interchange access request (IAR) must be performed according to the FDOT Interchange Access Request User's Guide. This requirement is applicable even if the proposed lane repurposing is not on the SHS (off-system). Examples of potential impacts would be removing a travel lane at the ramp terminal, modification of the existing ramp terminal intersection, or implementation of transit signal priority at or near the ramp terminals. Coordination with the District Interchange Review Coordinator (DIRC) is required to determine the level of analysis and documentation necessary for the IAR.

Consistency with Plans and Programs

Planning consistency is crucial to project implementation. Lane repurposing projects typically begin with the identification of a need or issue to be addressed, such as improving safety and pedestrian/bicyclist access or promoting community redevelopment. Proposed lane repurposing projects should be consistent with adopted plans and programs. These plans and programs vary based on the level of government, as well as scope of the project (see Figure 3).

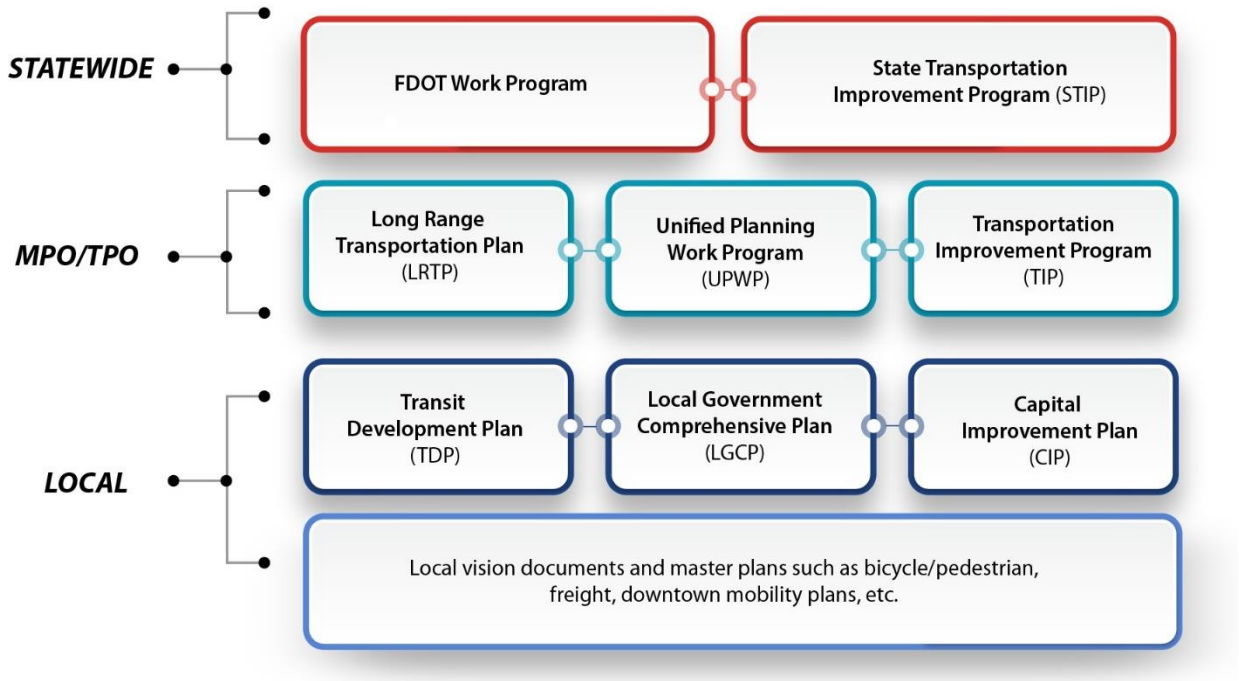

Figure 3: Relevant Plans and Programs

The proposed cross-section for a lane repurposing project should be consistent with: (a) the cross-section upon which the analyses that informed the plans and programs are based, and (b)

any planned and programmed projects affecting that project. For instance, if the travel demand model underlying the Long Range Transportation Plan (LRTP) assumed that a roadway for which lane repurposing is proposed would have a six-lane cross-section in the long term, reducing the cross-section to four lanes is inconsistent with the LRTP. If the FDOT Work Program shows that funding has been obtained to widen a given roadway from four lanes to six lanes, lane repurposing is inconsistent with the Work Program. Another example would be if the Transit Development Plan (TDP) shows that a given roadway is planned to have dedicated bus lanes in the future, eliminating through lanes may make it infeasible to implement the dedicated bus lanes, so lane repurposing is inconsistent with the TDP.

If a proposed lane repurposing project is inconsistent with an adopted plan or program, the lane repurposing: (a) may be infeasible or (b) the adopted plan or program must be amended or modified. The amendment processes for the above listed plans and programs involve the following:

- FDOT Work Program – Amendments must occur in accordance with Section 339.135 F.S. See Part III, Chapter 3, of the Work Program Instructions for detailed information about the process, the types of amendments that are possible, and the conditions under which amendments are allowed.
- Statewide Transportation Improvement Program (STIP) – Amendments must occur in accordance with 23 CFR 450. Chapter 5 of FDOT's Metropolitan Planning Organization Program Management Handbook notes that each MPO/TPO's TIP is incorporated into the STIP and includes a section on TIP and STIP amendments. Chapter 5 describes conditions under which a STIP amendment is required and the amendment process. Additional information about STIP amendments and administrative modifications is available from the FDOT Office of Work Program and Budget.
- Long Range Transportation Plan (LRTP) – Amendments must occur in accordance with the Code of Federal Regulations (CFR) Title 23 Part 450 and 339.175, F.S. Chapter 4 of FDOT's Metropolitan Planning Organization Program Management Handbook contains guidance for amending or modifying LRTPs. Amendments may be required based on changes in project cost, changes in the project schedule, changes in project scope, and deletion of a cost feasible project from the LRTP, An "administrative modification" is required for a change that is less significant than an amendment.
- Unified Planning Work Program (UPWP) – The requirements for processing amendments to the UPWP vary and more information can be found in Chapter 3 of FDOT's Metropolitan Planning Organization Program Management Handbook.
- Transportation Improvement Program (TIP) – Amendments must occur in accordance with 23 CFR Part 450 and 339.175, F.S. Chapter 5 of FDOT's Metropolitan Planning Organization Program Management Handbook includes a section on TIP amendments. Chapter 5 describes conditions under which a TIP amendment is required and the amendment process. Administrative TIP amendments do not require the approval of the full MPO/TPO board.
- Transit Development Plan (TDP) – TDPs undergo major updates every five years and minor updates annually. Both types of updates provide an opportunity to maintain consistency between TDP projects and proposed lane repurposing projects. TDP updates occur

according to Florida Administrative Code (F.A.C.) Rule 14-73.001. TDPs are required to be consistent with the LRTP and the local comprehensive plan.

