ACCESS MANAGEMENT: SAFETY FOR ALL ROAD USERS

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Access Management: Safety for All Road Users

- What is Access Management
- Access Management Theory
- Access Management Techniques
- Access Management and Transit
- Access Management and Bicyclists and Pedestrians
- Application of Access Management
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What is Access Management

• The coordinated planning, regulation, and design of access between roadways and land development

• The goals of access management are:
  – Enhanced safety
  – Increased fuel efficiency and reduced emissions
  – Preserve critical roadway capacity
  – Increase economic development opportunities
  – Preserve property owners’ reasonable access

**Access Management Basics: Theory**

- **Functional Classification**
  - Techniques vary based upon classification of road
  - Classification describes purpose of road (land access versus through movement)

Figure from *Access Management Manual, 2nd Edition*
Access Management Basics: Theory (cont’d)

• Conflict Points
  – Where traffic movements cross, merge, diverge
  – Minimize number to reduce information load
  – Separate to provide safe areas

Types of Conflict Points

Typical 2-Lane 4-Leg Intersection

Both figures from Access Management Manual, 2nd Edition
Access Management Basics: Theory (cont’d)

- Reducing Speed Differential
  - Greater speed differential generally means greater crash severity
  - Merge/diverge less dangerous than crossing
  - Decel and accel lanes allow equalization of speed at point of conflict
Access Management Basics: Techniques

• Entrance spacing
  – Varies by intersection type and functional classification (in Virginia)
  – Prohibition of entrances in functional area of intersection
  – Corner clearance

• Joint use entrances

• Cross-parcel access

Example: Principal Arterial with 35 to 45 mph Speed Limit.
Access Management Basics: Techniques (cont’d)

- **Medians**
  - Crossovers and directional crossovers, TWTL
- **Auxiliary lanes**
  - Right and left turn lanes
  - Acceleration and deceleration lanes
- **Entrance design**
Access management and transit

- Buses generally deal with same issues as autos and trucks
- Managed streets can provide more reliable service
- Medians can provide space for light rail or bus rapid transit lanes/stops
- Location of transit stops is critical
Access Management: Bicyclists and Pedestrians

• Some techniques must be carefully considered
  – Turn lanes add width for pedestrian crossings
  – Right turn slip lanes can increase bike and ped crashes
  – Large block lengths can inhibit safe pedestrian crossings

• Some techniques can be friendly to these modes
  – Medians can provide refuge areas
  – Consolidating entrances reduce pedestrian and bicyclist conflict points
  – RCUTS can handle signalized pedestrian crossing movements
Application of the Basics: Entrance Spacing/Consolidation

- Conflict Points
  - Limit number of conflict points
  - Separate conflict points
  - Reduce pedestrian exposure
Application of the Basics: Roundabout Example

• Conflict Points
  – Limiting number of conflict points
  – Separating conflict points

• Speed Differential
Application of the Basics: Roundabout Example (conflict points)

• Conflict Points
  – 4 merging
  – 4 diverging
  – Possibility of 4 stopping and queuing

• Other Elements
  – Pedestrian crossings in driver sight lines
  – Vehicle speeds reduced
  – Merge/diverge replace crossing conflicts
Innovative Intersections: Spot the Basics

Restricted Crossing U-Turn (RCUT)

An RCUT is also known as:
- Superstreet intersection
- J-turn intersection
- Reduced conflict intersection
- Synchronized street intersection

Highway 9 East at Liberty Church Road, Long, S.C.
Innovative Intersections: Spot the Basics (Quadrant Roadway)

Quadrant Roadway (QR)
Access Management Websites

- **TRB**
  - Committee on Access Management: [http://www.accessmanagement.info/](http://www.accessmanagement.info/)
  - Committee Facebook Page: [https://www.facebook.com/accessmanagement.info](https://www.facebook.com/accessmanagement.info)

- **FHWA**
  - Access Management: [https://ops.fhwa.dot.gov/access_mgmt/](https://ops.fhwa.dot.gov/access_mgmt/)
  - Corridor Access Management:
    [https://safety.fhwa.dot.gov/provencountermeasures/corridor_access_mgmt/](https://safety.fhwa.dot.gov/provencountermeasures/corridor_access_mgmt/)

- **VDOT**
  - Access Management Regulations:
  - Innovative Intersections:
    [http://www.virginiadot.org/info/alternative_intersection_informational_design_guides.asp](http://www.virginiadot.org/info/alternative_intersection_informational_design_guides.asp)
  - Arterial Preservation:
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