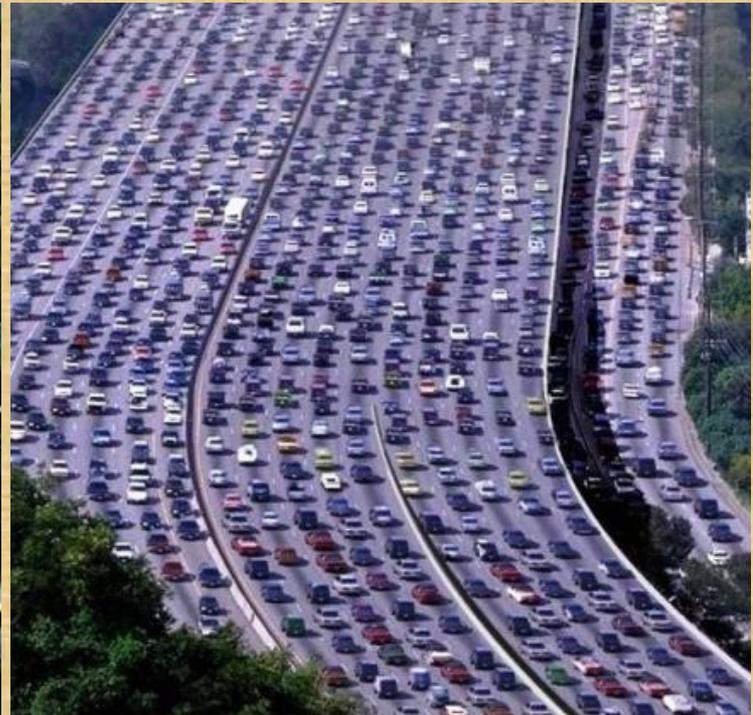




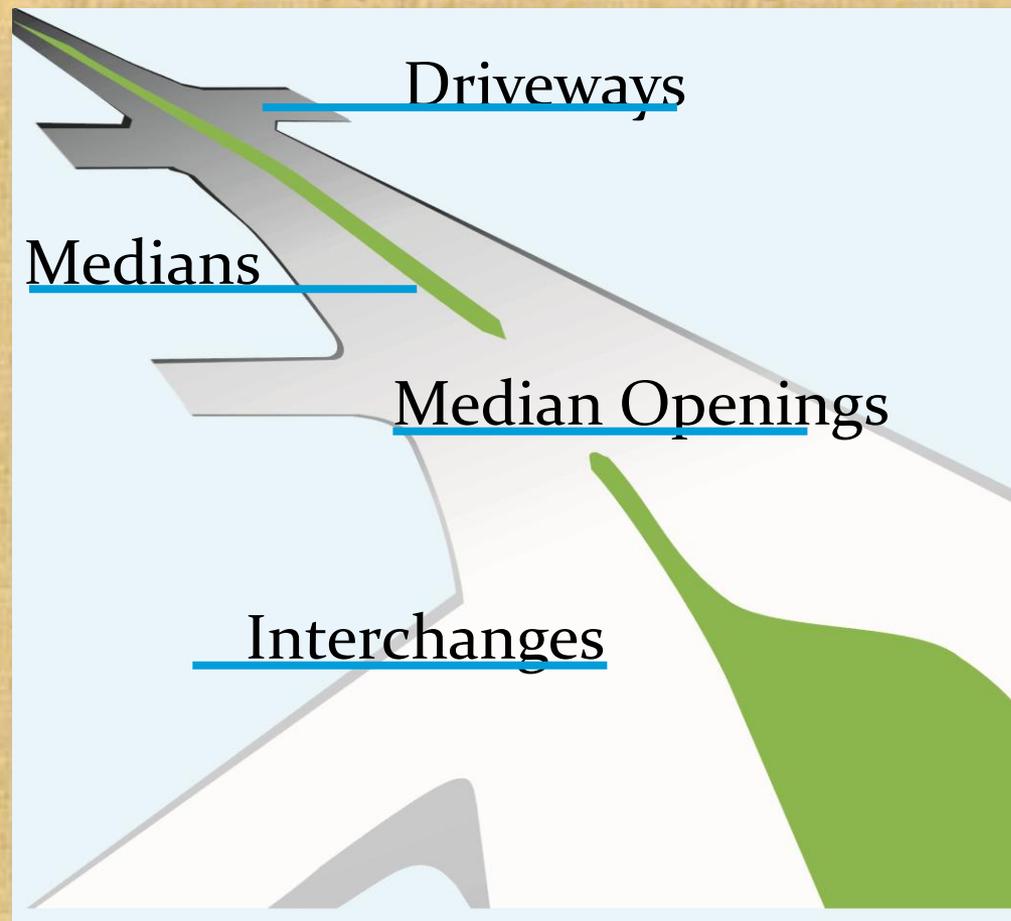
THE DISTRICT FOUR APPROACH TO ACCESS MANAGEMENT



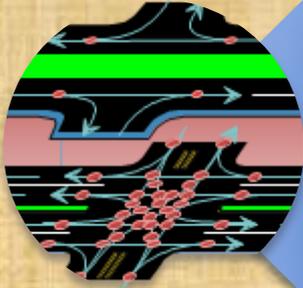
By
Geysa Y. Sosa
October 16, 2012

Defining Access Management

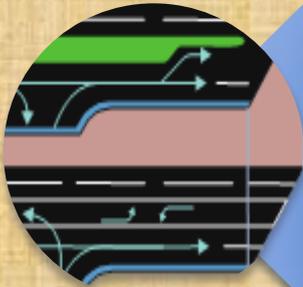
Access management is the careful planning of the location, type and design of access.



