

Access Management

Resource Guidebook



October 2006



Florida Department of Transportation District Five



Access Management

Resource Guidebook

*Presented to FDOT District Five
Intermodal Systems Development Unit*

October 3, 2006



Purpose of the Guidebook

- Provide an introductory overview of general access management principles.
- Discuss access management standards and regulations in Florida.
- Develop an access management resource inventory.

After going through this guidebook, the students / professionals will understand the basic concepts of access management and will know where to find related information for their purposes.

Target Audience

- Entry level engineering and planning professionals dealing with access management issues in planning, design, project management, right-of-way, safety and traffic operations.
- This guidebook will be useful not only to FDOT staff but also to professionals with other public agencies, consulting firms, developers, and business owners.



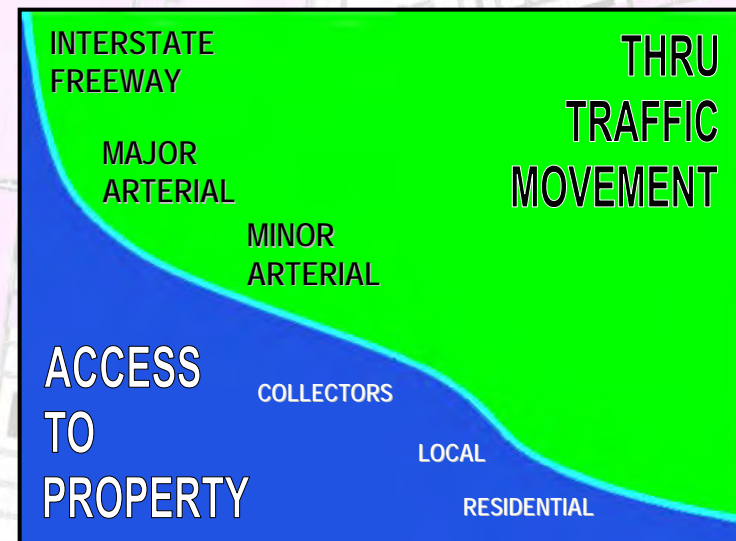
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What is "Access Management"

- Access management is a comprehensive approach to the management and regulation of driveways, medians, median openings, traffic signals, and freeway interchanges. The purpose of access management is to provide access to land development while limiting and separating traffic conflict points in order to increase safety and efficiency of the transportation system.

It also ensures balance between accessibility and mobility while increasing the capacity of a roadway system.



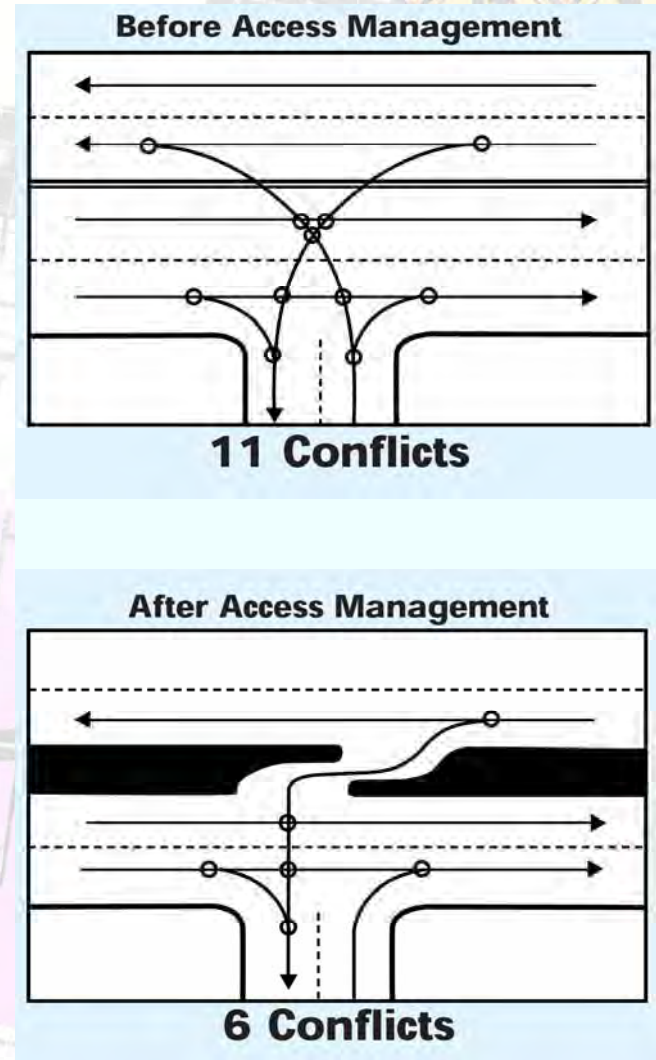
What is "Access Management" (continued..)