- Local Government Comprehensive Plans (LGCP) – LGCPs may be amended at any time. The timing of amendment submittals will vary by jurisdiction. The Florida Department of Economic Opportunity (DEO) provides information about amendment review processes and time frames. Florida Statute 163.3177 states the requirements that comprehensive plans are to meet; whereas 163.3184, F.S., provides information about FDOT's role in reviewing comprehensive plan amendments.
- Capital Improvement Plan (CIP) - Amendment processes will vary by jurisdiction.
- Visions and Master Plans – Amendment processes will vary by jurisdiction.

A proposed lane repurposing project may be determined to be infeasible if it is not consistent with one or more plans and programs. The applicant should be aware of the following additional considerations:

- The amendment processes may require community engagement, the participation and approval of multiple agencies, revised fiscal analyses, and revised environmental analyses (in non-attainment and maintenance areas).
- Amending one of the above-listed plans and programs may require amending others (e.g., local comprehensive plans should be consistent with the applicable LRTP).
- A project that utilizes federal funding must be included in the TIP and STIP. Amendments to the TIP and STIP associated with such projects must be transmitted to FHWA.

2.4 Traffic Analysis

Applicants of lane repurposing projects are required to perform a comprehensive traffic operational analysis which includes the following types of traffic analyses depending on the project scope and congestion level along the corridor:

- Type 1 Corridor Level Traffic Analysis – a corridor level analysis which examines the benefits and impacts of a proposal on the corridor, required for all projects.
- Type 2 Network Level Traffic Analysis – a network level analysis which examines potential impacts of a proposal on the surrounding roadways and intersections.
- Type 3 Transit Analysis – a transit analysis focusing on understanding ridership and potential network impacts of a proposal.

This tiered approach matches the analysis effort to project complexity by enabling simple projects that would repurpose underutilized lanes (on roadways with excess capacity) to be assessed quickly and cost-effectively, while reserving in-depth analysis for complex projects with potential substantial impacts to the surrounding network. Each analysis type will assess the impact of the lane repurposing project (Build conditions) compared to the No-Build conditions during the opening and design years. These three analysis types are categories, and a project specific traffic analysis methodology must be developed and approved by the FDOT Central Office for all lane repurposing projects.

Type 1 Corridor Level Traffic Analysis

Corridor level traffic (Type 1) analysis is applicable to all lane repurposing projects. Traffic analysis for projects on roadway corridors with excess capacity where the reduction of the number of lanes would not cause any adverse operational impacts may be completed at this level of analysis. The traffic analysis follows the processes schematically described in Figure 4. Traffic analysis should be performed using a travel demand model or other method as specified in the FDOT Project Forecasting Handbook and Highway Capacity Manual (HCM) analytical tools such as Highway Capacity Software (HCS), Synchro, and SimTraffic. Refer to the FDOT Traffic Analysis Handbook for a detailed discussion of HCM methods for traffic analysis. Future year project traffic projections must be developed based on Procedure 525-030-120, Project Traffic Forecasting and FDOT Project Traffic Forecasting Handbook guidelines.

Figure 4: Traffic Analysis Development Process

Type 1 analysis should be focused on meeting vehicular LOS targets for the project segments, without any substantial traffic diversion in the Build conditions. The future (opening year and design year) traffic analysis must be performed for both No-Build and Build conditions capturing morning peak and evening peak periods or other critical peak periods, as determined by the Department. When no network impacts are anticipated in the Build condition, a lane repurposing proposal will evaluate the operational and safety performances by comparing Build (with lane repurposing project) and No-Build (without lane repurposing project) alternatives using the HCM and Highway Safety Manual (HSM) procedures. If appropriate, microsimulation can be used for Type 1 analysis for instances where HCM level analysis will have limitations. If microsimulation is chosen, coordination with the FDOT Systems Implementation Office is required to determine the Area of Influence (AOI) and other analysis requirements.

An evaluation of the potential impacts due to lane repurposing includes a review of MOEs for the segments and intersections along the project corridor. The MOEs described in Table 1 should be reported, at a minimum, from the analysis for No-Build and Build alternatives. Refer to Chapter 9 of the FDOT Traffic Analysis Handbook for guidance on developing MOEs. The applicant may include in the Concept Report any additional MOEs which are relevant based on the purpose and need of the project.

Traffic Diversion

The amount of traffic diverting from the lane repurposing corridor to the adjacent roadway network including local roadways can be estimated by comparing the traffic forecasts in the

Build and No-Build conditions. If the change in AADT on the project corridor in the Build condition is less than 10% compared to the No-Build condition or the project segments and intersections would operate at or below LOS targets, then it can be assumed that the diversion will not significantly impact the network. The operational analysis must show that the intersections and segments within the corridor operate at LOS targets or that mitigation measures can be implemented to improve the intersections to operate at or above LOS targets.

Lane repurposing projects which show degradation to Build conditions operating below the LOS targets or more than 10% traffic diverted to other roadways should proceed to Type 2 network level traffic analysis.

Table 1: Measures of Effectiveness for Type 1 Analysis

Analysis	Measure of Effectiveness
Signalized Intersections	Intersection Delay (sec/veh) Intersection Movement Delay (sec/veh) Intersection LOS Intersection Movement LOS Queue Length (veh)
Unsignalized Intersections	Intersection Delay (sec/veh)* Intersection Movement Delay (sec/veh) Intersection LOS* Intersection Movement LOS Queue Length (veh)
Corridor	Arterial LOS Segment Travel Time (sec) Segment Average Speed (mph) Traffic Diversion Percentages (%)

*Intersection delay and Intersection LOS for all-way-stop-controlled intersections only.

Type 2 Network Level Traffic Analysis

When network impacts are anticipated, a Type 2 analysis will be conducted. If the Type 2 analysis indicates that the lane repurposing project may result in unacceptable operating conditions along the corridor or adjacent facilities, mitigation measures to address any potential impacts on the lane repurposing corridor and within the network study limits shall be identified, evaluated and documented in the Concept Report. Network level traffic analysis should follow the guidance contained in the FDOT Project Traffic Forecasting Handbook, FDOT Traffic Analysis Handbook, and FHWA Traffic Analysis Toolbox.

Area of Influence

Network AOI or network study limits must be established in coordination with the Central Office Systems Implementation Office (see Chapter 3, FDOT Traffic Analysis Handbook). Knowledge of parallel corridors and the connections (roadway geometry and traffic volume) to the lane repurposing corridor is needed to establish the analysis AOI. Simply selecting one intersection on either side of the project or cross street will not provide the necessary level of network analysis. The analysis AOI can be established by running a travel demand model and identifying

the roadways which will substantially absorb diverted traffic. The analysis AOI should include, at a minimum, all collector and arterial roadways, all signalized intersections, and other major priority intersections that may be impacted by the lane repurposing project.

Analysis

The network operational analysis should fully cover all segments that are anticipated to be affected by traffic diversion, which will include parallel corridors and cross streets in the analysis AOI. At the beginning of the analysis, travel demand models are used to estimate future year traffic volumes for No-Build and Build conditions along with OD demands (trip tables).