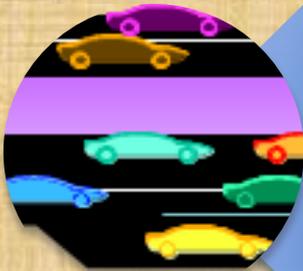
Access Management Definitions



What are **Conflict Points**?

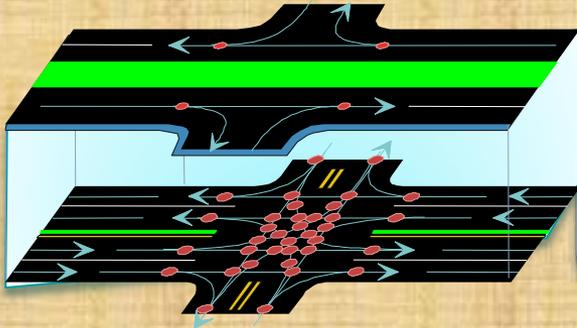


What are **Directional Median Openings**?

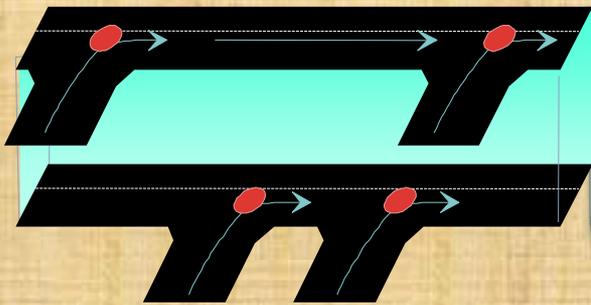


What is Access Management **Classification**?

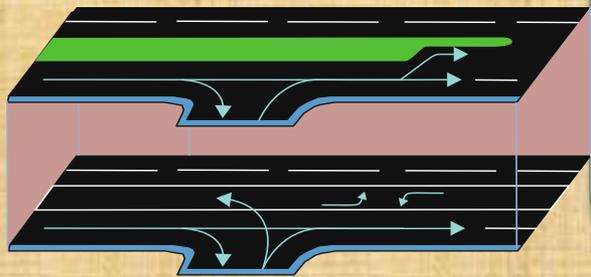
What Are The Principles of Access Management?