Access Management
Reduces Traffic/
Multimodal Conflict Points

Driver Survey

78% felt safer
84% felt traffic moved better

Drivers surveyed along five
improved corridors in
Central Florida FDOT District 5
(Ivey Harris & Walls - 1995)



Access Management Principles

- Provide a specialized roadway system.
- Limit direct access to major roadways (*major roadways serving regional traffic need more access control to ensure mobility*).
- Promote intersection hierarchy (*interchange, signalized intersection, non-signalized intersection*) and preserve the functional area of intersections and interchanges (*access connections too close to intersections can cause crashes and congestion*).
- Minimize conflict points and ensure safe distance between conflict points to allow drivers adequate response time.
- Separate turning lane traffic from through lane traffic to ensure efficiency of the transportation system.
- Provide a connected circulation system.

Access Management - National Perspective

- National efforts to integrate access management with planning, policy and design processes – Transportation Research Board (TRB) committee ADA70.
- TRB access management manual covers access management principles, policies, techniques, and steps in developing access management programs.
- “Documentation of the benefits of access control has been available since 1902” – P. Demosthenes, 1999, *access management policies: an historical perspective*.
- Research on effects of access management –
 - Add nontraversable median = $\geq 55\%$ reduction in total crashes, $\geq 30\%$ decrease in delay, \geq increase in capacity.
 - Add a left-turn bay = 25% to 50% reduction in crashes on 4-lane roads, up to 75% reduction in total crashes at unsignalized access, 25% increase in capacity.
- Available online for order at:
http://gulliver.trb.org/news/blurb_detail.asp?id=1427 .



Access Management - National Perspective (continued..)

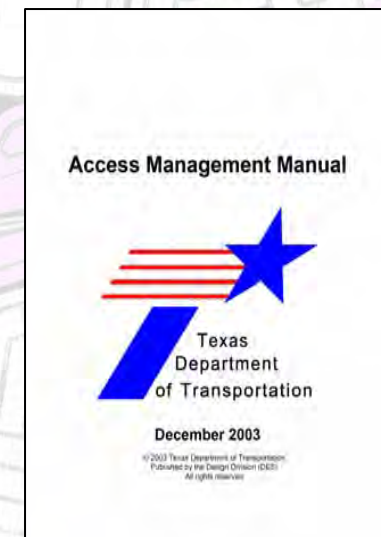
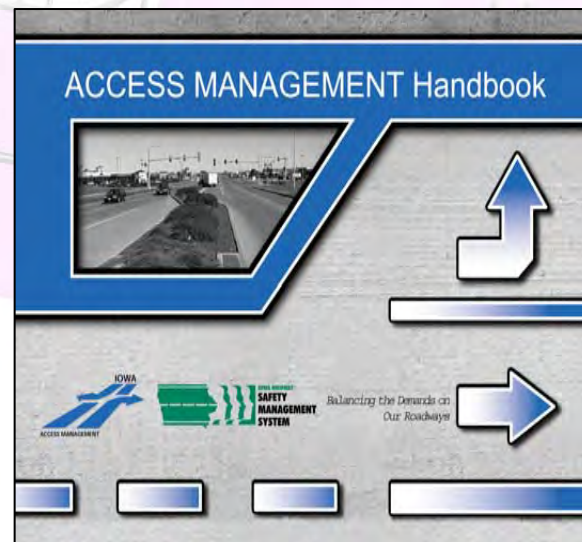
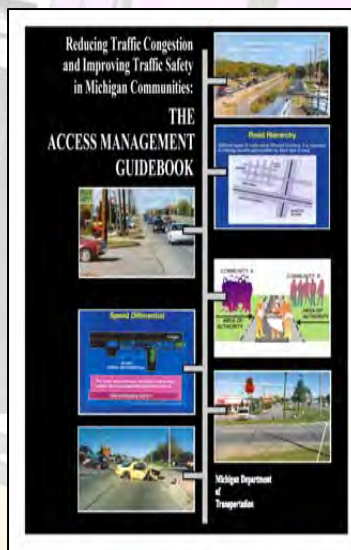
- TRB maintains an online resource database (*available at <http://www.accessmanagement.gov/resources.html>*).
- 2004 Access Management DVD/CD Library – contains a wealth of access management documents and resources. To obtain a free copy of the DVD/CD contact Neil Spiller at neil.spiller@fhwa.dot.gov.

