

Technical Note Notification

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1. Responsibility for Coding NBI Item 71 (Waterway Adequacy)

TN Commentary: Effective with the release of this Technical Note, NBI Item 71 (Waterway Adequacy) shall only be updated by the BMO following consultation with the Hydraulic Design Support Office. If the evaluation or re-evaluation of NBI Item 71 is required, Attachment 4.2 shall be completed. Language will be revised to the following sections per this policy change.

4.8.3 Scour Inspections

If *waterway adequacy or* scour criticality re-evaluation is recommended, then the *Bridge Waterway and Scour Evaluation Form* will be filled out and submitted to the BIPM; see Attachment 4.2

5.3.4.3 Request for Re-Evaluation of Item 113 – Scour Critical Bridges

If a re-evaluation is required, then the *Bridge Waterway and Scour Evaluation Form* will be filled out and submitted to the BIPM; see Attachment 4.2.

5.3.4.4 Waterway Adequacy

If the evaluation or re-evaluation of NBI Item 71 (Waterway Adequacy) is required, Attachment 4.2 shall be completed and submitted to the BIPM. The BIPM or their designee will coordinate with the Hydraulic Design Support Office (HDSO) to review the request to evaluate or re-evaluate NBI Item 71. Some concerns the BITL shall be aware of are listed below. All of the concerns mentioned below could result in a request to the HDSO.

- *Evidence of overtopping/flooding*
- *Change in Functional Class of the inventory route*
- *Significant change in the potential for traffic delays in the event of overtopping/flooding*

5.4.4.8 Underwater Inspection Report

When the Underwater Inspection Report is attached in BIO, the following shall also be attached in BIO, if required, by the underwater bridge inspectors:

- *Bridge Waterway and Scour Evaluation Form*; see Attachment 4.2

The underwater bridge inspectors will also determine if a scour or hydraulic analysis is needed. If such an analysis is recommended, the completion of the *Bridge Waterway and Scour Evaluation Form* (which is available in Attachment 4.2) shall be submitted to the BIPM.

