Florida Department of
Transportation

Interchange Access Request
User's Guide

Systems Implementation Office

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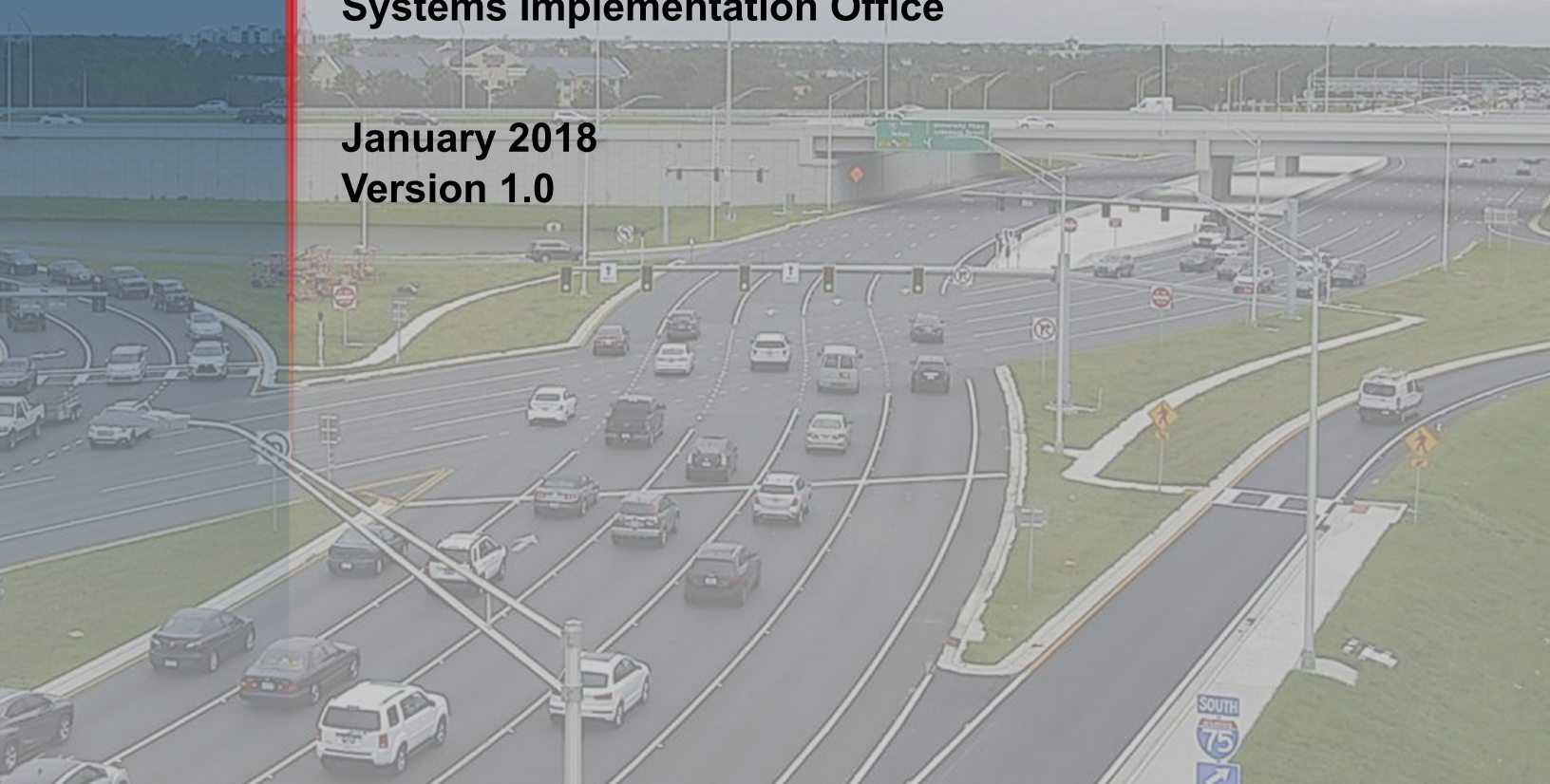

Interchange Access Request

User's Guide

Florida Department of Transportation
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Preface

The Florida Department of Transportation (FDOT) and the Federal Highway Administration (FHWA) have a substantial investment in limited access facilities, particularly the interstate system. An FHWA Policy Statement related to the justification and document preparation of the need for additional access to the interstate system was published in the Federal Register on October 22, 1990, (55 FR 42670) and subsequently modified February 11, 1998, (63 FR 7045), August 27, 2009, (74 FR 20679) and May 22, 2017. The FHWA Policy on Access to the Interstate System, effective May 22, 2017, can be found at https://www.fhwa.dot.gov/design/interstate/170522.cfm.

Any proposal to change the access to these facilities potentially can have an adverse impact on their ability to effectively and safely accommodate travel demand in a corridor. To ensure access decisions are properly administered, FHWA and FDOT have adopted policies and requirements regarding interchange access requests and approvals on limited access facilities. The acceptability determination shall be determined by FHWA through the process outlined in FHWA's Interstate Access Policy, which went into effect May 22, 2017, or by the FDOT Chief Engineer through an expedited approval process, as agreed upon in the Programmatic Agreement (PA) executed April 2, 2015, between the FHWA Florida Division and FDOT.

The FHWA Interstate System Access Informational Guide can be found at https://transportationops.org//publications/interstate-system-access-informational-guide.

Purpose

FDOT Procedure 525-030-160, New or Modified Interchanges, defines the state and federal requirements and processes to be followed in the development of an Interchange Access Request (IAR). Full compliance with the requirements and process defined in 525-030-160 is required for the consideration of any interchange access proposal. 525-030-160 and this User's Guide are applicable to new or modified access to the following facilities:

- Interstate highway system and
- Non-interstate limited access facilities on the State Highway System (SHS).

The purpose of this User's Guide is to provide guidance on how to prepare documents that support requests for new or modified access to the Florida Interstate Highway System and non-interstate limited access facilities on the SHS. This User's Guide also provides information on the IAR process that shall consider the needs of the system at a regional level while maintaining the integrity of the highway network.

This User's Guide provides guidance on preparing and processing IARs.

This User's Guide shall be used by local agencies, consultants, FHWA, FDOT and staff from other agencies when developing and reviewing safety, operational and engineering (SO&E) acceptability of new or modified interchange access proposals on limited access facilities.

Scope

Any proposed change in access to the interstate system must be submitted by FDOT to the FHWA Florida Division Office for a determination of SO&E acceptability under Title 23, United States Code, (23 U.S.C.) Highways Sections 106 and Section 111 and 23 CFR 625.2(a). The acceptability determination shall be determined by FHWA through the process outlined in FHWA's Interstate Access Policy, which went into effect May 22, 2017, or by the FDOT Chief Engineer through an expedited approval process, as agreed upon in the PA between the FHWA Florida Division and FDOT, executed April 2, 2015.

This expedited approval process between FHWA and FDOT for access requests regarding certain types of projects on the interstate system allows the FDOT Chief Engineer or acting Chief Engineer to make a determination of SO&E acceptability for Interchange Access Requests (IARs). The FHWA Florida Division Office would concur with the FDOT Chief Engineer's determination and accept the IARs under the provisions of 23 U.S.C. within five business days of notification of FDOT's determination.

Organization

This User's Guide is organized into five chapters and three appendices:

- **Chapter 1: IAR Overview and Process** — This chapter discusses FHWA and FDOT policies supporting the need for the IARs and related Florida statutes, rules, procedures and the PA between FHWA and FDOT regarding review and approval of IARs. This chapter also discusses where the IAR process applies and various types of IARs and examples. Finally, this chapter defines the various stakeholders involved in this process and who has the authority to sign and accept the IARs.
- **Chapter 2 Methodology Letter of Understanding (MLOU)** — This chapter provides guidance on the preparation of the MLOU. Elements of the MLOU are discussed in detail.
- **Chapter 3: Interchange Access Report** — This chapter provides guidance on developing documentation required for an Interchange Access Report. The contents of the Interchange Access Report are discussed in detail.
- **Chapter 4: IAR Re-evaluations** — This chapter discusses the different conditions that trigger re-evaluation of the previously approved IARs. Documentation required to support re-evaluation is also discussed.
- **Chapter 5: Explanation of FHWA Policy Points** — This chapter explains what must be included in the IAR to fulfill FHWA's policy points. The two points are discussed.
- **Appendix A** — Template for MLOU
- **Appendix B** — Template for statement of technical review (QC certification) and quality control checklist template
- **Appendix C** — Acronyms and definitions

Distribution, Updates and Contact

This document is available online at Systems Implementation Office under Document Repository.

For updates and questions regarding this User's Guide and example studies, contact:

Florida Department of Transportation
Systems Implementation Office, Mail Station 19
605 Suwannee Street
Tallahassee, FL 32309
ATTN: State Interchange Review Coordinator (SIRC)

Email: SIRC@dot.state.fl.us

For more information regarding District Interchange Review Coordinators, visit http://www.dot.state.fl.us/planning/systems/programs/sm/intjus/default.shtm

Users of this guide are encouraged to submit questions and requests for modifications to the SIRC at the above address. The User's Guide will be revised to incorporate all current addenda and any other updates every three years or as needed. This effort will be coordinated through the Interchange Review Coordinators (IRC) of each district and the Turnpike Enterprise. Users of this guide are encouraged to check the website prior to using this Guide to ensure the latest process and technical requirements are being followed.

Chapter 1
IAR Overview and Process

1.1 FHWA's Interstate System Access Policy

According to Title 23, United States Code, Highways Section 111 (23 U.S.C. 111), all agreements between the Secretary of the U.S. Department of Transportation (USDOT) and the state departments of transportation regarding construction of projects on the Interstate Highway System shall contain a clause that the state will not add points of access to, or exit from, the project in addition to those approved by the Secretary in the plans for such a project, without prior approval of the Secretary. The Secretary has delegated the authority to administer 23 U.S.C. 111 to the Federal Highway Administrator, pursuant to Title 49, Code of Federal Regulations, Section 1.48(b)(10) (49 CFR 1.48(b)(10)). A policy statement consolidating a series of policy memoranda, including guidance for justifying and documenting the need for additional access to the existing sections of the interstate highway system, was published in the Federal Register on October 22, 1990, titled "Access to the Interstate System," and was modified February 11, 1998, August 27, 2009, and May 22, 2017.

1.1.1 FHWA's Interest with Changes in Interstate System Access

It is in the national interest to preserve and enhance the interstate highway system to meet the needs of the 21st century by assuring that it provides the highest level of service in terms of safety and mobility. FHWA's interest is to ensure all new or revised access points:

- are considered using a decision-making process that is based on information and analysis of the planning, environmental, design, safety and operational effects of the proposed change;
- support the intended purpose of the interstate highway system;
- do not have an adverse impact on the safety or operations of the interstate highway system and connect to the local roadway networks or other elements of the transportation system; and
- are designed to applicable standards.

1.1.2 FHWA's Policy Requirements

FHWA's policy points are required to be fulfilled to substantiate any access request that is submitted for approval considerations. The policy points are outlined in the ***FHWA "Policy on Access to the Interstate System,"*** effective May 22, 2017, and can be found at https://www.fhwa.dot.gov/design/interstate/170522.cfm. FHWA's decision to approve a request is dependent on the request proposal satisfying and documenting the policy points' requirements. As such, the two policy points shall be documented appropriately in the IAR.

The policy points are listed and discussed in detail in **Chapter 5** of this guide.

1.1.3 FHWA Policy Implementation

The FHWA Florida Division Office requires that all requests for new or revised access submitted for FHWA consideration contain sufficient information to allow FHWA to independently evaluate the request and ensure all pertinent factors and alternatives have been appropriately considered. The level of acceptance for an IAR varies with the type of request and the complexity of the project and its impact. To streamline the review process, the IAR is required to include a section that describes how the proposed access is consistent with FHWA's policy points.

1.2 Florida Statutes, FDOT Rules, Policies and Procedures

Several Florida statutes, FDOT rules, policies and procedures apply to access requests. FDOT provides specific direction for the development of IARs through rules, policies and procedures outlined in this User's Guide. This direction is provided to ensure statewide consistency in the technical analysis, documentation and review processes.

1.2.1 Florida Statute

Requests for new or modified interchanges must meet the requirements of the "Authority to Establish and Regulate Limited Access Facilities" — §338.01, F.S., which authorizes transportation and expressway authorities of the state, counties and municipalities to provide and regulate limited access facilities for public use.

1.2.2 FDOT Rules

Rule Chapter 14-97 F.A.C., "State Highway System Access Management Classification System and Access Management Standards," provides guidance on the adoption of an access classification system and standards to implement the State Highway System Access Management Act of 1988 for the regulation and control of vehicular ingress to and egress from the SHS. This includes interchange spacing standards and other criteria for medians and driveways adjacent to the interchange.

The spacing of existing interchanges on existing highway facilities may preclude exact conformance and do not require a design variation. Access management spacing standards should always be a project goal. Therefore, a discussion on compliance with standards and mitigation strategies must be provided within the IAR.

New interchanges on existing facilities that do not meet spacing requirements outlined in Rule Chapter 14-97 F.A.C. shall require a design variation at the discretion of the Department.

Interchanges for new limited access facilities shall be reviewed by the IRC during the planning and Project Development and Environment (PD&E) phases for operational performance, safety and compliance with Rule Chapter 14-97 F.A.C.

1.2.3 FDOT Policies

FDOT has implemented Policy Statement 000-525-015, "Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS)," to minimize the addition of new access points to limited access facilities to maximize operation and safety of transportation movements.

1.2.4 FDOT Procedures

Various procedures that must be considered during the preparation of an IAR are referenced in this section.

- **Topic 525-030-120: Project Traffic Forecasting** — This procedure provides instructions for using design traffic criteria to forecast corridor traffic and project traffic. The selection of the most appropriate analysis method(s) must be coordinated with FDOT before conducting the study. District planning offices will be responsible for carrying out the traffic forecasting process.

- **Topic 525-030-160: New or Modified Interchanges** — This procedure set forth the state and federal requirements and processes to be used for determination of SO&E acceptability associated with adding or modifying interchange access to limited access facilities on Florida's SHS. Full compliance with the requirements and processes in this procedure is required for any IAR.

- **Topic 525-030-020a: Capacity Improvement Alternatives** — This procedure provides direction for consideration of capacity improvements when a need to widen has been identified on existing limited access facilities on the SHS. An IAR is required for a new interchange or a proposed modification to an existing interchange.

- **Topic 525-030-260: SIS Highway Component Standards and Criteria** — This procedure addresses the responsibilities of the various offices within FDOT to develop and implement the SIS. It also defines the requirements for coordination with the local government and Metropolitan Planning Organization (MPO) transportation planning process. Such coordination is needed to ensure IARs are consistent with the Strategic Intermodal System (SIS) Master Plan and Action Plan for the affected facilities.

- **Topic 650-000-001: Project Development and Environment (PD&E) Manual** — This manual describes in detail the process by which transportation projects are developed by the department to fully meet the requirements of the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) and other related federal and state laws, rules and regulations. The manual aids project analysts and project managers in understanding all aspects of the project development process and its requirements, such as engineering and environmental analyses, public involvement and documentation.

IAR Approval Process

The IAR approval process consists of two parts: The determination of the SO&E acceptability and the approval of NEPA document that covers the environmental requirements for the proposed improvements. After completion of these two parts, District IRC submits a letter to FHWA notifying that the SO&E and NEPA approval parts are complete. The letter also confirms that the recommended alternative concept is the same in the SO&E and the NEPA documents. The NEPA evaluation can be

conducted concurrent with the SO&E or following the approval of the SO&E document.

The two parts in an IAR approval process are discussed in detail below.

1. The first part constitutes an acceptance of the SO&E by complying with FHWA's two policy points and FDOT's Procedure 525-030-160 for new or modified interchanges. The determination of SO&E acceptability indicates the access proposal is a viable alternative to include in the environmental analysis stage of the project. It should be noted, however, that full compliance with the guidelines and process outlined in this User's Guide does not ensure acceptance. The acceptance decision on each IAR is based on SO&E acceptability and FDOT and FHWA policies.

   The process for completing NEPA/PD&E procedure is beyond the scope of this User's Guide and FDOT Procedure 525-030-160.

