

ACCESS MANAGEMENT

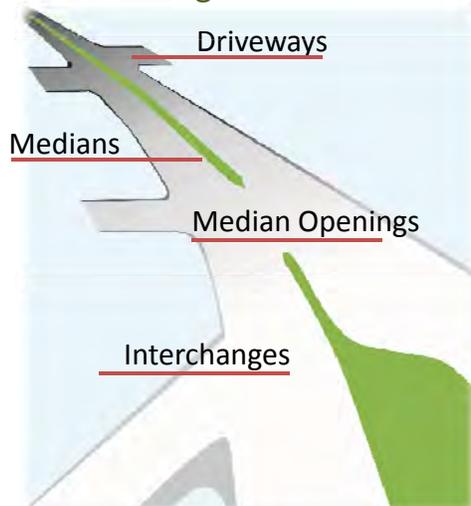
BALANCING ACCESS AND MOBILITY

An overview of access management along with a review of the free and useful products we have available to FDOT staff, other transportation professionals, and the public. Also how to get, and use the Driveway Information Guide, Median Handbook, as well as other valuable materials.



Access Management

is the careful planning of the location, type and design of access



**Access Management is a more than
controlling driveways**

Connectivity and a Support System for the Arterial

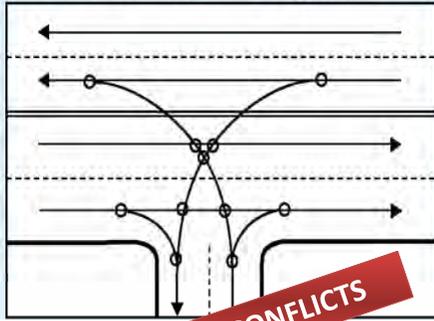


Why do we care?



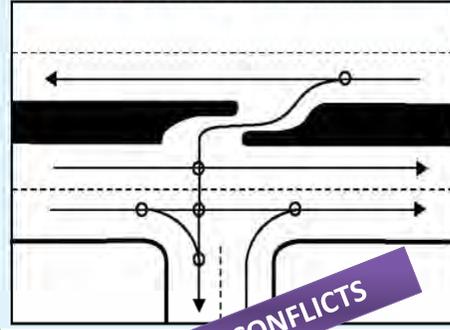
More **conflicts** means more **crashes**

Before Access Management



MORE CONFLICTS

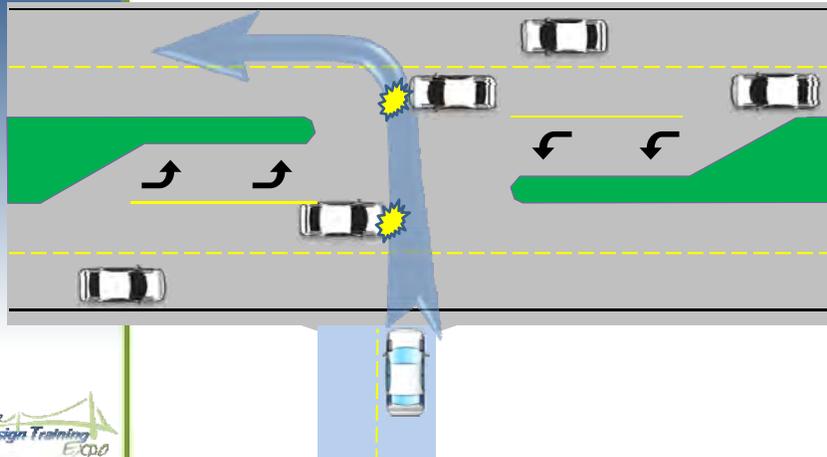
After Access Management



LESS CONFLICTS

We didn't just make this stuff up
Safety is the Prime Reason for Access Management

Left turns out are the most dangerous low-speed driving maneuver you can make from an unsignaled driveway



Left Turn Driver is in Most Danger



Dangers of Pedestrians & Two-Way Left Turn Lanes



On Wide Florida Roads, Running for Dear Life

The New York Times

August 16, 2011



A pedestrian walked across Semoran Boulevard in Orlando last week. Some cars and trucks whiz by on the six-lane road at 60 miles per hour, 15 m.p.h. above the speed limit.

Chip Litherland for The New York Times

By LIZETTE ALVAREZ
Published: August 15, 2011

ORLANDO, Fla. — As any pedestrian in Florida knows, walking in this car-obsessed state can be as tranquil as golfing in a lightning storm. Sidewalks are viewed as perks, not necessities. Crosswalks are disliked and dishonored. And many drivers maniacally speed up when they see someone crossing the street.

- RECOMMEND
- TWITTER
- SIGN IN TO MAIL
- PRINT
- SINGLE PAGE
- REPRINTS

A pedestrian bolts across Semoran Boulevard in Orlando, Fla.

Chip Litherland for The New York Times

**NO
MEDIANS**
(in either image)

Then there are the long, ever widening
arterial roads — these major

Apalachee Parkway Before



Pedestrian

Source : Debbie Danton



Apalachee Parkway



Source : Debbie Danton



Same Road Today



12



What is Good Access?