The operational effect of traffic diversion in the analysis AOI can be evaluated by using either a static assignment from the travel demand model's trip table imported into a microsimulation model or a Dynamic Traffic Assignment (DTA) tool within the microsimulation model. Care should be taken to carefully review the analysis results for reasonableness. The FDOT Traffic Analysis Handbook recommends the use of DTA in complex networks and provides guidance for checking model convergence. It should be noted that unlike HCM-based methods, microscopic models require the highest level of effort in terms of network building, data collection, calibration, and computational resources.

Mesoscopic analysis may be used when it is not feasible or cost effective to microsimulate the entire analysis AOI. Mesoscopic analysis might be done in two ways—by directly integrating the mesoscopic model with the travel demand model (e.g., using Visum Dynamic User Equilibrium) or applying the mesoscopic model as a post-processing tool for the macroscopic model. Mesoscopic simulation analysis should not use open-source tools as they are generally not validated for planning and operations applications in Florida. Guidance for using mesoscopic simulation including calibration/validation is presented in the FHWA Multiresolution Modeling for Traffic Analysis: Guidebook (2022).

Table 2: Measures of Effectiveness for Type 2 Analysis

Facility Type	Measures of Effectiveness
Intersections	Intersection Delay (sec/veh) Movement Delay (sec/veh) Intersection LOS Movement LOS Queue Length (veh)
Corridors	Average Speed (mph) Travel Time (sec) Throughput (veh/hr) for each direction
Networkwide	Travel Time (sec) Average Delay (sec/veh) Latent Demand (veh) Vehicle Miles Traveled (mi/veh) Vehicle Hours Traveled (hours)

The MOEs shown in Table 2 should be reported (at a minimum) from microsimulation or mesoscopic simulation analysis for No-Build and Build alternatives for both the opening year and design year morning and evening peak periods or other peak periods as agreed upon with District and Central Office staff. The applicant may include in the Concept Report additional MOEs that are relevant to the project based on the purpose and need for the project.

Type 3 Transit Analysis

This analysis is conducted for lane repurposing projects involving removal of a travel lane for transit infrastructure to provide new transit service or connect to the other modes. This could include Bus Rapid Transit (BRT), Business Access Transit (BAT) lanes or removal of a lane to install elevated transit options such as people movers. Transit projects typically evaluate benefits, costs, and impacts of the proposed improvements from a transit perspective. Typical benefits include improved travel time for transit riders, transit ridership increase, reduction in vehicle emissions, and economic development along the corridor. The traditional analysis requirements for such projects (defining the project, estimating ridership, developing fleet requirements, estimating economic growth, etc.) depends on the type of project and funding type. The FDOT Transit Corridor and Project Evaluation (TCPE) provides guidance to sponsors of major transit fixed guideway capital investment projects seeking funding through the Federal Transit Administration's (FTA) and Capital Investment Grants (CIG) Program. Information on the FTA CIG Program is available online at https://www.transit.dot.gov/CIG. However, the highway impacts of transit projects are often not adequately analyzed.

The lane repurposing guidance for transit projects focuses on impacts to the facility and the transportation network surrounding the project. All projects are unique and will require methodology specifically tailored to the project's impacts. Coordination with District and Central Office staff during the methodology meeting is important to ensure that extensive rework and additional analysis are not required after the draft Concept Report.

Ridership Analysis

Transit planners use models such as regional travel demand models and FTA's Simplified Trips-on-Project Software (STOPS), FDOT's Transit Boardings Estimation and Simulation Tool (TBEST), and other models to forecast transit ridership.

Lane repurposing projects involving transit must meet a minimum ridership threshold of 3,000 existing year passengers per day and 6,000 opening year passengers per day for the route. The transit analysis should provide the origin and destination of any existing riders along with the potential number of riders that will shift to transit from driving.

Congestion Benefits

The transit analysis should include congestion relief benefits such as increased person throughput, vehicle hours of travel reduction, improved transit travel time, improved air quality and improved safety for all modes.

Operational Analysis

Transit projects are required to conduct a network-level microscopic simulation or mesoscopic simulation analysis unless a Type 1 analysis was agreed upon in the approved methodology. Additionally, the Type 3 analysis should consider how a transit lane repurposing project will affect traffic on surrounding roads due to traffic diversion. The network analysis should account for various factors, including the following:

- Transit signal priority (TSP) – This system gives priority to buses and trains at traffic signals, reducing their wait times and improving overall travel speeds. The analysis should consider both passive and active TSP implementations, and station locations throughout the corridor.
- Queue jump – Queue jump coupled with TSP can provide significant travel time savings and reliability of a transit system.
- Other operating features – Include any additional features that affect traffic flow, such as dedicated turn lanes or specific signal timing adjustments.

The MOEs shown in Table 3 should be reported from microscopic simulation or mesoscopic simulation analysis for No-Build and Build alternatives for both morning and evening peak periods, as well as other critical periods, as determined by the Department, in the analysis AOI.

Table 3: Measures of Effectiveness for Type 3 Analysis

Analysis	Measures of Effectiveness
Transit	Daily Ridership (route and stop level) Daily Mode Shift (route level) Daily Person Throughput (route level)
Intersection	Intersection Delay (sec/veh) Movement Delay (sec/veh) Intersection LOS Movement LOS Queue Length (veh)
Corridor	Average Speed (mph) Travel Time (sec) Throughput (veh/hr) for each direction
Networkwide	Travel Time (sec) Average Delay (sec/ veh) Latent Demand (veh) Vehicle Miles Traveled (mi/veh) Vehicle Hours Traveled (hours) Person Miles Traveled (mi/per)

2.5 Safety Analysis

A safety analysis is required for all lane repurposing projects and involves both historical crash analysis and predictive safety analysis. Combining historical data with predictive modeling provides a comprehensive understanding of the safety issues and the effectiveness of mitigation strategies. A project's safety MOEs will be based upon the purpose of the project and could include:

- Number of fatalities
- Rate of fatalities per 100 million Vehicle Miles Traveled (VMT)
- Number of serious injuries
- Rate of serious injuries per 100 million VMT
- Total number of crashes
- Annual crashes by severity
- Number of crashes by crash type
- Number of non-motorized fatalities and serious injuries
- Predicted crash rates

Historical crash analysis consists of a review of a five-year crash history with respect to crash frequency, type (including pedestrian and bicyclists), severity, patterns, and contributing causes. The crash analysis should also evaluate if the lane repurposing project is on or close to an identified high crash segment or intersection location.

Corridor and network predictive safety analysis utilizes Highway Safety Manual (HSM) methods to determine the impact of several key safety-related elements such as lane width, turn lanes, raised median, intersection design, and non-motorized traffic accommodation. Resources to assist with safety analysis can be found on the FDOT Safety Engineering website and Safety Analysis Guidebook for PD&E Studies.