Limit the number of conflict points for all modes



Separate the conflict points for all modes

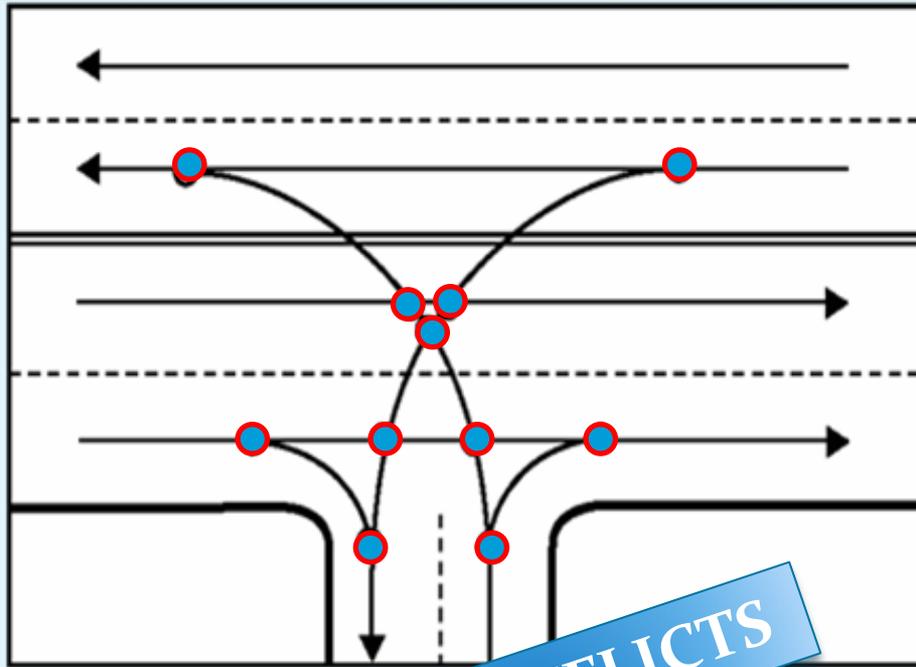


Provide reasonable access at each property

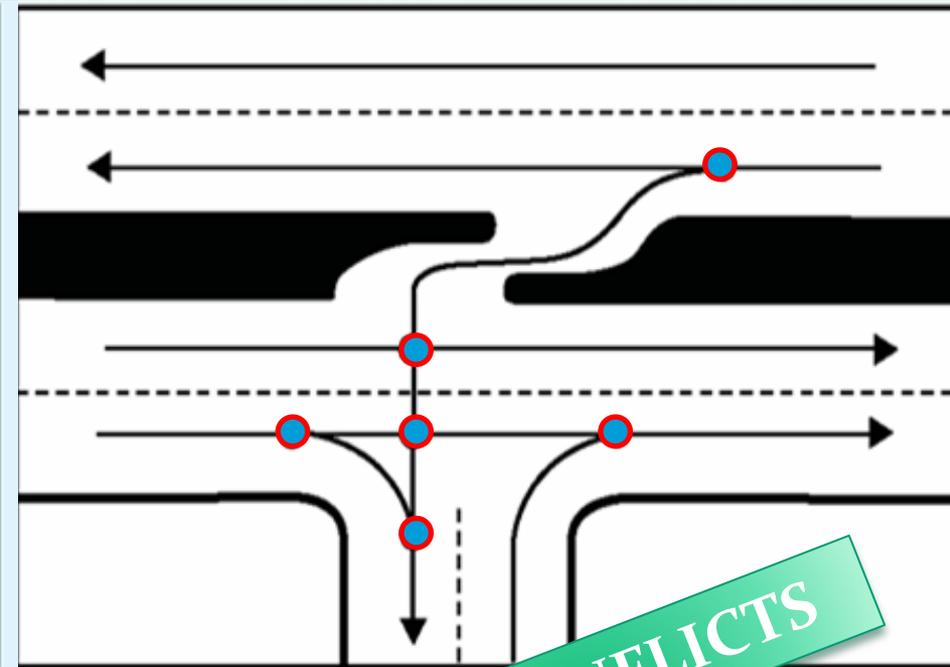
Before Access Management

After Access Management

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



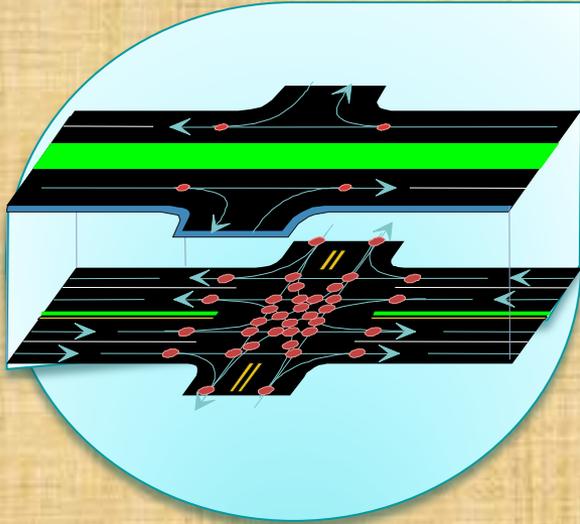
MORE CONFLICTS



LESS CONFLICTS

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

Limiting Conflict Points



Directional vs Full

Reducing Number of Median Openings

More Restrictive Median Openings

Reducing and Aligning Driveways

Better Driveway Design

Center Turn Lane Driver Perspective



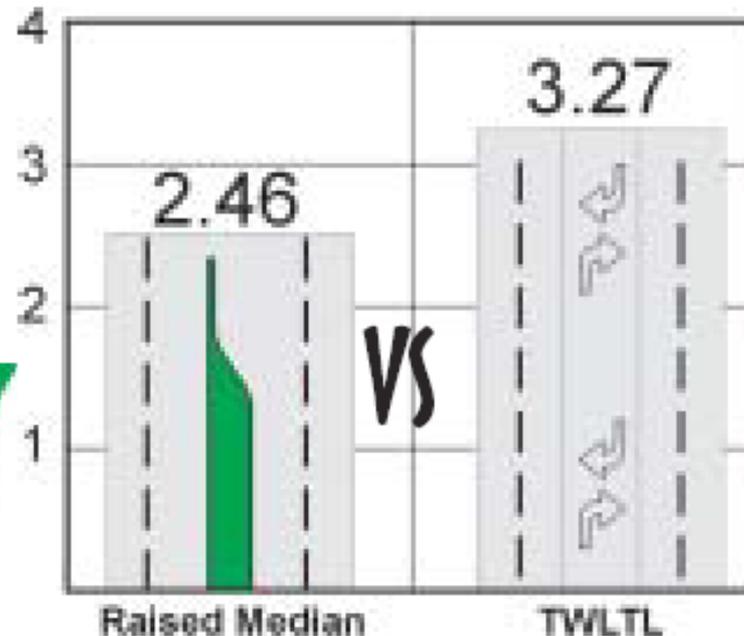
Multiple Potential Conflicts