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5.12 UNDERWATER INSPECTION REPORT SUBMISSION CHECKLIST

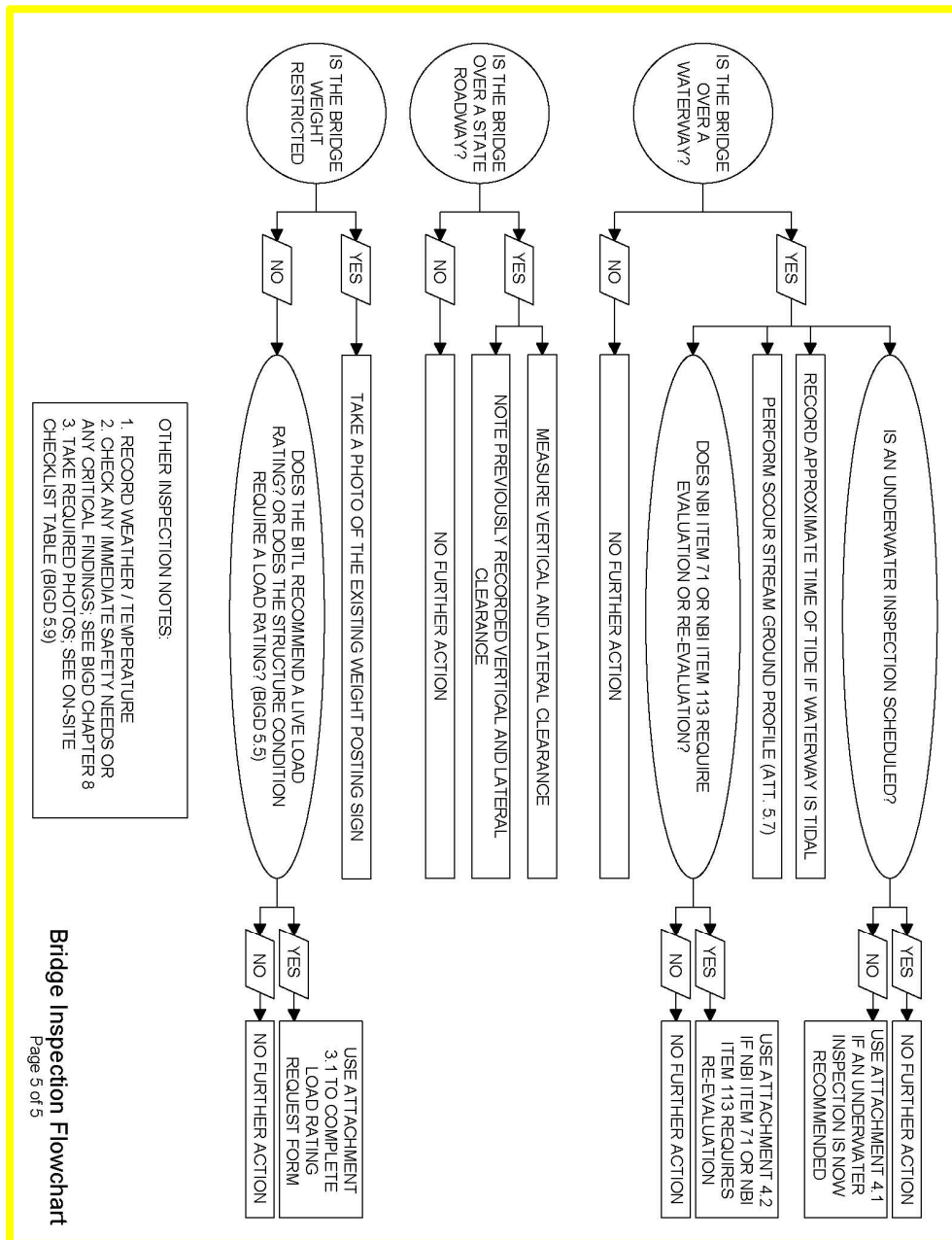
√	Task	Notes	BIGD Ref.
	Cover Page of Report is BIRF	<i>The cover page of the underwater inspection report is the BIRF, no special cover page is needed.</i>	5.4.4
	Update information in BIO	<i>BIRF is filled (SI&A, etc.) and Bridge Element Level Data. Under the BEGTD Waterway and Scour heading, the following is stated: "Underwater Inspection Performed XX/XX/XXXX; see Underwater Bridge Inspection Report." Element information updated per Section 5.4.4.8 (including any element combination from other inspections).</i>	5.4.4 & 5.4.4.8
	Diagrams / Plans / References	<i>All references or diagrams are consistent with labeling diagram or plans. UW Inspectors are required to review Bridge File prior to inspection.</i>	5.2.1.1
	Water Velocity Included	<i>Water velocity included (if needed)</i>	5.3.4.1.2
	Tidal Information Recorded	<i>Tidal Information recorded in report (if needed)</i>	5.3.8.8
<i>All attachments in BIO:</i>			
	Photographs with Captions	<i>For all bridges; see Section 5.9</i>	5.9 & 5.4.4.2
	Detailed Channel Survey	<i>For all bridges over a waterway where an underwater inspection is performed.</i>	5.3.4.1.2
	Bridge Waterway and Scour Evaluation Form	<i>Form is to be completed (if needed)</i>	5.3.4
	Critical Findings Form	<i>Upload current status of the Form (if needed)</i>	8.1 to 8.3
	Consultant Repair Recommendations	<i>Completed spreadsheet is to be completed (if needed)</i>	8.6 to 8.9
	Bridge Inspection QC Form	<i>For all bridges</i>	9.2.2.4
	Out-of-Frequency Form	<i>Form is to be completed (if needed)</i>	4.10.3
	Addendum or Attachments	<i>Varies The UW Inspection Report shall include all required information listed in BIGD Section 5.4.4.8.</i>	Varies

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Inspection Procedures Flow Chart (Page 5 of 5)



Bridge Inspection Flowchart
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7.1.1.1 Coding NBI Item 71 (Waterway Adequacy)

Per Section 5.3.4.4, if the evaluation or re-evaluation of NBI Item 71 (Waterway Adequacy) is required, Attachment 4.2 shall be completed and submitted to the BIPM. Waterway Adequacy (NBI Item 71) calls for the appraisal evaluation of the waterway adequacy; therefore, this item appraises the waterway opening with respect to the passage of flow through the bridge. Appraisal ratings take into account the functional classification of the roadway, the expected frequency of overtopping and potential traffic delays as a result of overtopping.

