




INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

Croft Road Corridor Study
Analysis & Recommendations Report

Appendix 9: Roadway Design Criteria Document

ROADWAY DESIGN CRITERIA DOCUMENT-CROFT RD.

Road Name:	Croft Road		
PID #	NA		
DLZ Project #	1321/1005/02		
Prepared By:	Alex Furfaro		
Date:	4/7/2014		
Checked By:	Andrew Frankhouser		
Date:	4/11/2014		
Date of Last L&D Update:	1/17/2014		
Design Exceptions:		PENDING ANALYSIS	
ITEM	CRITERIA	L&D LOCATION	COMMENTS
GENERAL EXISTING INFORMATION			
Legal Speed	35 MPH		
Design Speed	40 MPH		Design speed is 55 mph for w end of wb Croft Rd.
Opening Year ADT	5465		Current based off traffic counts
Design Year ADT	6558		
Trucks (24 Hour B&C)	1.75%		
Functional Classification	Major Collector		
Locale (Rural or Urban)	Rural		
National Highway System (NHS)	No		
HORIZONTAL ALIGNMENT			
Maximum Centerline Deflection Without Curve	2° 05'	Figure 202-1E	Min radius = 2750.20
Maximum Degree of Curve	12° 45'	Figure 202-2E	Min radius = 449.38
Maximum Curve Without a Spiral	N/A	Figure 202-11E	Min radius =
Maximum Pavement Transition/Taper Rates	26.67:1	Section 301.1.4	L = WS ² /60. Use 55:1 for w end of wb Croft Rd.
Maximum Diverging Taper Rates	5:1	Section 301.1.4	
Allowable Intersection Angles	70° to 90°	Section 401.3	
VERTICAL PROFILE			
Maximum Grades	7-10% (Level to Hilly)	Figure 203-1E	Rural Collector
Grades 1% steeper may be used-see figure notes.		Figure 203-1E	Extreme cases
Minimum Grades	Flat	Section 203.2.2	Flat grades are acceptable on uncurbed pavements
VERTICAL CURVES			
Maximum Grade Change Without Vertical Curve	0.75%	Figure 203-2E	
Crest Curve Design K	Min = 44	Figure 203-3E	
Crest Curve Design Stopping Sight Distance	Min = 305	Figure 203-3E	
Crest Curve- Minimum Length	120'	Section 203.3.3	
Sag Curve Design K	Min = 64	Figure 203-6E	
Sag Curve Design Stopping Sight Distance	Min = 305'	Figure 203-6E	
Sag Curve- Minimum Length	120'	Section 203.3.4	
SUPERELEVATION			
Maximum Degree of Curve Without Superelevation	1° 08'	Figure 202-3E	Low Speed Rural
Max. Design Superelevation Rate	ed = 0.080	Figure 202-7E	Rural Highways
Superelevation Transitions	See ODOT L&D, Vol 1	Figure 202-4E & 202-8E	Urban Highways
Method of Superelevation	See ODOT L&D, Vol 1	Figure 202-5dE	50% to 70% on Tangent
TYPICAL SECTION			
Minimum Lane Width	12'	Figure 301-2E	Rural collector >2000 adt
Curve Widening	1.5'-3.5'	Figure 301-5cE	
Normal Pavement Cross Slope	0.016	Section 301.1.5	
Graded Shoulder Width	8' / 11'	Figure 301-3E	With out / With Barrier
Treated Shoulder Width	4'	Figure 301-3E	
Median	N/A		
Clear Zone Width-Foreslopes	13' (6:1 or Flatter)	Figure 600-1E	ADT 1501-6000
	15' (Steeper than 6:1 to 4:1)	Figure 600-1E	
Clear Zone Width-Backslopes	13' (6:1 or Flatter)	Figure 600-1E	
	13' (Steeper than 6:1 to 4:1)	Figure 600-1E	
	13' (Steeper than 4:1)	Figure 600-1E	
Type of Grading	Clear Zone	Section 307.2.1	Figure 307-3E
Fill Slope	4:1/3:1 max	Figure 307-3E	2:1 Max with Barrier
Cut Slope	4:1/3:1 max	Figure 307-3E	2:1 Max with Barrier
Guardrail Offset from Traveled Way	8'	Figure 301-3E	