



BRIDGE ADVISORY
Construction & Technology Division
Bridge Operations Section

BRIDGE ADVISORY NUMBER: BA-2010-05

DATE: September 5, 2010

SUBJECT: Scour Critical Bridge Action Plan Form – Blank Form

ISSUED BY: MDOT Bridge Operations Engineer

REVIEWED BY: MDOT Scour Critical Bridge Committee

Contact Information: David Juntunen, Bridge Operations Engineer, 517-322-5688 or juntunend@michigan.gov

A blank copy of the Scour Critical Bridge Action Plan form is available for field use. The form is attached to this Bridge Advisory and is available on MDOT's Bridge Operations website at the following link:

http://www.michigan.gov/mdot/0,1607,7-151-9625_24768_24772---,00.html

Although the field form is being provided for convenience, please be aware that the form must be filled out in the Michigan Bridge Inspection System (MBIS) and the "Preparation and implementation of the Scour Critical Bridge Action Plan form is complete" check box at the top of the electronic form is checked in order to meet agreement with FHWA for compliance..

The Michigan Bridge Inspection System (MBIS) is available at the following link:

http://www.michigan.gov/mdot/0,1607,7-151-9625_24768---,00.html

Additional information about the "Preparation and implementation of the Scour Critical Bridge Action Plan form is complete" check box is available in MDOT Bridge Advisory 2009-03 which is available at the following link:

http://www.michigan.gov/mdot/0,1607,7-151-9625_24768_49104---,00.html

MICHIGAN DEPARTMENT OF TRANSPORTATION
SCOUR CRITICAL BRIDGE ACTION PLAN

MDOT Bridge ID		Structure Number			Control Section		
Facility		Federal Struc ID		Last Modified By		Agency Name	
Feature	Location	Latitude	Longitude	Insp Freq		Insp Key	
Length	Width	Year Built	Yr Recon	Br	Type	Scour Eval	# of Pins

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WaterShed	
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Scour Vulnerability Rating	
Item 113 Rating & Description	

ABUTMENT A

Foundation	In Water		Spread Footing		Piles Deep Fdn		Unknown	
Foundation Soil Type	Non Cohesive		Cohesive		Rock		Unknown	

ABUTMENT B

Foundation	In Water		Spread Footing		Piles Deep Fdn		Unknown	
Foundation Soil Type	Non Cohesive		Cohesive		Rock		Unknown	

Total Number of Piers	
Comments	

Piers in water for 100 year event(by footing type) (identify location i.e 1W,2S)	Spread Footing	Piers Deep Fdn	Unknown

Pier Foundation Soil Type	Non Cohesive		Cohesive		Rock		Unknown	
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OBSERVED SCOUR REPORTED

SCOUR EVALUATION REPORT, EXECUTIVE SUMMARY

Scour Analysis Event Frequency	25 year	50 year	100 year
Anticipated Surface Elevation(ft)			
Distance below bottom chord(ft)			
Anticipated Flow(cubic ft/sec)			

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Bridge Inspection Coding Information	
Routine Inspection Date	
Under Water Inspeccion Date	

Pontis Scour Smart Flag		
Pontis Rip-Rap Smart Flag		
Item 71 Water Adequacy		

Item	Rating (1 to 9)	Comments
Abutment		
Piers		
Item 61 Channel/Protection		
(MDOT) Culvert Scour Rating		

Counter Measure Condition & Recommendation	
Existing Counter Measures	

Inspector recommendations	
Counter Measures Not Feasible	
Priority	
Explanation:	

Monitoring Plan	
Routine Inspection Frequency	
Under Water Inspection Frequency	

Cross Section Elevations	
Date Last Taken	
Frequency(in months)	

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Items to Watch

Fixed Monitoring Devices
Type of Instruments
Installation Locations

Agency Responsible For Monitoring During High Flow

Responsible Agency Location	Phone Number	Cell Number

Flood Monitoring Resources
NoAA Website http://www.crh.noaa.gov/ahps2/ [Flows are shown in kcfs]
USGS Website http://water.usgs.gov/cgi-bin/waterwatch?map_type=real&state=mi [Flows are shown in cfs]

Initiate Monitoring when a flood warning is issued and/or when one or more of the following occurs
1. Structure will experience 25 year peak flow or more.
2. Structure is expected to have pressure flow.
3. History of whirlpools upstream or adjacent to sub-structure.
4. History of debris accumulation.
5. Known or existing scour holes.

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Feature	Location	Latitude
		null
		Longitude
		null
		Insp Freq
		Insp Key
Length	Width	Year Built
		Yr Recon
		Br
		Type
		Scour Eval
		# of Pins

Bridge Closure	
Conditions To Evaluate Bridge Closure	
1.Pressure Flow(water surface above bottom cord)	
2.Observed whirlpools upstream and adjacent to substructure	
3.High Debris Accumulation	
4.Settlement of abutment/piers	
5.Erosion of Roadway Embankment	
6.Other	

Contact People For Bridge Closure		
Name	Phone Number	Cell Number

(For NHS bridges, notify FHWA if closure is more than eight hours)		
Contact For Re-Opening After Inspection	Phone Number	Cell Number

Detour Route
Possible Detour Route(route number,from,to, etc.)

Bridges/Culverts on Detour Route			
Detour Bridge Numbers	Water Way	Load Limitations	Scour Rating

Documentation Of High Flow Event			
Date Monitored		Time Monitored	hr min
Storm Duration (hrs)		Estimated Total Rainfall (in)	
High Water Dst from Bottom Chord (ft)		Estimated USGS Flow Discharge (cu ft./sec)	

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Length	Width	Year Built	Yr Recon	Br	Type	Scour Eval	# of Pins
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Whirlpools Observed

Debris Accumulation

Action Taken / Closure

Comments