2. Updated List of Attachments

TN Commentary: Inspectors are to review the instruction pages included in the attachments; the instruction pages include commentary on some revisions which have been made as part of this Technical Note. Several attachments only include updates to embedded emails included in the forms. The only attachment with a significant update is:

- Attachment 4.2, Bridge Waterway and Scour Evaluation Form

List of Attachment Files			
Attachment No.	Name of Attachment File	Version	Page Count
ROUTINE INSPECTION (NO WATERWAY)			
5.20	Photograph Form Instructions	MAR2022 V1	2
	Photograph Form		1
5.25	Bridge Inspection QC Form Instructions	MAR2022, V1	1
	Bridge Inspection QC Form (SCDOT Inspection)		1
	Bridge Inspection QC Form (Consultant Inspection)		1
ROUTINE INSPECTION OF BRIDGE (OVER WATERWAY)			
5.7	Scour Stream Ground Profile Instructions	APR2022, V1	2
	Scour Stream Ground Profile		1
ROUTINE INSPECTION OF CULVERT			
5.21	Culvert Profile Sketch Sheet Instructions	MAY2022, V1	2
	Culvert Profile Sketch Sheet		1
INSPECTION FOR DECK			
5.11	Deck Sketch Sheet Instructions	MAR2022, V1	1
	Deck Sketch Sheet (Panel Deck by Panel Number)		1
	Deck Sketch Sheet (Panel Deck by Panel Number, non-visual)		1
	Deck Sketch Sheet (Panel Deck by Bay Number)		1
	Deck Sketch Sheet (Flat Slab)		1
INSPECTION FOR SUPERSTRUCTURE			
5.26	Blank Inspection Sketch Sheet Instructions	MAR2022, V1	1
	Blank Inspection Sketch Sheet		1
5.12	Prestressed Concrete Member Deterioration Sketch Sheet Instructions	MAR2022, V1	1
	Prestressed Concrete Member Deterioration Sketch Sheet (Cored Slab)		1
	Prestressed Concrete Member Deterioration Sketch Sheet (Beam)		1

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List of Attachment Files			
Name of Attachment File	Version	Page Count	
INSPECTION FOR SUPERSTRUCTURE (CONTINUED)			
5.13	Reinforced Concrete Member Deterioration Sketch Sheet Instructions	MAR2022, V1	1
	Reinforced Concrete Member Deterioration Sketch Sheet (Tee Beam)		1
	Reinforced Concrete Member Deterioration Sketch Sheet (Slab)		1
5.14	Steel Member Deterioration Sketch Sheet Instructions	MAR2022, V1	1
	Steel Member Deterioration Sketch Sheet		1
5.15	Rigid Frame Deterioration Sketch Sheet Instructions	MAR2022, V1	1
	Rigid Frame Deterioration Sketch Sheet (Concrete)		1
	Rigid Frame Deterioration Sketch Sheet (Steel)		1
INSPECTION FOR SUBSTRUCTURE (WITH PILES)			
5.18	Pile Section Sketch Sheet Instructions	APR2022, V1	1
	Pile Section Sketch Sheet (Vertical Orientation)		1
	Pile Section Sketch Sheet (Horizontal Orientation)		1
INSPECTION FOR SUBSTRUCTURE			
5.17	Bent Cap and Bearing Sketch Sheet Instructions	MAR2022, V1	1
	Bent Cap and Bearing Sketch Sheet (Single Bent Cap)		1
	Bent Cap and Bearing Sketch Sheet (Plan View (Bents/Caps))		1
	Bent Cap and Bearing Sketch Sheet (Plan View (Caps/Saddles))		1
	Bent Cap and Bearing Sketch Sheet (Eight Pile Bent Sketch)		1
	Bent Cap and Bearing Sketch Sheet (Seven Pile Bent Sketch)		1
	Bent Cap and Bearing Sketch Sheet (Six Pile Bent Sketch)		1
	Bent Cap and Bearing Sketch Sheet (Five Pile Bent Sketch)		1
	Bent Cap and Bearing Sketch Sheet (Four Pile Bent Sketch)		1
OTHER ATTACHMENTS			
3.2	Exemption for BITL Status Form Instructions	SEPT2022, V1	1
	Exemption for BITL Status Form		1
5.24	Closed Bridge Re-opening Form Instructions	SEPT2022, V1	1
	Closed Bridge Re-opening Form		1
OTHER INSPECTION FORMS			
4.5	Scour Inspection (Post Storm Inspection) Form Instructions	MAR2022, V1	1
	Scour Inspection (Post Storm Inspection) Form		1
5.8	Damage Inspection Form Instructions	MAR2022, V1	1
	Damage Inspection Form		2
5.9	Steel Superstructure Damage Inspection Form Instructions	MAR2022, V1	3
	Steel Superstructure Damage Inspection Form		2
5.10	Concrete Superstructure Damage Inspection Form Instructions	MAR2022, V1	2
	Concrete Superstructure Damage Inspection Form		2
5.16	Fracture Critical Member (FCM) Inspection Form Instructions	MAR2022, V1	1
	Fracture Critical Member (FCM) Inspection Form		1
5.19	Textual Data – Written Description Form Instructions	MAR2022, V1	1
	Textual Data – Written Description Form		1
5.22	Bridge Joint Sketch Sheet Instructions	MAR2022, V1	2
	Bridge Joint Sketch Sheet		1
5.23	AASHTO Element Table Worksheet Instructions	MAR2022, V1	1
	AASHTO Element Table Worksheet		1