Old Definition of
Good Access



How Did Our Growth Affect Customer Traffic?

- Long queues
- Congestion
- Peak hour spread
- More trouble getting out of business
- Small properties are at a disadvantage

This queue is blocking street traffic and additional customers

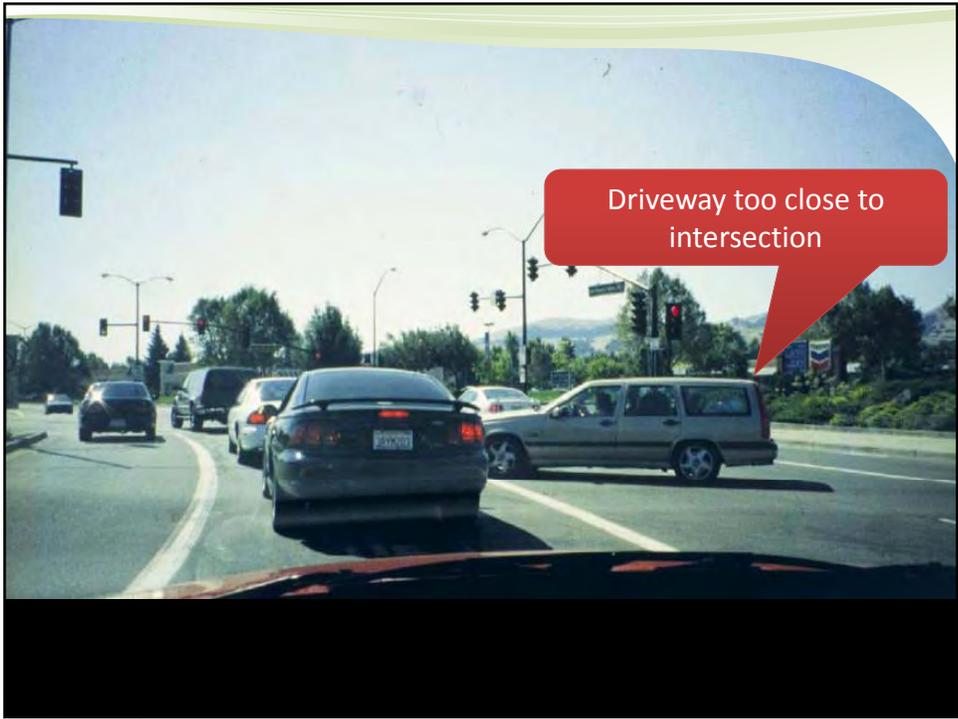
2012 Design Training expo

Morning Traffic Conditions

Evening Traffic Conditions

It's conditions around the driveway, not the lack of driveways

Source: Kittelson & Associates, Inc.





Businesses want median erased from road plan

Opponents say a median on State Road 44 would cause too many access problems for area stores.

By GEORGE WILKENS
Tampa Staff Writer

LOCATED — It will be a copy of weeks before state Department of Transportation

without a median, to accommodate turning. Tender said.

Charles B. Cleasby of CRC Fence & Co., who argued against a median, said he opposed the median, but the median was not removed when the highway was widened from County Road 881 through to

Cleasby said that when DOT announced plans to include the raised median, it was to make sure to collect the money before

Green Cove 'road wars' heating up

By Bill Broome
Staff Writer

GREEN COVE SPRINGS — The battle lines have been drawn in the "Road War" between the Green Cove Springs City Council and a number of local business people whose establishments are located along the city's main road, Orange Avenue (U.S. 17).

Up against the 6-inch wall

Median saves lives, costs customers

LEAVING MEMORIAL DRIVE: Medians along the corridor strip built to reduce accidents that make Memorial Drive and Bay Road. Drivers of cars and trucks along the highway are often forced to stop at the 6-inch high concrete wall when they are stuck.

Medians along Memorial Drive are a big help in reducing accidents and saving lives. But they are also a big help in saving lives. Medians along Memorial Drive are a big help in reducing accidents and saving lives. But they are also a big help in saving lives.

Group claims victory in median battle

Transportation planners recommend project redesign

By Dennis Thompson Jr.
FLORIDA TODAY

Business owners and residents along South Patrick Drive won a way by U-turning to reach shops

DESOTO PKWY. Atlantic Ocean Indian

Do Access Management
Projects
Harm
Business?



