Purpose of the Guidebook

- Provide an introductory overview of the interchange justification procedure of the Department
- Discuss interchange policy and technical resource documents
- Develop an interchange resource inventory

After going through this guidebook, the students / professionals will understand the interchange justification procedure and will know where to find related information.
### Target Audience

<table>
<thead>
<tr>
<th><strong>Entry level planning and engineering professionals dealing with interchange operations and design</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FDOT Central Office Involvement – Systems Planning, Environmental Management</strong></td>
</tr>
<tr>
<td><strong>Non-FDOT offices and agencies that might be involved – Florida’s Turnpike, MPOs, local governments, State agencies, Federal agencies, and expressway authorities</strong></td>
</tr>
<tr>
<td><strong>This guidebook will be useful not only to FDOT staff but also to professionals with other public agencies, consulting firms, and private developers</strong></td>
</tr>
</tbody>
</table>
Abbreviations
What is an interchange?
Types of interchanges
Why interchange justification?
Types of interchange justification proposals
National perspective
National resources
Interchange justification process in other States
Interchange justification process in Florida
The Interchange Handbook
Policy Resource Documents for The Interchange Handbook
Technical Resource Documents for The Interchange Handbook
Other technical resources
Training information
Contacts
# Abbreviations

- **DIRC:** District Interchange Review Committee  
- **ETDM:** Efficient Transportation Decision Making  
- **FHWA:** Federal Highway Administration  
- **FIHS:** Florida Intrastate Highway System  
- **HCM:** Highway Capacity Manual  
- **HCS:** Highway Capacity Software  
- **IJR:** Interchange Justification Report  
- **IMR:** Interchange Modification Report  
- **IOAR:** Interchange Operational Analysis Report  
- **LOS:** Level-of-Service  
- **MLOU:** Methodology Letter of Understanding  
- **NEPA:** National Environmental Policy Act  
- **PD&E:** Project Development and Environment  
- **SAMR:** Systems Access Management Report  
- **SIMR:** Systems Interchange Modification Report  
- **SIOAR:** Systems Interchange Operations Analysis Report  
- **SOAR:** Systems Operations Analysis Report
What is an interchange?

- An interchange is a grade-separated connection between a limited access facility and another road. The primary objective of an interchange is to maintain mainline traffic flow while allowing access to and from the limited access facility.
- Entry and exit ramps allow traffic to enter or exit a freeway.
- Often frontage roads (also known as service or feeder roads) and collector distributor (CD) systems facilitate freeway access.
- A complete interchange accommodates movements in all applicable directions; a partial interchange has some missing connections.
Types of interchanges

- Diamond

- Cloverleaf

- Single-Point Urban Interchange (SPUI)/ Single-Point Diamond

These are a few examples of different types of interchanges
Types of interchanges (continued...)

- Parclo/ Partial Cloverleaf
- Trumpet
- Directional T (also known as Y)
- Stacked
Freeways are designed to provide uninterrupted, high-speed, high-volume, long-distance travel at the highest level of safety. Any proposal to add or change freeway interchanges can potentially have an adverse impact on the ability to effectively and safely accommodate travel demand on a facility. Thus, proposal for a new interchange or modification of an existing interchange requires justification and approval.
Types of Interchange Justification Proposals

- Interchange Justification Report (IJR) - to request a new interchange. Requires the highest level of analysis and documentation.

- Interchange Modification Report (IMR) - to request modification to or relocation of an existing interchange (in place or approved but not yet constructed)

- Systems Interchange Modification Report (SIMR) - to request an interchange proposal for multiple interrelated interchanges. A SIMR can contain requests for new and modified interchanges. It should be considered while combining multiple interchanges where a problem/issue with one interchange could potentially delay approval of the SIMR.

- Interchange Operational Analysis Report (IOAR) - to request minor modifications to an interchange that does not require an IMR

Note: Decision of an interchange justification proposal is made on a case by case basis
National Perspective

- FHWA Policy No. 98-3460: It is in the National Interest to maintain the Interstate Highway System to provide the highest level of service in terms of safety and mobility. Adequate control of access is critical to providing such service.