2. The second part constitutes the completion of the NEPA document (PD&E study). The NEPA document can be prepared concurrently or following the SO&E acceptance. However, NEPA approval can occur only after SO&E acceptability is complete. Projects involving interstate right of way are federal action, and as such, must follow the NEPA procedures. In Florida, the NEPA documents are prepared per the guidelines and requirements outlined in the PD&E Manual. After the NEPA document is approved, the District IRC notifies the FHWA Florida Division Office and submits the IAR approval request to the Florida Division Office. This letter will reference the previously completed SO&E acceptability and approval of the NEPA document. The letter will include verification that the location design concept of the preferred alternative in the NEPA document matches the design of the accepted SO&E proposal. FHWA's signature of this document constitutes the Affirmative Determination of the SO&E and approval of the IAR. For non-interstate limited access facilities on the SHS, a State Environmental Impact Report (SEIR) is required. The process for completing a PD&E study can be found at http://www.dot.state.fl.us/emo/pubs/pdeman/pdeman1.shtm.

The two-part process offers flexibility to obtain the SO&E acceptability prior to completing the environmental review and approval process. In which case, requestors can determine if an access proposal is acceptable for inclusion as an alternative in the environmental review process.

The major steps involved in the SO&E preparation of an IAR and its relationship to NEPA is depicted in **Figure 1-1**. The re-evaluation due to time-lapse is also covered in **Figure 1-1.** The remaining re-evaluation types are discussed in **Section 4** of this IARUG. The NEPA (PD&E) phase can either start after the determination of SO&E acceptability or be developed concurrently. This User's Guide covers the procedure for preparation and review of SO&E documents. The process for completing NEPA/PD&E is beyond the scope of this User's Guide. The guidelines and requirements outlined in the PD&E Manual shall be followed while preparing the NEPA document.

Figure 1-1

Interchange Access Request (IAR)
Safety, Operational & Engineering (SO&E) Process

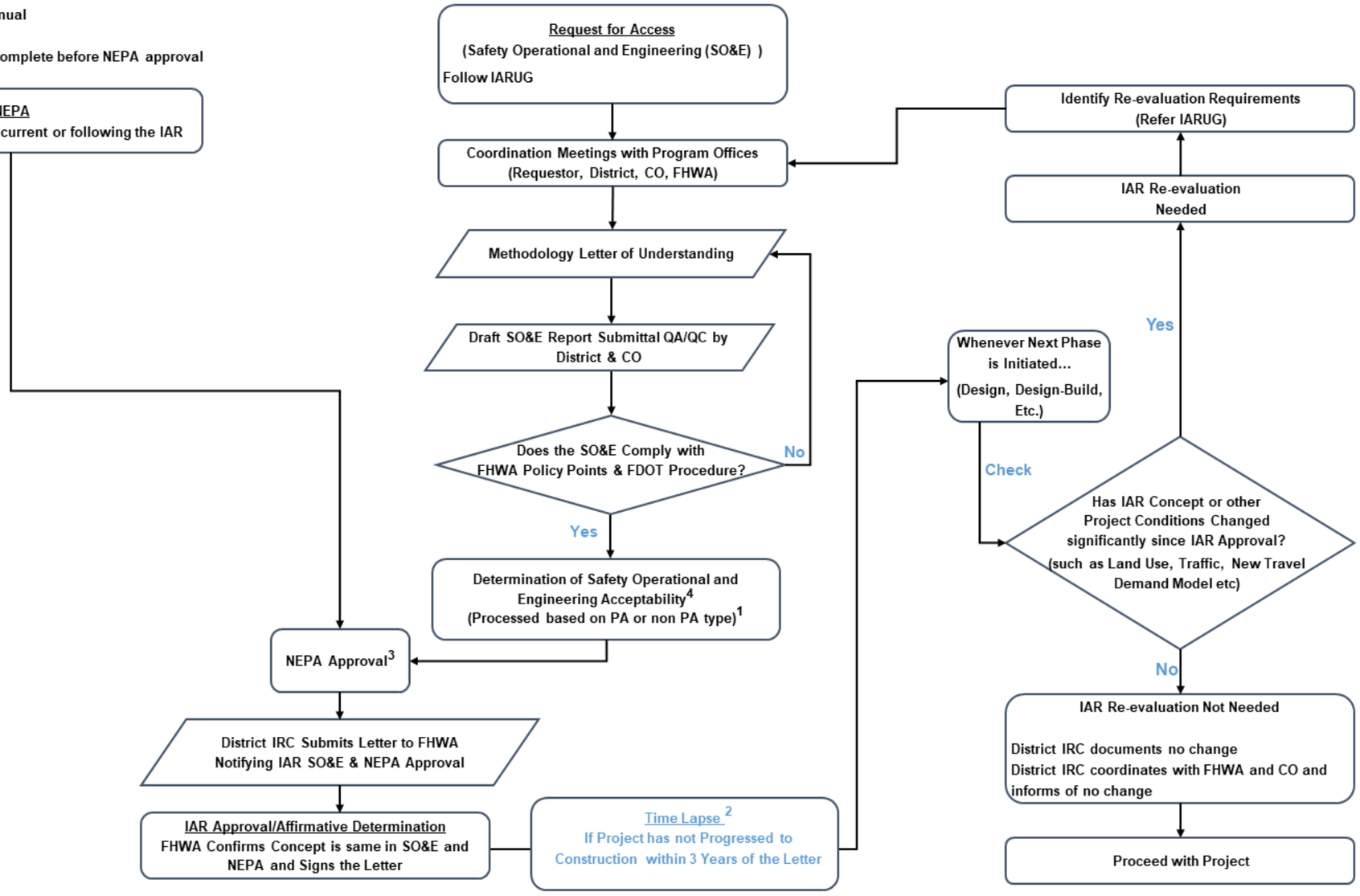
Notes

1 Refer to Section 1.7 of the IARUG

2 This flow chart covers the check for Time Lapse based Re-evaluation only. Refer to Chapter 4 of IARUG for other types of Re-evaluation

3 According to FDOT PD&E Manual

4 SO&E acceptability must be complete before NEPA approval



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If three years have passed since affirmative determination of the SO&E acceptability and NEPA, and the project has not progressed to construction, then a re-evaluation of the IAR might be needed at the initiation of the next project phase such as design, design-build or any other project phase. The need for a re-evaluation shall be determined based on the change in project conditions since approval of the SO&E request. If significant changes in conditions have occurred in land use, traffic volumes (release of a new travel demand model), roadway configuration or design or environmental commitments, then a re-evaluation will be needed. Engineering judgement will be needed in determining a significant change. Some examples of significant change in conditions include change in travel conditions or patterns resulting in a modification of project need, change in approved design or change in traffic volumes resulting in a different level of service grade. The District IRC will evaluate the need for the re-evaluation at the initiation of the project phase and notify the SIRC. The re-evaluation guidelines identified in **Section 4** of this guide shall be followed when preparing the re-evaluation. The intent should be to avoid long gaps between the affirmative determination of SO&E acceptability, NEPA approval and initiation of the subsequent project phases. Requirements and guidance for performing NEPA re-evaluations are in the PD&E Manual.

1.3 Interchange Access Points

Each break in the control of access to the interstate system right of way is considered to be an access point. Per FHWA policy, each entrance or exit point, including "locked gate" access and access to collector-distributor roads or ramps, is considered to be an access point. For example, a diamond interchange configuration has four access points.

Per FHWA policy, ramps providing access to rest areas, information centers, and weigh stations within the interstate system are not considered access points. Access to or from these facilities and local roads and adjoining property is prohibited. The only allowed exception is for access to adjacent publicly owned conservation and recreation areas, if access to these areas is only available through the rest area, as allowed under 23 CFR 752.5(d).

Each entrance or exit point is an access point.

Interchange reconfiguration is considered to be a change in access even though the number of actual points of access may not change. For example, changing a cloverleaf interchange into a diamond interchange is considered a revised access. Slip ramps to/from general lanes and express lanes are not considered interchange access points unless a direct connection is provided to/from the express lanes and the interchange ramp.

1.4 Stakeholders

A fundamental component of the IAR process is its management and coordination. Close coordination between stakeholders at various stages of the IAR process is necessary for a successful acceptance of the IAR. The various stakeholders involved in the IAR process are described in this section.

1.4.1 Requestor

A requestor may be FDOT, a local government entity or a transportation authority (e.g., toll authority, port authority, etc.). For projects initiated by private developers, the local government becomes the requestor. The District IRC must be more involved in development-driven projects and must involve SIRC early in the project.

A requestor can be FDOT, a local government entity or a transportation authority.

In all cases, the requestor is responsible for collecting any data required, documenting the need for the new or modified interchange access and developing the safety, operational and engineering analysis required by the acceptance authority to make a decision on the IAR. Additionally, the requestor is responsible for conducting quality control reviews for the IAR deliverables before submitting them to the IRC. Specifically, the requestor must:

- reach an agreement with the IRC and other applicable acceptance authorities on the type of IAR to better define study design or scope of work;
- develop, sign and submit to the IRC a Methodology Letter of Understanding (MLOU) documenting the agreed-upon study methodology;
- perform appropriate quality control;
- develop and submit to the IRC a draft Interchange Access Report containing the results documenting the analysis of safety and operation of the access proposal, as agreed in the MLOU;
- respond to or resolve all comments and requests for additional information from reviewers and revise the IAR documents accordingly; and
- sign and submit a final IAR document to the IRC for an acceptance decision.

1.4.2 Interchange Review Coordinator (IRC)

Each District and Florida's Turnpike Enterprise (FTE) appoint an IRC. The IRC is the primary point of contact for all requestors, inside and outside the Department, requesting new or modified interchanges on the existing SHS limited access facilities within their districts. The IRC acts as a liaison to other offices within the district. The IRC also serves in a review and processing role for IARs. The IRC and the requestor are responsible for quality control of the IAR documents. By serving in the review-and-processing role, the IRC is responsible for ensuring the IARs meet quality objectives. The District IRC submits document notifying FHWA the SO&E acceptability and NEPA are complete.

The IRC is the point of contact for all requestors and is responsible for quality control.

For all IARs, the IRC is responsible for establishing and documenting in the MLOU the basis for acceptance, evaluation criteria, level of coordination needed and scope of the technical analysis and documentation. The IRC arranges a technical review for the safety, operational, engineering and environmental impacts of the IAR. Every District shall coordinate with the following offices during the IAR process: Environmental Management, Design, Traffic Operations, Safety, Structures, Right of Way (ROW), Maintenance and Program

Management. The IRC shall seek assistance from these offices in reviewing portions of the IAR relevant to their disciplines. The IRC determines if a request can continue in the access-request process based on the information submitted with the IAR document and the outcome of the technical review.

The IRC is required to conduct regular meetings to discuss milestones and statuses for the IAR projects.

1.4.3 State Interchange Review Coordinator (SIRC)

The SIRC's role is to provide guidance for rules, policies and procedures related to IAR reviews, ensure consistency and coordinate with the FHWA, District and FTE IRCs. For IARs that are reviewed and approved through the PA process, the SIRC will be responsible for notifying FHWA about the approval decision.

1.4.4 Systems Management Administrator (SMA)

The Systems Management Administrator (SMA) is responsible for the approval of IARs after they have been reviewed by the SIRC. The SMA also coordinates with FHWA on matters related to interchange projects and FDOT processes.

1.4.5 FHWA

FHWA is responsible for protecting the structural and operational integrity of the interstate system. The FHWA District Transportation Engineer (DTE) representing the district in which the IAR is located is the FHWA Florida Division Office's point of contact for that project. The DTE is also responsible for reviewing the IAR and making a recommendation on the acceptance.

1.4.6 Interchange Coordination Meetings

Development of an IAR should take an interdisciplinary approach that combines the strengths of different technical staff within the District. As such, it is recommended that the IRCs hold regular district interchange coordination meetings to discuss proposals for change-in-access requests. Staff from other division offices within the District such as Environmental Management, Design, Traffic Operations, Structures, Safety, ROW, Maintenance and Program Management must be invited to the coordination meetings. These meetings must be held during the development of IAR study design (or MLOU stage) and when the draft IAR report is ready for review. FHWA DTE and SIRC must also be invited to the interchange coordination meetings.

Interchange coordination meetings must be held for each IAR proposal.

1.5 Types of Interchange Access Requests and Documentation

An IAR's purpose is to demonstrate that the project is viable based on traffic, engineering, safety and financial criteria. Any IAR should start by developing an analysis approach that is followed to determine the impact of the access proposal to the mobility and safety of the limited access facility. The MLOU and types of IARs are defined in this section.

1.5.1 Methodology Letter of Understanding (MLOU)

An MLOU is optional for an IOAR and is determined on a case-by-case basis.

The MLOU provides a dialogue among the requestor, IRC, SIRC and FHWA to identify the parameters and primary areas of focus for preparing an IAR. The purpose of the MLOU is to document the procedures to be followed in the IAR development and mitigate risk. The MLOU is intended to define the project's type of IAR report and establishes analysis assumptions and traffic analysis approach required to prepare the IAR. The MLOU is not a scope of work for the project. The requestor must understand that any work done prior to signing of the MLOU is at the risk and responsibility of the requestor.

The MLOU is required for an Interchange Justification Report (IJR) and Interchange Modification Report (IMR). The MLOU is optional for an Interchange Operational Analysis Report (IOAR) and is determined on a case-by-case basis by the IRC, in consultation with the SIRC and FHWA DTE. The decision to prepare an MLOU for IOAR is based on the scope of the project and the level of traffic analysis effort. Such a decision is reached after discussions between the requestor, IRC, SIRC and FHWA DTE. **Appendix A** provides an outline of a typical MLOU.

1.5.2 Interchange Justification Report (IJR)

An IJR is required when the proposed action is intended to provide a new access to a limited access facility. Such action requires the highest level of analysis and documentation to justify the need for and operational impacts of the proposed access. The IJR quantifies the magnitude and significance of impacts of the proposed new access on the mainline and mitigation, if needed.

An IJR is required for the following situations:

- new system interchanges providing access between two limited access facilities;
- new service interchanges providing access between a non-limited access local roadway network (e.g., arterial, collector or local road) and the limited access facility;
- new partial interchanges or new ramps to and from continuous frontage roads that create a partial interchange within the existing limited access right of way.

1.5.3 Interchange Modification Report (IMR)

An IMR is required for a proposed action to modify configuration or travel patterns at an existing interchange. The extent and complexity of the proposed modification will determine the level of analysis and documentation required. The level of analysis and documentation requirements are determined and agreed upon in the MLOU.

A Systems Interchange Modification Report (SIMR) may be needed when a series of closely spaced interchanges that are operationally interrelated are analyzed for an IAR. Such an effort may be used to support the development of a corridor PD&E study, either following or concurrently with the SIMR development. It is important to understand that the purpose of an SIMR is to evaluate impacts of closely spaced interchanges. If an IMR is prepared for an interchange included in a previously approved SIMR, it shall follow the requirements outlined in this guide. The limits of an SIMR should be carefully chosen and discussed with SIRC and FHWA.

An IMR or SIMR may be required for the following situations (where examples are provided, they are not intended to be all-inclusive):

- Modification to the geometric configuration of an interchange.
  - Adding new ramp(s)
  - Abandoning/removing ramp(s)
- Completion of basic movements at an existing partial interchange.
- Modification of existing interchange ramp to provide access to a different local road that requires a break in the limited access right-of-way.
- Managed lanes access to an existing interchange that provides direct connection to the crossroad or express-express lane ramp connections.
- Any changes that result in an increase in the number of lanes at the gore point of an on-ramp within a weaving area, as determined by the Highway Capacity Manual (HCM) weaving methodology.

1.5.4 Interchange Operational Analysis Report (IOAR)

An IOAR is prepared to document traffic and safety analysis of minor modifications to the existing access points that do not change existing interchange configuration or travel patterns. The examples of interchange improvements that require an IOAR are listed below. The determination of an IOAR versus IMR requirement is critical, because the level of effort could significantly vary. Therefore, the requestor shall coordinate with the IRC, SIRC and FHWA in making this determination. The determination to prepare an IOAR or IMR shall be done at the beginning of the project, during the MLOU stage.

The following types of interchange improvements require an IOAR:

- Addition of a lane (or lanes) to an existing **on-ramp** while maintaining existing lanes at gore point.
- Any proposal that results in the shortening of an **off-ramp**.
- Replacement of an unsignalized free-flow, right-turn lane on an **off ramp** with a signalized right turn or installation of a signal or roundabout to a stop-controlled ramp terminal intersection.
- Any changes that result in an increase in the number of lanes at the gore point of an on-ramp outside the weaving area as determined by the HCM weaving methodology.