Median - Driver Perspective



Medians Increase Safety

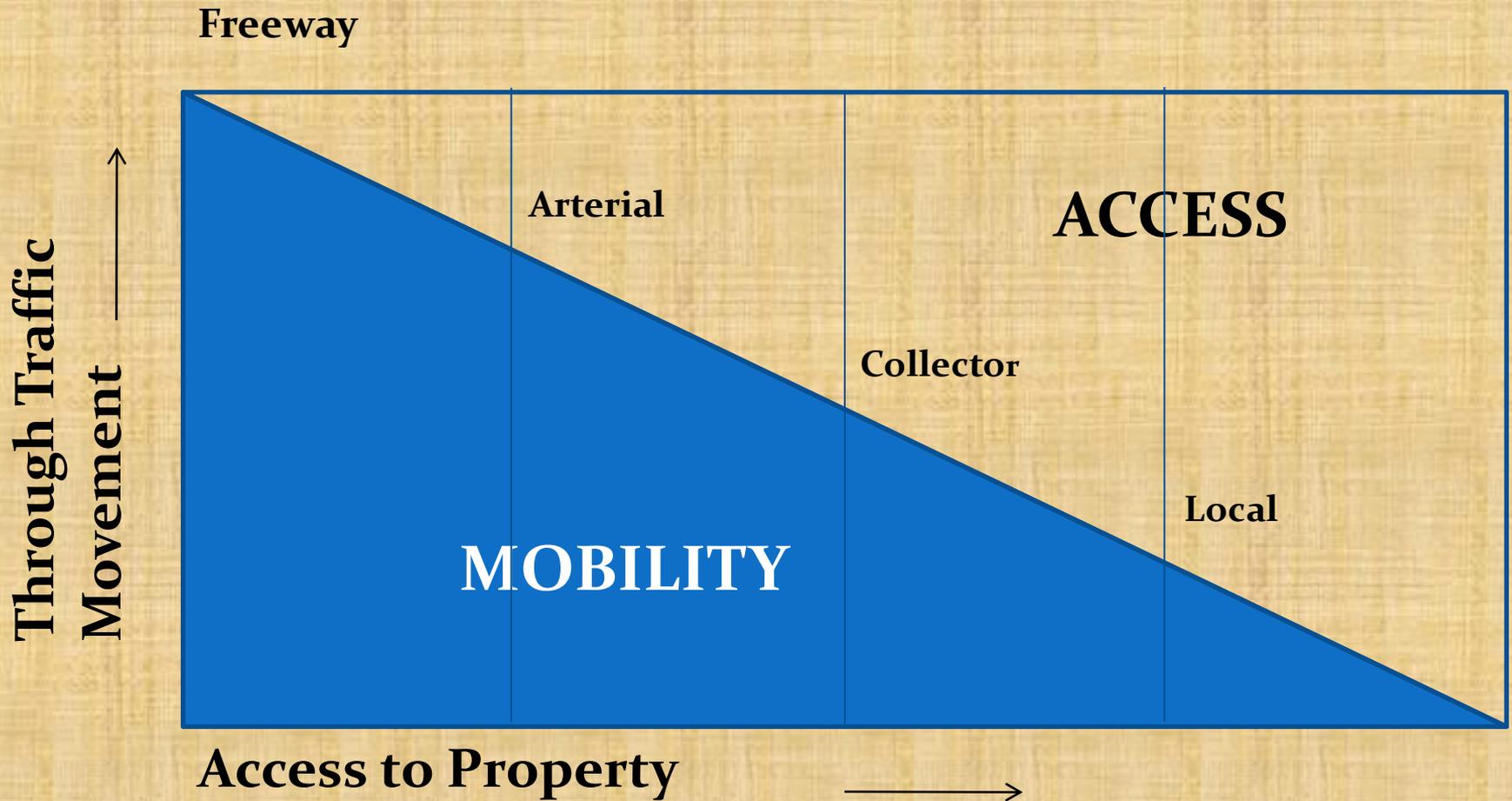
**Crash Rates for Median Treatments
Florida Crash Study**



25% crash rate reduction

Long, Gan, Morrison, University of Florida 1993

Different Roads Have Different Roles



Spacing guidelines

Access Class	Facility	Connection Spacing (feet)	Directional Median Spacing (feet)	Full Median Spacing (feet)	Signal Spacing (feet)
2	Restrictive with Service Roads	1320/660	1320	2640	2640
3	Restrictive	660/440	1320	2640	2640
4	Non-Restrictive	660/440	N/A	N/A	2640
5	Restrictive	440/245	660	2640/1320	2640/1320
6	Non-Restrictive	440/245	N/A	N/A	1320
7	Both	125	330	660	1320

(Greater than 45 mph/Less than or equal to 45 mph)

Does Access Management Hurts Business?