There are two approaches to predictive safety analysis:

- Safety Performance Functions (SPF) to estimate the predicted number of crashes on roadway segment or intersection based on its characteristics (such as AADT, facility type, and number of lanes). SPF analysis uses the models built in the HSM spreadsheet tools.
- Crash Modification Factors (CMF) to estimate the expected change in crash frequency after implementing a lane repurposing project. CMFs provide a quick way to understand the safety-related results of the lane repurposing project. If multiple CMFs may be used, avoid double-counting overlapping safety effects by following guidance published in the NCHRP (Web-Only Document 352) Crash Modification Factors in the Highway Safety Manual: Resources for Evaluation.

The safety analysis should also identify potential safety risks associated with the project and recommend mitigation strategies to create a safe environment for all users – pedestrians, bicyclists, drivers, and transit riders. Lane repurposing projects must document all analysis and assumptions made in the Concept Report. Supporting documentation should be included in the appendix.

2.6 Mitigation

Congestion and safety impacts to the corridor and surrounding roadway network must be mitigated with the lane repurposing project. Appropriate mitigation must be identified, documented in the Concept Report, and approved prior to the lane repurposing project receiving approval. For example, if the lane repurposing project is going to divert traffic to another roadway and cause degradation of that corridor's intersection operations, mitigation measures to address any potential impacts shall be evaluated and proposed. Mitigation measures may include, but are not limited to, improvements such as signal timing changes, addition of turn lanes, implementing turn prohibitions, geometric improvements, traffic calming measures, and other Transportation Systems Management and Operations (TSM&O) strategies.

2.7 Pilot/Temporary Projects

Request for a pilot or temporary lane repurposing on the SHS must follow the review and approval process outlined in this guidebook. Full analysis is required for the request to be considered by FDOT. The Concept Report must also include a timeline of the project including how the project will be monitored and how the project will potentially be considered for permanent installation or removal.

2.8 Concept Report Appendix

The applicant should include all relevant documentation to support the analysis of the lane repurposing project such as traffic counts, traffic analysis, transit analysis, crash data, models utilized, proposed conceptual plans and typical sections, initial meeting minutes and approved methodologies, public workshop information, and any other related information.

3. COMMUNITY ENGAGEMENT

Support by the local community is crucial to the long-term success of any lane repurposing project. The process of discussing and proposing changes to roadway configuration during consensus-building can create opportunities for misunderstanding or misperceptions about the project's goals or impacts, making community engagement a critical component. Therefore, community engagement requires a commitment to a strong partnership and an engagement process between the local government, FDOT, and the community throughout the project development to address concerns and foster collaboration.

The FDOT Public Involvement Handbook provides guidance on community engagement. In addition, Section 334.61, F.S., and 341.051(2)(c), F.S., stipulate the minimum requirements of community engagement that must be completed for a lane repurposing project.

- The governmental entity must notify all affected property owners, impacted municipalities, and the counties in at least 180 days before the design phase is completed. The notice must provide a written explanation of the need for the project and information on how to review the traffic study required and provide an opportunity for the public to provide comments.
- The governmental entity must hold at least one public meeting specifically for the project, with at least 30 days prior notice, before completing the design phase
- The governmental entity must review and consider all comments from the public meeting in the final design of the project
- Transit proposals must be approved by a two-thirds vote of the transit authority board in a public meeting

3.1 Community Engagement Methods and Tools

There are multiple tools available to assess and/or build community support for a lane repurposing project. Community engagement and outreach techniques and tools are discussed in the FDOT Public Involvement Handbook and FDOT PD&E Manual Part 1, Chapter 12.

3.2 Best Practices

While every lane repurposing project is unique, due to the underlying existing conditions or other factors, there are several important steps that applicants should take to be sure that their project can be approved and built successfully. Some of these best practices focus on community engagement while others focus on the application process itself, and they are based upon input from the FDOT District and Central Office. It is recommended that a resolution of support from the local agency be requested during the initial meeting for the request.

Local Champion and Support

One of the best practices for lane repurposing projects is to have a local champion and support from elected or appointed officials. A local champion may be a local government chief planner/engineer or public works director while the elected official may be a city or county commissioner. There are several reasons for having a local supporter(s), including:

- A local champion facilitates engagement with the community making the project more community-centric by understanding their needs and concerns and coordinating with the applicant. Additionally, the local champion can advocate for the project by promoting its benefits and addressing any misconceptions from the community.
- An elected official can rally support from other officials or influence stakeholders and help the project to align with the local priorities.

Early Coordination with Stakeholders

It is critical that any lane repurposing project is coordinated early and often with all major stakeholders and FDOT to avoid any potential pitfalls or issues. Such coordination is important to help the project align with broader state policies, including the Corridor Capacity Policy. It is also important for the applicant to be mindful of the project development process and schedule and the maintenance requirements of the proposed design.

4. LANE REPURPOSING APPLICATION PROCESS

This section provides guidance regarding the FDOT lane repurposing application process, and the roles and responsibilities of the FDOT staff at the District offices and Central Office. The FDOT lane repurposing application is a three-step process involving the lane repurposing applicant, FDOT District staff, and FDOT Central Office staff. This section is not applicable to project not on the SHS (off-system).

4.1 Applicant

The applicant for a lane repurposing project on the SHS must be a local government entity (i.e., municipality or county). Metropolitan Planning Organizations (MPO) or Transportation Planning Organizations (TPO) should not be the applicant but should work with the local government entity to prepare the application. The applicant should only request lane repurposing of a roadway within their geographic jurisdiction. The applicant may submit a request for a lane repurposing project on the SHS through their appropriate FDOT District Lane Repurposing Coordinator (DLRC). The Department may implement lane repurposing projects that demonstrate significant safety benefits or are of compelling state interest on the SHS.

The applicant is required to ensure that all parts of the application, including a traffic study and community engagement, are completed in accordance with Florida Statutes, Corridor Capacity Policy, and FDOT standards, guidelines, and procedures. The applicant shall also ensure that all affected property owners, and any surrounding MPO, TPO, Transportation Planning Agency (TPA), municipalities, or counties which may be impacted by the project are notified. These governmental entities must be given the opportunity to review and provide feedback on the Concept Report and the applicant must incorporate the outcome of coordination in the Concept Report.

4.2 FDOT Review

District Review Staff

The District review staff generally includes staff from Planning and Environmental Management, Modal Development, Roadway Design, Safety, and Traffic Operations offices. However, other offices may need to be involved depending on the nature of the project and associated issues at the DLRC discretion.

Central Office Review Staff

There are two main staff members who manage the lane repurposing process in Central Office: the Systems Management Administrator and the Statewide Lane Repurposing Coordinator (SLRC). The District review staff work with these staff members to help applicants move through the process. The Central Office review staff also includes the offices of Systems Management, Systems Forecasting and Trends, Roadway Design, Traffic Engineering and Operations, and Public Transit, if applicable. Additional experts from Central Office are included as needed based on the specific project needs.