1.5.5 Non-Interchange Access Request (Non-IAR)

Non-IARs are improvements that **do not require** an access request. The following are examples of non-IAR:

- Addition of storage lanes at the terminus of existing **off-ramps** with the crossroad.
- Relocation or shifting of the ramp termini (i.e., moving the ramp end that connects with the crossroad) along the same roadway, which does not result in a shortening of an **off-ramp**.
- Extension of an acceleration lane, deceleration lane or recovery lane at the interstate connection point not within the weaving area of an adjacent interchange.
- Extension of an **on-ramp** as an auxiliary lane extending to downstream interchange.

- Access (slip ramps) between express lanes and general use lanes on the interstate highway. The existing interchanges are not modified, in which case no direct connection between express lanes and crossroad is provided. This does not constitute preparation of an IAR, per FHWA's Interstate System Access Informational Guide. The operations and safety of the access points shall be evaluated and documented in a Corridor Traffic Analysis Report (CTAR) in lieu of the IAR.
- Implementation of ramp metering or other active control of vehicles entering the interstate highway.
- Construction of new signing, striping and/or resurfacing of an interstate **on-ramp** or **off-ramp**, where geometric features are not changed.
- Installation of a roadside guardrail and concrete barriers (such as for resurfacing and safety projects).
- Addition of through lane(s) on a crossroad at a ramp terminal.
- Widening of an existing off-ramp to add lane(s) at the diverge point from the mainline.
- "In-kind" bridge replacement/modification without changing laneage.
- Construction of overpasses or grade-separated structures without ramps along interstate facilities.
- Interchanges that are proposed within a new limited access facility and do not connect to an existing limited access.

Although an access request is not required for the above improvements that are performed in the interstate system, coordination with the FHWA Florida Division Office is required for informational purposes. This coordination shall be scheduled at the start of the project to determine the level of analysis effort. The IRC shall coordinate with SIRC and FHWA at the beginning of the project to determine whether the improvement requires an IAR or should be classified as a non-IAR. It is the responsibility of the IRC to ensure operational analyses for the non-IAR improvements are conducted and documented.

Traffic and safety analysis may not be required on the following non-IAR improvements:

- Construction of new signing, striping and/or resurfacing of an interstate on-ramp or off-ramp, where geometric features are not changed.
- Installation of roadside guardrail and concrete barriers (such as for resurfacing and safety projects).
- "In-kind" bridge replacement/modification without changing laneage.

1.6 Locked Gate Access

All requests for a locked gate access require submission of a general use permit through the District Office of Maintenance. The IRC shall review the request only after the Office of Maintenance is satisfied with the purpose and need for the locked gate access. The IRC shall forward the request to FHWA for determination of the safety, operational and engineering acceptability, only after being satisfied with the recommendations from the Office of Maintenance. Requests for locked gate access shall satisfy FHWA's policy points.

Information and factors used by the District Office of Maintenance to make a recommendation for a locked gate access include but are not limited to:

- purpose and need for the locked gate access;
- review of possible access alternatives to confirm the feasibility of the proposed access;
- number, type, duration and frequency of vehicles proposed to use the locked gate; and
- ownership and lessee of the property contiguous to the locked gate.

1.7 Acceptance Authorities

1.7.1 IRC Authority

The IRC has the primary responsibility for all IAR coordination with the requestor, coordination with the SIRC and FHWA (when applicable) during all phases of the IAR. It is essential for the IRC to seek inputs from all applicable district offices, such as Environmental Management, Design, Traffic Operations, Structures, Safety, ROW, Maintenance and Program Management in the IAR review process.

Where the IAR affects a limited access facility of more than one District (including FTE), or if the interchange access is near a District boundary, all affected District IRCs shall be involved in the IAR process. It is required that IARs developed by the FTE or other expressway authorities involve the local FDOT District.

1.7.2 FDOT and FHWA Authorities

FDOT recognizes three forms of IAR approvals:

- Programmatic IARs that apply to projects on interstate highways identified in the PA between FHWA Florida Division and FDOT regarding the review and approval of specific types of changes in interstate system access. (The PA was executed April 2, 2015, and was originated from Section 1505 of MAP-21.)
- IARs for projects on interstate highways that are not included in the PA between FHWA Florida Division and FDOT. These IARs are referred to as non-Programmatic IAR in this User's Guide.
- IARs for projects on non-interstate limited access facilities on the SHS.

Programmatic IARs Approval

Section 1505 of MAP-21 has provided the U.S. Department of Transportation (USDOT) Secretary the option to allow state DOTs to review and approve IARs on the interstate system. FHWA and FDOT have entered into the PA to allow FDOT to review and approve certain types of IARs. The PA will expedite the IAR review process and streamline the project delivery process.

Under the PA, the FDOT Chief Engineer is authorized to determine the SO&E acceptability for certain types of IARs that will receive an expedited FHWA approval. **Figure 1-2** shows how to determine projects that shall be reviewed under the PA. IARs that are to be included in the PA review process shall be determined early

on during the project's conceptualization and initiation. The following IARs are included in the PA:

a. New service interchanges outside Transportation Management Areas (TMAs)

b. Modifications to service interchanges. An exception is when access is provided to a different road not previously served that is located within a TMA; this type of modification is not delegated under the PA.

c. Completion of basic movements at existing partial interchanges.

All IOARs will qualify as Programmatic IAR approval. The level of environmental documentation or severity of the impacts associated with the implementation of the project affects project qualification for the Programmatic IAR. As such, FHWA has determined that the following conditions will exempt the PA and require FHWA access review and approval:

- Projects requiring an Environmental Impact Statement (EIS) under NEPA. Types of projects that require an EIS are listed in Chapter 2 of Part 1 of the FDOT PD&E Manual;
- Projects with issues related to National Policy or substantial controversy; and
- Any other project, as required by FHWA.

It is recommended that IAR features related to social, natural, economic and physical environment are initially screened through the Efficient Transportation Decision Making (ETDM) process. The ETDM screening should be performed at the beginning of the IAR process, even though environmental impacts are not documented in the SO&E acceptability. Coordination with FHWA DTE is required to ensure projects with substantial controversy or requiring an EIS are flagged early during the MLOU development stage.

The acceptance authority for programmatic IAR is the FDOT Chief Engineer, as shown in **Table 1-1**. SMA and the IRC must approve the IAR before it is routed to the Chief Engineer for signature. The Assistant Secretary for Strategic Development also will sign IARs for new access requests (or IJRs). FHWA will approve Programmatic IARs by concurring with the Chief Engineer's determination of SO&E acceptability of the IARs.

Table 1-1: Programmatic Interchange Access Request Approval Authorities

Approval Authority		MLOU			IAR		
		IJR	IMR	IOAR[1]	IJR	IMR	IOAR
Requestor		✓	✓	✓	✓	✓	✓
District IRC		✓	✓	✓	✓	✓	✓
Central Office	Systems Management Administrator	✓	✓	✓	✓	✓	✓
	Chief Engineer (or Delegate)				✓	✓	✓
	Assistant Secretary for Strategic Development (or Delegate)				✓		
FHWA					•	•	•

Note: ✓ Review and approve the document
1 For an IOAR, the IRC will determine the need for an MLOU
• Concurs with FDOT Chief Engineer's determination of engineering, operational and safety acceptability, as agreed upon in the PA. FHWA Transportation Engineers should be involved when developing the MLOU.

Non-Programmatic IARs Approval

Projects on the Florida Interstate Highway System that are not included in the PA will be fully reviewed and approved by the FHWA Florida Division Office, as summarized in **Table 1-2**. IARs involving system interchanges, all new partial interchanges and new interchanges within a TMA require concurrence by FHWA headquarters in Washington, D.C.

The following IARs on interstate highways are not approved through the PA process and require full FHWA review and approval:

a. new service (freeway to crossroad) interchanges inside TMAs;

b. new system (freeway to freeway) interchanges;

c. new partial interchanges (inside and outside TMAs);

d. modifications to system (freeway to freeway) interchange, including express to express lane ramp connections;

e. closure of individual access points that result in partial interchanges or closure of entire interchanges;

f. locked gate access; and

g. projects that are exempted from the PA.

For non-programmatic IAR requests on the interstate, the SMA and the IRC must sign the IAR before it is routed to FHWA for approval. The Assistant Secretary for Strategic Development also will sign requests for new access (IJRs) prior to forwarding them to FHWA for review and approval.

Table 1-2: Non-Programmatic Interchange Access Request Approval Authorities

Approval Authority		MLOU			Interchange Access Request					
					Interstate			Non-Interstate		
		IJR	IMR	IOAR[1]	IJR	IMR	IOAR[1]	IJR	IMR	IOAR
Requestor		✓	✓		✓	✓		✓	✓	✓
District	IRC	✓	✓		✓	✓		✓	✓	✓
	District Secretary							✓	✓	✓
Central Office	Systems Management Administrator	✓	✓		✓	✓		✓		
	Assistant Secretary for Strategic Development				✓					
FHWA		✓	✓		✓	✓				

Note: ✓ Review and approve the document
1 All IOAR projects qualify for delegation under the PA. The IRC will determine the need for an MLOU.

Non-Interstate System IARs Approval

FHWA is not involved in IARs for projects that are on non-interstate facilities. Acceptance authorities for non-interstate IARs are summarized in **Table 1-2**. The IRC and District Secretary sign IARs at the District level. The District Secretary approves IMRs and IOARs, while the Systems Management Administrator approves only IJRs.

Non-Interstate Toll Facility IARs Approval

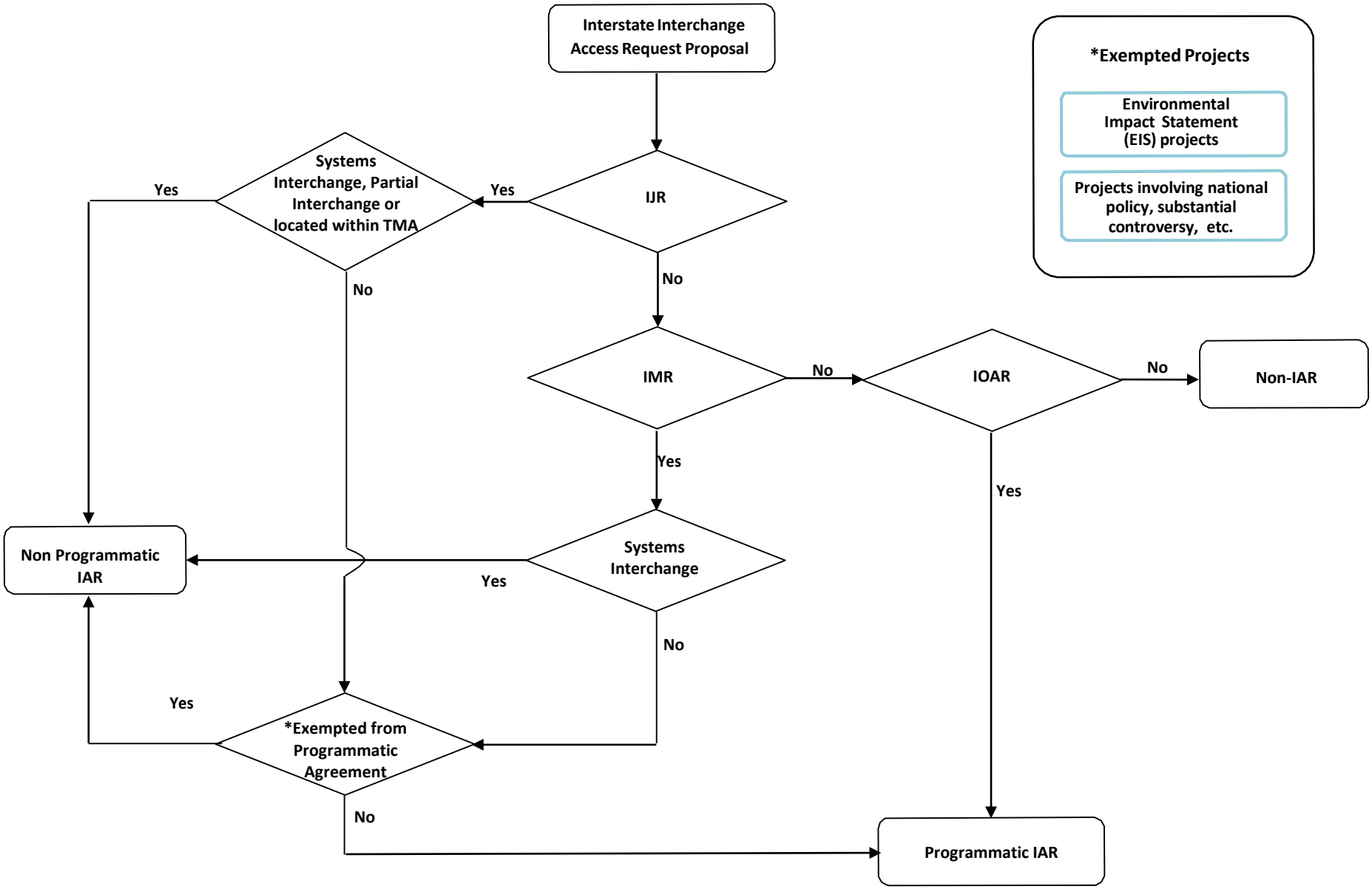
FHWA is not involved in IARs for projects that are on non-interstate toll facilities. Acceptance authorities for non-interstate toll facility IARs are summarized in **Table 1-3**.

Table 1-3: Non-Interstate Toll Facility Interchange Access Request Approval Authorities

Approval Authority	Florida's Turnpike			Other Expressway Authorities		
	IJR*	IMR*	IOAR	IJR*	IMR*	IOAR
Requestor	✓	✓	✓	✓	✓	✓
Turnpike IRC	✓	✓	✓			
District IRC	✓	✓		✓	✓	
Systems Management Administrator	✓			✓		

Note: ✓ Review and approve the document
* District IRC acceptance will not be needed for IJRs, IMRs not on the state highway system or IJRs, IMRs not affecting state highways. This determination will be made in coordination with District IRC and SIRC during the project.

Figure 1-2 Determination of Programmatic versus Non-Programmatic Interchange Access Request



1.8 IAR Review Process

Review of IAR deliverables is necessary to ensure they are of appropriate quality. The requestor shall ensure that the IAR's schedule includes adequate times for reviews. (See **Section 1.9** for review time frame.) The review process that is documented in this User's Guide must be followed. Tight schedules or pressure to maintain project schedules shall never compromise the quality of the documents, because poor quality deliverables eventually lead to project delays. Whenever an expedited review is needed due to project schedules, the District IRC must coordinate in advance with the SIRC. For IARs that involve complex projects, interim reviews of technical documents, such as model calibration reports and future traffic forecast reports are strongly recommended. Interim review requirements should be determined at the MLOU development stage of the IAR on a case-by-case basis.

Every IAR submittal must be reviewed through the ERC system.

All documents related to IARs must be reviewed utilizing the FDOT Electronic Review Comment (ERC) System. The ERC system is a web-based application used to track the review process (comments and responses) for the project documents in a database. All IAR documents shall be submitted under the Interchange Access Request submittal category of the ERC system. Use of ERC system allows requestors, IRCs, SIRC, FHWA and other users to track all comments and responses from the reviewers at any time during the project development process. Information about the ERC application is available at the FDOT ERC website. The IRC shall coordinate with the requestor to ensure the IAR documents are first reviewed at the district level before requesting Central Office review through the ERC system. IARs that are not processed through the PA process (or non-programmatic IAR) shall be submitted to FHWA for review after the review by the Central Office is completed and all comments have been addressed or resolved. The IRC shall utilize the ERC system to request IAR reviews from FHWA.

The review process is summarized as follows:

1. The requestor produces the IAR document and submits it to the IRC.
2. The IRC conducts a district internal review through ERC and returns it to the requestor with comments.
3. The requestor reviews the comments, addresses and resolves the comments and resubmits the document to the IRC.
4. Upon verification that all comments were resolved, the IRC requests the SIRC to review the IAR document through the ERC.
5. The SIRC conducts reviews and returns it to the IRC with comments.
6. The IRC reviews the comments and forwards them to the requestor.
7. After corrections are made and upon FDOT signature (as per approval authority tables shown earlier), the IAR is forwarded to FHWA for review (if applicable).
8. For Non Programmatic IARs:

a) FHWA reviews the document and returns it to the IRC with comments.
b) IRC forwards the comments to the requestor for incorporation and then resubmits the document for FHWA approval.