- **MYTH**

- **Access management hurts businesses**

- **FACTS**

- **Access management improves safety and traffic flow**
- **Customers avoid congested roadways/sites and high crash potential areas**
- **Efficient traffic flow exposes more motorists to businesses**
- **Does not impact destination trips**

Small corner properties are more difficult to access.



This queue is blocking street traffic and additional customers

Is this a sign of a store doing great business, or one that is telling customers to try the next guy down the street?

- **The National Highway Institute reports that inadequate access management can increase travel time and delay by as much as 60 percent. Yet, even a 10 percent reduction in average travel speeds can cause a business to lose 20% of its market area.**



Median Handbook Interim Version



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

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

The primary thrust of this handbook is the unsignalized median opening. Even though much of this material can be used with signalized intersection planning, issues of signalized queues 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



Access Management Impacts

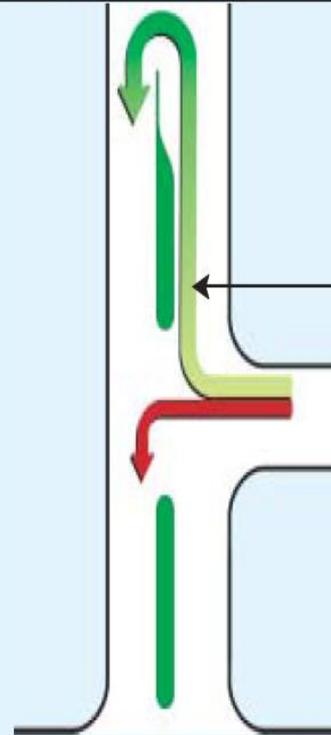
- MYTH

- U-turns are not safe

- FACT

- Research indicates U-turns are often much safer than direct left turns, especially on high volume, high speed, or congested roadways

A study in Orlando shows most customers do not find U-turns an inconvenience



18%

total crash rate reduction

27%

injury fatality crash rate reduction

John Lu, Ph.D., P.E. University of South Florida 2001

U-turns are often much safer than direct left turns, especially on high volume, high speed, or congested roadways.

Why Access Management?

- **Aesthetics – by enhancing environment and economic vitality of the surrounding communities**
- **Provide a place for landscaping and signs**
- **Provides a pedestrian refuge while crossing wide streets**
- **Separates Traffic**



Why Access Management?

- **Traffic Flow Efficiency** by reducing interference of turning traffic with through traffic
- **And, by ensuring** adequate circulation and storage for traffic on-site



Driveway Location

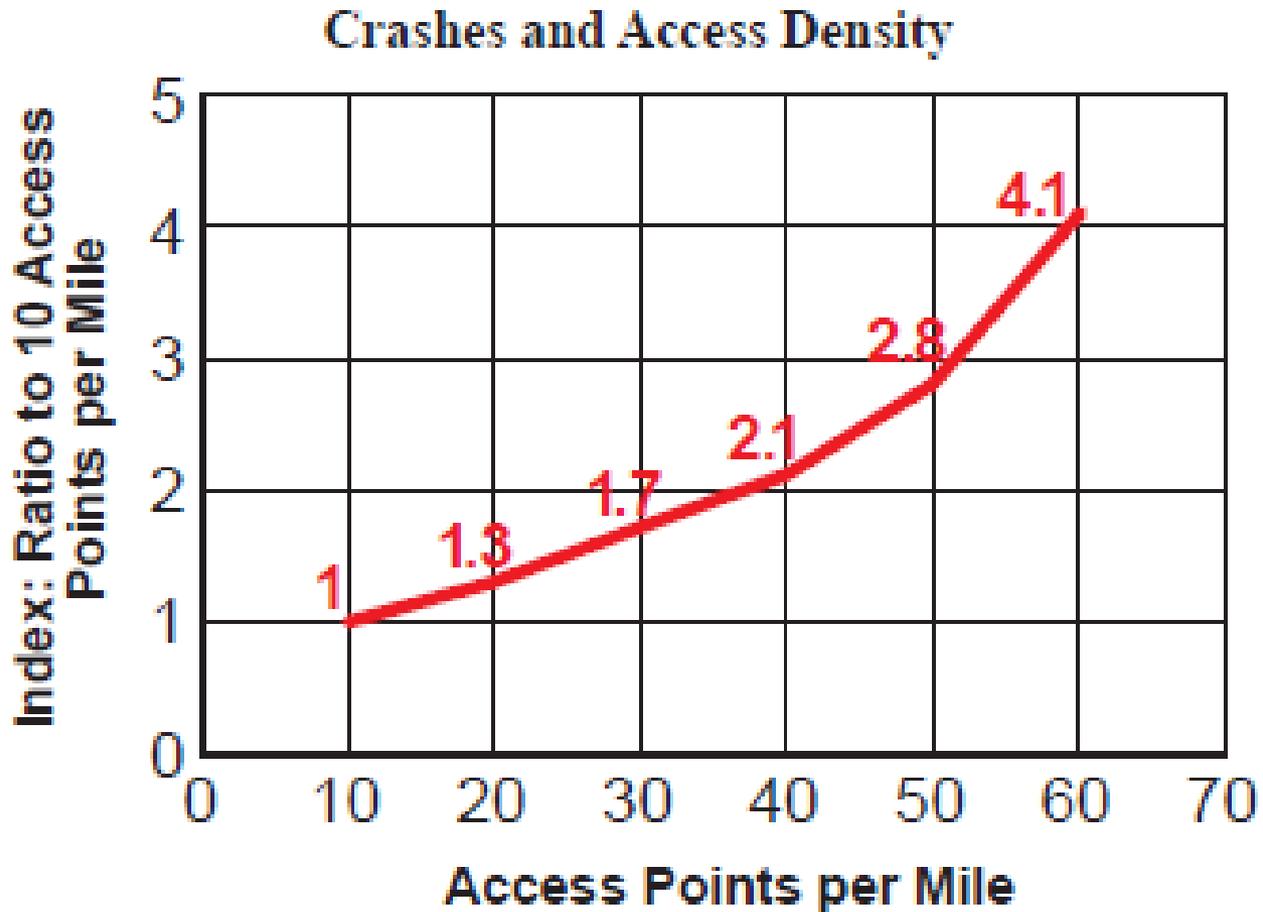
- Consider adjacent driveways, intersections, signals, median openings, and interchanges