The screenshot shows the website for the Access Management DVD Library. At the top, there is a navigation bar with "Library", "Overview", and "Conferences" tabs, and a "Home" link. Below the navigation bar, there is a main content area with several buttons: "Library", "DVD Video", "Tour LIBRARY", and "www.accessmanagement.gov". A large central banner features the text "THE SIXTH NATIONAL CONFERENCE ON ACCESS MANAGEMENT" with the dates "August 29 - September 1, 2004" and the location "Kansas City, Missouri". Below the banner is a large blue and yellow arrow graphic pointing right, with the text "CLICK HERE FOR PROCEEDINGS".

The cover of NCHRP Report 348 is black with white text. At the top, it says "National Cooperative Highway Research Program". Below that, in a white box, is "NCHRP Report 348". The main title is "Access Management Guidelines for Activity Centers". At the bottom, it says "Transportation Research Board" and "National Research Council".

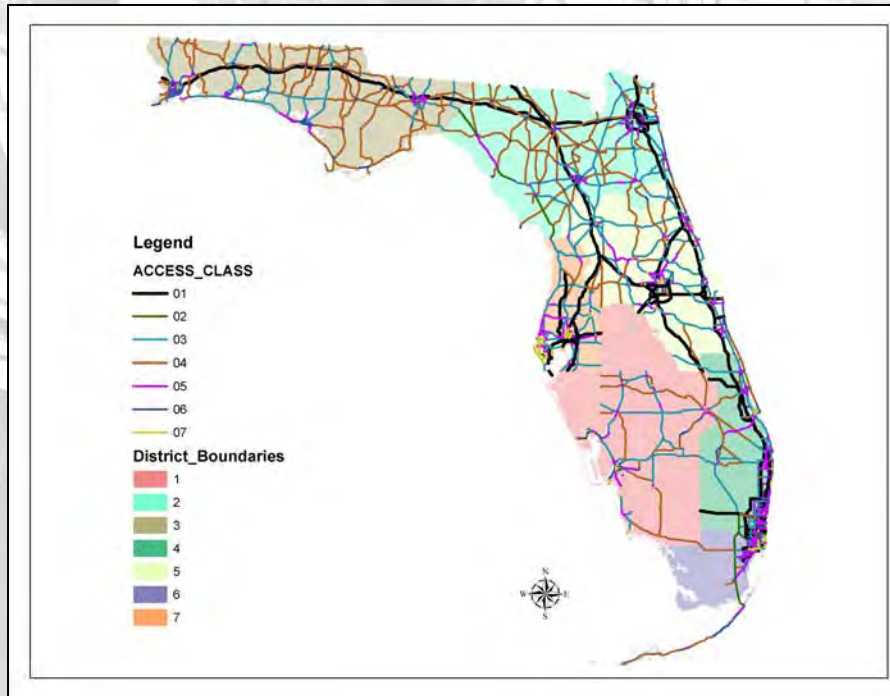
Access Management - State Initiatives

- Oregon Department of Transportation Access Management Manual available at http://www.oregon.gov/ODOT/HWY/ACCESSMGT/accessmanagementmanual.shtml#Manual_Revisions
- 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



Access Management in the State of Florida

- Florida Department of Transportation uses access management as a systems planning tool (*FDOT access management resources are available online at <http://www.dot.state.fl.us/planning/systems/sm/accman/>*).



- Access class GIS data is available online at <http://www.dot.state.fl.us/planning/statistics/GIS/default.htm>.
- Access class data is also available on the Transportation Automated Information Management System (TAIMS - an application available through FDOT intranet) and the FDOT Highway Data CD/ Roadway Characteristics Inventory (RCI).

Driveway Permits - Rule 14-96, F.A.C.

- Required before the initiation of the connection construction.
- This rule does not apply to limited access facilities.
- Voluntary pre-application for a category C, D, E, F, or G connection (*advisory in nature, free service*).
- For categories C through G, additional information on trip generation, site plan, transportation facility and neighboring connection information, and connection location and design information is required.
- Permit applications are processed/ handled by the FDOT District Operations and Maintenance Office.