9. The SIRC submits the Programmatic IARs to FHWA to obtain concurrence with the FDOT Chief Engineer's determination of SO&E.

Reviewers should exercise good professional judgment when reviewing the documents. Comments that are personal preference are discouraged.

1.9 IAR Review Time Frame

The following review time frames apply to all IARs:

- The SIRC shall review and submit comments on the IAR within 10 business days.
- The FHWA Florida Division shall review and submit comments within 20 business days for non-PA IARs.

The review times may be longer than the time frames outlined above, depending on the number of project submittals by FDOT to FHWA and conflicting production schedules. For projects that the districts have as high priority, the IRC shall coordinate with FHWA and SIRC about the schedule constraints and priorities early on during the MLOU development stage.

System interchanges, all new partial interchanges and new interchanges within a TMA require concurrence by FHWA headquarters in Washington, D.C. FHWA Florida Division Office shall make an IAR SO&E acceptability determination and forward it to the FHWA headquarters for approval within 40 to 60 business days.

1.10 Performance Management of Programmatic IAR

As part of the requirements of the programmatic agreement, FDOT will conduct annual reviews of the performance of the IAR process and submit a report to FHWA consisting of:

- A summary of the results of all IARs that were processed and approved under the terms of the PA.
- Verification that the IARs were processed and complied with the PA.
- An identification and implementation plan for IAR process improvements.
- A summary of potential IARs in the coming year.

Chapter 2
Methodology Letter of Understanding

2.1 Project Initiation

The IAR process begins with a formal determination of the need for the project. The determination of the need for the project helps identify performance criteria or deficiencies that are to be addressed by the project. The determination of the need for the project involves coordination between the requestor, IRC, SIRC and FHWA division office to define the scope of the IAR and to verify the project is in the adopted MPO's Long-Range Transportation Plan (LRTP). The FHWA DTE shall be informed of all projects at their initiation. Coordination also is needed to identify type of project (IJR, IMR or IOAR), project objectives, determination of Programmatic or non-Programmatic process, performance measures and FHWA involvement. Coordination with project stakeholders is required, even for non-IAR projects.

2.2 Methodology Meetings

When it is determined that the need for the project is reasonable, the requestor and IRC may start drafting the MLOU. The objective of the MLOU is to reach a consensus among the requestor, IRC, SIRC and FHWA on the process and analysis to be followed in developing the IAR. The purpose and intent of the MLOU is not to arrive at a predetermined concept and it should not prohibit the evaluation of viable alternatives. The MLOU shall be signed by all parties to demonstrate agreement on the IAR process.

Methodology meetings shall be conducted to discuss various aspects of the access proposal and to reach an agreement regarding the contents of the MLOU for the access request. The meetings shall include the IRC, SIRC, FHWA, the requestor and other project stakeholders, including representatives from affected or interested local agencies, regional planning councils and other state agencies. It is essential to discuss any anticipated exceptions or variations to FDOT or FHWA policies, criteria or standards to ensure they would not create a fatal flaw to the IAR acceptance. Any fatal flaws shall be identified and resolved in the preliminary meetings prior to execution of the MLOU to determine whether the requestor should proceed with the IAR proposal. The MLOU does not serve as scope of work for the project. Any work done prior to signing the MLOU is at the risk and responsibility of the requestor.

The meeting minutes should be documented, distributed to meeting attendees for concurrence and kept in the project files.

2.3 Determination of the Need for MLOU and Type of IAR

The development of an MLOU is guided by the need for the project. It is recommended that the requestor gather all project data and information sufficient to determine the type of the IAR prior to preparing the MLOU. An environmental screening tool (EST) may be used to gather environmental information and data about the IAR project. The environmental information may help the IRC determine the type of IAR, as per the guidance provided in **Section 1.7** of this User's Guide. Coordination with the acceptance authorities is

required to ensure appropriate report type, review process and documentation before finalizing the preparation of the MLOU.

2.4 Contents of MLOU

The contents of an MLOU are detailed in this section. The required format of the MLOU is provided in **Appendix A**.

2.4.1 Project Purpose and Need

Identification of the purpose and need for adding new or modifying access to a limited access facility is essential to providing appropriate analysis and documentation to justify the acceptance of the change in access.

The need for an IAR is the same as the need for the project.

The purpose and need for the IAR should be the foundation for the purpose and need in the PD&E study. Specifically, the purpose of the access proposal should answer why the project is considered, along with the necessary supporting evidence. Therefore, the purpose of an IAR should identify transportation problems, issues and concerns and provide guidance on developing alternative improvements that would address such problems. The purpose should focus on the national/regional transportation system, because local economic development or improving the local roadway system functionality, though a factor, is not a primary focus for the IAR.

The need for the IAR provides a rationale for how it addresses the transportation problems identified in the purpose statement. The need is supported by existing data and analysis to justify the project. Existing data, summaries from local transportation comprehensive plans, existing roadway geometry and statistics such as speed, delay, crash data and project volumes should be used, as appropriate, to support the need for the project. Utilization of readily available transportation information that does not require extensive data collection or traffic operational analysis is strongly recommended when developing the purpose and need for the project.

2.4.2 Area of Influence (AOI)

Once the purpose and need for the project have been identified, the next step is to identify the analysis area of influence (AOI). The AOI is defined as the area that is anticipated to experience significant changes in traffic operating characteristics as the result of the access proposal. The AOI shall reflect current and anticipated operational and safety concerns associated with the access request. The AOI for the IAR shall be finalized in the MLOU phase. **Figure 2-1** provides an example of an AOI. Factors such as interchange spacing, cross-street signal locations, the extent of congestion, the presence of system interchanges, planned transportation systems and anticipated traffic impacts should be considered when identifying the AOI.

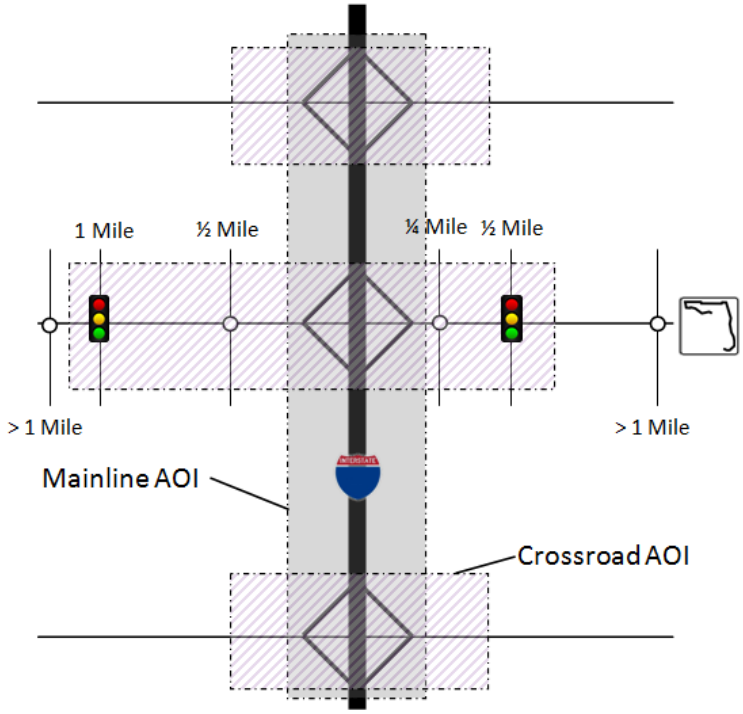
The following guidelines shall be used when defining the AOI:

- **AOI along a limited access mainline —** In urban areas, the AOI for IJRs shall include at least the first adjacent interchange on either side of the proposed access change. In rural areas, where interchanges are far apart and the proposed access is isolated, extension to adjacent interchanges

may not be necessary. For IMRs, the AOI extends only to the on- and off-ramp gore points of the adjacent interchanges. However, the AOI can extend beyond these limits, based on operational and safety impacts of the proposed change in access. The limits in this situation should be determined through discussion with the IRC, SIRC and FHWA (if applicable).

- **AOI along a crossroad —** The AOI along the crossroad shall extend at a minimum, up to one half-mile in either direction of the proposed access change. If there are signalized intersections along the crossroad, the AOI shall extend beyond the half-mile to include at least one signalized intersection in either direction, as determined by the IRC. If the signals are in a coordinated system, the AOI may be expanded to include the analysis of all affected signals. If there is a Development of Regional Impact (DRI) within the vicinity of the access change, the AOI could be extended to include the DRI area of influence. The AOI along the crossroad shall be determined by the IRC during the MLOU stage of the project.

Figure 2-1 Area of Influence Along Mainline and Crossroad



2.4.3 Analysis Years

All IARs shall consider existing year, opening year, interim year and design year as traffic analysis years. The need for analysis of interim years shall be decided and agreed when developing the MLOU. The interim year shall be included in projects that have phased construction or fail prior to the design year. Additionally, the analysis methodology and procedure for each analysis year must be agreed to by the requestor, IRC, SIRC and FHWA (if applicable) during the MLOU phase. The requestor must analyze build alternatives and the no-build alternative for all analysis years, as defined in the MLOU. The analysis years are described below:

- **Existing year —** The year the IAR is prepared, or a prior year from which acceptable data is available. The operational and safety aspects of the existing mainline, interchanges and adjacent arterial system within the AOI are determined and documented in the existing year analysis. This analysis is used to document existing conditions and deficiencies.

- **Opening year —** The first year in which the proposed improvements will be opened to traffic. If the proposed improvements are to be phased, the opening year is the year the first phase of the project will be opened to traffic.

- **Interim year(s) —** This is not required in every interchange proposal. The interim year is the opening year of the phased project. Phased interchange improvements require additional interim analysis for the year each phase is anticipated to open to traffic. An interim year also is required when an alternative shows failure prior to the design year. In this situation, the interim year is the year of failure of the proposed improvements. An interim year may not be required if no phased improvements are planned or the preferred alternative provides acceptable operations until the design year.

- **Design year —** The design year for IMR and IJR projects normally is 20 years after the opening year. The design year is used for all subsequent project phases, such as PD&E study and design. If the proposed project phasing extends beyond the 20-year horizon, the requestor is required to show the improvements that will be in place in the design year and the interim 20-year. However, FDOT will only consider alternative phases completed within the 20-year horizon. The design year for an IOAR is at least 10 years after the opening year.

The MLOU should include the base and planning years of the travel demand model.

Two additional analysis years are considered for travel demand forecasting. These are the base year and planning horizon year, which are documented when preparing data and traffic forecasts. The outputs from the travel demand forecasting model for the base and planning years are used as the basis to forecast opening, interim and design year travel demand. Techniques to interpolate or extrapolate travel demand model data to the analysis years shall be documented in the MLOU.

- **Base year —** The year for which the selected travel demand forecasting model was calibrated. The most current version (as close to the existing year as possible) of the adopted travel demand forecasting model shall be used.

- **Planning horizon year —** The approved forecast or horizon year of the selected travel demand forecasting model.

2.4.4 Coordination

Coordination with other agencies, such as MPOs and other affected entities, is part of the IAR process. Proper coordination helps avoid conflicts with other new or proposed changes in access or corridor improvements within the vicinity of the IAR project. Additionally, coordination with other agencies could lead to the adjustment of design concepts to meet permitting requirements in later phases of project development. As such, the MLOU shall identify all coordination efforts that will be performed in the IAR process.

2.4.5 Data Collection

Data to be collected for the IAR analysis includes roadway geometrics, travel demand and traffic control. Existing traffic data includes hose and turning movement counts, queue data, origin-destination data and heavy vehicle data; speed and travel time data; traffic control data; transit data; crash data; and information on bicycles and pedestrians. Efforts to use existing databases and studies are emphasized. However, field observations should be performed to confirm the reasonableness of the existing data. For further details on the data collection requirements, the requestor should refer to the FDOT Traffic Analysis Handbook.

In the event additional data collection is necessary after the MLOU has been approved, the requestor is required to develop a supplemental methodology as an addendum to the MLOU. The supplemental methodology for additional data collection shall be approved by the IRC prior to the initiation of data collection. The methodology shall contain the justification for any additional data need, the collection techniques and limitations on use of data.

2.4.6 Travel Demand Model Selection and Forecasting

Model selection and development of demand volume projections shall be done based on the guidelines and techniques published in FDOT's 2014 Project Traffic Forecasting Handbook, Project Traffic Forecasting Procedure Topic 525-030-120 and Traffic Analysis Handbook. The adopted regional travel demand model to be used in the analysis shall be identified in the MLOU. Any deviation from the use of the district's and MPO's approved models or methods shall include documentation to support justification for such deviation. All assumptions used to determine future traffic demand shall also be identified. The technique recommended to validate the base year model shall be discussed in the MLOU. The base year model shall be validated to replicate existing year traffic volumes and trends.

2.4.7 Traffic Operational Analysis

Defining the scope of traffic operational analysis is part of the MLOU. The scope of the traffic analysis should, therefore, be supported by the area type, existing traffic operating conditions and analysis tools. Additionally, prior to finalizing the scope of the analysis, an IAR coordination meeting called by the IRC should be held. The coordination meeting also is used to define the purpose and need for the IAR, the goals and objectives of the IAR and the operational analysis limits. Composition of the coordination meeting should include the requestor, IRC, SIRC, FHWA DTE and technical staff from the various disciplines in the district.

Area type is defined as rural, transitioning into urban areas or urbanized areas. The requestor should reference the FDOT Quality/Level of Service Handbook for more discussion about the area type.

Knowledge of existing operational conditions is essential to determine if the existing facility is oversaturated or undersaturated. Such knowledge is useful to establish the analysis AOI and to select the type of analysis tool.

Knowledge of existing conditions is essential to determine operating conditions.

Proper selection of a traffic analysis tool and approach determines the success of any analysis effort. As

such, the requestor must possess sufficient knowledge of traffic flow analysis and limitations (strengths and weaknesses) of the traffic analysis tools. The requestor should be aware that no single tool can analyze or model all project scenarios. It is recommended that the analysis effort should correlate the magnitude of the problem. The use of sophisticated tools and approaches should match the complexity of the problem that the analysis is intended to evaluate. Further guidance for tool selection is provided in the FDOT Traffic Analysis Handbook.

2.4.8 Safety Analysis

The safety analysis methodology shall be documented and agreed to in the MLOU. The objective of the safety analysis is to examine the effects of the access proposal on the performance of the facility. As such, the safety analysis should proactively aim at reducing or correcting potential safety problems in the planning and design phases before they are constructed.

Safety analysis shall be performed by analyzing a minimum of five years of historical crash data within the AOI. If data is not available for last five years, then three years of crash data could be used to perform the safety analysis.

This analysis shall identify areas where there may be a safety concern. The study limits of safety analysis are the same as for operational analyses. The crash data collected should include:

- Crash type
  - Crash types such as overturns, rear-ends, angle, sideswipes, hitting fixed objects, etc.
  - Most prevalent crash types
  - Crash patterns and crash contributing factors
- Crash severity
  - Fatalities, serious injuries, evident injuries, possible injuries, property damage

Specific analysis methodologies are outlined dependent on the scope of the project. Details regarding types of safety analysis and their methodology are provided in **Section 3.3** of this IARUG. The safety analysis shall meet the criteria for one of the following crash analysis types:

- Quantitative Safety Analysis for IOARs, or
- Quantitative Safety Analysis for IJRs/IMRs

The quantitative analyses should follow the procedures developed by the Highway Safety Manual (HSM).

The MLOU shall state an understanding that either a quantitative analysis for IOARs or IJRs/IMRs will be required.

The safety analysis for proposed conditions should document how the access request proposal would improve the identified safety problems.

2.4.9 Performance Measures

Performance measures must be chosen to meet the need for the IAR.

Performance measures are Measures of Effectiveness (MOEs) used to evaluate the operations and safety performance of an IAR. Identification of the performance measures in the MLOU enhances the focus of the analysis to quantify the benefits and impacts of the IAR. It is recommended that the performance measures be selected to fulfill the purpose and need for the access request. For the performance measures to be useful, they must ultimately provide information that can be used to make investment and management decisions.

Level of Service (LOS) Targets for Interchanges

Interchange modifications should result in improved traffic operations. The build alternative shall result in operating conditions equal or better than the no-build. Florida LOS requirements are defined in Department Policy 000-525-006 and are detailed in the current Quality/Level of Service (Q/LOS) Handbook. Within the LOS Policy and Q/LOS Handbook, specific minimum acceptable targets are given for limited access highways based on the area type and lane restrictions. Proving the access proposal would meet minimum LOS targets does not guarantee its acceptability.

