

OFF-SYSTEM TRUSS BRIDGES

REPAIR SUGGESTIONS FOR LONG-TERM PRESERVATION

• AFTER BRIDGE INSPECTIONS •

PROBLEM	SUGGESTIONS		EXAMPLE IMAGES
	DO:	DO NOT:	
Cracked and fatigued truss members.	Discuss with TxDOT Area Engineer, TxDOT District Bridge Engineer, or structural engineer consultant about repair options.	Attempt to weld or replace truss members as this can add undue stress to other members and worsen damage.	CRACKED TOP CHORD
Large cracks in masonry abutments or wingwalls.	Discuss with TxDOT Area Engineer, TxDOT District Bridge Engineer, or structural engineer consultant about repair options.	Apply concrete to the crack or any part of the abutment and wingwalls. Application of concrete may further damage the masonry and negatively affect the historic character of the abutments and wingwalls.	LARGE CRACK IN MASONRY ABUTMENT
Pack rust on truss members, connections, and joints.	Consult with a structural engineer regarding the degree of pack rust.	Sandblast connections and bearings as this may result in weakening and further deterioration of bridge members.	PACK RUST ON UNDERSIDE OF BOTTOM CHORD
Corrosion.	Consult with a structural engineer regarding the degree of corrosion. Create an adhesive surface by lightly scoring and sanding the area by hand; spot treat paint corroded area.	Attempt to treat large areas of corrosion without consulting with a structural engineer. Treating corrosion prior to consultation may result in incompatible repairs and further deterioration of bridge members.	

CORROSION OF BATTEN PLATE



OFF-SYSTEM TRUSS BRIDGES

REPAIR SUGGESTIONS FOR LONG-TERM PRESERVATION

• AFTER BRIDGE INSPECTIONS •

PROBLEM	SUGGESTIONS		EXAMPLE IMAGES
	DO:	DO NOT:	
Missing bolts.	Consult with a structural engineer regarding the appropriate strength, diameter, and grade.	Attempt to replace missing bolts without first consulting with a structural engineer. Use of the wrong type of bolts may further damage the bridge.	MISSING TWO BOLTS
Fatigued or deteriorated turnbuckles.	Discuss with TxDOT Area Engineer, TxDOT District Bridge Engineer, or structural engineer consultant about repair options.	Replace turnbuckles as this can weaken truss members.	REPLACEMENT TURNBUCKLE
Deck joints filled with debris.	Clean debris from deck joints.	Allow debris to accumulate as this prevents the deck from expanding and contracting with temperature fluctuations and can result in damage to the substructure.	DEBRIS AND RUBBLE IN DECK JOINT
Vegetation on substructure and truss members.	Remove vegetation by cutting limbs and vines away from the truss. Clean lower truss members, connections, and bearings with high pressure water spray.	Allow overgrowth of vegetation on the bridge as this can weaken bridge members and lead to corrosion.	VINES CLIMBING ON AN END POST