Driveway Permits - Rule 14-96, F.A.C. (continued..)

Connection Category and Application Fee

DESCRIPTION/PROJECTED AVERAGE VEHICLE TRIPS PER DAY OF SITE	APPLICATION FEE
Category A - Uses to 20 VTPD	\$ 50
Category B - Uses with 21 - 600 VTPD	\$ 250
Category C - Uses with 601 - 1,200 VTPD	\$1,000
Category D - Uses with 1,201 - 4,000 VTPD	\$2,000
Category E - Uses with 4,001 - 10,000 VTPD	\$3,000
Category F - Uses with 10,001 - 30,000 VTPD	\$4,000
Category G - Uses with 30,000 + VTPD	\$5,000

- Available online at <http://www.dot.state.fl.us/planning/systems/sm/aceman/pdfs/1496.pdf>

Driveway / Connection Application Form

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**DRIVEWAY/CONNECTION APPLICATION
 FOR ALL CATEGORIES**

850-040-15
 SYSTEMS PLANNING
 04/05
 Page 1 of 3

OFFICE USE ONLY

Application Number: _____ Received By: _____
FOOT STAFF (TYPE OR PRINT)

Category: _____ Date: _____

Section/Mile Post: _____ State Road: _____

Section/Mile Post: _____ State Road: _____

Instructions - To Applicant

- Contact the Department of Transportation to determine what plans and other documents you are required to submit with your application.
- Complete this form (some questions may not apply to you) and attach all necessary documents and submit it to the Department of Transportation.
- For help with this form contact your local Maintenance or District Office.
 - Or visit our website at www.dot.state.fl.us/onestoppermitting for the contact person and phone number in your area.
 - You may also email - driveways@dot.state.fl.us
 - Or call your District or local Florida Department of Transportation Office and ask for Driveway Permits.

Please print or type

APPLICANT:

Check one:
 Owner Lessee Contract to Purchase

Name: _____

Responsible Officer or Person: _____

If the Applicant is a Company or Organization, Name: _____

Address: _____

City, State: _____

Zip: _____ Phone: _____ Fax: _____

Email: _____

LAND OWNER: (If not applicant)

Name: _____

If the Applicant is a Company or Organization, Name: _____

Address: _____

City, State: _____

Zip: _____ Phone: _____ Fax: _____

Email: _____

850-040-15
 SYSTEMS PLANNING
 04/05
 Page 2 of 3

AUTHORIZED REPRESENTATIVE: If specified by Applicant to handle, represent, sign, and file the application -
 NOTE: A notarized letter of authorization must be provided with the Application

Name: _____

Company Name: _____

Address: _____

City, State: _____

Zip: _____ Phone: _____ Fax: _____

Email: _____

Address of property to be served by permit (if known):

If address is not known, provide distance from nearest intersecting public street (such as, 500 feet south of Main St.)

Check here if you are requesting a
 new driveway temporary driveway modification to existing driveway safety upgrade

Does the property owner own or have any interests in any adjacent property?
 No Yes, if yes - please describe:

Are there other existing or dedicated public streets, roads, highways or access easements bordering or within the property?
 No Yes, if yes - list them on your plans and indicate the proposed and existing access points.

Local Government Development Review or Approval Information:

Local Government Contact: _____

Name: _____

Government Agency: _____

Phone #: _____



Driveway / Connection Application Form (continued..)

855-043-15
SYSTEMS PLANNING
04/05
Page 3 of 3

If you are requesting commercial or industrial access, please indicate the types and number of businesses and provide the floor area square footage of each. Use additional sheets if necessary.

Business (Name and Type)	Square Footage	Business (Name and Type)	Square Footage
1.		3.	
2.		4.	

If you are requesting a residential development access, what is the type (single family, apartment, townhouse) and number of units?

Type	Number of Units

Provide an estimate of the daily traffic volume anticipated for the entire property at build out. (An individual single family home, duplex, or quad-plex is not required to complete this section.)

Daily Traffic Estimate = _____ (Use the latest Institute of Transportation Engineers (ITE) Trip Generation Report)

If you used the ITE Trip Generation Report, provide the land use code, independent variable, and reference page number.

ITE Land Use Code	Independent Variable	ITE report page number reference

Check with the project engineer to determine which of the following documents are required to complete the review of your application.