Businesses fail at no higher rate
on roadways with new access
management improvements

*Study of Business Turnover
Median reconstruction projects in Orlando metro area*

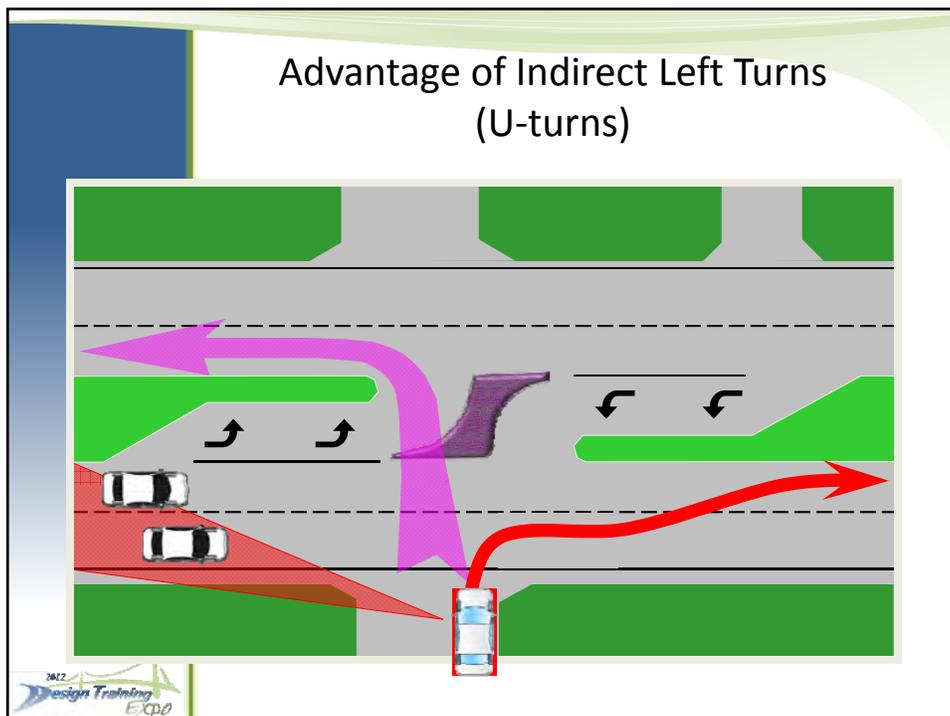
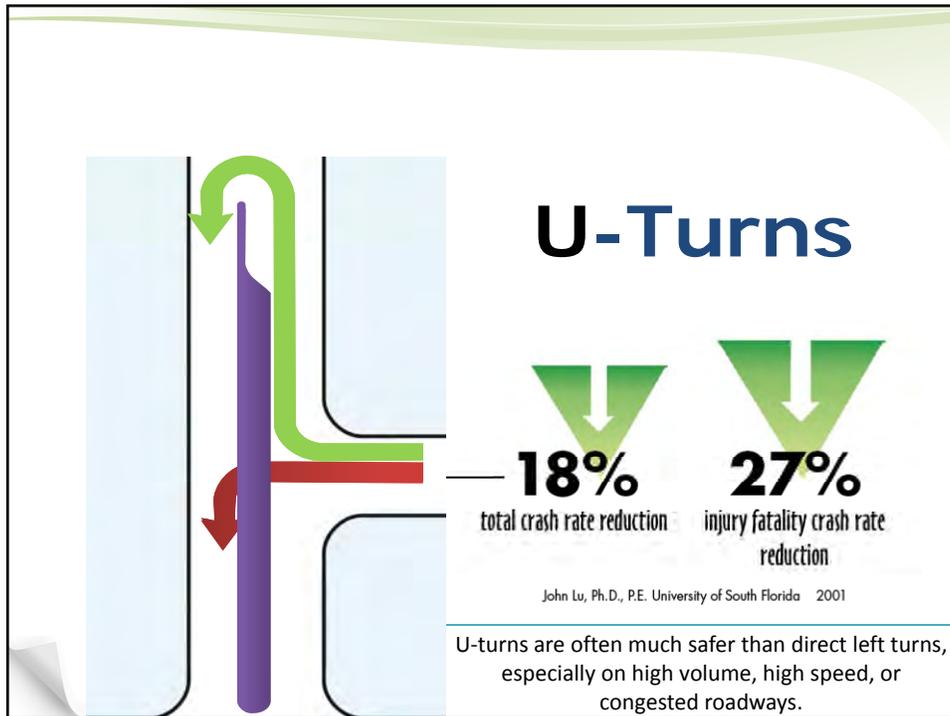
2012 Design Training Expo

SOURCE: Ivey, Harris and Walls along with David Gwynn, PE, TEI Engineers & Planners

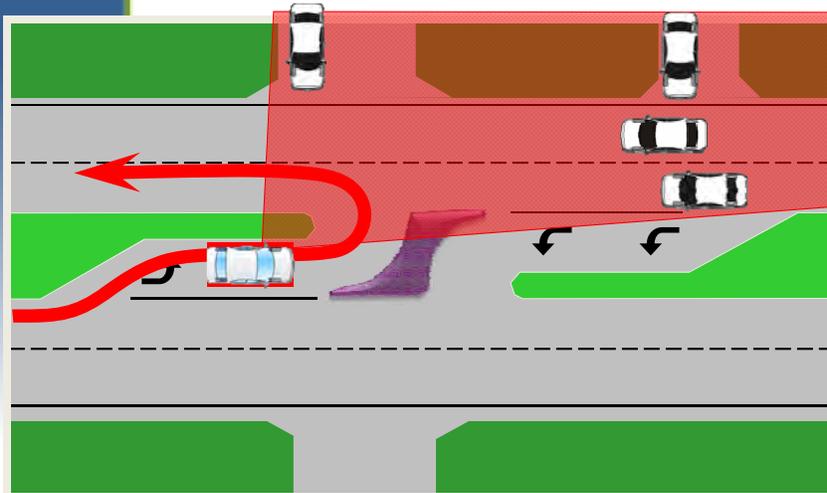
U-turns are controversial at
public meetings ...