Copies of the Bridge Inspection Guidance Document and related Technical Notes can be obtained from the SCDOT Bridge Maintenance Office website at the [SCDOT Bridge Inspection Guidance page](#).

Bridge Inspection Guidance Document



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INSPECTION PREPARATION AND PROCEDURES			
5.1	Bridge Data Form for SCDOT Road Data Services (RDS) Instructions	SEPT2022, V1	1
	Bridge Data Form for SCDOT Road Data Services (RDS)		1
5.2	Request for Bridge Preparation Prior to Inspection Instructions	MAR2022, V1	1
	Request for Bridge Preparation Prior to Inspection (Word Document)		2
	Request for Bridge Preparation Prior to Inspection (PDF)		2
5.3	Railroad Flagging Service Form Instructions	SEPT2022, V1	1
	Railroad Flagging Service Form		1
5.4	Inspection Access, Procedures and Equipment Form Instructions	MAR2022, V1	1
	Inspection Access, Procedures and Equipment Form		2
5.28	Bridge-Specific Inspection Procedure (BSIP) Template Instructions	MAR2022, V1	1
	BSIP Template Fracture Critical Member (Blank) (Word Document)		2
	BSIP Template Fracture Critical (w/ Instructions) (Word Document)		3
	BSIP Template Underwater (Blank) (Word Document)		2
	BSIP Template Underwater (w/ Instructions) (Word Document)		2
	BSIP Template Complex Components (Blank) (Word Document)		2
	BSIP Template Complex Components (w/ Instructions) (Word Document)		2
BRIDGE ASSESSMENT FOLLOWING INSPECTION (NON-CRITICAL FINDINGS)			
3.1	Load Rating Request Form Instructions	SEPT2022, V1	1
	Load Rating Request Form		1
4.1	Consultant Inspection Request Form (CIRF) Instructions	SEPT2022, V1	1
	Consultant Inspection Request Form (CIRF)		1
4.2	Bridge Waterway and Scour Evaluation Form Instructions	SEPT2022, V1	1
	Bridge Waterway and Scour Evaluation Form		1
4.3	Inspection Out-of-Frequency Form Instructions	SEPT2022, V1	1
	Inspection Out-of-Frequency Form		1
4.4	NDT Request Form Instructions	SEPT2022, V1	1
	NDT Request Form		1
CRITICAL FINDINGS AND REPAIR RECOMMENDATIONS			
5.5	Critical Findings Form Instructions	SEPT2022, V1	2
	Critical Findings Form		2
5.6	Repair Recommendations Form Instructions	MAR2022, V3	2
	Repair Recommendations Form (PDF)		2
	Repair Recommendations Form (Spreadsheet)		N/A
5.27	Stud-up Pile Repair Planning Form Instructions	MAR2022, V1	1
	Stud-up Pile Repair Planning Form		1

