

2016 Michigan Bridge Conference Workshop

Culvert Safety Inspection Report (CSIR)

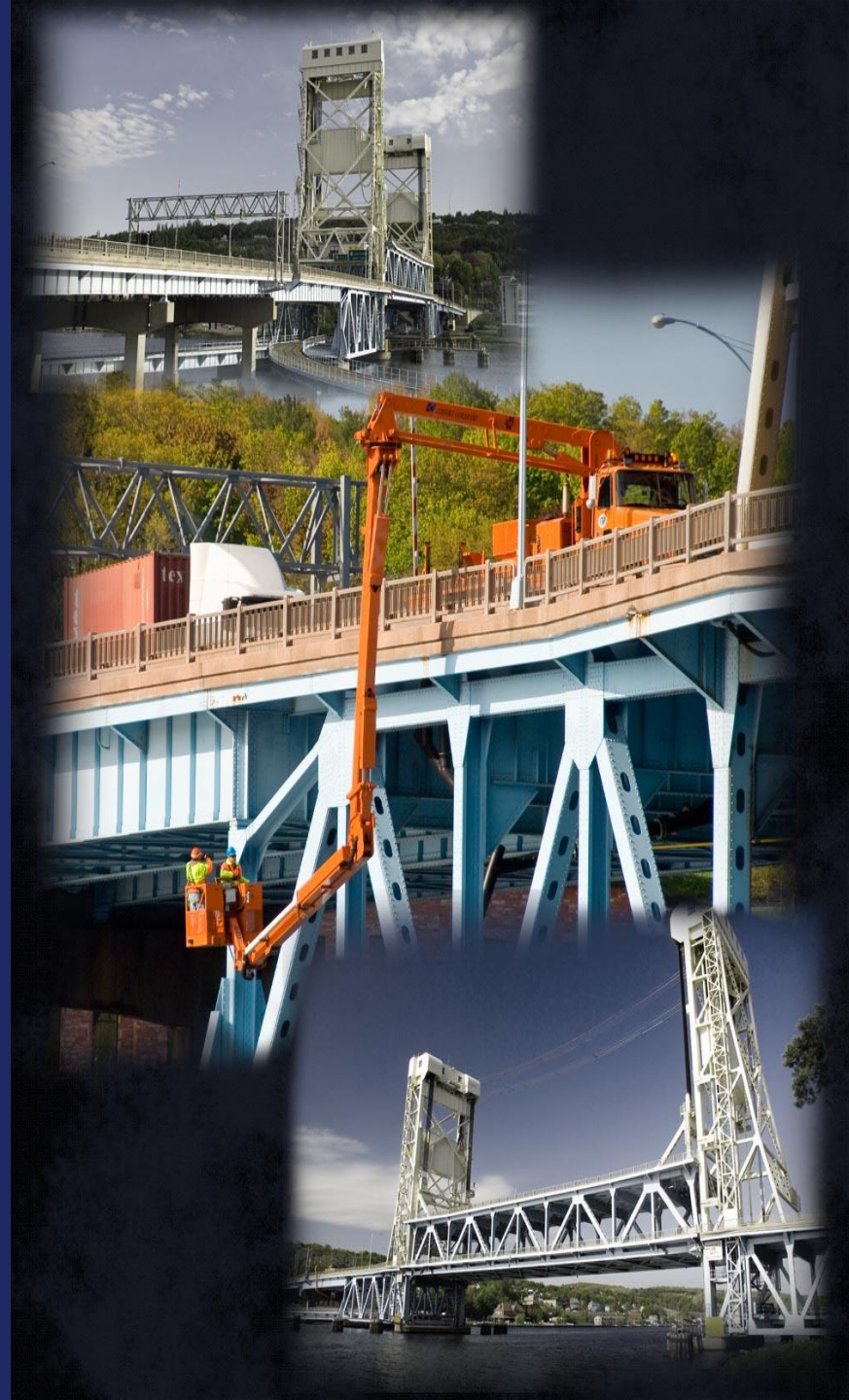


Rich Kathrens

MDOT Bridge Safety Inspection Engineer

kathrens@michigan.gov

March 22, 2015





Culvert Safety Inspection Updates

Pre 2015 CSIR

NBI INSPECTION			
Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
		24	05/27/2014
GENERAL NOTES			
Location: @ Gath Trucking south of US-23 over M-13 bridge Waded and probed with hip boots.			
APPROACH/SURFACE			
Item	Rating	Comments	
1. Pavement	5 FAIR CONDITION	HMA surface. Open transverse and longitudinal cracks throughout, some partially sealed. Map / block cracking taking place along longitudinal joints and some transverse cracks. Areas of plugs in SB lane.	
2. Sidewalks or Curbs	N NOT APPLICABLE		
3. Headers / Rails	7 GOOD CONDITION	Thrie beam backed guardrail detail. Some blocks are loose and tipped. Light weathering on all panels. Moderate scale at the top of SW concrete header. Minor scale and small pop-outs at E header.	
4. Approach Guard Rail	7 GOOD CONDITION	Type B guardrail. Minor scrapes and light weathering on all panels. Light collision damage at NW.	
5. Shoulder	5 FAIR CONDITION	HMA full width paved shoulders. Tight transverse cracks at reference lines with areas of tight map and block cracking. Area of cold patch adjacent to SB lanes at west shoulder; previous report mentioned area of settlement at this location. Outer edge of shoulder at SW with cold-patch filled	



Pre 2015 CSIR, continued

6. Deck	???	N NOT APPLICABLE	HMA over buried structure.
7. Deck Soffit	???	6 FAIR CONDITION	Minor areas of deterioration. Scattered areas of honeycomb, mostly at W half of structure. Spall to steel within 6in of center construction joint with adjacent shallow delamination. Few small spalls and incipient spalls. Small random wet areas. Extended portion of structure at west end is continuously wet with rust staining.
8. Other Joints		N NOT APPLICABLE	
9. Leakage		5 FAIR CONDITION	Minor leakage where soffit and abutments meet in the SE and NE corners. Evidence of leaking at west construction joint in soffit. Extended portion of soffit continuously wet. Some small random wet areas in soffit. Isolated leaching cracks in sidewalls.

SUPERSTRUCTURE

Item	Rating	Comments
Pipe	???	N NOT APPLICABLE

CULVERT

Item	Rating	Comments
Slope Protection	5 FAIR CONDITION	Vegetated slopes. Heavy erosion in SW at end of wingwall, exposing guardrail post. Minor erosion in other quads. Cold-patched area in SE shoulder due to slope erosion. Roadside ditches contribute to steep adjacent slopes.