4.3 Step One - Project Initiation, Analysis, and Documentation

Initial Meeting

The applicant contacts the appropriate FDOT DLRC and submits a formal request for a lane repurposing project on government letterhead. The DLRC will direct the applicant to the FDOT Lane Repurposing Guidebook and the appropriate forms and schedule the initial meeting with the District Review staff and Central Office staff. The applicant will utilize the Lane Repurposing Initial Meeting Checklist to prepare for the initial meeting with FDOT. This checklist is intended to provide a starting point for discussion and understanding of the scope of information that may be required to develop the Concept Report. The applicant will also complete a draft of the Type 1 Traffic Analysis Methodology or Type 2 Traffic Analysis Methodology, as applicable, in preparation for the initial meeting with FDOT.

During the initial meeting, the scope of the project will be discussed along with project specific information related to developing the Type 1 Traffic Analysis. The checklist and the initial draft of the Type 1 Traffic Analysis Methodology will be discussed and agreed upon with the applicant. Potential project impacts and Concept Report requirements will also be discussed with the applicant to provide a full understanding of the process and requirements.

Once the methodology is discussed and agreed upon with the applicant, the DLRC will email all necessary documents to the SLRC. This includes the completed Initial Notice to Central Office, draft Type 1 Traffic Analysis Methodology, and meeting minutes from the initial meeting.

The SLRC will use the Electronic Review and Comment (ERC) system to distribute these documents. Additionally, the SLRC will assign and coordinate Central Office staff from various departments to review and provide feedback. The reviewing offices will include:

- System Forecasting and Trends
- Roadway Design
- Traffic Operations
- Public Transit, if transit is proposed

All comments provided in the ERC by Central Office staff will be forwarded directly to the appropriate DLRC. It is the responsibility of the DLRC to coordinate with the applicant to address all comments received. Once the applicant has satisfactorily addressed all responses to the comments, they will proceed with the traffic analysis.

Development of Type 1 Analysis

The applicant will then proceed with data collection and Type 1 analysis as agreed upon in the methodology. Additional information on the Type 1 analysis can be found in Section 2.4 Traffic Analysis.

This analysis is required for FDOT to decide if additional Type 2 analysis is required. Type 1 analysis includes development of the MOEs shown in Table 1 for No-Build and Build alternatives using HCM analytical tools such as Highway Capacity Software (HCS), Synchro,

and SimTraffic, and a travel demand forecasting model or other method specified by the FDOT Project Forecasting Handbook guidelines. If the project is in an area with oversaturated conditions microsimulation may be required for a Type 1 analysis consistent with the FDOT Traffic Analysis Handbook guidelines. The applicant will prepare a short Traffic Analysis Technical Memorandum (technical memorandum) which includes the following:

- Project Description
- Purpose and Need
- Area of Influence
- Traffic Data Collection
- Land Use Data
- Planned and Programmed Improvements
- Traffic Projections
- Traffic Operational Analysis

The technical memorandum must be submitted to the DLRC to be circulated for review prior to the Traffic Analysis Review Meeting. During the Traffic Analysis Review Meeting the applicant should be ready to present the summary of findings and discuss the possible need for network level analysis. After the meeting, the applicant will update the technical memorandum and submit it to DLRC. The DLRC will review the memorandum for completeness before submitting to SLRC for distribution to Central Office reviewing staff in the ERC system.

Traffic Analysis Review Meeting

Once the applicant has completed the Type 1 analysis, and submitted a Traffic Analysis Technical Memorandum the review meeting will be held with DLRC and Central Office staff to review the Type 1 analysis results and determine if a Type 2 analysis is required for the project.

If the review of the Type 1 analysis shows that the project will operate at an acceptable level of service, then the applicant may be permitted to proceed with development of the Concept Report. If the project is shown to degrade the operating conditions or has more than a 10% traffic diversion to other roadways, then a Type 2 or Type 3 analysis methodology will be discussed and agreed upon and the applicant will be required to proceed with Type 2 or Type 3 analysis if transit is proposed. After the meeting, the applicant will finalize Type 2 or Type 3 methodology, send it to DLRC who will submit to SLRC for review in ERC system.

Central Office must be engaged in this step to adequately identify the required additional traffic analysis, AOI, and the methodology that will be used. If the applicant proceeds without receiving approval of the analysis AOI and traffic analysis methodology, they are at risk of the analysis requiring extensive rework or rejection.

Development of Concept Report

Once agreement is reached regarding the required traffic analysis, the applicant then completes traffic and safety analyses and drafts the Concept Report including all sections required as outlined in Exhibit 1.

A Professional Engineer (PE) registered to practice in Florida must sign and seal the Concept Report in accordance with Chapter 471, F.S. A sample of the Concept Report coversheet is provided as Exhibit 2.

4.4 Step Two - District Review

The DLRC and District staff will review the draft Concept Report including the traffic analysis, potential lane repurposing impacts, mitigation measures, and proposed typical sections in the ERC system. The District will decide if the lane repurposing project will meet the needs of the SHS in accordance with the FDOT Corridor Capacity Policy and if accepted, Lane Repurposing Final Approval will be signed at the District level and submitted to Central Office SLRC for distribution to Central Office reviewing staff.

4.5 Step Three - Final Review and Decision

The SLRC will coordinate the review of the lane repurposing application with other offices including Systems Forecasting and Trends, Roadway Design, Traffic Engineering and Operations, and Public Transit, if applicable in ERC. All comments provided in the ERC by Central Office staff will be forwarded directly to the appropriate DLRC for the applicant to address. After all comments are satisfactorily addressed, the Systems Implementation Office will obtain concurrence from the FDOT Chief Planner and present the lane repurposing Concept Report to the FDOT Chief Engineer, who has the final authority for approval or denial of the lane repurposing application.

If approved, Lane Repurposing Final Notice and Recommendation form must then be signed by both the Chief Planner and Chief Engineer.

Lane repurposing applications may be denied by the Chief Engineer based on FDOT review of applicable policy, criteria, and requirements. If denied, the applicant will not be able to move forward with the project unless changes are made, and the Concept Report is resubmitted to the Department for review. Should the applicant not wish to move forward with the project, Lane Repurposing Withdrawal form must be used to withdraw the project from consideration. The overall coordination and review process is outlined in Figure 5.

Approval of the lane repurposing does not constitute design approval; it simply means acceptance of the concept, allowing it to proceed through the project development process. The project team is strongly recommended to work closely with the District Design Office staff to finalize the design elements to their satisfaction.