- The FHWA Division Office will ensure that all requests for new or revised access submitted by the State highway agency for FHWA consideration contain sufficient information to allow the FHWA to independently evaluate the request and ensure that all pertinent factors and alternatives have been appropriately considered. The extent and format of the required justification and documentation should be developed jointly by the State highway agency and the FHWA to accommodate the operations of both agencies, and should also be consistent with the complexity and expected impact of the proposals. The Federal Policy is available online at [http://www.ops.fhwa.dot.gov/access_mgmt/docs/policy_adtl_interchange.doc](http://www.ops.fhwa.dot.gov/access_mgmt/docs/policy_adtl_interchange.doc).
Federal requirements for interchange proposals (8 points):

- The existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access nor be improved to satisfactorily accommodate the design-year traffic demands.
- All reasonable alternatives to a new interchange have been considered including ramp metering, mass transit, and HOV facilities. Improvements to adjacent interchanges and supporting arterials have been considered together with TSM strategies, alternative travel modes, and grade separation alternatives.
- Proposal does not adversely impact operations or safety of the existing freeway.
- A full interchange with all traffic movements at a public road is provided.
- The proposal is consistent with State Highway Master Plans and regional and local plans.
- In areas where the potential exists for future multiple interchange additions, the proposal is supported by a comprehensive Interstate network study.
- The proposal is coordinated with the area’s development.
- Planning and environmental constraints have to be considered.
National Resources

FHWA

- The toolbox includes tools/methodologies for sketch-planning, travel demand modeling, HCM-based deterministic analysis, traffic signal optimization, and traffic simulation
- Volume I: Traffic Analysis Tools Primer
  Volume II: Decision Support Methodology for Selecting Traffic Analysis Tools
  Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software
  Volume IV: Guidelines for Applying CORSIM Microsimulation
  Volume V: Traffic Analysis Tools Case Studies: Benefits and Best Practices (Volume IV and V are coming soon)
- Visit the toolbox at http://ops.fhwa.dot.gov/trafficanalysistools/index.htm
National Resources (continued...)

- Year 2004 Access Management DVD/CD Library - contains a wealth of access management documents and resources. To obtain a free copy of the DVD/CD contact Neil Spiller at neil.spiller@fhwa.dot.gov
- Electronic copy of Manual on Uniform Traffic Control Devices (MUTCD) is available online at http://mutcd.fhwa.dot.gov/
- Visit other FHWA Technical Resources online at http://www.planning.dot.gov/technical.asp
AASHTO Publications


- For other AASHTO publications visit the online book store at https://bookstore.transportation.org/category_browse.aspx
National Resources (continued...)

Transportation Research Board (TRB) Publications

- The Highway Capacity and Quality of Service 2005 is available online at http://gulliver.trb.org/news/blurb_detail.asp?id=5915
- Highway Capacity Manual Applications Guidebook is available online at http://www.hcmguide.com/index.htm
- Visit TRB website at http://gulliver.trb.org/ for other publications (including NCHRP reports)
- TRB also maintains an online access management resource database at http://www.accessmanagement.gov/resources.html

ITE Publications

- Visit ITE bookstore at http://www.ite.org/bookstore/index.asp
Interchange justification process in other States

- Requests for FHWA Interstate Access Approval or Modification – Minnesota Department of Transportation http://www.dot.state.mn.us/tecsup/tmemo/active/tm01/03ts03.html
- Minnesota Department of Transportation – Advanced CORSIM Manual available online at http://www.dot.state.mn.us/trafficeng/modeling/index.html
Interchange justification process in other States (continued…)

- Project Development Procedures Manual, Chapter 24 (Freeway Agreements) – Caltrans

- Highway Design Manual, Chapter 500 (Traffic Interchanges), Caltrans

- Design Manual, Chapter 940 (Traffic Interchanges), Chapter 1425 (Interchange Justification Report), Washington State Department of Transportation

