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Montana Department of Transportation

2701 Prospect
PO Box 201001
Helena MT 59620-1001

Steve Bullock, Governor
Michael T. Tooley, Director

MEMORANDUM

From: Amanda Jackson, P.E., Bridge Management Engineer

Date: July 16, 2019

Subject: Interim Guidance for Hands-on Inspection of Steel Members

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This document provides inspection frequency requirements for bridges that contain steel members that are not fracture critical. This interim guidance will stay in effect until a new edition of the Manual is published, or until otherwise superseded.

7.4.1 Steel Bridge Inspection

Non-FC Hands-on Inspection Frequency

Steel members that are not fracture critical are required to receive a hands-on inspection for their first and second inspections after construction. After the first two inspections, hands-on access may be reduced according to the following table, or as determined by the Bridge Management Engineer:

NBI Item 59 Rating	Hands-on Inspection Frequency (months)
7 and above	96
6	72
5	48
4	24
3 and below	*

*Determined by Bridge Management Engineer.

Hands-on inspection frequency is determined by the Bridge Management Engineer when the bridge meets any of the following criteria:

- Any fatigue cracks are present in the steel members
- There are fatigue cracks in the bridge's twin interstate structure. If the second structure is not identical to the cracked one, this does not apply.
- Steel members contain multiple fatigue prone details such as closely spaced welded transverse stiffeners, welded cover plates, or welded longitudinal stiffeners.

- Impact damage or other defects in steel members that warrant frequent monitoring
- High Average Daily Truck Traffic (general rule: ADTT > 1,000)
- Bridge nominated by an Engineer, Inspector or Local Agency Owner and approved by Bridge Management Engineer

District Bridge Inspection Coordinators are responsible to ensure hands-on inspections are performed within the appropriate frequency. Any observations or information that warrants a change in inspection frequency is required to be brought to the Bridge Management Engineer's attention within one month of the field inspection.

Hands-on inspection frequency is tracked through the *Hands-on Steel Inspection* (Inspection Master type) in SMS. All inspection data is recorded in the *Map21 Inspection*, and the *Hands-on Steel Inspection* is used only as a reminder of the snooper requirement. The frequency of UBIV inspections is also recorded in SMS attribute *MDT134 UBIV Frequency*.

When the NBI Item 59 condition rating is reduced due to an inspection that is not hands-on, the Team leader and District Bridge Inspection Coordinator will work together to determine if an immediate follow-up hands-on inspection is necessary. The follow-up inspection may or may not require a UBIV, depending on access to the structure. The Team leader will include an explanation of why the bridge will or will not receive an immediate follow-up hands-on inspection in the General Inspection Notes (*Inspection – Info Tab – Comments*).