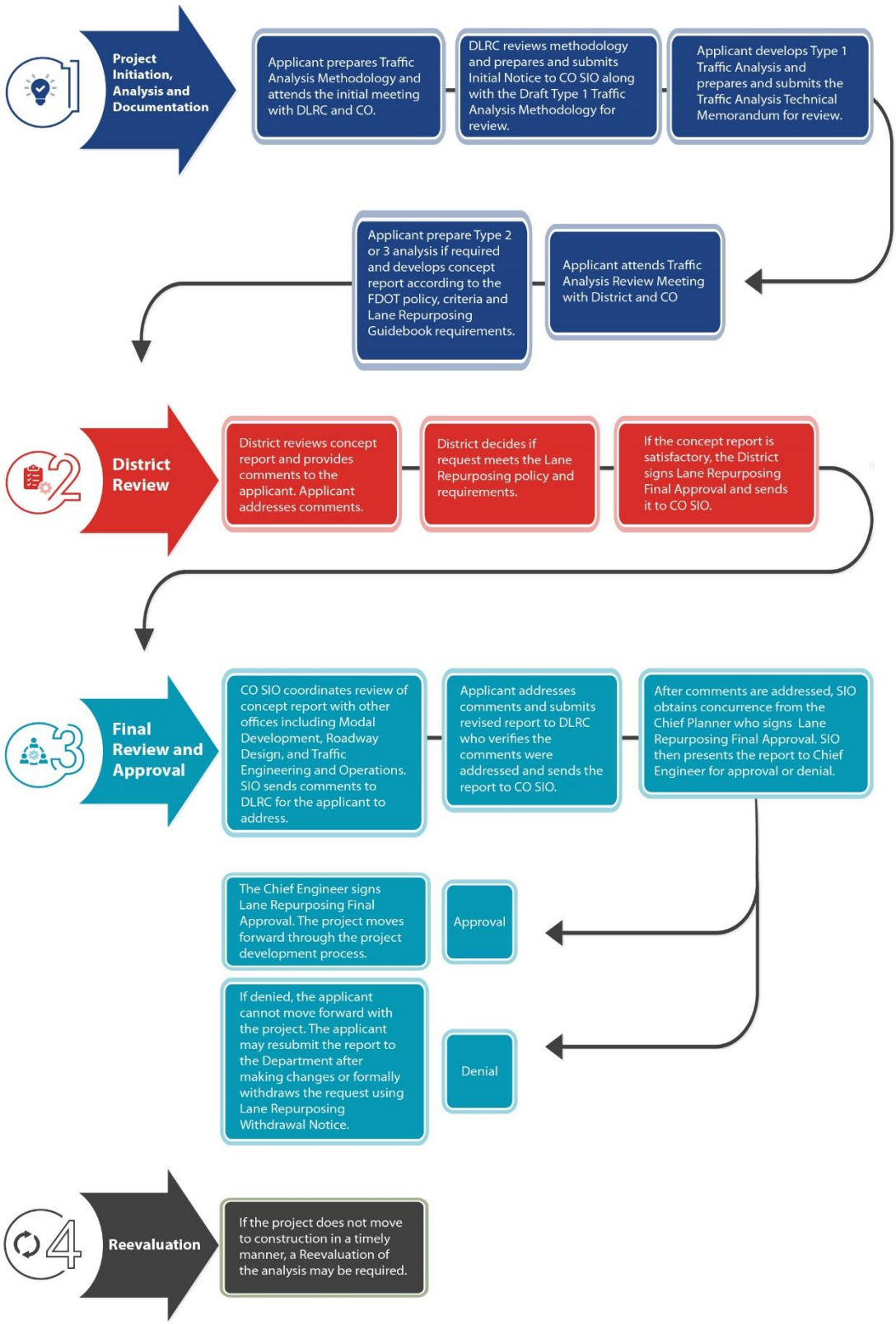

Figure 5: Coordination and Review Process

4.6 Step Four – Reevaluation

Upon approval, the project will move forward through the project development process. The applicant is responsible for ensuring that the project is advancing towards construction. If the project has not begun construction within five years, FDOT reserves the right to request for a reevaluation, at any time, if any of the stated reasons for reevaluation have occurred in the project area. These may include, but are not limited to, significant changes in traffic patterns, substantial changes in approved concept, and an updated adopted travel demand model. If a project is required to complete a reevaluation, then the applicant must return to Step One of the review process.

5. APPENDIX

This appendix has several resources which should be used by lane repurposing applicants.

5.1 Forms

The following forms that are required for a lane repurposing project application on the SHS and are provided in the Appendix.

- Lane Repurposing Initial Meeting Checklist
- Lane Repurposing Initial Notice to Central Office
- Type 1 Traffic Analysis Methodology
- Type 2 or 3 Traffic Analysis Methodology
- Lane Repurposing Final Approval
- Lane Repurposing Withdrawal Notice

5.2 Concept Report Outline and Coversheet

The applicant is required to develop a Concept Report as part of the lane repurposing application process. The Concept Report will be reviewed by the FDOT District and Central Office staff and used to inform the approval or rejection decision. Exhibit 1 in the Appendix presents the recommended report outline. It is important that applicants coordinate with FDOT District staff if there is an issue with completing any portions of this recommended template. Exhibit 2 in the Appendix presents the recommended coversheet for the Concept Report.

Lane Repurposing Initial Meeting Checklist

Lane Repurposing Initial Meeting Checklist

The applicant should utilize the following list of items as a starting point for discussion in the initial meeting. This list is intended to provide an understanding of the scope of information required to prepare a Lane Repurposing Concept Report, however, project specific information may be required by the District Review Team

- ☐ Applicant
- ☐ Project location, limits, and length
- ☐ Jurisdiction(s) where the project is located
- ☐ Project purpose
- ☐ Conceptual plan (including transitions to and from the lane repurposing section and proposed uses of the roadway)
- ☐ Utility location(s) and owner(s)
- ☐ Potential environmental impacts
- ☐ Consistency with local plans
- ☐ Any roadway designations, e.g. freight route, evacuation route
- ☐ Impact on bicycle/pedestrian infrastructure and connectivity
- ☐ Impact on parking
- ☐ Impact on transit routes, stop locations, total number of stops and routes in the area.
- ☐ Impact on school crossing and midblock crossings
- ☐ Existing right-of-way width
- ☐ Anticipated changes in jurisdictional responsibility for ownership or maintenance of the roadway
- ☐ Existing functional class and anticipated changes
- ☐ Existing access management classification and anticipated changes
- ☐ Existing context classification and any anticipated changes
- ☐ Existing design and posted speed
- ☐ Target speed with anticipated changes in posted speed limits and design speed
- ☐ Existing and future typical section
- ☐ Potential Design variations or Design Exceptions
- ☐ Traffic data, annual average daily traffic (AADT), peak hour volumes, directional design hour volumes, heavy vehicle percentages,
- ☐ Bicycle and pedestrian counts
- ☐ Existing queues within the project corridor
- ☐ Potential area of influence
- ☐ Historical crash data, crash rate, comparison to the statewide average by facility type
- ☐ Transit specific data, ridership, origin destination, headway, and any potential changes
- ☐ Need to add, remove or modify traffic signals
- ☐ Public involvement, agency outreach and endorsement
- ☐ Plan for obtaining input and review from businesses, residents, and other stakeholders
- ☐ Plan for receiving signatures for the Memorandum of Understanding and elected official support
- ☐ Cost estimates and funding source
- ☐ Potential implementation strategy and partner commitments

Lane Repurposing Initial Notice to Central Office

Lane Repurposing Initial Notice to Central Office

The intent of the notice is to inform Central Office that the District (_____), has received a request for lane repurposing on the State Highway System from _____.