- Control of Access to the Interstate and its Right-of-Way, Colorado Department of Transportation –
  [http://www.dot.state.co.us/AccessPermits/](http://www.dot.state.co.us/AccessPermits/)
Interchange justification process in other States (continued…)

- Michigan Access Management Handbook is available online at http://www.accessmanagement.gov/pdf/GuidebookMI.pdf
- Iowa Access Management Handbook is available online at http://www.ctre.iastate.edu/Research/access/amhandbook/AMhandbook.pdf
- Access Management Manual, Texas Department of Transportation, is available online at http://www.accessmanagement.gov/pdf/Texas_acm.pdf
Interchange justification process in Florida

- FDOT Policy No. 000-525-015: minimize the addition of new access points to Florida Intrastate Highway System (FIHS) limited-access facilities to maximize the operation and safety of intrastate and interstate transportation movements. The Policy is available online at http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/000525015.pdf.
- New interchanges or modifications to existing interchanges must follow the Department’s Interchange Justification Procedure. The document is available online at http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/525030160.pdf.
- Compliance with the requirements does not ensure approval of the interchange proposal – decision is made by the Department/ FHWA on a case by case basis.
Interchange justification process in Florida (continued...)

- A proposal may be stopped at any point by the Department or applicant
- Applicant: can be a private developer, a local government, a transportation authority, or an Office/District within the Department
- Approval authority:
  - Interstate IJRs, IMRs, and IOARs: FHWA
  - Non-interstate IMRs and IOARs: District Secretary or designee
  - Non-interstate IJRs in Department’s FIHS Cost Feasible Plan: District Secretary or designee
  - Non-interstate IJRs not in Department’s FIHS Cost Feasible Plan: Department Transportation Secretary or designee
- Federal Action requires approval of both IJR/IMR document and NEPA approval through the PD&E process (two separate documents)
Interchange justification process in Florida (continued...)

- Review and approval authority

<table>
<thead>
<tr>
<th></th>
<th>INTERSTATE</th>
<th></th>
<th>FIHS (NON-INTERSTATE)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Need</td>
<td>MLOU</td>
<td>Document</td>
<td>Need</td>
</tr>
<tr>
<td></td>
<td>Determination</td>
<td>Approval</td>
<td>Transmittal/Approval</td>
<td>Determination</td>
</tr>
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<td>District Office</td>
<td>LJR</td>
<td>IMR/IOAR</td>
<td>LJR</td>
<td>IMR</td>
</tr>
<tr>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Central Office</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X(1)</td>
</tr>
<tr>
<td></td>
<td>FHW</td>
<td></td>
<td>X(2)</td>
<td>X(2)</td>
</tr>
<tr>
<td>Applicant</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. For LJR’s not contained in FIHS 10-Year Cost Feasible Plan.
2. FHWA will not sign MLOUs, but will provide comment and concurrence
3. FHWA interchange approval requires both LJR/IMR and NEPA approval
The Interchange Handbook

- Provides guidance to meeting the State and Federal requirements (process, policies, technical standards, reporting requirements, etc.)
- Should be used by all applicants, Department, and the Turnpike Enterprise in the development and review of Interchange Proposals
- Situations may exist where the criteria and technical standards may not apply – application of engineering judgment is required
- Available online at http://www.dot.state.fl.us/planning/systems/sm/intjus/interchangehb/complete.pdf
Interchange Proposal Process

1. Development of a Project Study Design and Methodology Letter of Understanding (MLOU)
2. FDOT and FHWA review and approval of MLOU
3. Development of the Preliminary Interchange Proposal
4. Review of the Preliminary Interchange Proposal
5. Development of the Final Interchange Proposal
6. Interchange Proposal Processing and Approval Decision
7. Project implementation activities
Methodology Letter of Understanding (MLOU)

- Introduction – identify all parties involved, the type of interchange proposal, and interchange location
- Purpose and need for the project – identify the need for the project and the applicant’s purpose/ objectives
- Project schedule – anticipated proposal development and review schedule, and schedule of production activities consistent with the proposed funding and opening year
- Project location – include both graphic and written description
- Area of influence – include both graphic and written description
The Interchange Handbook (continued...)