Outside of the functional area of the signal or another driveway.



- Avoid Locating in exclusive right turn lanes
- Comply with the spacing guidelines defined in Rule 14-97 to the extent possible

RESEARCH RESULTS



Transportation Research Board, Access Management Manual 2003

The various studies point to one consistent finding: An increase in the number of access points translates into higher accident rates.

Thus the greater frequency of driveways and streets, the greater the number of accidents.



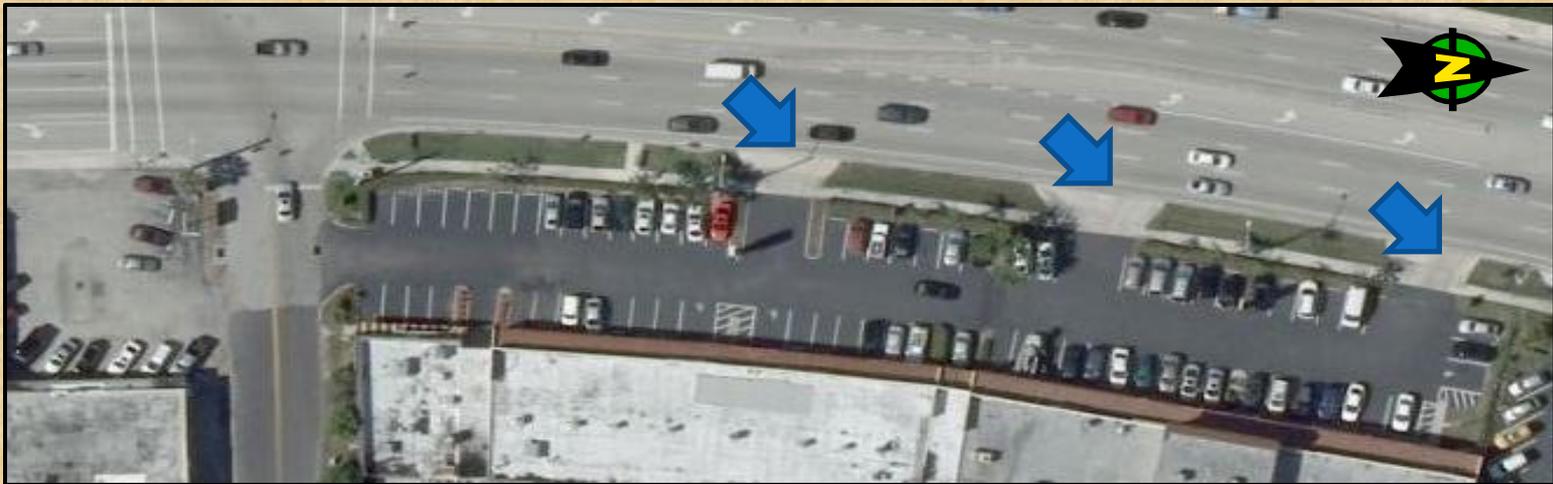
Site Plan Review

- **Proposed Property Use**
- **Site Circulation**
- **Driveway Length**
- **Queue Length For Drive-Thru**
- **Turn Lanes**
- **Access Easements**
- **Deliveries /Fire**
- **Sight Distance**