*U-Turns are Safe and
Effective!*



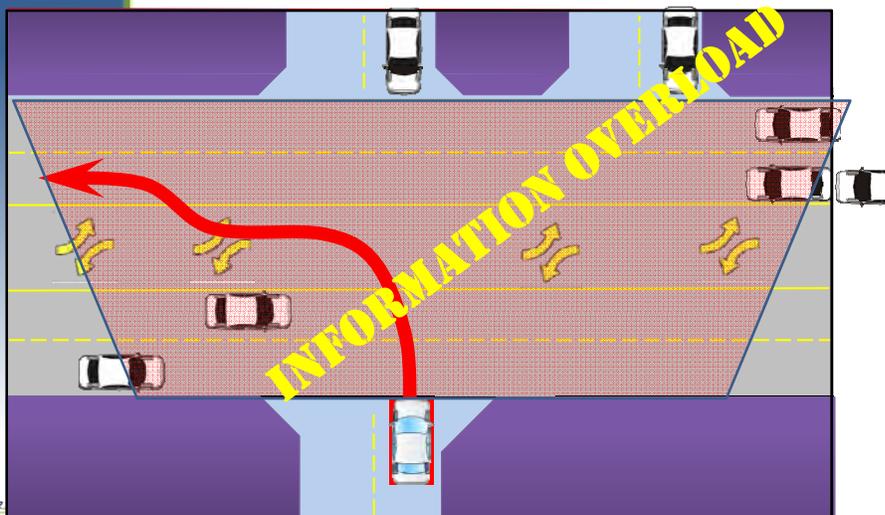


Advantage of Indirect Left Turns (U-turns)