- Analysis years – identify proposed opening year, interim year/s, and design year (consider analysis years of PD&E study, facility Master Plans and other plans)

- Analysis alternatives – include both graphic and written description of no-build, TSM alternative(s), and build alternative(s), if any alternative has been eliminated due to site conditions include a brief justification

<table>
<thead>
<tr>
<th>Table 9.1 Required Network Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Alternative</td>
</tr>
<tr>
<td>No Build Alternative</td>
</tr>
<tr>
<td>Build</td>
</tr>
<tr>
<td>Other Network and Interchange Improvements</td>
</tr>
<tr>
<td>Preferred</td>
</tr>
<tr>
<td>Other Overpass Underpass</td>
</tr>
</tbody>
</table>

| TSM Alternative | ✓ | ✓ | ○ | ○ | Based on feasibility of existing and opening year analyses, additional years may be required |

| Alternative Travel Modes | ✓ | ✓ | ○ | ○ | Based on feasibility of existing and opening year analyses, additional analysis may be required |

Legend:
- Required
○ May be required as determined by the DIRC and approval authorities
Data collection methodology and sources – consider different data types (land use, traffic, environmental, etc.)

Traffic factors – identify all traffic factors to be used with justification

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**Table 7.1 Potential Data Sources**

<table>
<thead>
<tr>
<th>Item</th>
<th>State</th>
<th>Regional</th>
<th>MPO</th>
<th>County</th>
<th>City</th>
<th>Expressway Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corridor Master Plan</td>
<td>P</td>
<td>S</td>
<td>S</td>
<td>P</td>
<td>S</td>
<td>P</td>
</tr>
<tr>
<td>Local Government Comprehensive Plan</td>
<td>N/A</td>
<td>S</td>
<td>S</td>
<td>P</td>
<td>P</td>
<td>N/A</td>
</tr>
<tr>
<td>Land Use/Transportation</td>
<td>P</td>
<td>S</td>
<td>P</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Amendment Transportation Plan</td>
<td>P</td>
<td>S</td>
<td>P</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>DRI/Development Orders</td>
<td>S</td>
<td>P</td>
<td>S</td>
<td>S</td>
<td>P</td>
<td>N/A</td>
</tr>
<tr>
<td>Improvement Plans (Work Programs/TIP)</td>
<td>P</td>
<td>N/A</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>Roadway Construction Plan</td>
<td>P</td>
<td>N/A</td>
<td>N/A</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>Design Standards</td>
<td>P</td>
<td>S</td>
<td>N/A</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>Local Development Policies</td>
<td>S</td>
<td>S</td>
<td>N/A</td>
<td>P</td>
<td>P</td>
<td>N/A</td>
</tr>
<tr>
<td>Traffic Counts</td>
<td>P</td>
<td>N/A</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>P</td>
</tr>
<tr>
<td>Traffic Factors</td>
<td>P</td>
<td>N/A</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Accident Data</td>
<td>P</td>
<td>N/A</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
</tbody>
</table>