Driveway Length

- Measured from the ultimate right-of-way line to the first conflict point
- Should be at least 25 feet (one car length)
- Based on Design Standard Index 515



On-site Queue Lengths

- Review for adequate circulation and storage for traffic on-site
- Provide adequate queue lengths for drive through businesses



Right Turn Lanes

- **Determined based on**
 - **Peak hour right turning volume**
 - **Truck/Heavy Vehicle traffic volume**
 - **Traffic volume on the adjacent roadway**
 - **Posted speed limit**



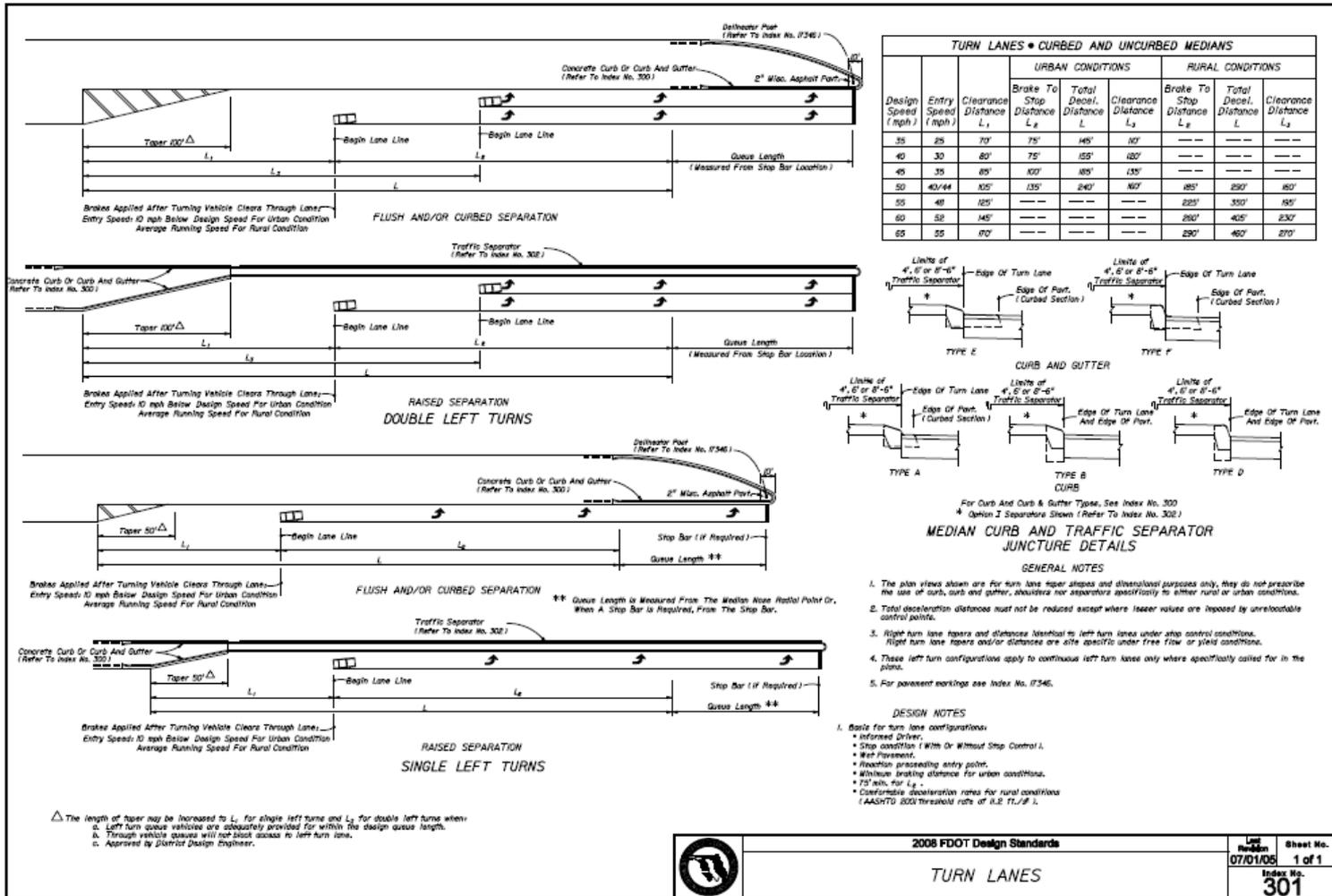
Guidelines for Right Turn Lanes to Unsignalized Driveways

Roadway Posted Speed Limit	Number of Right Turns per hour
45 mph or less	80-125
Over 45 mph	35-55

Left Turn Lanes

- **Required when a left turn and/or U-turn movement is allowed at a median opening**
- **On two-lane roadways, required at any location serving more than a single family residence if:**
 - **posted speed limit is 50 mph or greater,**
 - **location on a curve**
- **Based on safety not volume**
- **Site specific storage based on traffic projections must be provided at left turn lanes (at least 100 feet in urban areas and 50 feet in rural areas)**