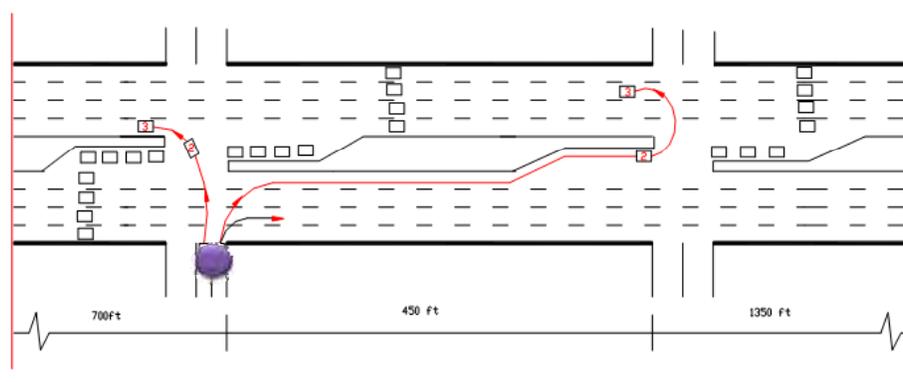
2012
Design Training
Exp

Disadvantage of Direct Left Turns in 2 Way Left Turn Lanes



2012
Exp

Safety Evaluation of Left Turns vs. Right Turn Plus U-turns



Operational Study



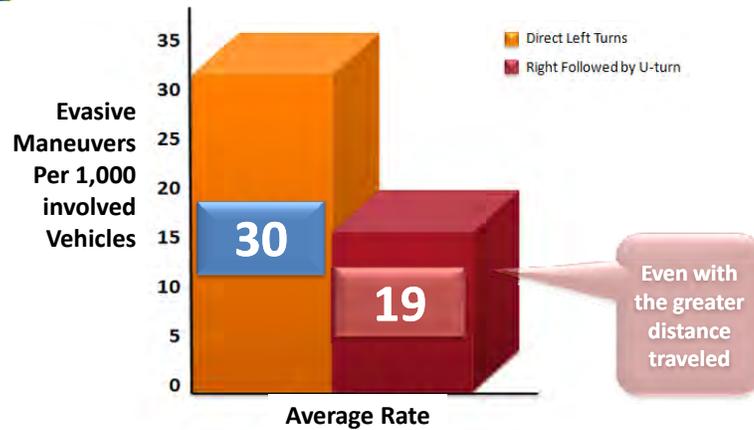
Data Collection Equipment

Over 300 hours of video

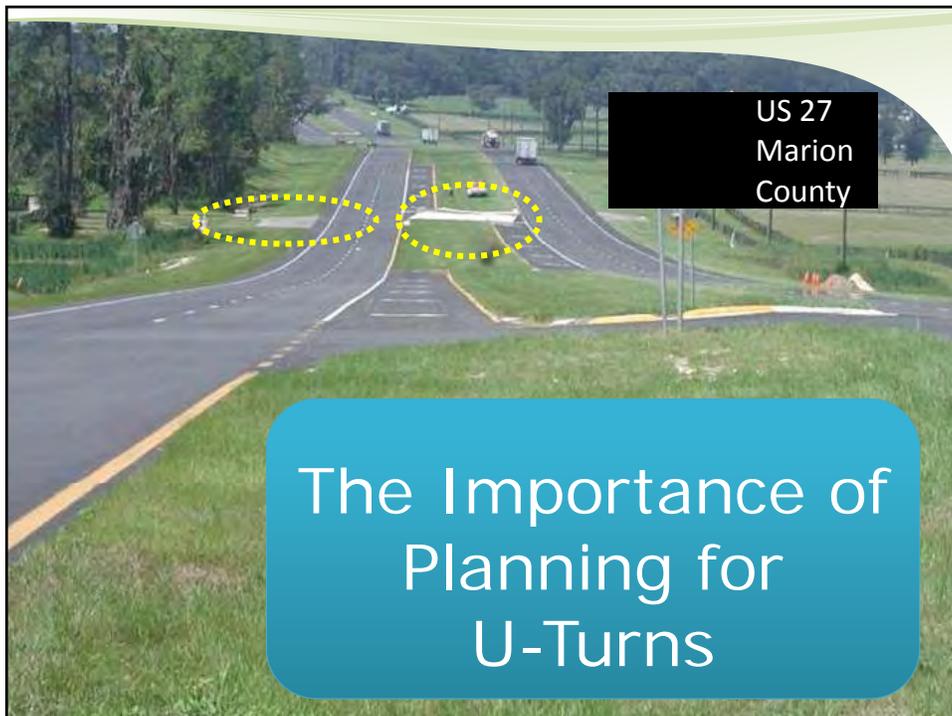
Eight sites in Tampa Bay area

Actual analysis of evasive maneuvers (Conflicts)

Evasive Maneuvers Comparing Direct Lefts vs. Right Turn followed by U Turn

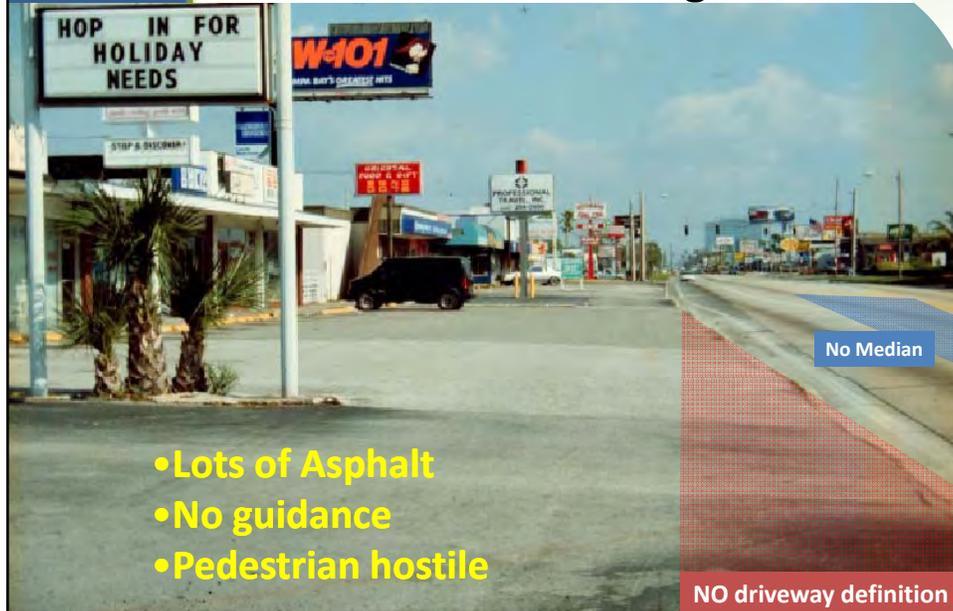


University of South Florida - 2001





Poor Access Management



Good Access Management



September 2, 2011
 All Rights Reserved
 Home | Business Partners | Employment | Programs | Projects | Related Links | Research/Statistics | Travel Information

[Access Management](#) | [Congestion Management](#) | [Mobility Review Guide](#) | [Interchange Justification](#) | [Highway Capacity/Point of Service](#) | [Site Impact Analysis](#) | [Control Development](#)

Access Management

One of the most important responsibilities of the Florida Department of Transportation is to ensure that the design of each state road **properly balances access and mobility**. Access management is used to provide this very important balance by the careful planning of the location, design and operation of driveways, median openings, interchanges and street connections. The **purpose** of access management is to provide access to land development in a manner that preserves the safety and efficiency of the transportation system.



Do You Need a Driveway Application?

