

# Highlights of Major Updates to the SCDOT Roadway Design Manual

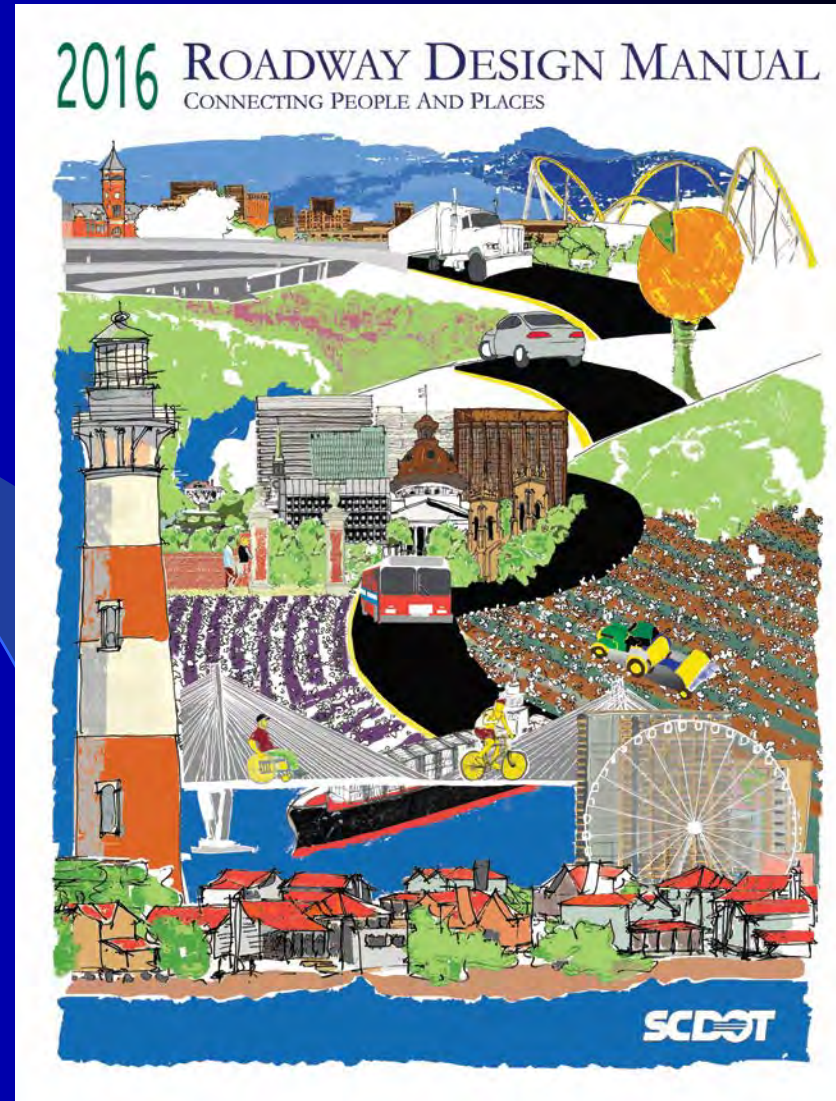
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# Manual Focus

- Design of highways
- Plan preparation

# Context Sensitive Solutions

- Chapter 2
- Summary of resources
- Contextual design guidance throughout Manual
- Utilize Design Exceptions as a tool

# Basic Design Controls

- Chapter 3
- 13 Controlling Criteria Remain
- New Design Exception Form/Process

# Sight Distance

- Chapter 4
- Sight Distance at Roundabouts
  - Stopping Sight Distance
  - Intersection Sight Distance

# Horizontal Alignment

- Chapter 5
- Superelevation
  - Superelevation Transition Lengths
  - Low-speed Urban Method
  - Open Roadway Conditions Method

# Vertical Alignment

- Chapter 6
- Spline Grades
  - Low Speed Urban Areas
  - Gore Areas
  - Termini
  - Right-turn Lanes

# Roadside Safety

- Chapter 8
- General Guidelines
- References to
  - AASHTO Roadside Design Guide
  - SCDOT Publications
  - AASHTO Manual for Assessing Safety Hardware



# Intersections

- Chapter 9
- Roundabouts
  - Guidance on Selection
  - Design Criteria
    - Diameter
    - Volumes
    - Lane Widths
    - Alignment

# Interchanges

- Chapter 10
- Expanded information on types
  - Tight Urban Diamond
  - Double Roundabout Diamond
  - Diverging Diamond Interchange (DDI)

# Special Design Elements

- Chapter 11

- Bicycles

- 2012 AASHTO Guide for the Development of Bicycle Facilities
- Selection Guidelines
- Design Criteria

# Facility Types

- Chapters 14, 15, 16, and 17
- Match the Greenbook
  - Local Roads and Streets
  - Collector Roads and Streets
  - Rural and Urban Arterials
  - Freeways

# Collector Roads and Streets

## Rural and Urban Arterials

- Chapter 15 & 16
- Central Business District (CBD)
  - Development Adjacent to the ROW
  - 11-foot Lanes
  - No Design Exception

# 3R Projects

- Chapter 18
- Expanded application
- More options

# Quantities

- Chapter 20
- Expanded
- Focus where guidance is needed

# Plan Preparation

- Chapter 21 - Procedures for Highway Plans Preparation
- Chapter 22 - Plans Sheet Preparation



# Application of the Manual

- Contextual Flexibility
  - Diverse system of SCDOT roads
- Establish project design criteria **early**
  - Design exceptions are a highly effective tool to implement practical, contextually appropriate solutions.....
    - if implemented early
    - for the appropriate reasons
    - has team buy-in



# Application of the Manual

- Urban
  - Low Speed
  - Central Business District
- 3R
  - Clarified eligible project types
- Connecting designers with information
  - Eliminate duplication of guidance
  - Point a designer directly to the source



# Application of the Manual

- Vision for SCDOT Roadway Design
  - Standardize state practices with national practices
  - Focus on guidance that is specialized/unique to SCDOT
  - Refining low speed vs. high speed and functional classification
  - National discussion of the 13 controlling criteria

# Development of the Manual

- Shareholder input
  - Roy Jorgensen Associates, Inc.
  - Michael Baker International
  - ACEC-SC
  - FHWA
  - Bicycling Community
  - SCDOT staff

Thank you to everyone that has been involved!

# Questions?

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