<p>Plans should be 11" x 17" (scale 1" = 50')</p> <p>Note: No plans larger than 24" x 36" will be accepted</p> <p>a) Highway and driveway plan profile</p> <p>b) Drainage plan showing impact to the highway right-of-way</p> <p>c) Map and letters detailing utility locations before and after development in and along the right of way</p> <p>d) Subdivision, zoning, or development plans</p> <p>e) Property map indicating other access, bordering roads and streets</p>	<p>f) Proposed access design</p> <p>g) Parcel and ownership maps including easements (Boundary Survey)</p> <p>h) Signing and striping plans</p> <p>i) Traffic Control/Maintenance of Traffic plan</p> <p>j) Proof of liability Insurance</p> <p>k) Traffic Impact Study</p> <p>l) Cross section of roadway every 100' if exclusive turn lanes are required</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Important Notices to Applicant Before Signing Application

The Department Reserves The Right To Change Traffic Features And Devices In Right Of Way At Any Time
Proposed traffic control features and devices in the right of way, such as median openings and other traffic control devices, are not part of the connection(s) to be authorized by a connection permit. The Department reserves the right to change these features and devices in the future in order to promote safety in the right of way or efficient traffic operations on the highway. Expenditure by the applicant of monies for installation or maintenance of such features or devices shall not create any interest in the maintenance of such features or devices.

Significant Changes in Property Use Must Undergo Further Review
If an access permit is issued to you it will state the terms and conditions for its use. Significant changes in the use as defined in Section 336.182(3), Florida Statutes, of the permitted access not consistent with the terms and conditions listed on the permit may be considered a violation of the permit.

All Information I Give is Accurate
I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief, such information is true, complete and accurate.

Starting Work On The Driveway Connection After I Get My Permit Means I Accept All The Conditions In My Permit.
I will not begin work on the connection until I receive my Permit and I understand all the conditions of the Permit. When I begin work on the connection, I am accepting all conditions listed in my Permit.

Applicant Name (Printed): _____
Applicant's signature: _____ Date: _____

ITE trip generation information

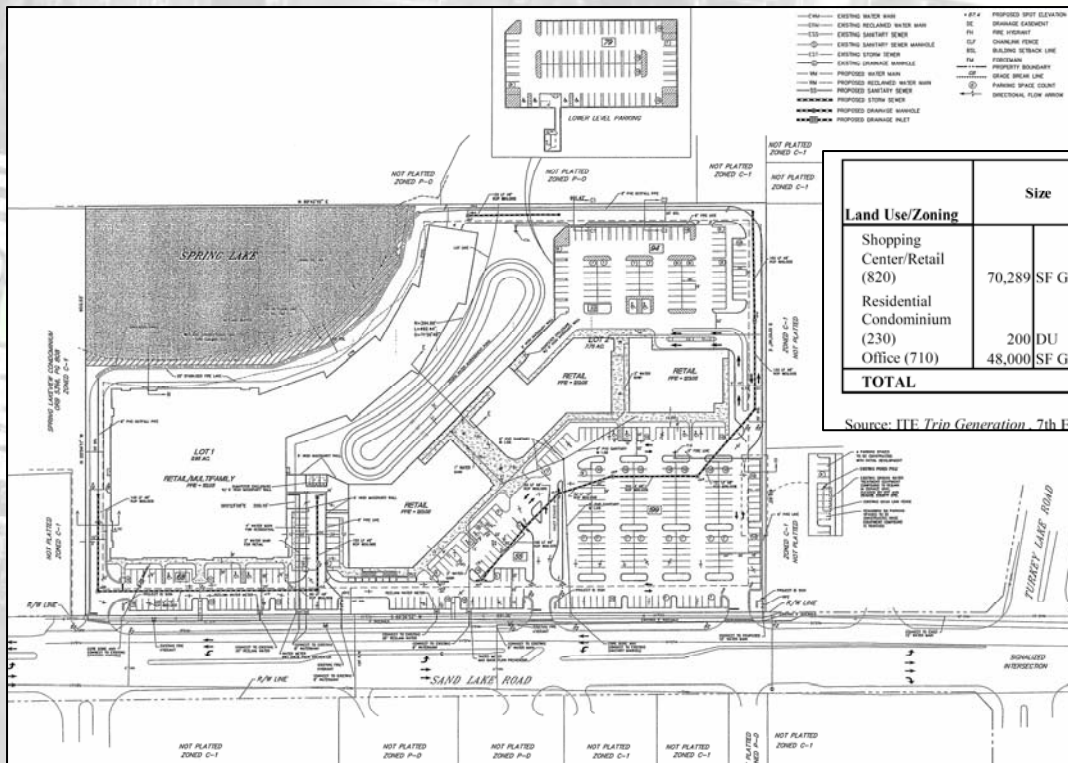
- The application form is available online at