Other Performance Measures

Other performance measures that may be evaluated include but are not limited to speed and travel time, queue length, person/vehicle served, control delay, trip length, number of phase failures, percent demand served in peak hour, crash rates and frequency, reduction in crashes, density, network-wide MOEs (such as vehicle miles traveled, total vehicle delay, etc.) and travel time reliability. It is recommended to establish all MOEs by analysis type that will be used to evaluate the performance of an IAR in the MLOU. Guidance for performance MOEs selection is provided in the FDOT Traffic Analysis Handbook.

2.4.10 Environmental Considerations

The MLOU should identify a status and schedule of the PD&E study. Environmental documentation in an IAR is minimal and limited to fatal impacts and known environmental impacts used to compare build alternatives. Known or potential environmental issues shall be documented in the IAR document, because they affect the IAR approval process. Additionally, known environmental information may be used to identify any fatal-flaw conditions that may affect the selection of the improvement alternative and NEPA decision. Any environmental fatal flaws shall be identified as early as possible to determine whether the requestor should proceed with the IAR proposal. If a previous ETDM screening has been completed, then the results should be summarized in the IAR. These results help determine if there are any significant or fatal environmental impacts.

2.4.11 Design Exceptions and Variation

The geometry of the roadway is important to the overall operation and safety of the highway network. The geometry of the roadway is affected by traffic and environmental variables, such as volumes, speeds, right of way, environmental impacts, etc. Therefore, the geometry of the roadway is an important part of the IAR. While detailed geometric design is performed in later phases of the project, geometric information and conceptual design developed in the IAR should be consistent with the FDOT design criteria and standards outlined in the FDOT Design Manual (FDM). It should be noted that compliance with design

standards and criteria does not guarantee SO&E acceptability of the IAR. Rather, the acceptability determination is based on a full evaluation of FHWA's two policy points.
When developing the MLOU, the requestor shall take the following into consideration:

- For all new construction; reconstruction; and resurfacing, restoration and rehabilitation (3R) projects on the SHS, FDOT design standards (Design Standards, Florida Design Manual, Structures Manual, Standard Specifications for Road and Bridge Construction) apply. For design standards not listed in these manuals, American Association of State Highway and Transportation Officials (AASHTO) design standards shall apply.

- When it becomes necessary to deviate from the department's criteria and standards, early documentation and approval are required. As such, the MLOU shall identify any anticipated exceptions and variations to FDOT or FHWA design standards, criteria, rules and procedures.

2.4.12 Conceptual Signing Plan

The MLOU shall contain a requestor's commitment to prepare a conceptual signing plan for the IAR. It is very important to note that adequate signing is not a replacement for sound geometry design and engineering judgment. The conceptual signing plan in IARs is intended for planning purposes only and not for PD&E study, design or construction. The Manual on Uniform Traffic Control Devices (MUTCD) serves as guidance for preparing the signing plan.

2.4.13 FHWA's Policy Points

The MLOU shall include a commitment to meet FHWA's two policy points.

2.5 Review and Acceptance of MLOU

The review and consideration for acceptance of the MLOU is performed according to FDOT Procedure 525-030-160 and discussed in **Chapter 1** of this User's Guide. The ERC system shall be used when reviewing the MLOU. For proposals affecting more than one district (i.e., FTE proposals or proposals near district boundaries), all affected IRCs shall be part of the signatories of the MLOU. It is important for the MLOU to clarify any review time frame expectation, especially for high-priority projects.

The IRC, SMA and FHWA (according to **Section 1.7**) shall accept and sign the MLOU after they concur with the MLOU requirements and need to proceed with the IAR. The signed MLOU serves as the notice to proceed for the requestor, unless otherwise stipulated by the IRC. Any work performed by the requestor prior to the acceptance of the MLOU is considered "at risk" and may not be accepted by the IRC. If a change to the agreed methodology is proposed during the IAR process, then an amendment to the approved MLOU shall be required. The requestor shall prepare the amendment only for sections of the MLOU that have changed and submit for approval. The amendment approval shall follow a similar process as of the original MLOU. All parties that signed the original MLOU shall also approve the amendment. An IAR re-evaluation shall require submittal of a new MLOU for approval. This is discussed in more detail in **Section 4** of this guide.

2.6 MLOU Qualifying Provisions

The following qualifying provisions shall be stated in each MLOU:

- Coordination of assumptions, procedures, data and outputs for project review during the access request process will be maintained throughout the evaluation process.
- Full compliance with all MLOU requirements does not obligate FDOT or FHWA to accept the IAR.
- The requestor shall inform the approval authorities of any changes to the approved methodology.

Chapter 3
Interchange Access Report

The Interchange Access Report is developed as a stand-alone document consistent with the requirements of the MLOU. If a feasibility study or any other previous report has been prepared, then relevant information from such documents should be summarized and provided in appropriate sections of the report or in the appendices. Most importantly, the report should be clearly written for a reviewer not familiar with the project to understand the intent of the report.

FDOT and FHWA will use the information contained in the report to determine the safety, operational and engineering (SO&E) acceptability of the report. The determination of SO&E acceptability shall only be given when justification and documentation provided in the report successfully address FHWA's two policy points, as stated in the updated Policy on Access to the Interstate System, May 22, 2017.

Acceptability of an IAR is based on full evaluation of the FHWA's two policy points.

3.1 Documentation Requirements

The Interchange Access Report shall address the following items in detail:

- Executive summary (FHWA's two policy points)
- Purpose and need covering operational and safety deficiencies
- Methodology
- Existing conditions
- Future conditions
- Alternatives analysis
- Funding plan and schedule
- Recommendation

The documentation requirements will be determined by the IRC in cooperation with the acceptance authority during the MLOU development phase. When microsimulation analysis techniques are used, a calibration report shall be prepared and included in the report.

3.2 Analysis of Existing Conditions

All IARs must include an existing year analysis. The purpose of this analysis is to support the need for the project. Also, the analysis of existing conditions provides the baseline operational characteristics for

comparison of build and no-build alternatives.

Existing conditions analysis should include the common elements such as traffic volumes, multimodal mobility, land use, safety and roadway characteristics. The existing conditions should also identify any known or potential environmental impacts that could be a fatal flaw to the access proposal or would result in significant mitigation efforts. This analysis includes navigable waterways, wetlands, public lands, contaminated sites, noise-sensitive sites, historical or archaeological sites, threatened and endangered species, contamination, air quality, Section 4(f) lands and impacts to neighborhoods or any other environmental issues. The requestor shall be responsible for identifying any such fatal flaws as soon as possible and bring them to the attention of the IRC.

3.3 Safety Analysis

The purpose of the safety analysis is to understand how geometric designs will impact safety and crash likelihood at an existing or proposed interchange. The appropriate methodology for a project will depend on the type of project, the scope of the project, and the historical crashes. The safety analysis method chosen for IAR analysis should be in concert with other analyses such as Purpose and Need, Alternative Analysis, Design Exception, and Value Engineering that are done during PD&E Study or Design phase. It is recommended that the level of safety analysis effort be discussed and agreed during the MLOU stage of the project. The safety analysis shall include the analysis of existing conditions using historical data and quantitative analysis of the proposed modification based on the Highway Safety Manual (HSM). The HSM is published by American Association of State Highway and Transportation Officials (AASHTO) and includes methodologies to quantitatively predict a facility's safety performance.

Tools that support the HSM procedures and methodologies may be used to perform the safety analysis. Commonly available tools that can be used to quantify highway safety include: Safety Analyst, Enhanced Interchange Safety Analysis Tool (ISATe), Interactive Highway Safety Design Model (IHSDM) and Crash Modification Factors (CMFs) Clearinghouse. Further information regarding these tools can be found at: http://www.highwaysafetymanual.org/Pages/tools_sub.aspx.

3.3.1 Existing Conditions Safety Analysis

An existing conditions safety analysis shall be performed for all IARs by analyzing a minimum of five years of historical crash data within the AOI. If data is not available for last five years, then three years of crash data could be used to perform the safety analysis with explanation for three years of crash data.

The existing conditions safety analysis shall identify areas where there may be a safety concern. The study limits of safety analysis are the same as for operational analyses. The safety analysis should include:

a. Calculation of Crash Rates

The calculation of crash rates includes calculating the following values for each freeway segment, ramp, merge, diverge, or termini within the AOI:

- Crash frequency (Crashes/year)
- Crash rate (Crashes/million entering vehicle and crashes/100 million vehicle miles of travel)
  - The actual crash rate should be compared to the statewide crash rate for similar like facilities.

b. Crash Diagrams

Crash diagrams such as heat maps, bar charts, pie charts or other maps graphically showing the high crash locations along a system or at an interchange should be created.

c. Description of Existing Crash Trends

A written description of the crashes occurring over the analysis period, broken down by location, is required.

The descriptions must provide the following information:

- Number of crashes occurred
- The most frequent crash type
- Common crash cause if present
- Severity of crashes

d. Documentation

The safety analysis of the existing conditions will be summarized in the existing conditions section of the IAR. Any supporting data and calculations will be included in the Appendix.

3.3.2 Quantitative Safety Analysis

The quantitative safety analysis uses HSM based procedures and methodologies that incorporate project specific characteristics (geometry, traffic, etc.) and mathematical equations (CMFs, SPFs, etc.) to objectively estimate safety performance measures. The quantitative analysis allows for comparisons between project alternatives or proposed conditions based on the various factors.

The quantitative safety analysis methodology for application to IOARs and IJRs/IMRs is discussed below.

I) IOARs

IOARs include low cost, short term improvements requiring little or no ROW. A quantitative safety analysis for IOARs is appropriate when the access modification project is not going to use the results as part of a formal benefit-cost analysis, but the preliminary crash rate or crash severity analysis shows that there is a historical crash problem. A comparison with statewide average crash rates for similar facilities can be done to determine the historical crash problem.

Based on the observations from the existing conditions safety analysis, the safety improvements that could mitigate existing crash concerns are identified. The CMFs can then be applied to the number of recorded crashes (crash frequency) to determine the effectiveness of the alternatives, but the change in expected crashes due to the applied CMFs should not be assigned a dollar amount to determine the return on investment. If it is determined that a benefit-cost analysis is required during the MLOU stage, then the quantitative safety analysis for IJRs/IMRs, described below, should be performed.

The quantitative safety analysis for IOARs includes:

a. Existing Conditions Safety Analysis

b. Crash Reduction Estimations

CMFs can be applied to the predicted crash frequency or the expected crash frequency to estimate the reduction in crashes.

c. Documentation

The safety analysis of the proposed IOAR alternative will be summarized in the alternatives analysis section of the IOAR. Any supporting data and calculations will be included in the Appendix.

II) IJRs/IMRs

The quantitative safety analysis for IJRs and IMRs is required when the results of the crash analysis will be compared against the other costs and benefits of the project in order to estimate the return on investment, or the benefit-cost ratio. The Empirical Bayes (EB) method, outlined in the HSM Part C, combines the observed crash frequency and the expected crash frequency from the Standard Performance Function (SPF) equations to determine the predicted crash frequency. The predicted crash frequency is the most statistically accurate predictor of crashes in the future. The observed crash frequency is not as good of an indicator because crashes are random occurrences, however, relying only on the SPF equations could overlook a crash problem that is occurring at the site. When using the SPF functions in the EB process for existing interchanges, the existing year volumes should be used. For a new interchange safety analysis, the SPFs analysis shall be done with design year volumes.

In some cases, the SPF may require adjustments to Florida conditions because they were developed using national data and may not reflect average Florida conditions. Calibration factors to adjust SPFs to local conditions are available at:
http://www.fdot.gov/safety/11A-SafetyEngineering/TransSafEng/HighwaySafetyManual.shtm

CMFs that are part of the proposed design can be applied to the predicted crash frequency to determine the benefit of a specific safety improvement.

The safety analysis for a new interchange should take into account the additional crashes that are likely to occur due to an increase in conflict points along the managed access facility. However, if the new access point will decrease traffic at an existing interchange or along an arterial street, these safety benefits can be included as well.

The crashes expected at the new interchange shall be calculated using the SPFs and procedures outlined in the HSM for all freeway segments, ramp segments, speed-change lanes, termini on the arterial network and any other proposed modifications to the arterial. CMFs shall be used to modify the SPFs criteria to better match the proposed condition.

At adjacent interchanges or arterials where traffic volumes between the no-build and build scenarios are expected to be different due to the addition of the proposed interchange, the SPF functions should be calculated for no-build and build scenarios. The difference between crashes in the no-build and build

scenarios shall be attributed to the proposed interchange. These differences can be used as part of a benefit-cost analysis, if required in the MLOU.

The quantitative safety analysis for IJRs/IMRs includes:

a. Existing Conditions Safety Analysis

b. Safety Performance Functions

Safety Performance Functions (SPF) are equations outlined in the HSM Part C that calculate the expected crash frequency based on ADT and existing or proposed site characteristics.

c. Empirical Bayes Method

The EB method outlined in the HSM combines the observed crash frequency and the expected crash frequency from the SPF equations to determine the predicted crash frequency for an existing site. The EB method can only be applied to existing conditions with the existing traffic volumes and is used to determine the most statistically accurate prediction for future crashes at the existing location.

d. Crash Reduction Estimations

CMFs can be applied to the predicted crash frequency or the expected crash frequency to estimate the reduction in crashes.

e. Benefit Cost Analysis

The benefit or cost of changes in the expected or predicted crash frequency can be determined by applying a dollar amount to the estimated change in crashes.

- **For IMRs**: the EB method is required for determining an accurate benefit-cost ratio.
- **For IJRs**: it is not possible to determine the predicted crash frequency, so it is acceptable to use the change in expected crash frequency to determine the cost associated with crashes.

The benefit cost analysis uses the Highway Safety Improvement Program Guideline (HSIPG) cost per crash by facility type to estimate benefit to society, while cost to society is estimated by the expected cost of right of way, construction and maintenance. When utilizing predictive methods or crash severity distributions for analysis, FDOT KABCO Crash Costs should be used. These values are available via the FDM.

f. Documentation

The safety analysis of the proposed IJR/IMR alternative will be summarized in the alternatives analysis section of the IJR/IMR. Any supporting data and calculations will be included in the Appendix.

The tasks required for a safety analysis are slightly different based on the type of IAR. The safety analysis tasks necessary for common IARs are shown in **Table 3-1**.

Table 3-1: Safety Analysis Types

IJR	Calculation of Crash Rates	Crash Diagrams	Description of Existing Crash Trends	Safety Performance Functions	→	Crash Reduction Estimation (CMF's)	Benefit Cost Analysis (Optional)	Documentation
IMR	Calculation of Crash Rates	Crash Diagrams	Description of Existing Crash Trends	Safety Performance Functions	Empirical Bayes Method	Crash Reduction Estimation (CMF's)	Benefit Cost Analysis	Documentation
IOAR	Calculation of Crash Rates	Crash Diagrams	Description of Existing Crash Trends	→		Crash Reduction Estimation (CMF's)	→	Documentation
Existing Conditions	Calculation of Crash Rates	Crash Diagrams	Description of Existing Crash Trends	→				Documentation

3.4 Considered Alternatives

The alternatives to be considered and analysis years required are identified in **Table 3-2**.

Once the existing conditions are known, the requestor develops potential improvement concepts that address the purpose and need for the project. It is recommended that the requestor schedule a meeting or a workshop with the IRC and acceptance authority to review the considered alternatives. The IRC shall invite staff from other offices such as Environmental Management, Design, Traffic Operations, Construction, etc., to review and determine the viability of the alternatives in addressing the need for the project.

The Interchange Access Report build alternatives include strategies providing new access or modifying existing access to limited access facilities. Details of all reasonable build alternatives considered, including those eliminated from further considerations, shall be documented in the report. The documentation for the alternatives eliminated can be minimal, such as a summary of what was considered, reasons for elimination, etc. Build alternatives meeting requirements of the project will have a more detailed description and carried forward for evaluation. If a planning study was prepared prior to the report, all reasonable alternatives considered in the study shall be discussed in the report. Similarly, alternatives considered during the alternative technical concepts (ATCs) process in a design-build (D-B) project shall be documented in the report. It is understood that not all of these alternatives can be evaluated in the report, but the report should include discussion of all reasonable alternatives that were considered and reasons for not carrying them further for evaluation. The alternatives considered in the report, along with the analysis years, shall be agreed to by the IRC, SIRC and FHWA (on interstate facilities).