**Legend:**
- P - Primary Source
- S - Secondary Source
- N/A - Not applicable

---

**Table 10.1 Acceptable Traffic Volume Factors**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Facility</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural Freeway</td>
<td>9.6% - 14.6%</td>
</tr>
<tr>
<td>K&lt;sub&gt;30&lt;/sub&gt;</td>
<td>Rural Arterial</td>
<td>9.4% - 15.8%</td>
</tr>
<tr>
<td></td>
<td>Urban Freeway</td>
<td>9.4% - 10.0%</td>
</tr>
<tr>
<td></td>
<td>Urban Arterial</td>
<td>9.2% - 11.5%</td>
</tr>
<tr>
<td>Directional Factor (D&lt;sub&gt;30&lt;/sub&gt;)</td>
<td>Rural Freeway</td>
<td>0.523 - 0.573</td>
</tr>
<tr>
<td></td>
<td>Rural Arterial</td>
<td>0.511 - 0.796</td>
</tr>
<tr>
<td></td>
<td>Urban Freeway</td>
<td>0.504 - 0.612</td>
</tr>
<tr>
<td></td>
<td>Urban Arterial</td>
<td>0.508 - 0.671</td>
</tr>
<tr>
<td>Peak-Hour Factor (PHF)</td>
<td>Rural - Uninterrupted Flow</td>
<td>0.95 - 0.95</td>
</tr>
<tr>
<td></td>
<td>Rural - Interrupted Flow</td>
<td>0.91 - 0.93</td>
</tr>
<tr>
<td></td>
<td>Urban - Uninterrupted Flow</td>
<td>0.95 - 0.95</td>
</tr>
<tr>
<td></td>
<td>Flow</td>
<td>0.88 - 0.90</td>
</tr>
<tr>
<td></td>
<td>Urban - Interrupted Flow</td>
<td>0.88 - 0.90</td>
</tr>
<tr>
<td>Daily Truck Percentages (T)</td>
<td>Rural</td>
<td>8.0% - 20.0%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>2.0% - 16.0%</td>
</tr>
<tr>
<td>Truck Percentages in the Design Hour (DHT)</td>
<td>Rural</td>
<td>4.0% - 10.0%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>1.0% - 8.0%</td>
</tr>
<tr>
<td>Bus and Recreational Vehicles (Rvs)</td>
<td>Based on observed values</td>
<td></td>
</tr>
</tbody>
</table>
Existing conditions – consider different aspects of the project area (traffic, physical, land use, environmental, social, natural, cultural, etc.)

Travel demand forecasting – include details of travel demand forecasting methodology (model to be used, validation/calibration efforts, historical trends analysis, growth rate development, development of future year project traffic, etc.)

Operational analysis procedures – include details of operational analysis methodology (include type of analysis – mainline capacity analysis, ramp analysis, queuing analysis, weave analysis, signalized intersection analysis, arterial analysis, crash analysis, etc.; use of specific software – HCS, Synchro, Corsim, etc.)

Consistency with Master Plans, LRTP, LGCP, and DRI applications – if the proposal is not included in any of these, steps to establish consistency should be developed

Environmental considerations – identify any known potential fatal environmental factors, flaws, etc.

Conceptual funding and construction schedule – identify already available or potential funding sources
The Interchange Handbook (continued...)

- Anticipated exceptions – any known exceptions to State/ Federal rules/ policies/ standards/ procedures should be identified (Common exceptions: Interchange spacing and connection/ median standards, AASHTO Design Criteria, FDOT Plans Preparation Manual, LOS Criteria)

- Consideration of other interchange proposals – identify other interchange proposals/ improvements in the study area and relationship to the subject project

- Public involvement – where public issues exist (optional at DIRC discretion)
Basis for approval and evaluation criteria – include basis for approval, evaluation criteria including acceptable LOS, etc. per the Project Study Design. FDOT LOS criteria from Rule 14-94 (supported by DCA Rule 9J-5) –

![Table]

Level of Service standards inside parentheses use lanes only when exclusive lanes.

**LOS Guidance for Review Purposes**

<table>
<thead>
<tr>
<th>Collector/Distributor, Merge/Diverge and Other Checkpoints</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>E</th>
<th>E</th>
<th>Maintain</th>
</tr>
</thead>
</table>

However, this criteria may not be acceptable to FHWA for the Interstate Highway System. FHWA policy for the Interstate Highway System requires that the LOS for the facility not be degraded from its current LOS. Coordination between DIRC and FHWA is required during the Project Study Design process to reach agreement on the LOS standard and mitigation measures.