<http://formserver.dot.state.fl.us/MiscRepository/forms/85004015.pdf>

Site Plan & Trip Generation

Example

Property on Sand Lake Road – Site Plan & Daily Trip Generation



Land Use/Zoning	Size	Trip Rate	Total Trips	Trip Reductions		Net External Trips
				Internal Capture	Pass-By Trips	
		Daily	Daily	Daily	Daily	Daily
Shopping Center/Retail (820)	70,289 SF GLA	$Ln(T) = 0.65 Ln(X) + 5.83$	5,400	799	1,836	2,765
Residential Condominium (230)	200 DU	5.86	1,172	173	0	999
Office (710)	48,000 SF GFA	0.01101	528	78	0	450
TOTAL						4,214

Source: ITE Trip Generation, 7th Ed.

Trip Generation Software by Microtrans, Inc. available online at <http://www.tripgeneration.com/index.htm>

- Spreadsheet for calculating trip generation using ITE rates/ equations (7th Edition) is available at <http://www.dot.state.fl.us/planning/systems/sm/accom/default.htm#pubs>

Access Management Standards - Rule 14-97, F.A.C.

- Rules of the Department of Transportation, chapter 14-97, 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.
- The standards are basis for connection permitting and the planning and development of FDOT construction projects.
- Seven classification access management systems are used for all roads on the state highway system.

Access Spacing Standards

Access Class	Segment Location	Applicable Interchange Spacing Standard
1	AREA TYPE 1 CBD & CBD FRINGE FOR CITIES IN URBANIZED AREAS	1 MILE
1	AREA TYPE 2 EXISTING URBANIZED AREAS OTHER THAN AREA TYPE 1	2 MILES
1	AREA TYPE 3 TRANSITIONING URBANIZED AREAS AND URBAN AREAS OTHER THAN AREA TYPE 1 OR 2.	3 MILES
1	AREA TYPE 4 RURAL AREAS	6 MILES

■ Class 1 spacing

■ Most restrictive (*class 2*) to least restrictive (*class 7*)

ACCESS CLASS	FACILITY DESIGN FEATURES	MINIMUM CONNECTION SPACING	MINIMUM MEDIAN OPENING SPACING		MINIMUM SIGNAL SPACING
			DIRECTIONAL	FULL	
	(MEDIAN TREATMENT AND ACCESS ROADS)	(FEET)	(FEET)	(MILE)	(MILE)
2	Restrictive with Service Roads	1320/660	1320'	0.5	0.5
3	Restrictive	660/440	1320'	0.5	0.5
4	Non-Restrictive	660/440	N/A	N/A	0.5
5	Restrictive	440/245	660'	0.5/0.25	0.5/0.25
6	Non-Restrictive	440/245	N/A	N/A	0.25
7	Both	125	330'	0.125	0.25

(Greater than 45 MPH/ Less than or = 45 MPH)

Interim Standards, Modification of Classification

- Interim standards to be applied to the State Highway System prior to classification.

INTERIM STANDARDS

Posted Speed	Minimum Connection Spacing	Minimum Median Opening (Full)	Minimum Median Opening (Directional)	Minimum Signal Spacing
(MPH)	(Feet)	(Miles)	(Feet)	(Miles)
35 or less Special Case	125	0.125	330	0.25
35 or less	245	0.25	660	0.25
36 - 45	440	0.25	660	0.25
Over 45	660	0.50	1320	0.25