PROJECT INFORMATION

State Road and Project Location: _____

Roadway ID:_____ Project Limits (MP) from: _____ to: _____

Context Classification: _____ Access Management Classification: _____

Existing Posted Speed: _____ Proposed Posted Speed: _____

Design Speed: _____ Target Speed: _____

Existing Transit Facilities (stops and routes): ☐ Yes ☐ No

Applicant: _____

Project Description: _____

Proposed Change in Cross Section: From _____ lanes to _____ lanes

ACTIONS AND OUTCOMES TO DATE

District and Central Office staff participated in an Initial meeting with _____ on _____ to formally commence the lane repurposing application process. At that meeting, the Applicant shared the traffic analysis methodology of the project. The Department staff participated in the discussion and determined the specific review process and the level of traffic analysis per the FDOT Lane Repurposing Guidebook.

CONCURRANCE

The District is in concurrence with the Applicant preparing a Lane Repurposing Concept Report with all required analysis and documentation for review. If the application is deemed complete and acceptable, the lane repurposing request will be approved at the District level and submitted along with all required forms to the Central Office for final review and approval.

_____ Date: _____
Select the District Planning Approver

_____ Date: _____
District Design Engineer

_____ Date: _____
District Traffic Operations Engineer

Type 1 Traffic Analysis Methodology

Type 1 Traffic Analysis Methodology

Project Information
State Road and Project Location: _____

Roadway ID:_____ Project Limits (MP) from: _____ to: _____

Context Classification: _____ Access Management Classification: _____

Existing Posted Speed: _____ Proposed Posted Speed: _____

Design Speed: _____ Target Speed: _____

Existing Transit Facilities (stops and routes): ☐ Yes ☐ No

Applicant: _____

1. Project Description

1.1. Project Description
Describe the project and include the project location map.

1.2. Purpose and Need
Provide the purpose and need of the project

1.3. Area of Influence
The corridor limits which will be analyzed in the traffic analysis

2. Analysis Years

2.1. Travel Demand Model
2.1.1. Base year
2.1.2. Horizon year

2.2. Traffic Operational Analysis
2.2.1. Existing year
2.2.2. Opening year
2.2.3. Design year

3. Data Collection

3.1. Traffic Data
3.1.1. Existing Year AADT
3.1.2. Heavy vehicle percentage

3.2. Crash Data
Use the latest five years of crash data to be used for the analysis.

3.3. Land Use Data
Describe any land use changes that must be incorporated into the model.

3.4. Environmental Data
Describe any potential environmental impacts

3.5. Planned and Programmed Projects in the surrounding area
Provide a list of planned or programmed projects in the area

4. Travel Demand Forecasting

4.1. Selected Travel Demand Model (s)

4.2. Project Traffic Forecast Development Methodology
Describe the methodology and assumptions in developing the future year traffic volumes (AADT and DDHV)

4.3. Subarea Model Validation Methodology
Describe the validation methodology to be used

4.4. Adjustment Procedures
Identify the process used to adjust modeled future year traffic to the defined analysis years. Discuss how trends/growth-rates will be used if applicable

5. Traffic Operational Analysis

The area type, traffic conditions, and analysis tools to be used are summarized in this section

5.1. Traffic Analysis Tools
List the traffic analysis tools to be used.

5.2. Measures of Effectiveness
List the measures of effectiveness which will be analyzed. At a minimum the measures from the Lane Repurposing Guidebook Section 2.4 will be used.

6. Safety Analysis

6.1. Historical Crash Analysis
The latest five years of crash data will be used to evaluate crash characteristics including but not limited to total crashes, crash types (e.g., angle crashes, rear-end collisions, pedestrian and bicyclists), severity of crashes, crash locations, and contributing causes.

6.2. Predictive Analysis
Corridor and network predictive safety analysis will be performed utilizing Highway Safety Manual (HSM) predictive crash procedures to determine the impact of several key safety-related elements.

6.3. Measures of Effectiveness
List the measures of effectiveness which will be analyzed. At a minimum MOEs from the Lane Repurposing Guidebook Section 2.5 will be used.

Type 1 Traffic Analysis Methodology Concurrence

Full compliance with all methodology requirements does not obligate the Florida Department of Transportation to accept the lane repurposing project application.

The Applicant shall inform the approval authorities of any changes to the approved methodology.

Applicant	[Type Name Here] [Type Title Here]	Date
District Lane Repurposing Coordinator	[Type Name Here] [Type Title Here]	Date
Systems Management Administrator	[Type Name Here] Systems Implementation Office-Central Office	Date

Type 2 or 3 Traffic Analysis Methodology

Type [*2 or 3*] Traffic Analysis Methodology

Project Information
State Road and Project Location: _____

Roadway ID:_____ Project Limits (MP) from: _____ to: _____

Context Classification: _____ Access Management Classification: _____

Existing Posted Speed: _____ Proposed Posted Speed: _____

Design Speed: _____ Target Speed: _____

Existing Transit Facilities (stops and routes): ☐ Yes ☐ No

Applicant: _____

1. Project Description

1.1. Project Description
Describe the project and include the project limits map.

1.2. Purpose and Need
Provide the purpose and need of the project

1.3. Area of Influence
The network area which will be analyzed in the traffic analysis

2. Analysis Years

2.1. Travel Demand Model
2.1.1. Base year
2.1.2. Horizon year

2.2. Traffic Operational Analysis
2.2.1. Existing year
2.2.2. Opening year
2.2.3. Design year

3. Data Collection

3.1. Traffic Data
3.1.1. Existing Year AADT
3.1.2. Heavy vehicle percentage

3.2. Crash Data
Use the latest five years of crash data

3.3. Land Use Data
Describe any land use changes that must be incorporated into the model.

3.4. Environmental Data
Describe any potential environmental impacts

3.5. Planned and programmed projects in the surrounding area
Provide a list of planned or programmed projects in the area

4. Travel Demand Forecasting
4.1. Selected Travel Demand Model (s)

4.2. Project Traffic Forecast Development Methodology
Describe the methodology and assumptions in developing the future year traffic volumes (AADT and DDHV)

4.3. Subarea Model Validation Methodology
Describe the validation methodology to be used

4.4. Adjustment Procedures
Identify the process used to adjust modeled future year traffic to the defined analysis years. Discuss how trends/growth-rates will be used if applicable

5. Traffic Operational Analysis
The area type, traffic conditions, and analysis tools to be used are summarized in this section

5.1. Traffic Analysis Software
5.1.1. List traffic analysis software to be used.

5.1.2. Calibration Methodology
5.1.2.1. Calibration methodology and parameters utilized will be documented
5.1.2.2. Calibration Measures of Effectiveness (MOEs) and calibration targets

5.2. Measures of Effectiveness
These corridor level measures of effectiveness must be presented during the traffic analysis review meeting to confirm the type of analysis required.