[Driveway Permit Contacts in Your County](#)

- Contact information for various Permit Types including Access, Drainage, Utility, Building Moving, Road Closure, Banner, Highway Landscaping/Vegetation Management, Rest Area and general Use Permits.

[Driveway Permit Forms](#)

- FDOT Forms separated by Office for various needs. This specific link is for the Systems Planning Office Forms. Specifically, here is where you will find all the driveway application and permit forms.

[Access Management Information](#)

[The Median Handbook](#)

www.dot.state.fl.us/planning/systems/sm/acman/

www.dot.state.fl.us/planning/systems/sm/acman/

Access Management Information

- The Median Handbook**
 Guides the professional through existing rules, standards and procedures as well as provides **national guidance on the best ways to plan for medians and median openings.**
- Driveway Information Guide 2008**
 Guides the professional through existing rules, standards and current accepted practice to assist in making better decisions for driveway placement and design.
- Access Management Brochure**
 Answering your questions about access management: balancing access and mobility.
- Driveway Permits**
 Chapter 14-96: Information on State Highway Systems Connection Permits (Updated 1/23/2003).
- Driveway Application Form**
 Driveway/Connection Application for all categories
- Access Management Standards**
 Chapter 14-97: Information on State Highway Systems Access Management Classification System and Standards (Updated 10/5/2010)
- Trip Generation Spreadsheet**
 A spreadsheet for calculating trip generation for the most common uses using the 8th Edition ITE Rates. Calculates daily and PM Peak hour directional trips.

www.dot.state.fl.us/planning/systems/sm/acman/



Brochure for our Work with Public



<http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/am2006brochure.pdf>

Question and Answer Format

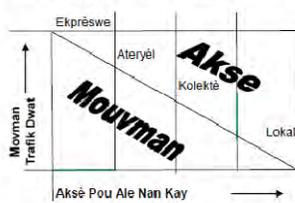
<p style="text-align: center; font-size: 2em; color: #4F81BD;">CONFLICTS</p> <p>Does FDOT just think this stuff up?</p> <p>Many business and property owners have asked us this question. The answer is no. The standards developed by FDOT are based on research done around the world for the last 40 years. Much of this research involved studying actual locations, many in Florida, where different access management strategies have been used. The studies evaluated the impacts of different access management treatments on crashes, congestion, and even business performance. The standards used by FDOT are thought to provide the optimal balance between access and mobility, and consider the characteristics of different types of roadways.</p> <p>How does Access Management improve safety?</p> <p>By reducing conflicts.</p> <p>Conflict points are locations along a roadway where two vehicles' paths can legally cross. At a four-way intersection there are as many as 20 conflict points. Each conflict point is a location where a crash can occur. A basic principle of access management is to limit the number of conflict points along a roadway by limiting the number of driveways and median openings and restricting certain movements at some median openings. Drivers can be overwhelmed by conflict points in close proximity to one another.</p> <div style="text-align: center;"> <p>More Conflicts</p> </div>	<p style="text-align: center; font-size: 2em; color: #4F81BD;">VALUE</p> <p>What will happen if access management is not implemented?</p> <p>Businesses can be hurt by congested, high collision roadways near their entrance.</p> <p>When safety and capacity decrease, one of the ways to fix the problem is to add lanes. Although a roadway may eventually need to be widened, good access management practices can delay the need to widen the road for several years.</p> <p>In cases where roadways cannot be widened, good access management will help reduce congestion. Congestion results in driver frustration and also discourages customers from using the road, since most customers try to avoid unsafe or congested roadways whenever possible.</p> <div style="text-align: center;"> </div> <p>Does access management keep customers away?</p> <p>No, access management does not impact the demand for goods and services.</p> <p>Studies have found that "destination" businesses (doctors, specialty retail stores, service-oriented businesses) are not affected by access management modifications. Businesses with both destination and business centers have shown that good access management</p>
--	--

Brochures in Spanish and Haitian Creole

Jesyon Aksè



Diferan Wout Genyen Diferan Wol



Translation by: **Jacques Defrant**



Manejo de Accesos



Más puntos de acceso = Más accidentes



Translation by: **Cesar A. Toro**

For these: Contact gary.sokolow@dot.state.fl.us

Some of Our Other Materials

Driveway Information Guide

FLORIDA DEPARTMENT OF TRANSPORTATION 2008

The purpose of this document is to guide the professional through the existing rules, standards and current accepted practices, the background behind the guidelines is also provided.

Unless stated otherwise or referenced this is not a set of Department Standards but is a comprehensive guide to assist the professional in making better decisions for driveway placement and design.



Median Handbook Interim Version



The purpose of this document is to guide the professional through the existing rules, standards and practices, we seek to provide current national guidance on the best ways to plan for medians and median openings.

Unless stated otherwise or explicitly referenced, this is not a set of standards or a Department Procedure, but is a comprehensive guide to allow the professional to make the best decisions on median opening.

The primary thrust of this handbook is the unorganized median opening. Even though much of the material can be used with organized intersection planning, issues of signalized openings and signal timing are not covered in detail.