Signature block – applicant, consultant (if any), DIRC, Central Office, FHWA
The Policy Resource Documents (July 2000) summarize existing statutes, policies, rules, and standards that apply to the interchange proposal process:

- PRD-1: FHWA Requirements & Guidelines
- PRD-2: FDOT Rules, Policies & Procedures
- PRD-3: Interchange Modification Requiring an IMR
- PRD-4: Consistency with Master Plans
- PRD-5: Consistency with the Statewide FIHS Plan
- PRD-6: Relationship to the PD&E Process
- PRD-7: Justification Requirements Applicability


For additional policy information, visit the State Transportation Policy Framework at http://www.dot.state.fl.us/planning/legislation/default.htm#federal
The Technical Resource Documents provide guidelines for the technical analysis and review of the interchange proposals:

- TRD-1: Department Engineering Standards
- TRD-2: Operational Standards, Measures of Effectiveness
- TRD-3: Analysis Years
- TRD-4: Area of Influence
- TRD-5: Identification of Alternatives
- TRD-6: Warrants for Overpasses, Interchanges, Interchange Modifications and Mainline Enhancements
- TRD-7: Data Collection
- TRD-8: Travel Demand Model Selection and Verification
- TRD-9: Travel Demand Forecasting
- TRD-10: Development of Design Traffic

Other Technical Resources

**Handbooks**

- Project Traffic Forecasting Handbook  

- Site Impact Handbook  
  [http://www.dot.state.fl.us/planning/systems/sm/siteimp/PDFs/site.pdf](http://www.dot.state.fl.us/planning/systems/sm/siteimp/PDFs/site.pdf)

- FHWA Urban Boundary and Federal Classification Handbook  

- Interchange Report  

- 2002 Quality/ Level of Service handbook available online at  
Other Technical Resources (continued...)

Other Technical Resources (continued...)

- FDOT ETDM Manual is available online at http://www.dot.state.fl.us/emo/pubs/etdm/etdmman.htm
- FDOT PD&E Manual is available online at http://www.dot.state.fl.us/emo/pubs/pdeman/pdeman.htm
- FDOT Sociocultural Effects Handbook is available online at http://www.dot.state.fl.us/emo/pubs/sce/sce.htm
Other Technical Resources (continued...)

Traffic Data

- The Florida Traffic Information (FTI) DVD contains information on AADT, historical counts, synopsis reports, traffic factors, etc. The Highway Data CD displays data contained in the FDOT Roadway Characteristics Inventory (RCI).
- Contact - Joey D. Gordon
  Supervisor, Traffic Data Quality Control
  FDOT Central Office
  Phone - 850 414 4738
  Email - joey.gordon@dot.state.fl.us

(http://www.dot.state.fl.us/planning/statistics/trafficdata/fticd.htm#contact)

- For crash data contact - Lula Bradwell
  Crash Records & Research Administrator (State Safety Office)
  Phone - 850 245 1500, E-mail - lula.bradwell@dot.state.fl.us
Other Technical Resources (continued...)

- FDOT Transportation Statistics Office (TranStat) also maintains a Roadway Characteristics Inventory (RCI) database, a GIS database, and other highway and traffic data - visit [http://www.dot.state.fl.us/planning/statistics/default.htm](http://www.dot.state.fl.us/planning/statistics/default.htm) for more information.
Other Technical Resources (continued...)

Traffic Tools

- For copies of latest Trends (V-02), Turns (V-02), and ESAL (V-02), Contact - Joey D. Gordon, Supervisor - Traffic Data Quality Control FDOT Central Office, Phone – (850) 414-4738 Fax – (850) 414-4878 Email - joey.gordon@dot.state.fl.us

- For District specific traffic tools (TMTTool, etc.) contact the respective Office
Travel Demand Forecasting

- FSUTMS Online – recently launched web portal for the Florida transportation modeling community. Visit [http://www.fsutmsonline.net/index.php](http://www.fsutmsonline.net/index.php) for model downloads, documentation, etc.
Other Technical Resources (continued…)

Operations Analysis

- The FHWA Toolbox is available online at http://ops.fhwa.dot.gov/trafficanalysistools/index.htm
- Visit the State Traffic Engineering and Operations Office online at (includes documents, research, contacts, etc.) http://www.dot.state.fl.us/TrafficOperations//Doc_Library/Doc_Library.htm
- The Department is working on a CORSIM Interchange and Freeway Modeling Handbook
Access Management