Table 3-2: Considered Alternatives

Considered Alternatives		Year of Analysis		
		Opening Year	Interim Year	Design Year
No-Build Alternative		✓	*	✓
Build	Preferred Alternative	✓	*	✓
	Other Alternatives	✓	*	✓
TSM&O Alternative**		✓	*	N/A

✓ Required
* May be required as determined by IRC and acceptance authorities;
N/A Not applicable
** Does not apply to D-B and P3 projects, need determined by IRC

The no-build alternative is the existing conditions plus any committed projects in the adopted MPO's Transportation Improvement Program (TIP), Statewide Transportation Improvement Program (STIP), Local Government Comprehensive Plan (LGCP), MPO Long-Range Transportation Plan (LRTP) and Cost Feasible Plan (CFP), FDOT's Adopted Five-Year Work Program and SIS Modal Plan. The committed projects also may include mitigation improvement projects that are elements of approved development orders. Privately funded projects that relieve traffic on state and local highways may be considered if agreed to by the IRC.

The requestor must consider the implementation of Transportation Systems Management and Operation (TSM&O) strategies as an alternative in the Interchange Access Report. TSM&O alternatives are relatively low-cost approaches that can satisfy the traffic needs without having to construct or modify an interchange. TSM&O alternatives that may be considered include adding crossroad turn lanes, improving signalization strategies or increasing the number of lanes along a ramp segment that are dropped in advance of the mainline ramp terminal. If a TSM&O alternative provides an acceptable solution in the opening year, the alternative should be analyzed in each of the subsequent analysis years (interim and design). If the TSM&O alternative provides an acceptable solution through the interim year, the alternative would normally be adopted and no further alternatives need be considered.

The TSM&O alternative, by itself may not always satisfy the project needs, especially in case of D-B and Public-Private Partnership (P3) projects. In such a situation, the build alternatives evaluated in the Interchange Access Report may incorporate elements of TSM&O, alternative transportation modes or additional network improvements beyond those planned and programmed.

3.5 Travel Demand Forecasting

Analysis of future conditions involves the preparation of future traffic volumes for all agreed-upon alternatives utilizing the travel demand projection models, input data and adjustment procedures, as documented in the MLOU. If no travel demand model is available, historic traffic data may be used to develop design traffic by trend analysis.

The specific FDOT procedures and technical criteria for future-year traffic forecasting are discussed in detail in the Project Traffic Forecasting Handbook.

Documentation of the future conditions forecast should include, at a minimum:

- Methodology techniques, model refinement and results of the network and project (subarea) model validation efforts. The technique recommended to validate the base year model shall be discussed in the IAR document. The base year model shall be validated to replicate existing year traffic volumes and trends. Any adjustments made to base year model volumes should be carried over to design year.
- Travel-demand forecasts within the AOI for the proposed opening, interim (if applicable) and design years for all alternatives depicted on maps, line drawings and tables, as agreed to in the MLOU.
- Historical traffic data (trend analysis)
- Summary of modifications to land use or socio-economic data files and networks for all analysis years.
- Model output smoothing techniques applied, the method used and the extent of adjustments.
- Post-processing of travel demand model volumes.
- Consistency with DRIs or other major developments affecting the traffic within the AOI.
- Traffic factors agreed to in the MLOU.

3.6 Evaluation of Alternatives

The evaluation of alternatives for an IAR is a thorough, technical investigation to compare the performance of alternative improvements that are developed to meet the need for the project. Performance measures or MOEs that were identified in the MLOU are used to compare the alternatives. Guidance for selection of appropriate traffic analysis tools used for evaluation of alternatives is provided in the FDOT Traffic Analysis Handbook and agreed to in the MLOU.

The evaluation of alternatives should address, at a minimum:

- safety,
- operational and engineering performance and
- environmental considerations.

The evaluation of alternatives should be documented to allow independent review of the IAR.

The evaluation of alternatives must be consistent with the MLOU. The SO&E analyses performed in the evaluation of alternatives shall demonstrate that the IAR does not have significant negative impact on the operation of the mainline and adjacent network. The build alternative shall not result in conditions worse than the no-build alternative at any analysis year. Additionally, the analysis should use sufficient

data and its documentation should be of sufficient detail to allow independent review of the IAR.

If the project will be constructed in phases, the analysis must demonstrate that each phase can function independently and does not affect the safety and operational efficiency of the facility.

3.7 Design Exceptions and Design Variations

Any request for design exceptions or design variations must be submitted with sufficient engineering, safety and operational analyses in accordance with FDM and AASHTO design controls and criteria. In addition, any requests for exceptions to policies and procedures must be reviewed and have acceptance decisions when the Interchange Access Report is reviewed to ensure they will not compromise the operation.

Design exceptions and design variations must be approved using the following guidelines:

- All known requests for exceptions must be fully documented and justified by the requestor during the Interchange Access Request process.
- All exceptions must be done during the PD&E process.
- Design exception and design variation approvals shall be obtained as described in the FDM. It is noteworthy that approval of an exception does not ensure acceptance of an IAR.

3.8 Local Transportation Plans and Planning Studies

An IAR shall be consistent with the adopted statewide and local transportation plans and other planning documents. The MPO or other local government plans must support the IAR proposal, and any inconsistencies shall be resolved prior to its submittal for approval.

It is recommended that an interchange master plan or a planning study be prepared prior to developing the IAR proposal. The planning study includes the existing and financially feasible planned interchanges from the MPO or other local government plans and identifies the future multimodal transportation development needs in the corridor. This assists in prioritizing the interchange needs and helps determine the impacts of new access or modification of an existing access to other interchanges in the corridor. An interchange master plan, if prepared, does not replace the formal IAR.

If the access proposal is not consistent with the adopted local transportation plan, the IRC shall examine the discrepancy and determine which access (proposed or local transportation plan access) better serves the public interests, safety and operational performance of the limited access facility. If both are needed, the IRC shall investigate how they can be corrected or reconciled to minimize operational and safety problems.

If the access proposal is not contained in the current local transportation plan, the IRC shall determine the reason and need for the proposed access and determine its impact on the mainline and adjacent interchange operations. If it is decided to move forward with the proposed access, then it will be required to be included in the local transportation plan. In all the above cases, the IAR proposal shall be prepared per the requirements outlined in this guide.

3.9 Funding Plan

A commitment of funding and inclusion of projects as part of the planning process in the adopted plans (LRTP, STIP or TIP) prior to final approval of the IAR are part of the requirements for determination of the SO&E acceptability.

When the project is included in the FDOT Five-Year Work Program or MPO TIP, subsequent phases of the project must be included in the work program. If this is not the case, the funding for successive phases must be identified. The TIP may include a project that is not fully funded, only if full funding for the time period to complete the project is identified and fiscally committed in the LRTP.

For projects proposed by a developer, a financial plan prepared by the developer must provide the IRC with enough detail to determine the source of all funds available to finance the access proposal. The District IRC should be more involved in development-driven projects and include SIRC early in the IAR process.

3.10 Access Management Agreement for the Interchange Cross Streets

When the IRC determines it is necessary, the requestor may be required to develop an access management agreement with all necessary parties. The agreement will be between FDOT, the local government, the requestor and individual property owners. It may be necessary to include other affected parties. This documented agreement will be based on an access management plan for the property located up to a minimum distance from the end of the interchange ramps, depending on the access classification of the crossroad. The access management plan shall provide reasonable access to the public road system and maintain the long-term safety and operation of the interchange area. Any planned access to the SHS within the interchange area shall conform to Rules 14-96 and 14-97 F.A.C. and be based on criteria outlined in the FDOT Access Management Handbook. Failure to develop and execute the agreement may result in FDOT stopping the IAR review process and/or denying the IAR.

Access management standards require more stringent regulation of driveway connections and median openings in interchange areas. Interchange areas are defined as either ¼ mile from the interchange if the crossroad is a controlled-access facility, or up to the first intersection with an arterial road, whichever is less. The distance is measured from the end of the ramp that is farthest from the interchange. These distances may be increased at the discretion of FDOT to improve the operations and safety of the facility.

3.11 Intergovernmental Coordination

It is important to consider coordination with other agencies during the IAR process. Coordination with stakeholders performed during the IAR process shall be documented.

The IRC shall determine the level of coordination required and the federal, state, regional and local agencies that must be contacted. The IRC also shall define the role of the requestor to ensure the required coordination is properly carried out and addresses all appropriate intergovernmental

comments. Areas where intergovernmental coordination may be needed include:

- local policies,
- data sources,
- environmental information,
- methodology development,
- proposal review,
- infrastructure and IAR funding commitments,
- consistency with local land-use and transportation plans,
- project-related issues to include access management and land-use coordination in the interchange area,
- signal progression and timing and
- public-involvement information.

3.12 Environment Considerations

Environmental documentation in an IAR should be kept to a minimum and limited to any fatal and known environmental impacts used to compare the build alternatives. Known or potential environmental issues shall be documented in the IAR document, because they affect the IAR approval process. Additionally, known environmental information may be used to identify any fatal-flaw conditions that may affect the selection of the improvement alternative and NEPA decision. The requirements for documentation of environmental considerations as part of an IAR will vary by project and location. The purpose of providing environmental information is to support the informed decision-making process on the potential environmental consequences that may affect future NEPA decisions.

Projects involving IJRs and IMRs that are the result of the standard MPO or local government planning process are subject to the planning screen of the ETDM process. This screening helps to understand the environmental impacts of the proposed improvement and determine if any fatal flaws exist.

For projects that are not included in any local government plan, the IRC shall work with the district ETDM coordinator to ensure the inclusion of these projects in the planning and/or programming screens. This process is required for all qualifying projects as defined in the ETDM Manual. The IRC shall provide the ETDM coordinator with any information regarding the project, including location, limits of study area and need for the project. The ETDM coordinator shall load the project information into the ETDM database and notify the Environmental Technical Advisory Team (ETAT) members of the project for review and comment.

The IRC shall act as the project manager with regard to the ETDM process. It is the IRC's responsibility to

ensure that the requestor receives any comments from the ETAT members resulting from the screening analysis. These comments shall be addressed in the IAR process and also during the subsequent NEPA phase of the project.

The IAR shall identify the environmental considerations that influenced the outcome of the alternative development and selection process. Environmental discussion should be brief, because it will be discussed in detail in the PD&E document.

3.13 Review of the Report

When completed, the report is forwarded to the IRC for review and comment, as agreed to in the MLOU. Once the IRC's comments are addressed, the report is forwarded to the SIRC for review, comment and acceptance recommendations. The Interchange Access Report is reviewed to ensure compliance with FHWA's policy points, the requirements set forth in the MLOU, sufficiency, completeness, correctness and consistency of the data, analysis and recommendations of the DRI (if required). The review must be done utilizing the ERC system. All IARs shall be reviewed and signed, per authority tables in **Section 1**, prior to submittal to FHWA. The FDOT Central Office shall also sign the IARs per the approval authority tables presented in **Section 1**, prior to submittal to FHWA.

3.14 Quality Control and Quality Assurance

FDOT uses Quality Control (QC) and Quality Assurance (QA) for the deliverables. The implementation of QA/QC procedures is a critical part of the development of IARs. An adequate QA/QC plan helps ensure that all FDOT and FHWA procedures are followed, as well as transparency, completeness and consistency of IAR documents. The project schedule should allow adequate time for QA/QC reviews. The QA/QC guidelines provided in this section will help the project team develop alternatives that are operationally viable, safe and constructible. QA/QC procedures shall be followed for every project, regardless of schedule. All major project items and deliverables shall be checked for quality control, and all QC documentation must be provided to the district IRC upon request.

QC shall be performed by the IRC. QC is a detailed review involving checking, incorporating and verifying prior to submittal of any project items or the IAR document. The IRC and FDOT discipline leads involved in the IAR are responsible for ensuring that the QC review is adequately performed.

Two important roles of the IRC are (1) to ensure the originator's QA/QC plan is being adequately followed and (2) to review project deliverables to ensure they are of appropriate quality and conform to FDOT standards and procedures and FHWA policy points. It is the responsibility of the IRC to ensure that the IAR submittal is reviewed by experienced and qualified staff. The IRC shall include the following district offices in review of the IAR: Environmental Management, Design, Traffic Operations, Structures, Right of Way, Maintenance and Program Management. The FDOT project manager (PM) and District IRC should meet with the consultant PM early in the project to reach a common understanding of QA/QC plan to be followed and submittal requirements. A record of all QA/QC activities shall be kept. QC documentation, including completed checklists, certifications or the reviewers' check set of the reviewed documents, should be provided upon request.

QA is performed by the Central Office Systems Implementation Office (SIO). QA is the overall review and confirmation of the quality control process to ensure a quality product. SIRC, on behalf of the SMA, reviews each report submitted for acceptance consideration and its associated analyses to ensure compliance with policies, procedures, standards, guidelines and processes. The SIRC is also responsible for conducting Quality Assurance Reviews (QARs) of projects. The purpose of the QAR is to ensure that the submittal and review of report documents are being conducted in accordance with the procedures and guidelines. For projects processed under the PA, the QARs will be the expansion of the annual review required by FHWA under the PA. For projects processed outside the PA, QARs will be conducted annually by the SMA or the SIRC. The frequency may be increased as needed.

A QA report will be prepared and submitted to:

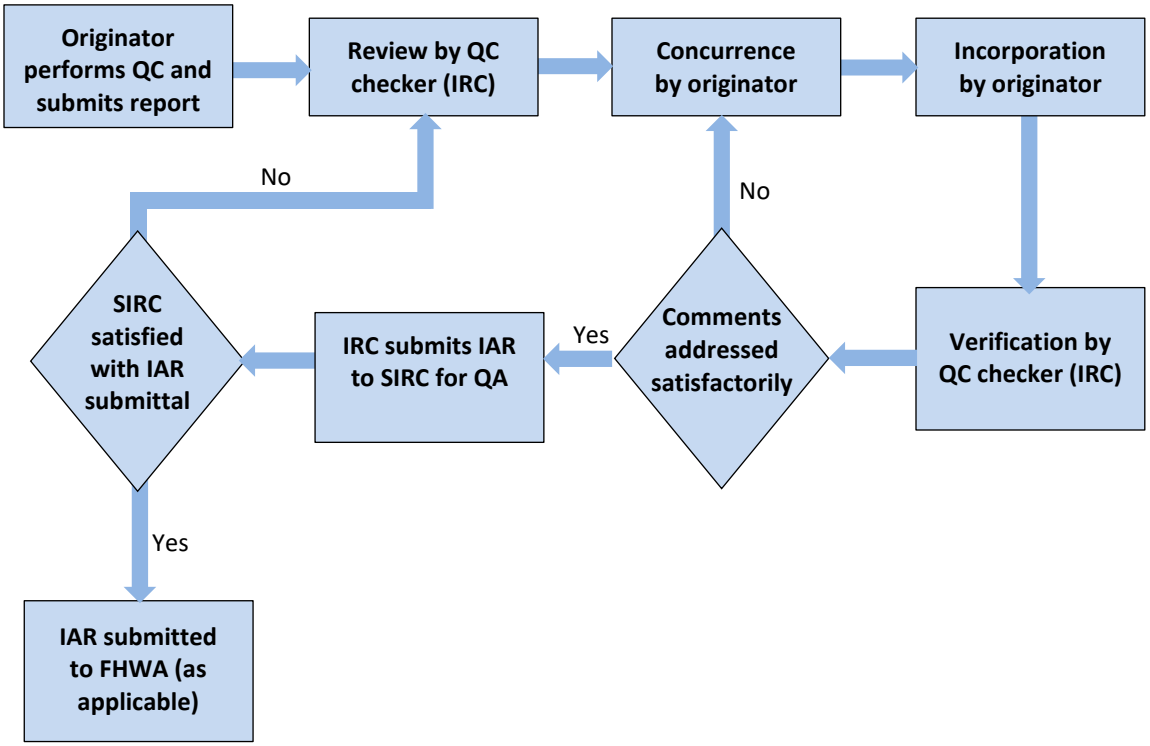
- Chief Planner
- District Secretary
- District Planning and Environmental Office Manager
- District IRC

The District IRC will submit a written response to the SMA within 30 days after receipt of the QA report addressing any findings, including a reasonable solution to the areas identified for improvement. Any comments and questions concerning the QA report should be discussed with the SMA or SIRC prior to submitting the written response to the SMA. QARs are valuable tools for identifying areas that need improvement and/or lack training.