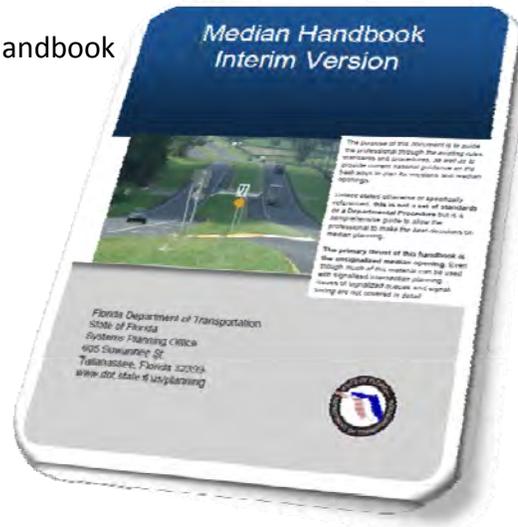
Florida Department of Transportation
State of Florida
Systems Planning Office
605 Suwannee St.
Tallahassee, Florida 32399
www.dot.state.fl.us/planning



<http://www.dot.state.fl.us/planning/systems/sm/aceman/>

Guidance for Staff, Developers, and Consultants

- The Median Handbook



www.dot.state.fl.us/planning/systems/sm/acman/



Median Handbook



INTRODUCTION

1.1 Medians and their Importance for safety

Why do we use medians?

-  Vehicular Safety — to prevent crashes caused by head-on and crossover traffic, headlight glare and traffic turning left.
-  Pedestrian Safety — to provide a refuge for pedestrians crossing the highway.
-  Vehicular Efficiency — to remove turning traffic from the main travel lanes.

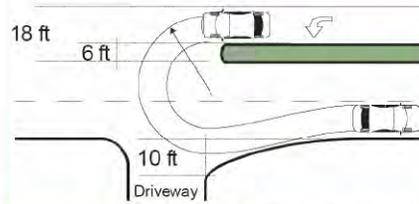


Median Handbook

MEDIAN HANDBOOK 

Special U-Turn Considerations

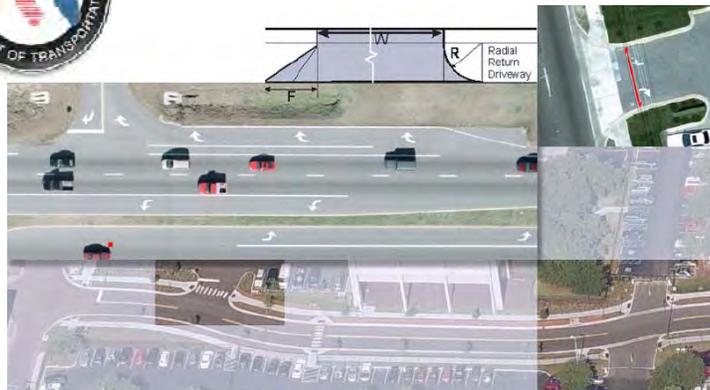
5



5.1



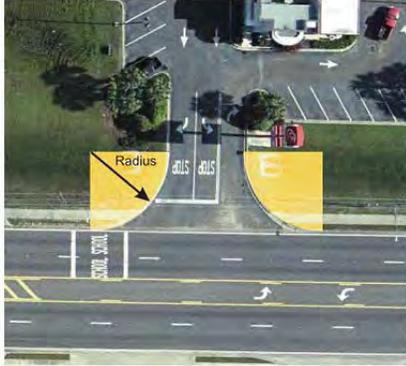
Driveway Information Guide



<http://www.dot.state.fl.us/planning/systems/sm/accom/pdfs/driveway2008.pdf>

Connection Radius and Flare

2



CONNECTION RADIUS AND FLARE

Driveways and the Pedestrian Environment

10



DRIVEWAYS AND THE PEDESTRIAN ENVIRONMENT

10.1
THE PEDESTRIAN AND THE DRIVEWAY ENVIRONMENT

10.1

THE PEDESTRIAN AND THE DRIVEWAY ENVIRONMENT

Almost all access management designs and operational strategies impact pedestrians and bicyclists. Where vehicles cross significant pedestrian traffic or bicycle facilities, the design should accommodate vehicles at lower speeds. The following strategies promote pedestrian and bicycle travel and safety.

Some general principles of accommodating pedestrians and the driveway are:

- Minimizing higher speed vehicle/pedestrian conflicts
- Preventing driveway slopes from encroaching into the



Driveways and the Pedestrian Environment

10



DRIVEWAYS AND THE PEDESTRIAN ENVIRONMENT

10.1
THE PEDESTRIAN AND THE DRIVEWAY ENVIRONMENT

10.1

THE PEDESTRIAN AND THE DRIVEWAY ENVIRONMENT

Almost all access management designs and operational strategies impact pedestrians and bicyclists. Where vehicles cross significant pedestrian traffic or bicycle facilities, the design should accommodate vehicles at lower speeds. The following strategies promote pedestrian and bicycle travel and safety.

