

Appendix B

Geometric Design Standard Tables

Roadway Data

Segment Termini: Clearwater to Hasty (Segment 1)

Design Element	Existing Condition	Proposed Design	Required
Roadway Type	Rural/Suburban/Urban	Rural/Suburban/Urban	Not applicable
Project or Segment Length (feet)	25, 145	25, 145	Not applicable
Functional Class	Principal Arterial	Principal Arterial	Not applicable
ADT (Year)	41,500	55,500	Not applicable
Heavy Commercial (%)	10 to 15%	10 to 15%	Not applicable
Speed (mph)	Posted/statutory	Design speed	70
Through Lanes Each Direction	2	3	Not applicable
Lane Width (feet)	12	12	12
Roadway Surfacing Type	Concrete	Concrete	Not applicable
Structural Design Strength (ton)	10	10	10
Shoulder Width (feet)	4-10	10	10 (12 desired)
Shoulder Surfacing Type	Bituminous	Bituminous	Not applicable
Recovery Area	40' Clear Zone	40' Clear Zone	40'
Inslope (rise)	1:6	1:4	1:4 to 1:6
Approach Sideslopes	1:6	1:6	1:6
Tune Lane (feet)	NA	NA	NA
Bypass Lane (feet)	NA	NA	Not applicable
Right-of-Way Width (feet)	284	284	NA
Median Type (feet)	49	37	NA
Median Type (raised/painted raised)	NA	NA	NA
Median Curb Reaction (feet)	NA	NA	NA
Curb and Gutter Type	NA	NA	Not applicable
Curb Reaction (feet)	NA	NA	NA
Clearance from Face/Curb (feet)	NA	NA	NA
Parking Lane (feet)	NA	NA	NA
Storm Sewer	Existing locations	Proposed Trunk	Not applicable
Utilities	NA	NA	Not applicable
Sidewalk Width (feet)	NA	NA	Not applicable
Distance from Edge of Traveled Way to Sidewalk (feet)	NA	NA	Not applicable
Curb Ramps with Detectable Warning	NA	NA	Not applicable

Design Element	Existing Condition	Proposed Design	Required
Traffic Signal(s)	Top of ramps	No change	Not applicable
Roundabout	NA	NA	Not applicable
Roadway Lighting (type)	Existing at ramps	Proposed at ramps	Not applicable
Railroad Crossing	NA	NA	Not applicable
Landscaping	NA	NA	Not applicable
Signing	Existing locations	Replace/Modify	Not applicable
Pavement Marking	Existing locations	Modify per new geometry	Not applicable

Segment Termini: Hasty to Albertville (Segments 2, 3, and 4)

Design Element	Existing Condition	Proposed Design	Required
Roadway Type	Rural/Suburban/Urban	Rural/Suburban/Urban	Not applicable
Project or Segment Length (feet)	102,631	102,631	Not applicable
Functional Class	Principal Arterial	Principal Arterial	Not applicable
ADT (Year)	41,500 to 65,800 vpd	55,500 to 81,600 vpd	Not applicable
Heavy Commercial (%)	10 to 15%	10 to 15%	Not applicable
Speed (mph)	Posted/statutory	Design speed	70
Through Lanes Each Direction	2	3	Not applicable
Lane Width (feet)	12	12	12
Roadway Surfacing Type	Concrete	Concrete	Not applicable
Structural Design Strength (ton)	10	10	10
Shoulder Width (feet)	4-10	10	10 (12 desired)
Shoulder Surfacing Type	Bituminous	Bituminous	Not applicable
Recovery Area	40' Clear Zone	40' Clear Zone	40'
Inslope (rise)	1:6	1:6	1:4 to 1:6
Approach Sideslopes	1:6	1:6	1:6
Tune Lane (feet)	NA	NA	NA
Bypass Lane (feet)	NA	NA	Not applicable
Right-of-Way Width (feet)	284	284	NA
Median Type (feet)	49	22	NA
Median Type (raised/painted raised)	NA	NA	NA
Median Curb Reaction (feet)	NA	NA	NA
Curb and Gutter Type	NA	NA	Not applicable
Curb Reaction (feet)	NA	NA	NA
Clearance from Face/Curb (feet)	NA	NA	NA
Parking Lane (feet)	NA	NA	NA
Storm Sewer	Existing locations	Proposed Trunk	Not applicable

Design Element	Existing Condition	Proposed Design	Required
Utilities	NA	NA	Not applicable
Sidewalk Width (feet)	NA	NA	Not applicable
Distance from Edge of Traveled Way to Sidewalk (feet)	NA	NA	Not applicable
Curb Ramps with Detectable Warning	NA	NA	Not applicable
Traffic Signal(s)	Top of ramps	No change	Not applicable
Roundabout	NA	NA	Not applicable
Roadway Lighting (type)	Existing at ramps	Proposed at ramps	Not applicable
Railroad Crossing	NA	NA	Not applicable
Landscaping	NA	NA	Not applicable
Signing	Existing locations	Replace/Modify	Not applicable
Pavement Marking	Existing locations	Modify per new geometry	Not applicable

Bridge Data

Bridge or Culvert Number: BR86819/BR86820

Design Element	Existing Condition	Proposed Design	Required
Bridge or Culvert Number	BR86819/BR86820	BR86819/BR86820	Not applicable
Location (over/under)	Over CSAH 75/BNSF RR	Over CSAH 75/BNSF RR	Not applicable
Bridge or Culvert Type	Precast Prestressed Conc	Precast Prestressed Conc	Not applicable
Design Loading	HL-93	HL-93	
Bridge Roadway Width (feet)	53	73	
Sidewalk (feet)	Na	Na	Not applicable
Bridge Length (feet)	253	253	Not applicable
Bridge: Number of Spans	2	2	Not applicable
Skew	49° 40'	49° 40'	Not applicable
Culvert Size (feet)	Na	Na	Not applicable
Culvert Length (feet)	Na	Na	Not applicable
Culvert: Number of Lines	Na	Na	Not applicable
Guardrail	Existing locations	Modify per widening	
Horizontal Alignment	Existing curve	Spiral and curve	Not applicable
Vertical Alignment	Existing	No change	Not applicable
Hydraulics	NA	NA	Not applicable
Vertical and Horizontal Clearance	Existing	No change	Not applicable