

Appendix 5-C

Culvert End Section Loss Pictures

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If you require assistance accessing this information or require it in an alternative format, contact the Michigan Department of Transportation's (MDOT) Americans with disabilities Act (ADA) coordinator at Michigan.gov/MDOT-ADA.

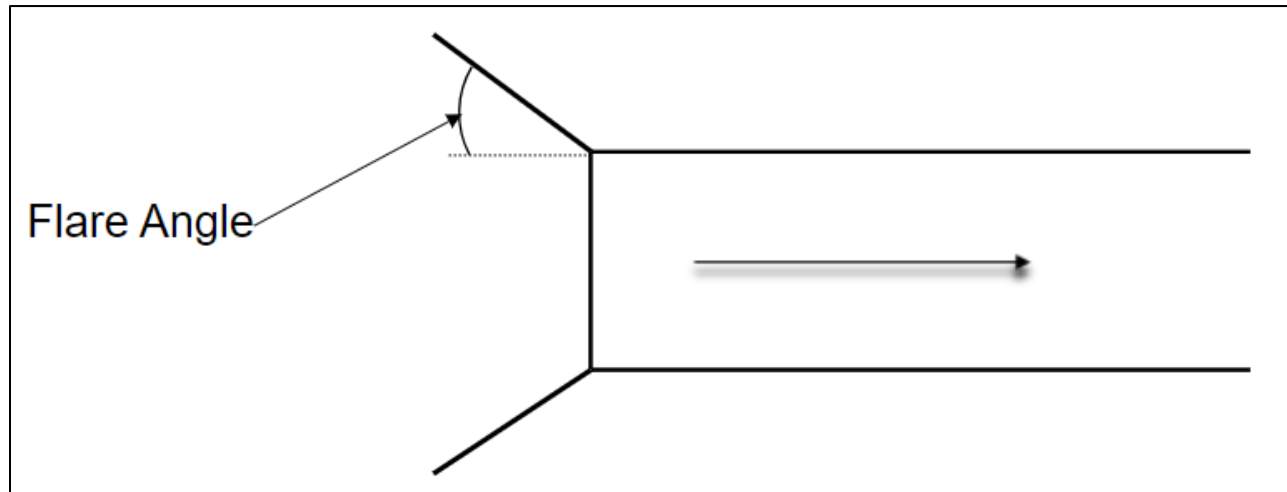
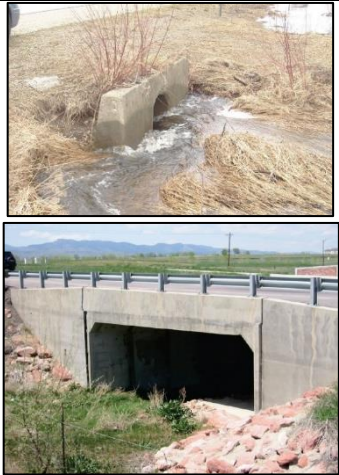
Figure 5-C-1. End Treatment Flare Angle

Table 5-C-1. Typical Culvert End Sections

End-Treatment Type	Pipe Material(s)	K_e	HY-8 Inlet Edge Condition Used	MDOT Standard Plan	Picture
Commercial end section (precast or metal)	Concrete, corrugated/ spiral ribbed metal, polymer coated metal, CPE, CPV	0.5	Square Edge with Headwall or Headwall	R-86 and R-88	
Culvert sloped end section	Concrete, corrugated/ spiral ribbed metal, polymer coated metal, CPE, CPV	0.7	Mitered	R-95	
Precast or cast-in-place wingwalls, 30° - 75°	Concrete, no bevel	0.4	Square Edge (30°-75° flare) Wingwall	N/A	

End-Treatment Type	Pipe Material(s)	K_e	HY-8 Inlet Edge Condition Used	MDOT Standard Plan	Picture
Precast or cast-in-place wingwalls, 90°	Concrete, no bevel	0.5	Square Edge with Headwall (circular/ellipse) or Square Edge (90°) Headwall (box)	N/A	
Precast or cast-in-place wingwalls with beveled edge	Concrete with grooved entrance	0.2	Grooved End in Headwall	N/A	
Mitered	Corrugated/spiral ribbed metal, plate arch metal	0.7	Mitered	N/A	

End-Treatment Type	Pipe Material(s)	K_e	HY-8 Inlet Edge Condition Used	MDOT Standard Plan	Picture
Projecting	Corrugated/ spiral ribbed metal, plate arch metal	0.9	Thin Edge Projecting	N/A	
Headwalls	Corrugated/ spiral ribbed metal	0.5	Headwall	N/A	