Central Office SIO and FHWA develop and facilitate IAR training for the Districts and their consultants. The training will be scheduled and located dependent on the need and budget.

The QA/QC process flowchart for IARs is shown in **Figure 3-1**.

Figure 3-1 QA/QC Process Flowchart for IARs



If there are any outstanding comments that cannot be resolved between originator and checker after one round of review, then the issue resolution protocol will be followed.

All IAR submittals to the District IRC shall have a QC review log or stamp showing that a review has been completed prior to submittal. A sample QC checklist and review log is shown below in **Table 3-3**. The major review items are listed in the table and it should not be considered an all-inclusive list. It is the responsibility of the QC checker to perform a complete review of the IAR prior to submittal, and additional review items shall be added to the checklist as needed. Finally, these items must be checked for completion as well as reviewed for correctness in the IAR.

Table 3-3: Quality Control Checklist and Review Log (Sample)
Interchange Access Request Proposals

Project Name: **FDOT Project Manager:**

FPID No. **IRC:**

No.	ITEM	READY FOR REVIEW	
		CHECKED BY	DATE
1	**Travel Demand Forecasting**		
	Has the latest version of approved model been used? Have all adjustments been made, per FDOT guidelines and MLOU, and reviewed?		
	Have the traffic factors been reviewed and checked to make sure K, D and T factors are reasonable?		
	Did the project traffic development follow FDOT Traffic Forecasting Handbook and MLOU?		
	Have existing and future traffic volumes been checked for reasonableness?		
2	**Operational Analysis**		
	Are the inputs into traffic software correct?		
	Has the validation/calibration of microsimulation been properly documented?		
	Are operational analysis results reasonable?		
3	**Safety Analysis**		
	Has appropriate safety analysis been performed to quantify impacts of the recommended improvements?		
4	**Concept Design**		
	Does the proposed design meet minimum design standards?		
	Have the exceptions and variations, if any, been justified?		
5	**Conceptual Signing Plan**		
	Has a conceptual signing plan been reviewed, checked to make sure it can be signed and meets MUTCD?		
6	**FHWA's Two Policy Points**		
	Does the proposal satisfy FHWA's policy points?		
7	**Report Review**		
	Has the report been reviewed for grammatical and editorial errors?		

The IRC shall submit a written statement of technical review for each IAR report, certifying that appropriate QC reviews were conducted and the report satisfies the requirements of FHWA's policy points and FDOT's procedure for new or modified interchanges. The statement shall be signed by the requestor and the IRC.

The recommended format of the statement of technical review is provided in **Appendix B**.

3.15 Processing for Acceptance Decision

The access request report is deemed ready for signature from the acceptance authority when it complies with FHWA's policy points and FDOT's policies and procedures. Additionally, all comments and issues raised during document reviews (in ERC) must be resolved to their satisfaction before the IRC transmits the report to the Central Office for signatures. After the Central Office signs the access report for a non-programmatic IAR, SIRC submits the report to FHWA Florida Division Office for signature.

If the acceptance authority denies the IAR, the document is returned to the requestor (through the IRC) with a written description of comments and issues requiring resolution. It is the IRC's responsibility to determine if the IAR should be pursued further and, if so, to resolve the comments and concerns with the requestor.

The SIRC is responsible for notifying the FHWA Florida Division Office about FDOT's review and determination of safety, engineering and operational acceptability decision for programmatic IARs. The notification to FHWA will include:

1. location and type of change on the interstate system,
2. location where information validating acceptability of the IAR may be accessed,
3. verification that the required analysis, review and actions taken in considering and processing the IAR comply with FHWA's policy points and PA and
4. acceptability determination by the FDOT Chief Engineer.

The FHWA Florida Division expedited approval of programmatic IARs will involve concurrence with or objection to the Chief Engineer's determination of safety, engineering and operational acceptability within five business days of receipt of notification. After receiving FHWA's approval decision, SIRC will inform the IRC about the final decision.

Chapter 4
IAR Re-evaluations

4.1 Re-evaluation

A re-evaluation is performed to document compliance with the state and federal requirements and processes as the result of changes in the project since the approval of the original IAR. Re-evaluations are required for one or more of the following conditions:

- change in an approved IAR design concept,
- significant change in conditions (traffic characteristics, land use type, environment) or
- failure of an IAR to progress to the construction phase within three years of approval (time lapse). The approval of the IAR occurs after SO&E affirmative determination and NEPA parts are complete.

Changes in the project that would affect safety, operations and environment compared to the approved IAR shall be considered when determining the need and scope for the re-evaluation. It is, therefore, strongly recommended that the requestor coordinate with the IRC, SIRC and FHWA to determine the level of effort required prior to proceeding with the re-evaluation process.

Analysis and documentation prepared for an IAR re-evaluation shall fulfill the requirements identified in FHWA's policy points. The IAR re-evaluation format is similar to the original IAR.

A new MLOU shall be prepared for an IAR re-evaluation.

A new MLOU documenting the assumptions and methodology shall be prepared for an IAR re-evaluation.

The applicability of PA or non-PA process must be re-established during the re-evaluation.

The conditions requiring an IAR re-evaluation and the associated documentation requirements are discussed in detail in the sections below.

4.1.1 Change in Approved Access Design Concept

Changes in design features or design concept that occur after an IAR is accepted shall necessitate the need for re-evaluation of the IAR. The common reasons for design changes of an approved IAR and the minimum requirements for re-evaluation are discussed below.

i. NEPA or final design phases in which the requestor can improve the approved IAR concept. An IAR re-evaluation during NEPA could occur prior to Affirmative Determination stage if the IAR recommended concept changes during NEPA. This type of re-evaluation is most likely to occur if the NEPA is initiated following the IAR acceptability and the concept changes due to environmental impacts.

ii. Alternative Technical Concept (ATC) or post-contract design change proposed by the design-build (D-B) firm.

iii. P3 project in which the selected team proposes a concept different from the request for proposal (RFP).

In all the above conditions, the approved IAR concept serves as the no-build, or baseline, in the re-evaluation and is used as the basis of comparison with the proposed concept. In the case of D-B and P3 projects, the approved IAR concept is included with the RFP and referred to as the RFP concept. It is important that the requestor preparing the re-evaluation have a clear understanding of the level of effort that will be required when proposing a change in the approved design concept.

Design Changes Due to Environmental Impacts

When the change of an approved design concept occurs during NEPA because of environmental impacts, the re-evaluation shall show the new concept satisfies the SO&E requirements and FHWA policy points. An IAR re-evaluation during NEPA could occur prior to Affirmative Determination stage if the IAR recommended concept changes during NEPA. This type of re-evaluation is most likely to occur if the NEPA is initiated following the IAR acceptability and the concept changes due to environmental impacts. The requestor shall confirm the validity of the traffic volumes in the re-evaluation. Traffic volumes shall be updated depending on change in conditions to be discussed during the MLOU. An MLOU documenting the methodology and procedures to be followed in the re-evaluation shall be prepared and signed by all applicable parties. The new proposed concept shall be compared with the no-build concept for evaluation purposes.

Design Changes During Design Phase

When the change of an approved design concept occurs during NEPA or the final design phase of the project, in which a new concept is proposed as an improvement over the IAR approved concept, the re-evaluation shall demonstrate that the new concept satisfies the SO&E requirements and FHWA's policy points. The new proposed concept shall meet the LOS targets and operate equal to or better than the original IAR approved concept. The requestor shall confirm the validity of the traffic volumes in the re-evaluation. Traffic volumes shall be updated if there has been a significant change in traffic conditions since the approval of the original IAR that can result in changes in traffic volumes. A comparison of traffic volumes from the forecasting model used in the original IAR with the new model can be made to determine if a significant change in traffic volumes is anticipated. It is highly recommended that the requestor have meetings with IRC, SIRC and FHWA early in the process to come to an agreement over the traffic forecasting methodology to be used in the re-evaluation. The agreed methodology shall be documented in the MLOU and signed by applicable authorities.

The new concept must perform equal to or better than the original approved concept.

Design Changes Due to D-B or P3 Alternative Concept

When a change in the approved design concept occurs during D-B or P3 projects, in which a new concept is proposed as an improvement over the IAR approved concept, the re-evaluation shall show that the new concept satisfies the SO&E requirements and FHWA's policy points. In these projects, the approved IAR concept is included in the RFP and serves as the no-build alternative for comparison purposes. The

new concept proposed by the D-B or P3 team shall perform equal to or better than the original RFP concept and satisfy the FHWA policy points. This means the re-evaluation shall show that the proposed new concept operates at acceptable LOS targets and satisfies the other MOEs used in the evaluation of the original concept. Project traffic volumes shall be updated if there has been a significant change in traffic conditions since the approval of the RFP concept that can result in a change in traffic volumes. A comparison of traffic volumes from the forecasting model used in the original IAR with the new forecasting model can be made to determine the significance of the change in traffic volumes. It is critical that the requestor involve the IRC, SIRC and FHWA early in the process to agree upon the re-evaluation methodology. An MLOU documenting the methodology and procedures to be followed in the re-evaluation shall be prepared and signed by all applicable parties. The analysis performed for the re-evaluation shall, at a minimum, use the same MOEs that were identified in the original RFP evaluation.

4.1.2 Change in Conditions

An IAR shall be re-evaluated whenever a significant change in conditions occurs. Changes in projected traffic demand because of a proposed DRI or other land-use changes that were not part of the original IAR can necessitate a re-evaluation if it is determined that the design traffic has substantially changed to affect the operation of the interchange. If significant changes in conditions have occurred such as land use, traffic volumes (release of a new travel demand model), roadway configuration or design or environmental commitments, then a re-evaluation will be needed. Engineering judgement will be needed in determining a significant change. Some examples of significant change in conditions include change in travel conditions or patterns resulting in a modification of project need, change in approved design or change in traffic volumes resulting in a different level of service grade.

If the development traffic changes within the interchange AOI, resulting in a change in LOS or a need for the improvement, an IAR re-evaluation shall be required. The re-evaluation shall show that the need for the improvement or modification is justified under the new traffic conditions and satisfies the FHWA policy points. The re-evaluation document shall follow the outline of the original IAR. A new MLOU shall be prepared and signed by applicable authorities.

4.1.3 Time Lapse before Construction

The need for re-evaluation will be determined if construction does not begin within three years of IAR approval.

The IAR proposal may be re-evaluated if the project has not progressed to construction within three years of receiving the IAR approval/affirmative determination. The IAR approval occurs upon FHWA signing the letter that confirms SO&E acceptability and PD&E approval steps are complete. The need for the re-evaluation will be determined by the District IRC in coordination with CO and FHWA (for non-PA projects). If it is determined that a re-evaluation is not needed, the District IRC will document and inform CO and FHWA of the decision. It is noteworthy that an IAR re-evaluation is different than a NEPA re-evaluation.

The re-evaluation shall demonstrate the project need still is viable by considering any changes in the project and conditions that would affect the safety, operations, environment or design criteria used in the original approval. The original access design and any approved design exceptions shall be reviewed. Justification for the design exception or variation for any design elements that do not conform to the current design criteria must be performed during the re-evaluation. The re-evaluation, because of time

lapse, shall update analysis years and traffic data used for the original access request. Other items to be updated in the re-evaluations include the funding plan, project schedule and compliance with FHWA's two policy points. The re-evaluation document shall follow the outline of the original IAR. A new MLOU shall be prepared and signed by applicable authorities.

Depending on the amount of time lapsed and change in project area conditions, a new IAR could be required in lieu of the re-evaluation. The District IRC shall coordinate with SIRC and FHWA to determine the appropriate document and analyses requirements at the beginning of the process if a project has not progressed to construction within three years of affirmative determination of SO&E and NEPA approval.

4.2 Documentation

The requestor is encouraged to contact the IRC and acceptance authorities to discuss specifics and determine whether an IAR re-evaluation is required. If re-evaluation is required, the IRC shall coordinate with the acceptance authorities to determine the type of re-evaluation documents required to update the IAR. After additional coordination with the acceptance authority, the IRC notifies the requestor to update the Interchange Access Report. The notification shall include specific items of the previously approved IAR that must be updated. An appropriate IAR report will be included as an appendix to the NEPA document to ensure that technical information relevant during NEPA analysis is readily available to all parties.

The IAR re-evaluation shall follow the outline of the original IAR and conform to the requirements of this guide. An MLOU shall be prepared and signed by all applicable entities for all re-evaluations. The re-evaluation shall be signed per the approval authorities identified in **Section 1** of this guide. The IAR re-evaluation scenarios discussed in sections above and the level of effort required is summarized in **Table 4-1** below.

Table 4-1: Re-evaluation Types and Requirements for IARs

Re-evaluation type	Primary reason for re-evaluation	MLOU required	Traffic update required*	Basis for comparison	Documentation level	Satisfy FHWA policy points
NEPA	Environmental impacts	Yes	*	No-build	Update relevant sections in the IAR such as alternatives, analysis, environmental, FHWA policy points	Yes
NEPA or design phase	Modified design	Yes	*	Approved IAR concept	Revised IAR report	Yes
Design-build or P3	Modified design	Yes	*	RFP	Revised IAR report	Yes
Change in conditions	Change in traffic	Yes	Yes	No-build	Revised IAR report	Yes
Time lapse	More than three years since IAR approval	Yes	*	No-build and previously approved IAR concept	Revised IAR report	Yes

* To be determined on a case-by-case basis depending on change in conditions, to be discussed during preparation of the MLOU. If significant changes have occurred since approval of the original IAR (for example, an increase or change in traffic resulting in change in approved design concept), then an updated traffic and analyses shall be required.

Chapter 5
Explanation of FHWA Policy Points

5.1 FHWA Policy Points

Adequate access control to limited access facilities is critical to provide the highest level of services in terms of safety and mobility in these facilities. The new and revised access points shall meet FHWA's two policy point requirements listed in this section. The policy points are included in the FHWA Policy on Access to the Interstate System which can be found at https://www.fhwa.dot.gov/design/interstate/170522.pdf.

Policy Point 1

An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis should, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (Title 23, Code of Federal Regulations (CFR), paragraphs 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, should be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access should include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute, and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request should also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

Policy Point 2

The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (e.g., transit or high occupancy vehicle and high occupancy toll lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)). In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.

Appendix A
Template for MLOU

Florida Department of Transportation Interchange Access Request

Methodology Letter of Understanding (MLOU)

Type of request: ☐ **IJR** ☐ **IMR** ☐ **IOAR**

Type of Process: ☐ **Programmatic** ☐ **Non-Programmatic**

Coordination of assumptions, procedures, data, networks and outputs for project traffic review during the access request process will be maintained throughout the evaluation process.

Full compliance with all MLOU requirements does not obligate the acceptance authorities to accept the IAR.

The Requestor shall inform the approval authorities of any changes to the approved methodology in the MLOU, and an amendment shall be prepared, if determined to be necessary.

1.0 Project Description

Provide background or supporting information that explains the basis for the request.

A. *Purpose and Need Statement*
Provide the Purpose, the Need, the Goals and Objectives.

B. *Project Location*
Provide project description and a map of the IAR project location.

Exhibit/Figure #

C. *Area of Influence*
Provide a description of the area of influence along the main line and cross street.

Exhibit/Figure # _____

D. *Project Schedule*
Identify the schedule of production activities consistent with a proposed conceptual funding plan and opening year.

2.0 Analysis Years

A. *Traffic Forecasting*
- Base year
- Horizon year

B. *Traffic Operational Analysis*
- Existing year
- Opening year
- Design year

A year of failure analysis shall be performed for preferred alternative, in case a failing LOS is obtained in design year.

3.0 Alternatives

The no-build and build alternatives shall be analyzed in the IAR. Details of all reasonable build alternatives considered, including those eliminated from further considerations, shall be documented. The documentation for the alternatives eliminated can be minimal, such as a summary of what was considered, reasons for elimination, etc. Build alternatives meeting purpose and need of the project shall have a more detailed description and evaluated in the IAR.

The implementation of TSM&O alternative will be considered in the IAR.

4.0 Data Collection

The type of data that may be used should be identified.