Some general principles of accommodating pedestrians and the driveway are:

- Minimizing higher speed vehicle/pedestrian conflicts
- Preventing driveway slopes from encroaching into the



Driveways are for Pedestrians Too



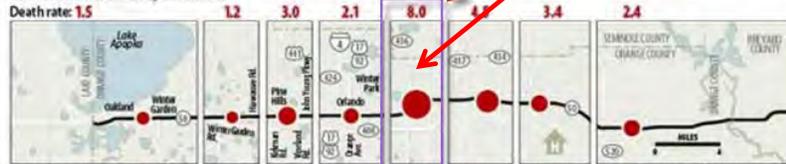
Orlando Sentinel Article 2004

Deadliest stretches of Colonial Drive

Orange County's S.R. 50, or Colonial Drive, is one of the nation's deadliest roads, claiming 80 lives since the start of 2001. The most deaths have occurred along a 2.5-mile section between the Orlando city limits and S.R. 417.

WHAT IS THE DEATH RATE?

Highway-safety experts compare the number of deaths on a road with the road's length and the volume of traffic it carries. That gives them a death rate—a calculation of traffic deaths per 100 million miles driven by all vehicles.



SOURCES: Sentinel research, Florida Department of Transportation, National Highway Traffic Safety Administration, Florida Highway Patrol, Winter Garden police, Ocoee police, Orlando police. DANA FASANO/ORLANDO SENTINEL



Medians Might Have helped Prevent Some of These Deaths by Protecting left turns and Pedestrians

Subsection 5 Activity Leading to Death			
Name	Age	Crash date	Accident description
23. Mireya Maria Velez	60	10/16/01	Driving east, tried to turn left, struck by westbound car.
24. Tracee Lanay Badgett	21	1/20/03	Driving west, struck eastbound car that tried to turn left.
25. Victor Resendes	3	1/20/03	Passenger in eastbound car that tried to turn left, struck by westbound car.
26. Madeline Rivera	30	1/20/03	Passenger in westbound car that struck eastbound car that tried to turn left.
27. Griselda Rodriguez	15	1/20/03	Passenger in eastbound car that tried to turn left, struck by westbound car.
28. Felix A. Aguilar Trevino	22	1/20/03	Passenger in eastbound car that tried to turn left, struck by westbound car.
29. Alvin Serrano	37	7/24/02	Driving east, tried to turn right, left roadway, struck a tree.
30. Charles Alexander	15	10/1/02	Struck by car while walking across to south side.
31. Byron J. Williams	24	10/19/03	Driving west, struck by eastbound truck that tried to turn left.
32. Charles F. Woods	59	8/11/01	Struck by car while walking across to south side.
33. Mary G. Cudd	73	5/2/03	Driving east, struck by westbound car forced across median by truck turning left.
34. Arthur Zamorano	31	10/26/02	Driving motorcycle west, struck by southbound truck.
35. Jayson Lee Echevarria	23	6/30/04	Driving motorcycle west, struck car that tried to turn left.
36. Yull Alejandro Toro	28	6/30/04	Driving motorcycle west, struck car that tried to turn left.
37. Ronald Lee Alford	36	12/16/02	Struck by car while walking across to north side.
38. William Ehart	35	3/11/03	Struck by car while walking across to south side.
39. Richard L. Williams	27	12/1/02	Struck by car while walking across to south side.
40. Michael Duane Larson	37	10/9/01	Struck by car while walking across to south side.
41. Bernice Falk	90	11/7/03	Struck by car while walking across to south side.
42. Unidentified	na	4/18/01	Struck by car while walking across to south side.
43. Paul Frank Wadman	55	8/17/01	Struck by unknown vehicle while walking across to north side.
44. Dany Toribio	23	12/2/02	Stopped eastbound for red light, struck from behind by eastbound car.
45. Marissa Irene Herzer	21	1/25/03	Waiting for southbound red light, struck by eastbound car that left roadway.
46. Robert John Vale	21	1/25/03	Passenger at southbound red light, struck by eastbound car that left roadway.
47. Christopher D. Brown	21	6/16/02	Passenger on eastbound motorcycle, struck by westbound truck making U-turn.
48. Cathy A. Selje	45	10/23/02	Struck by car while walking across to north side.
49. Cathy Elaine Sproule	21	4/28/01	Driving east, struck by westbound car that crossed median.
50. Roxane Whitmore	15	11/3/04	Passenger in eastbound car that turned left, struck by westbound car.

Subsection 5 Improved 2010



FDOT Systems Planning Office has now begun a comprehensive Before and After study of many corridors around the state. The study is being conducted by Florida International University and should be complete by November 2012.

Contact Information

- Gary Sokolow** -

Florida DOT - Systems
Planning

605 Suwannee St. # 19

Tallahassee, Florida 32399

- 850-414 4912

gary.sokolow@dot.state.fl.us

<http://www.dot.state.fl.us/planning/systems/sm/accman/default.shtm>

Give death a holiday - drive safe, sober and buckled up.