Turn Lanes-Standard Index 301



Joint-Use Cross Access

- Reduces number of driveways thus reducing and/or separating conflict points



Other Considerations

- **Bus stop locations:**
 - **Transit operations could influence operation and sight distance at driveways**
 - **Coordination with transit authority**



Sample Pre-Application Letter



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

3400 West Commercial Boulevard
Fort Lauderdale, FL 33309-3421

STEPHANIE C. KOPELOUSOS
SECRETARY

April 29, 2010

**THIS PRE-APPLICATION LETTER IS VALID UNTIL APRIL 29, 2011
THIS LETTER IS NOT A PERMIT APPROVAL**

Mr. Jerald McLaughlin
McLaughlin Engineering Co.
400 NE 3rd Avenue
Fort Lauderdale, Florida 33301

Dear Mr. McLaughlin:

RE: **April 29, 2011**, Pre-application Meeting for Category E Driveway
Broward County, Urban, In the City of Deerfield Beach
State Road 5, State Section 86020, Milepost 13.349, Access Class 5, Posted Speed 45 mph, SIS: N
Reference Project 403575-1 (Complete), Location: SE 15th Street & NE 54th Street, West Side of SR 5
Site Acreage: 9.2875, Proposed Land Use: Commercial, Maximum Square Footage: 150,000
Applicant: Deland Development II, LLC, Property Owner: Deland Development II, LLC
Proposed Plat Name: Toyota of Deerfield Beach
Proposed Project Name & Address: Toyota of Deerfield Beach, 1441 S. Federal Highway

Your Request: **Driveway #1: Right-in, right-out driveway 340 feet north of SE 15th Street.**
Driveway #2: Right-in, right-out, left-in driveway 240 feet north of Driveway #1 at the existing northbound directional median opening.

WE APPROVE YOUR REQUEST. Please see the conditions and comments below.

This ruling is based on your presentation of the facts, site plan, traffic study, and survey.

Conditions: A minimum driveway length of 25 feet at Driveway #1 and a minimum driveway length of 50 feet at Driveway #2, as measured from the ultimate right-of-way line to the first conflict point, shall be provided.

- **Right-turn lane is required at Driveway #1 with permitted right turns and must include bicycle lane width.**
- Drainage mitigation is required for any impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage).
- A Storm Water Pollution Prevention Plan must be submitted with the application if there will be more than one acre of "disturbed area" (as defined by the Florida Department of Environmental Protection (FDEP)).
- If right-of-way dedication is required to implement the proposed improvements, the applicant shall donate the right-of-way to the Department.
- All driveways not approved in this letter must be fully removed and the area restored.

Comments:

Please note that the dimensions between driveways are measured from the near edge of pavement to near edge of pavement and dimensions between median openings are measured from centerline to centerline unless otherwise indicated.

The purpose of this Pre-Application letter is to document the conceptual review of the approximate location of driveway(s) to the State Highway system and to note any required improvements. This letter shall be submitted with any further reviews. If conceptually approved, the applicant may submit engineering plans to the Department for permitting. The Department's personnel shall review these plans for compliance with this letter as well as current Department standards and/or specifications. Final design must consider the existing roadway profile and any impacts to the existing drainage system. **Please note that this letter does not guarantee permit approval.** The permit may be denied based on the review of the submitted engineering plans. Be aware that any approved median openings may be modified (or closed) in the future, at the sole discretion of the Department.

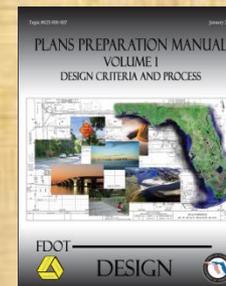
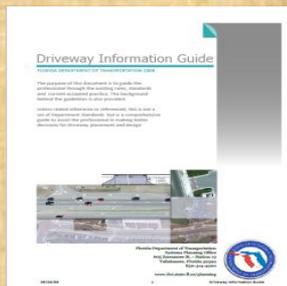
Please contact Christine Nabong Bacomo at the District Permits Office with any questions at telephone number 954-777-4377, fax number 954-677-7893 or e-mail: christine.bacomo@dot.state.fl.us. Thank you.

Sincerely,

Ston Williams
FOR → Christine Nabong Bacomo, P.E.
District Permits Engineer

Guidance

- **Access Management Resource Materials**
 - www.accessmanagement.info
- **Driveway Information Guide**
 - <http://www.dot.state.fl.us/planning/systems/sm/accman/>
- **Roadway Design Standard Index**
 - <http://www.dot.state.fl.us/rddesign/DesignStandards/Standards.shtm>
- **Plans Preparation Manual**
 - <http://www.dot.state.fl.us/rddesign/PPMManual/PPM.shtm>



Questions?

**Contact
Information:**

Geysa Y. Sosa

District Traffic

Access Manager

954-777-4363