A. Transportation System Data

B. Existing and Historical Traffic Data

C. Land Use Data

D. Environmental Data

E. Planned and Programmed Projects

5.0 Travel Demand Forecasting

A. *Selected Travel Demand Model(s)*

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

C. Validation Methodology
Describe the validation methodology using current FDOT procedures and data collection procedure

Identify how modifications to the travel demand forecasting model will be made, including modifications to the facility type and area type for links, modifications to socio-economic data and all input and output modeling files for review.

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

E. Traffic Factors

- Utilizing recommended ranges identified in the Project Traffic Forecasting Handbook and Procedure 525-030-120.
- Utilizing other factors, identified below.

Roadway	K	D	T	T_f	PHF	MOCF

Source:

6.0 Traffic Operational Analysis

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

A. Existing Area Type/Traffic Conditions

Area	Conditions	
	Under-saturated	*Saturated*
Rural	☐	☐
Urban Areas/Transitioning Urbanized Areas	☐	☐
Urbanized Areas/Central Business District (CBD)	☐	☐

B. Traffic Analysis Software Used

Software		System Component					
		Freeways				Crossroad	
Name	Version	Basic Segment	Weaving	Ramp Merge	Ramp Diverge	Arterials	Intersections
HCS/HCM		☐	☐	☐	☐	☐	☐
Synchro		☐	☐	☐	☐	☐	☐
Corsim		☐	☐	☐	☐	☐	☐
Vissim		☐	☐	☐	☐	☐	☐
Other		☐	☐	☐	☐	☐	☐

C. Calibration Methodology

- *Calibration methodology and parameters utilized will be documented.*
- *Calibration Measures of Effectiveness (MOEs) and calibration targets.*

D. Selection of Measures of Effectiveness (MOE)

- *The Level of Service target for each roadway classification, including mainline, ramps, ramp terminal intersections and the crossroad beyond the interchange ramp terminal intersections are identified below.*
- *In addition to the Level of Service target, state other operational MOEs to be utilized for the evaluation of alternatives.*

7.0 Safety Analysis

A. Detailed crash data within the study area will be analyzed and documented.

Years:
Source:

B. Identify the level of safety analysis to be performed, along with any software and tools to be used.

8.0 Consistency with Other Plans/Projects

A. The request will be reviewed for consistency with facility Master Plans, Actions Plans, SIS Plan, MPO Long Range Transportation Plans, Local Government Comprehensive Plans or development applications, etc.

B. Where the request is inconsistent with any plan, steps to bring the plan into consistency will be developed.

C. The operational relationship of this request to the other interchanges will be reviewed and documented. The following other IARs are located within the area of influence.

9.0 Environmental Considerations

A. Status of environmental approval and permitting process.

B. Identify the environmental considerations that could influence the outcome of the alternative development and selection process.

10.0 Coordination

Yes	No*	N/A*	
☐	☐	☐	An appropriate effort of coordination will be made with appropriate proposed developments in the area.
☐	☐	☐	Request will identify and include (if applicable) a commitment to complete the other non-interchange/non-intersection improvements that are necessary for the interchange/intersection to function as proposed.
☐	☐	☐	Request will document whether the project requires financial or infrastructure commitments from other agencies, organizations or private entities.
☐	☐	☐	Request will document any precondition contingencies required in regards to the timing of other improvements and their inclusion in a TIP/STIP/LRTP prior to the interstate access acceptance (final approval of NEPA document).
☐	☐	☐	Request will document the funding and phasing.

**Explain if "no" or "not applicable" (N/A) is checked*:

11.0 Anticipated Design Exceptions and Variations

☐ Design exceptions/variations are not anticipated, but if an exception/variation should arise, it will be processed per FHWA and FDOT standards.

☐ The following exceptions/variations to FDOT, AASHTO or FHWA rules, policies, standards, criteria or procedures have been identified:

12.0 Conceptual Signing Plan

A conceptual signing and marking plan shall be prepared and included in the access request.

13.0 Access Management Plan

☐ Access management plan within the area of influence will not be changed by the proposed improvements to the interchange.

☐ The improvement will affect access management within the area of influence will be changed. An access management plan will be developed within the area of influence to complement the improvements to the interchange:

14.0 FHWA Policy Points

The FHWA two policy points will be addressed within the access request.

Appendix B
Template for Statement of Technical Review (QC Certification)

Quality Control Checklist Template

SYSTEMS PLANNING OFFICE

QUALITY CONTROL CERTIFICATION FOR INTERCHANGE ACCESS REQUEST SUBMITTAL

Submittal Date: _____

FM Number: _____

Project Title: _____

District: _____

Requestor: _____ Phone: _____

District IRC: _____ Phone: _____

Document Type: ☐ MLOU ☐ IJR ☐ IMR ☐ IOAR ☐ OTHER_____(Specify)_____

Status of Document (Only complete documents will be submitted for review; however, depending on the complexity of the project, interim reviews may be submitted as agreed upon in the MLOU)

Quality Control (QC) Statement

This document has been prepared following FDOT Procedure Topic 525-030-260 (New or Modified Interchanges) and complies with the FHWA's two policy requirements. Appropriate District-level quality control reviews have been conducted, and all comments and issues have been resolved to their satisfaction. A record of all comments and responses provided during QC review is available in the project file or Electronic Review Comments (ERC) system.

Requestor_____ Date: _____
[PRINT NAME]

IRC _____ Date: _____
[PRINT NAME]

Quality Control Checklist and Review Log (Sample)
Interchange Access Request Proposals

Project Name:

FDOT Project Manager:

FPID No.

IRC:

No.	ITEM	READY FOR REVIEW	
		CHECKED BY	DATE
1	**Travel Demand Forecasting**		
	Has the latest version of approved model been used? Have all adjustments been made per FDOT guidelines and MLOU and reviewed?		
	Have the traffic factors been reviewed and checked to make sure K, D and T factors are reasonable?		
	Did the project traffic development follow FDOT Traffic Forecasting Handbook and MLOU?		
	Have existing and future traffic volumes been checked for reasonableness?		
2	**Operational Analysis**		
	Are the inputs into traffic software correct?		
	Has the validation/calibration of microsimulation been properly documented?		
	Are operational analysis results reasonable?		
3	**Safety Analysis**		
	Has appropriate safety analysis been performed to quantify impacts of the recommended improvements?		
4	**Concept Design**		
	Does the proposed design meet minimum design standards?		
	Have the exceptions and variations, if any, been justified?		
5	**Conceptual Signing Plan**		
	Has a conceptual signing plan been reviewed, checked to make sure it can be signed and meets MUTCD?		
6	**FHWA's Two Policy Points**		
	Does the proposal satisfy FHWA's policy points?		
7	**Report Review**		
	Has the report been reviewed for grammatical and editorial errors?		

Appendix C
Acronyms and Definitions

Term	Acronym	Definition
American Association of State Highway and Transportation Officials	AASHTO	A nonprofit, nonpartisan association representing state highway and transportation departments that advocates for transportation-related policies and provides technical services to support states in their efforts to efficiently and safely move people and goods.
Annual Average Daily Traffic	AADT	A measurement of the number of vehicles that use a highway over a period of a year divided by 365 to obtain the average for a 24-hour period.
Area of Influence	AOI	The area that is anticipated to experience significant changes in traffic volumes resulting from the interchange proposal and from changes in land use and/or roadway network (i.e., freeway main line, ramps, crossroads, immediate off-system intersections and local roadway system).
Average Daily Traffic	ADT	The number of vehicles that traverse a segment of roadway over a 24-hour period.
Crash Modification Factor	CMF	An index of how much crash experience is expected to change following a modification in design or traffic control. CMF is the ratio between the number of crashes per unit of time expected after a modification or measure is implemented and the number of crashes per unit of time estimated if the change does not take place.
Crash Modification Factor Clearinghouse	CMF Clearinghouse	The Crash Modification Factors Clearinghouse is a web-based database of CMFs along with supporting documentation to help transportation practitioners identify the most appropriate countermeasure for their safety needs. Click here for more information on the Clearinghouse.
Design Hour Volume	DHV	The traffic volume expected to use a highway segment during the 30th highest hour of the design year.
Development of Regional Impact	DRI	A development that, because of its character, magnitude or location, would have a substantial effect upon the health, safety or welfare of citizens of more than one county.
Directional Design Hour Volume	DDHV	The traffic volume expected to use a highway segment during the 30th highest hour of the design year in peak direction.
Empirical Bayes Method	EB	Method used to combine observed crash frequency data for a given site with predicted crash frequency data from many similar sites to estimate its expected crash frequency.
Enhanced Interchange Safety Analysis Tool	ISATe	The ISATe helps new users understand how to apply the predictive method included in Part C of the HSM. The spreadsheets demonstrate the crash prediction procedure for rural two-lane two-way roads (HSM Chapter 10), rural multilane highways (HSM Chapter 11), and urban and suburban arterials (HSM Chapter 12). It can be used to evaluate freeway and interchange safety.
Express Lanes		A type of managed lane where dynamic pricing through electronic tolling is applied to lanes with through traffic, having fewer access points. Express lanes can co-locate within an existing non-tolled or tolled facility to manage congestion and provide a more reliable trip time.
Florida Administrative Code	FAC	The official compilation of the administrative rules and regulations of state agencies.
Federal Highway Administration	FHWA	The approval authority for IJRs on Interstate Highway System projects and serves in an advisory role on non-interstate proposals.

Term	Acronym	Definition
Florida Department of Transportation	FDOT	An executive agency, which means it reports directly to the governor. FDOT's primary statutory responsibility is to coordinate the planning and development of a safe, viable and balanced state transportation system serving all regions of the state, and to assure the compatibility of all components, including multimodal facilities.
Florida Department of Transportation Electronic Review Comments	ERC	An application used to track the entire review process (comments and responses) for plan reviews and project submittals in a database. All comments and responses reside in one location allowing any user easy access to all or partial review data on demand. The system allows Project Managers to easily track all comments and responses from all Reviewers and Consultants at any time during the process.
Florida Standard Urban Transportation Modeling Structure	FSUTMS	A standard modeling structure used in Florida for travel-demand forecasting approved by FDOT Model Task Force.
Florida Design Manual	FDM	Sets forth geometric and other design criteria, as well as procedures, for FDOT projects.
High Occupancy Vehicle	HOV	A vehicle carrying two or more passengers.
Highway Capacity Manual	HCM	Compiles methodologies and procedures used to analyze highway capacity and quality of service.
Highway Capacity Software	HCS	Software that implements most of the HCM methodologies.
Highway Safety Manual	HSM	A resource that provides safety knowledge and tools in a useful form to facilitate improved decision making based on safety performance.
Intelligent Transportation System	ITS	A system that encompasses a broad range of advanced communications-based information and electronic technologies that improves transportation safety and mobility.
Interactive Highway Safety Design Model	IHSDM	The IHSDM is a suite of software analysis tools for evaluating safety and operational effects of geometric design decisions on highways. It performs the predictive method for the facilities in Part C of the first edition of the HSM (i.e., two-lane, two-way rural roads, rural multilane highways, and urban and suburban arterials)
Interchange		A system that provides for the movement of traffic between intersecting roadways via one or more grade separations.
Interchange Access Request or Report	IAR	Prepared to demonstrate that a proposed interchange access proposal is engineering and operationally viable based on traffic, geometry, financial and other criteria.
Interchange Justification Report	IJR	The primary document developed to evaluate FHWA's two policy points and the document submitted to FDOT and FHWA to gain approval to add access to the Interstate Highway System.

Term	Acronym	Definition
Interchange Modification Report	IMR	A report documenting a request for approval to modify access points to an existing interstate interchange or approved interchange but not yet constructed.
Interchange Operational Analysis Report	IOAR	Prepared for analysis of specific, low-cost aspects of an interchange modification, mostly within an existing right of way where a full IMR is not required.
Interchange Review Coordinator	IRC	An FDOT district personnel responsible for ensuring all interchange access requests are prepared according to the state and federal guidance.
Interstate or Interstate Highway System		A highway that is part of the Dwight D. Eisenhower National System of Interstate and Defense Highways.
Level of Service	LOS	A qualitative measure describing operational conditions within a traffic stream, based upon service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience; LOS A represents a complete free flow of traffic, allowing traffic to maneuver unimpeded; LOS F represents a complete breakdown in traffic flow, resulting in stop-and-go travel; LOS is typically calculated based upon peak-hour conditions.
Local Government Comprehensive Plan	LGCP	The plan (and amendments thereto) developed and approved by the local governmental entity pursuant to Chapter 163, F.S., and Rule Chapter 9J-5, Florida Administrative Code, and found in compliance by the Florida Department of Community Affairs.
Long Range Transportation Plan	LRTP	A plan adopted by the DOT, a metropolitan planning organization or a regional planning affiliation. For the purposes of an IJR and this policy and procedure, only the currently approved LRTP is considered.
Managed Lanes		Highway facilities or sets of lanes within a highway facility where operational strategies are proactively implemented and managed in response to changing conditions with a combination of tools. These tools may include accessibility, vehicle eligibility, pricing, or a combination thereof. Types of managed lanes include truck only lanes, truck only toll lanes, bus rapid transit lanes, reversible lanes, and express lanes.
Manual of Uniform Traffic Control Devices	MUTCD	The MUTCD contains the national standards governing all traffic control devices. All public agencies and owners of private roads open to public travel across the nation rely on the MUTCD to bring uniformity to the roadway. The MUTCD plays a critical role in improving safety and mobility of all road users.
Master Plan	MP	A document identifying short- and long-term capacity improvements to limited-access highways mainline and interchanges consistent with SIS policies and standards to allow for high-speed and high-volume travel.
Measures of Effectiveness	MOEs	Parameters indicating the performance of a transportation facility or service.
Methodology Letter of Understanding	MLOU	Documents the agreements reached between the requestor, DIRC, SPO and FHWA during the study design development of the project.
Metropolitan Planning Organization	MPO	An organization made up of local elected and appointed officials responsible for the development and coordination of transportation plans and programs, in cooperation with the state, for metropolitan areas containing 50,000 or more residents.
National Environmental Policy Act	NEPA	A United States environmental law that established national policy promoting enhancement of the environment.

Term	Acronym	Definition
National Highway System	NHS	Includes the Interstate Highway System as well as other roads important to the nation's economy, defense and mobility. The NHS was developed by the United States Department of Transportation (USDOT) in cooperation with the states, local officials and metropolitan planning organizations (MPOs).
Project Development & Environment Study	PD&E study	Prepared to ensure that FDOT's procedure for complying with environmental regulations is followed.
Safety Performance Function	SPF	An equation used to estimate or predict the expected average cash frequency per year at a location as a function of traffic volume and in some cases roadway or intersection characteristics (e.g., number of lanes, traffic control, or type of median).
Safety, Operational & Engineering	SO&E	The SO&E process is performed to document the existing, no-build and build traffic safety and operations of an IAR.
State Environmental Impact Report	SEIR	Required on all major state-funded projects in which FDOT becomes the owner of the document and no federal funding is involved in the project.
State Highway System	SHS	A network of approximately 12,000 miles of roads owned and maintained by the state of Florida or state-created authorities.
State Interchange Review Coordinator	SIRC	Responsible for the review of IAR documents at Central Office. The SIRC reviews documents and briefs the Central Office approval authorities on each project. The SIRC is responsible for revisions and updates to the IAR user's guide.
Systems Management Administrator	SMA	Responsible for the approval of Interchange Access Requests after they have been reviewed by the SIRC. The SMA ensures the implementation of this user's guide.
Statewide Transportation Improvement Program	STIP	A federally mandated document that must list projects planned with federal participation in the next four fiscal years.
Strategic Intermodal System	SIS	Facilities and services of statewide or interregional significance that meet high levels of people and goods movement, generally supporting the major flows of interregional, interstate and international trips.
Systems Interchange Modification Report	SIMR	Prepared when an interchange proposal is prepared for a series of closely spaced interchanges that are operationally interrelated.
Travel Demand Model		A computer model that forecasts traffic volumes on the major transportation grid. For purposes of an IJR, the travel-demand model must be the official model maintained by the MPO/RPA and is adopted as part of the LRTP.
Transportation Improvement Program	TIP	The MPO's agreed-upon list of priority projects that intend to use federal funds, along with non-federally funded capital projects. TIP is mandated by federal law for the MPO to receive and spend federal transportation funds.
Transportation Management Area	TMA	TMAs are urbanized areas with a population over 200,000. These areas are subject to special planning and programming requirements.
Transportation Systems Management & Operation	TSM&O	Integrated program to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety and reliability of our transportation system