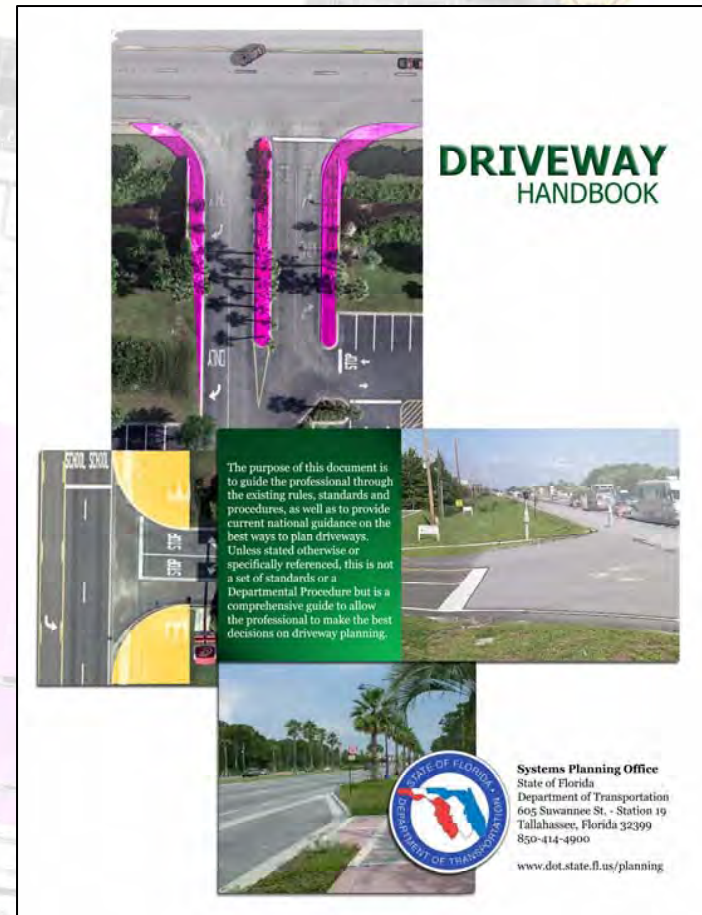
- Classification of a roadway is reviewed and modified if required.
- Available online at <http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/1497.pdf>.

Median Opening & Access Management Decision Process

- Guidance for staff as well as for the District Access Management Teams
- Three Principles – traffic safety, traffic efficiency and highway functional integrity
- Decision process should account for the “big picture” (*impacts on community, impacts on business, etc.*) in addition to the engineering considerations
- Deviations shall not be considered until the feasible options for meeting access management standards are analyzed
- Higher the access management class, the fewer deviations from the standards should be allowed (*access class 1 is least flexible*)
- Deviations from the standards should show an overriding benefit in safety or traffic operations or be shown not to degrade traffic safety, traffic efficiency, or highway functional integrity
- Deviation from the standards shall be made under the direct supervision of a Department Professional Engineer knowledgeable in access management and traffic operations
- More information available online at <http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625010021.pdf>

Overview of the FDOT Driveway Handbook

- Introduction to driveways
- Connection radius and flare
- Driveway width
- Driveway grade
- Driveway channelization
- Driveway length
- Right turn lanes
- Sight distance at driveways
- Driveway location
- Driveways and the Pedestrian environment
- Available online at <http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/drivewayHB.pdf>



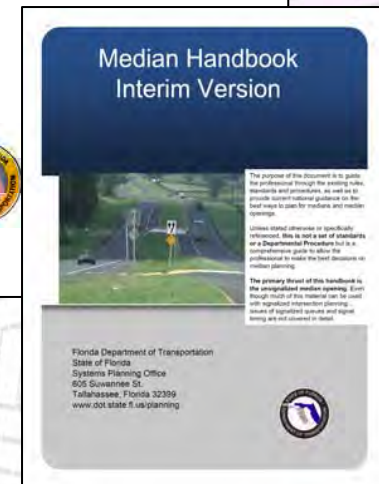
Overview of the FDOT Median Handbook

- Introduction and overview of medians and their benefits
- Understanding medians and median opening placement
- Sight distance as it relates to medians and median opening design
- Median width
- Special u-turn considerations
- Where the turning vehicle goes
- Available online at