5.2.1. Intersection Delay (sec/veh)
5.2.2. Intersection Movement Delay (sec/veh)
5.2.3. Intersection LOS
5.2.4. Intersection Movement LOS
5.2.5. 95th percentile back of queue (ft/ln)
5.2.6. Segment LOS
5.2.7. Segment Travel Time (min)
5.2.8. Segment Speed (mph)
5.2.9. Corridor Traffic Diversion Percentages (*Evaluation of changes in Network Traffic Volumes*)

6. Safety Analysis

6.1. Historical Crash Analysis
The latest five years of crash data will be used to evaluate crash characteristics including but not limited to total crashes, crash types (e.g., angle crashes, rear-end collisions, pedestrian and bicyclists), severity of crashes, crash locations, and contributing causes.

6.2. Predictive Analysis
Corridor and network predictive safety analysis will be performed utilizing Highway Safety Manual (HSM) predictive crash procedures to determine the impact of several key safety-related elements.

6.3. Measures of Effectiveness
List the measures of effectiveness which will be analyzed. At a minimum MOEs from the Lane Repurposing Guidebook Section 2.5 will be used.

7. Transit Analysis (For Type 3 Analysis only)

7.1. Transit Data

7.2. Transit Analysis Years
7.3. Transit Ridership Forecasting Tool

7.4. Ridership Forecasting Methodology
Development of future ridership

7.5. Accounting for Transit in Traffic Operational Analysis

7.6. Measure of Effectiveness

- 7.6.1. Daily ridership (route and stop level)
- 7.6.2. Daily mode shift (route level)
- 7.6.3. Daily person throughput (route level)
- 7.6.4. Intersection delay (sec/veh)
- 7.6.5. Movement delay (sec/veh)
- 7.6.6. Intersection LOS
- 7.6.7. Movement LOS
- 7.6.8. 95th Percentile queue length
- 7.6.9. Average speed (mph)
- 7.6.10. Travel time (sec) corridor level
- 7.6.11. Throughput (veh/hr) for each direction
- 7.6.12. Travel time (sec) network level
- 7.6.13. Average delay (sec/veh)
- 7.6.14. Latent demand (veh)
- 7.6.15. Average speed (mph)

Type *[2 or 3]* Traffic Analysis Methodology Approval

Full compliance with all methodology requirements does not obligate the Florida Department of Transportation to accept the lane repurposing project application.

The Applicant shall inform the approval authorities of any changes to the approved methodology.

Applicant	[Type Name Here] [Type Title Here]	Date
District Lane Repurposing Coordinator	[Type Name Here] [Type Title Here]	Date
Systems Management Administrator	[Type Name Here] Systems Implementation Office-Central Office	Date

Lane Repurposing Final Approval

Lane Repurposing Final Notice and Recommendation

The intent of the notice is to inform the Central Office that the District (_____), has completed the review of the following lane repurposing project on the State Highway System and submitted the attached Concept Report for final review and approval.

PROJECT INFORMATION

State Road and Project Location: _____

Roadway ID:_____ Project Limits (MP) from: _____ to: _____

Context Classification: _____ Access Management Classification: _____

Existing Posted Speed: _____ Proposed Posted Speed: _____

Design Speed: _____ Target Speed: _____

Existing Transit Facilities (stops and routes): ☐ Yes ☐ No

Applicant: _____

Project Description: _____

Proposed Change in Cross Section: From _____ lanes to _____ lanes

RECOMMENDATION

Based on the technical information provided in the Concept Report, the District is recommending for approval this lane repurposing request. The proposed request will meet the need of the State Highway System.

_____ Date: _____
Select the District Planning Approver

_____ Date: _____
District Design Engineer

_____ Date: _____
District Traffic Operations Engineer

CENTRAL OFFICE CONCURRENCE

_____ Date: _____
Chief Planner

CHIEF ENGINEER FINAL DECISION

Approved: _____ Date: _____

Denied:_____ Date: _____

Lane Repurposing Withdrawal Notice to Central Office

Lane Repurposing Withdrawal Notice

The intent of the notice is to inform the Central Office that the Applicant (_____), has withdrawn the following lane repurposing project on the State Highway System from consideration.

PROJECT INFORMATION

State Road and Project Location: _____

Roadway ID:_____ Project Limits (MP) from: _____ to: _____

Reason for Withdrawal of Project: _____

_____ Date: _____
Applicant

DISTRICT CONCURRENCE

_____ Date: _____
Select District Planning Approver

_____ Date: _____
District Design Engineer

_____ Date: _____
District Traffic Operations Engineer

This form was submitted on _____ to the Chief Engineer, Chief Planner and Systems Management Administrator.

Exhibit 1: Concept Report Outline

1. **Project Description**
   - 1.1. Purpose
   - 1.2. Project Location
   - 1.3. Existing Conditions Analysis
     - 1.3.1. Typical Section
     - 1.3.2. Roadway Function
     - 1.3.3. Context Classification
     - 1.3.4. Access Class
     - 1.3.5. Posted Speed Limit and Average Speed
     - 1.3.6. Traffic Data
     - 1.3.7. Signalized Intersections
     - 1.3.8. Crash Data
2. **Proposed Modification**
   - 2.1. Conceptual Design
     - 2.1.1. Typical Section
     - 2.1.2. Intersection Design
   - 2.2. Design Speed and Posted Speed Limit Changes
   - 2.3. Design Variation and Design Exception
   - 2.4. Consistency with Plans
3. **Traffic Analysis**
   - 3.1. Area of Influence
   - 3.2. Traffic Analysis Methodology
   - 3.3. Existing Traffic Conditions
   - 3.4. Future Travel Demand Projection
   - 3.5. Traffic Diversion Analysis
   - 3.6. Operational Analysis (Type 3 projects include ridership and congestion benefits)
4. **Safety Analysis**
   - 4.1. Safety Analysis Methodology
   - 4.2. Predictive Safety Analysis
   - 4.3. Crash Modification Factors
5. **Community Engagement**
   - 5.1. Anticipated effect on local residents and businesses
   - 5.2. Community Comments (Including how they were addressed)
   - 5.3. Public Meetings Summary
6. **Mitigation Measures**
   - 6.1. Improvements
   - 6.2. Costs
7. **Conclusion and Recommendations**
   - 7.1. Summary of Findings
8. **Appendices** (Organize and Provide a List of Appendices)
   - 8.1. Appendix A
   - 8.2. Appendix B

Exhibit 2: Concept Report Coversheet Sample

LANE REPURPOSING CONCEPT REPORT

Local Government Entity

Florida Department of Transportation District X

Project Title

Limits of Project

County, Florida

Financial Management Number: xxxxx (if applicable)

Date:

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

Lan B. Solo
2018.10.14 16:42:28 -4'00'

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

ROADWAY ENGINEERS, INC.
123 MAIN STREET
TALLAHASSEE, FL 32301
LAN B. SOLO, P.E. NO. 99994

Systems Implementation Office
Florida Department of Transportation
605 Suwannee St, Tallahassee, FL 32399
Tallahassee, Florida