- Rule 14-97, F.A.C: state highway system access management classification system and standards
- Adopts 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 state highway system
- Available online at http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/1497.pdf
- FDOT Access Management CD Library

Gary Sokolow
Florida Department of Transportation
Phone – (850) 414-4912
E-mail - gary.sokolow@dot.state.fl.us

Table 1.1 Interchange Spacing Standards

<table>
<thead>
<tr>
<th>Area Type</th>
<th>Spacing *</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBD/CBD Fringe</td>
<td>1.6 km (1 Mile)</td>
</tr>
<tr>
<td>Urbanized Areas</td>
<td>3.0 km (2 Miles)</td>
</tr>
<tr>
<td>Urban Areas /</td>
<td>5.0 km (3 Miles).</td>
</tr>
<tr>
<td>Transitioning Urbanized Areas</td>
<td></td>
</tr>
<tr>
<td>Rural Areas</td>
<td>10.0 km (6 Miles)</td>
</tr>
</tbody>
</table>

  b 14-97-003 - Centerline to centerline.

Table 1.2 Driveway and Median Opening Spacing Standard

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Crossroad Posted Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than or equal to 45 MPH</td>
</tr>
<tr>
<td>Distance from Driveway to Ramp*</td>
<td>130 m (440 Ft.)</td>
</tr>
<tr>
<td>Distance to Median Opening</td>
<td>400 m (1320 Ft.)</td>
</tr>
</tbody>
</table>
Training Information

- Training on the administrative and technical review process is available on request to the Central Office. Technical training is also available in cooperation with FHWA. Contact – Pete Tyndall, Systems Planning Office (Central Office), Phone – (850) 414-4913, Fax – (850) 414-4876
- National Highway Institute Training – Course Title: Fundamentals of Planning, Design and Approval of Interchange Improvements to the Interstate System (Course Number: FHWA-NHI-380073)  
  http://www.nhi.fhwa.dot.gov/training/brows_catalog.aspx
- FHWA Training (through NHI) –  http://ops.fhwa.dot.gov/trafficanalysistools/training_workshop.htm
- FDOT access management training –  
  http://www.dot.state.fl.us/planning/systems/sm/accman/accmantrn.pdf
- Register for FSUTMS training online at  
  http://www.fsutmsonline.net/modeling_training.aspx
- For training on HCM/ HCS, and Quality/Level of Service Analysis through FDOT, contact – Martin Guttenplan, Systems Planning Office (Central Office), Phone – (850) 414-4906
- Also visit http://mctrans.ce.ufl.edu/featured/TSIS/ for training information
Statewide DIRC/ FHWA contacts

- Central Office – Pete.Tyndall@dot.state.fl.us (Pete)
- District One – Amarilys.Perez@dot.state.fl.us (Amy)
- District Two – Dennis.Lord@dot.state.fl.us
- District Three – John.Golden@dot.state.fl.us (Scott)
- District Four – Gustavo.Schmidt@dot.state.fl.us
- District Five – Mark.Robinson@dot.state.fl.us
- District Six – Phil.Steinmiller@dot.state.fl.us
- District Seven – Waddah.Farah@dot.state.fl.us
- Turnpike Enterprise – Patricia.Palumbo@dot.state.fl.us
- FHWA Program Operations Engineer (Florida Division) – Leslie.Mccarthy@fhwa.dot.gov

For FDOT District Planning contacts visit: http://www.dot.state.fl.us/planning/contactinfo/distplan.htm#d1
For FHWA Florida Division contacts visit: http://www.fhwa.dot.gov/fldiv/teams.htm
Contacts (continued...)

FDOT District Five Contacts

- FDOT District Five DIRC Chairman
  Mark Robinson ● (386) 943-5000 ● mark.robinson@dot.state.fl.us

- FDOT District Five Intermodal Systems Supervisor
  John Zielinski ● (407) 482-7868 ● john.zielinski@dot.state.fl.us

- FHWA Area Engineer for FDOT District Five
  Manu Chacko ● (813) 240-3245 ● manu.chacko@fhwa.dot.gov
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