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List of Attachment Files			
Attachment No.	Name of Attachment File	Version	Page Count
MUNICIPALITY-COUNTY BRIDGES – CORRESPONDENCES			
2.1	Municipality-County Bridge Inspection Report Release Letter (No Repair Recommendations and No Critical Findings) Instructions	MAR2022, V1	1
	Municipality-County Bridge Inspection Report Release Letter (No Repair Recommendations and No Critical Findings) (Word Doc)		1
	Municipality-County Bridge Inspection Report Release Letter (No Repair Recommendations and No Critical Findings) (PDF)		1
2.2	Municipality-County Bridge Inspection Report Release Letter (Repair Recommendations) Instructions	MAR2022, V1	1
	Municipality-County Bridge Inspection Report Release Letter (Repair Recommendations) (Word Document)		1
	Municipality-County Bridge Inspection Report Release Letter (Repair Recommendations) (PDF)		1
2.3	Municipality-County Bridge Receiving Closed Bridge Inspection Letter Instructions	MAR2022, V2	1
	Municipality-County Bridge Receiving Closed Bridge Inspection Letter (Word Document)		1
	Municipality-County Bridge Receiving Closed Bridge Inspection Letter (Repair Recommendations) (PDF)		1
2.4	Municipality-County Bridge Critical Finding Memorandum Instructions	MAR2022, V1	1
	Municipality-County Bridge Critical Finding Memorandum (Word Doc)		1
	Municipality-County Bridge Critical Finding Memorandum (PDF)		1
2.5	Municipality-County Bridge Critical Finding Reminder Memorandum Instructions	MAR2022, V1	1
	Municipality-County Bridge Critical Finding Reminder Memorandum (Word Document)		1
	Municipality-County Bridge Critical Finding Reminder Memorandum (PDF)		1
2.6	Municipality-County Bridge Critical Finding Action Taken by SCDOT Instructions	MAR2022, V1	1
	Municipality-County Bridge Critical Finding Action Taken by SCDOT (Word Document)		1
	Municipality-County Bridge Critical Finding Action Taken by SCDOT (PDF)		1
2.7	Municipality-County Bridge Inventory List and Status Instructions	MAR2022, V1	1
	Municipality-County Bridge Inventory List and Status (Word Document)		2
	Municipality-County Bridge Inventory List and Status (PDF)		2
2.8	Municipality-County Bridge Removed from Inventory Letter Instructions	MAR2022, V2	1
	Municipality-County Bridge Removed from Inventory Letter (Word Doc)		1
	Municipality-County Bridge Removed from Inventory Letter (PDF)		1

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QUALITY			
9.1	Inspection Team Qualification Tracking Log Instructions	MAR2022, V1	1
	Inspection Team Qualification Tracking Log (Spreadsheet)		N/A
9.2	Field Review Quality Form Instructions	MAR2022, V1	1
	Field Review Quality Form		2
9.3	Independent Inspection Check Form Instructions	SEPT2022, V1	1
	Independent Inspection Check Form		5
9.4	District Quality Meeting Form Instructions	SEPT2022, V1	1
	District Quality Meeting Form		1
9.5	Quality Control Tracking Spreadsheet Instructions	SEPT2022, V1	1
	Quality Control Tracking Spreadsheet (Spreadsheet)		N/A
9.6	Quality Assurance Tracking Spreadsheet Instructions	MAR2022, V1	1
	Quality Assurance Tracking Spreadsheet (Spreadsheet)		N/A
9.7	Bridge Inspection QA Form Instructions	MAR2022, V1	3
	Bridge Inspection QA Form (SCDOT Inspection)		1
	Bridge Inspection QA Form (Consultant Inspection) (Spreadsheet)		N/A
9.8	Consultant QC Plan Review Checklist Instructions	MAR2022, V1	1
	Consultant QC Plan Review Checklist		1

As part of continuing efforts to improve the bridge inspection practices, Technical Note 03 (TN03) is currently being drafted and may include updates related to:

1. Updates to the BIGD Regarding Changes to the NBIS
2. Updates to Priority A and Priority B Flags
3. Inventory Photograph Form Requirements
4. Damage Inspection Frequency
5. Timber Pile Inspection and Load Rating Recommendation
6. Deep Water Situations
7. Off-Frequency or One-Time Underwater Inspections

Please direct any questions concerning the above to the Bridge Inspection Program Manager or other representatives at the Bridge Maintenance Office.