http://www.accessmanagement.gov/pdf/FL_Median_Handbook.pdf

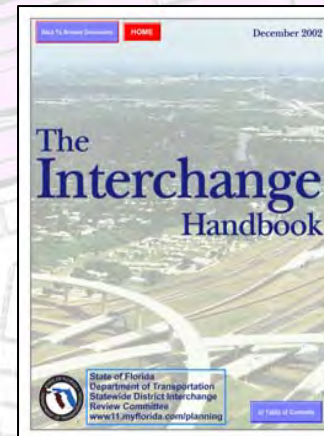
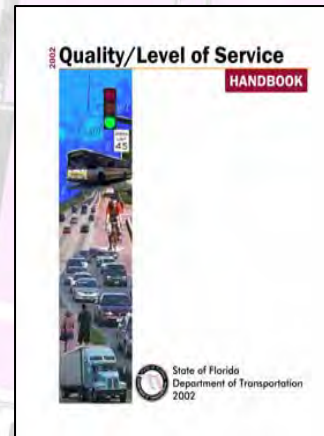
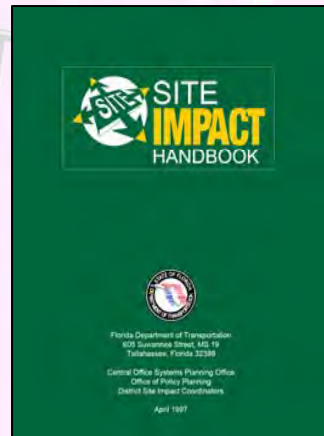
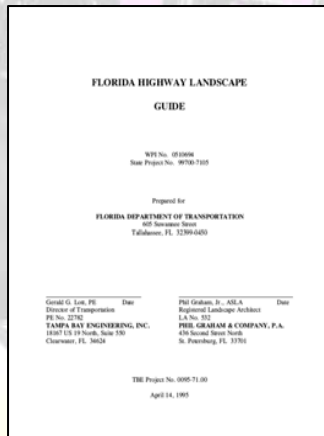
- A new interim 2006 version available at

<http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/mhb06b.pdf>



Other Resources and Contacts

- Florida Highway Landscape Guide available online at <http://www.accessmanagement.gov/pdf/landscap.pdf>
- Site Impact Handbook available online at <http://www.dot.state.fl.us/planning/systems/sm/siteimp/PDFs/site.pdf>
- 2002 Quality/ Level of Service handbook available online at <http://www.dot.state.fl.us/planning/systems/sm/los/pdfs/QLOS2002.pdf>
- The Interchange Handbook is available online at <http://www.dot.state.fl.us/planning/systems/sm/intjus/interchangehb/complete.pdf>



Other Resources & Contacts (continued..)

- FDOT Access Management CD Library
Gary Sokolow
Florida Department of Transportation
Mail Station 19, 605 Suwannee Street
Tallahassee, Florida 32399-0450
Telephone: (850) 414-4912 SunCom: 994-4912
Fax: (850) 414-4876 gary.sokolow@dot.state.fl.us
- Driveway Permit Contacts by Geographic Region/ County -
http://www.dot.state.fl.us/onestoppermitting/access_type.htm
- Center for Urban Transportation Research - University of South Florida -
http://www.cutr.usf.edu/research/access_m/intro.htm
Kristine M. Williams, AICP, Senior Research Associate
Center for Urban Transportation Research
(813) 974-9807 krwillia@cutr.eng.usf.edu
- Iowa Access Management Awareness Project
<http://www.ctre.iastate.edu/research/access/>
- National Access Management Site - <http://www.accessmanagement.gov>

Training Information

1. Register for FDOT access management training
<http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/training.pdf>
2. Online recorded training
 - a. The Principles of Access Management – Product of the National Access Management Committee – Transportation Research Committee – *(Uses Flash)*
<http://www.accessmanagement.gov/10principles.html>
 - b. Site Traffic Studies: Top Pitfalls and their solutions – Presenter: Gary Sokolow Florida DOT – Tallahassee, Florida *(Uses Flash)*
http://www.accessmanagement.gov/AM2004/AM0420_Sokolow/Export/index.html
 - c. Top Ten Public Involvement Problems – Presenter: David Gwynn HNTB – Orlando, Florida *(Uses Flash)*
<http://www.accessmanagement.gov/AM2004/Top10/index.html>
 - d. Safety of U-turns - Presenter: Ingrid Potts Midwest Research Institute - Kansas City, Missouri *(Uses Flash)*
http://www.accessmanagement.gov/AM2004/AM0416b_Potts/Export/index.html
 - e. Introduction to Access Management – Kristine Williams – Center for Urban Transportation Research – Tampa, Florida *(Uses Windows Media Player)*
<http://www.nctr.usf.edu/clearinghouse/netconference/access082003/accessmanagement.wmv>

Contact Information

For Further Information Related to this Resource Guidebook,
Please Contact:

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