

**Appendix B
Culvert Inspection Elements and Condition Levels**

			Condition Level		
			1	2	3
Asset Type	Element	Condition	Structurally compromised or major deficiencies	Moderate deficiencies	Minor or no deficiencies
Culverts	Inlet Ditch	Sediment and Debris Build Up	Major ponding with flooding possible	Some ponding; No danger of flood	Fully functioning
		Brush Build Up	Encroaching on ditch causing potential ponding or inadequate access for inspection	Moderate brush build up with minor effect on flow	Negligible
		Ditch Erosion	Severe erosion of ditch, bank protection, or beneath inlet apron	Moderate erosion present, but not yet detrimental to proper flow	Negligible
	Paved/Rock Gutter	Gutter	Gutter invert elevation is below Drop Inlet or Culvert elevation. Or compromising roadway.		Negligible
	Inlet Headwall	Concrete Spalling, deterioration and cracking	Extensive spalling, cracking, or deterioration jeopardizing structural integrity	Some spalling, cracking, or deterioration present but, structure is still sound.	Negligible
		Separation	Headwall is separated from the culvert.		Negligible
	Barrel-Concrete	Structure	Extensive concrete deterioration or separation of joints, structural integrity compromised	Some concrete deterioration or joint separation, but structure is still sound.	Negligible
		Blockage	Silt and debris buildup significantly reducing hydraulic efficiency.	Some silt and debris buildup but adequate hydraulic efficiency.	Negligible
	Barrel-CMP	Structure	Significant corrosion with section loss, collapse, joint separation, structural integrity compromised, or large sections of invert missing	Some corrosion with minor section loss, pipe distortion, loss of coatings, and joint separation; small sections of invert may be missing	Negligible
		Blockage	Sediment and debris buildup significantly reducing hydraulic efficiency.	Some sediment and debris buildup but adequate hydraulic efficiency.	Negligible

Culverts	Outlet Headwall	Concrete Spalling, deterioration and cracking	Extensive spalling, cracking, or deterioration jeopardizing structural integrity	Some spalling, cracking, or deterioration present but, structure is still sound.	Negligible
		Separation	Headwall is separated from the culvert.		Negligible
	Outlet Ditch	Sediment and Debris Build Up	Major ponding with flooding possible	Some ponding; No danger of flood	Fully functioning
		Brush Build Up	Encroaching on ditch causing potential ponding or inadequate access for inspection	Moderate brush build up with minor effect on flow	Negligible
		Ditch Erosion	Severe erosion of ditch, bank protection, or beneath inlet apron	Moderate erosion present, but not yet detrimental to proper flow	Negligible
Embankment	Embankment Erosion	Severe erosion around end treatment of pipe that may compromise the roadway,	Some erosion but, not compromising the roadway.	Negligible	
Drop Inlets	Concrete Structure	Spalling and deterioration	Extensive spalling, cracking, or deterioration jeopardizing structural integrity	Some spalling, cracking, or deterioration present but, structure is still sound.	Negligible
	Grate	Grate	Extensive corrosion affecting structural strength, potential hazard for vehicle; missing	Some corrosion with minor section loss	Negligible
	Sediment	Sediment	Accumulation > 50% of pipe height	Accumulation between 25% to 50% of pipe height	Accumulation < 25% of pipe height
	Paved/Rock Gutter	Gutter	Gutter invert elevation is below Drop Inlet or Culvert elevation. Or compromising roadway.		Negligible