

# LADOTD

## Design Guidelines

06-25-2015





# Why Me/Now

## Why am I doing this?

- Currently updating guidelines
- Last signed version in 2009
- FHWA has not adopted 2011 “Green Book”

### Goals

Give a review of Guidelines

Share Information





# Why ?

*“The Department of Transportation and Development shall adopt minimum safety guidelines with respect to highway and bridge design, construction, and maintenance. These safety guidelines shall correlate with and, so far as possible, conform to the system then current as approved by the American Association of State Highway and Transportation Officials allowing the flexibilities incorporated therein”*

*Louisiana Revised Statute 48:35*





# 1955 Department of Highways Design Standards

STATE OF LOUISIANA  
DEPARTMENT OF HIGHWAYS  
DESIGN STANDARDS

OCT 1955

ITEMS	A SYSTEM			B SYSTEM		C SYSTEM	
	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
1. Current Average Daily Traffic	3000 or More	1500-3000	1500 or Less	750 or More	750 or Less	150 or More	150 or Less
2. Number of Traffic Lanes (Minimum)	4, 3000-12000 6, Over 12000	2	2	2	2	2	2
3. Width of Each Lane	12'	12'	12'	12'	10'	10'	9'
4. Width of Shoulders (Minimum)	Stabilized 10' Outside 6' Inside	10' Stabilized	9' Stabilized	9'	8'	5'	5'
5. Width of Median (Minimum)	30' Min.						
6. Surface Type	High	High	High - Med.	High - Med.	High - Med.	Med Low Type, Dustless or Low Type	Dustless or Low Type
7. Speed Design (M.P.H.)	70	70	70	60	60	50	
8. Side Slope - Ratio	4:1 Outside-Median Slope Variable	4:1	4:1	4:1	3:1	3:1	3:1
9. Back Slope - Ratio	3:1	3:1	3:1	3:1	3:1	2:1	2:1
10. Width of Bridges - Less Than 80'	Unrestricted Rdwy.	Unrestricted	Unrestricted	28'	24'	24'	24'
11. Width of Bridges - 80' or Over	2 @ 28' 2 @ 40'	28'	28'	28'	24'	24'	24'
12. Bridge Loading	H-20-S-16	H-20-S-16	H-20-S-16	H-20-S-16	H-15	H-15	H-15
13. Controlling Curvature (Maximum)	3°	3°	3°	6°	6°	9°	
14. Controlling Grade (Maximum)	5%	5%	5%	5%	5%	5%	5%
15. Sight Distance - Non-Passing Vertical & Horizontal (Min.)	600' Min.	600' Min.	600' Min.	475' Min.	475' Min.	375'	
16. Clearance Vertical (Min.)	15'	15'	15'	15'	15'	15'	15'
17. Right of Way Widths (Min.)	300'	(200) 150' for Volume Less Than 2000 VPD	120'	100'	100'	80'	60'

Access - Complete control of access should be provided on all Class 1 Roads, if possible. Serious consideration should be given to Control of access on all primary roads where the anticipated traffic exceeds 3000 V.P.D.

\* For traffic volumes over 2000 - 2 Lane Roadway to be constructed offset from center line to provide future 4 Lane construction.

B Where traffic volumes of the C system exceeds 300 V.P.D., use appropriate standard for the volume in the higher classes.





# 1955 Was Such a Simpler Time

	1955	2009
Pages	1	15
Footnotes	3	99
Classifications	7	26
Items	17	18-21





# When To Use

Interstate – Replacement and Major Rehabilitation

Reconstruction

- New pavement structure (base and sub base)

- Addition of through travel lanes

- extensive changes in horizontal and vertical geometry (typically involving right of way)

- new alignment

Bridge Replacements

- Official/unofficial DOTD policy to investigate bringing up to current standards

- Use design exception as documentation process





# PRR/3R Guidelines

3R – Resurfacing/Restoration/Rehabilitation

PRR – Preservation /Rehabilitation/ Replacement

Project is primarily for improvement of ride quality

Routine preventive maintenance

Addition of isolated turn lanes

Minor Rehabilitation and Preservation – Match Existing

If there are people in audience that didn't know these exits before now It was worth it for me to get up here.





# Design Exceptions

May not be practical or prudent to meet guidelines on every project

Don't be scared of writing an exception. Used as way to document decisions.

Design Exception Request Form

Waiver vs Exception

FHWA 13 controlling Criteria

Exception From FHWA is required if minimum values in Green Book is not meet for projects federal oversight. DOTD minimums are not necessarily AASHTO minimums

March 2015 Stewardship Agreement





# FHWA 13 Controlling Criteria

- Design Speed
- Lane Width
- Superelevation
- Shoulder Width
- Vertical Alignment
- Bridge Width
- Lateral Offset to Obstruction
- Horizontal Alignment
- Stopping Sight Distance
- Grade
- Cross Slope
- Vertical Clearance
- Structural Capacity





# 13 Controlling Criteria vs DOTD Guidelines

- Controlling Criteria – not in guidelines
  - Ramps, Auxiliary lanes, cross over crown
- In DOTD guidelines and not 13 criteria

Medians	ClearZones
Shoulder Type	N/C and R/C Curves
Foreslopes	Backslopes
Sidewalks	Parking



# Complaints/Task

- More Flexible
- Too many footnotes
- Focus on 13 Controlling
- Want Designers to “think” instead of follow “cook book”
- Complete Streets



# Where are we?

- First Draft was an update  
Minimum/Desirable
- 2<sup>nd</sup> draft complete format change
  - Table and charts
  - No sub classification
  - Everything dependent on Traffic,  
Speed, Area type, Functional Class
  - Project Specific
  - Focus on 13 controlling





# End of The Show

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← Lydia