Scour	5 FAIR CONDITION	Slightly deeper flow at W end, previous report states: 2ft deep scour hole at west inlet that extends 1/3 of the way into structure. No scour along footings.
ABUT/Footing (SIA-60)	6 FAIR CONDITION	Minor areas of deterioration. Isolated tight vertical cracks in both with minor leaching. Delamination within 3 inches of center construction joint with minor leaching. Moderate scale under drains in south abutment. Hairline



Pre 2015 CSIR, continued

Channel (SIA-61)	4 POOR CONDITION	Channel upstream and downstream from structure is significantly restricted by vegetation and debris, approx 90%. Heavy sandy/gravelly sediment build up under structure diverting flow to south abut within culvert, toward north at outlet. Channel banks are densely vegetated.
Culvert SIA - 62	6 FAIR CONDITION	Minor deterioration with areas of moderate deterioration, including scaling and leaching map cracking at return/wingwall areas and shallow spalling to steel at center construction joint. Channel restricted up and downstream

MISCELLANEOUS			
GUARD RAIL		OTHER	
Item	Rating	Item	Rating
36A. Bridge Railings	0 Substandard	71. Water Adequacy	6 Equal Minimum
36B. Transitions	N N/A or not required	72. Approach Alignment	6 Equal Min Criteria
36C. Approach Guardrail	0 Substandard	Special Insp. Equipment	2 Waders
36D. Approach Guardrail Ends	0 Substandard	Underwater Insp. Method	1 Wading and Probe

REPAIRS / MAINTENANCE
Address erosion at SW shoulder and end of wingwall. Patch wing/return walls. Patch center construction joint.
???



RECOMMENDATIONS & ACTION ITEMS		
Recommendation Type	Priority	Description
Scour Repair	H	Repair erosion in SW at end of wingwall. Clean channel. (02)



Pre 2015 CSIR (PDF Report)

MICHIGAN DEPARTMENT OF TRANSPORTATION

STR [REDACTED] CULVERT SAFETY INSPECTION REPORT [REDACTED]

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
[REDACTED]	43.944537 / -83.966624	[REDACTED]	Good Condition(7)	
Feature	Length / Width	Owner		
COUNTY DRAIN	14.8 / 70.21	[REDACTED]		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
[REDACTED]	1935 / 1952 / /	[REDACTED]	P Posted for load(P)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
[REDACTED]	1 Concrete / 19 Culvert	01/20/2015 / V1NU	6 Calcs not made	

SUPERSTRUCTURE ???

	05/10	05/12	05/14	
10. Stringers	N	N	N	(05/14) (05/12) (05/10)


???

MISCELLANEOUS

Guard Rail		Other Items	
Item	Rating	Item	Rating
36A. Bridge Railings	0	71. Water Adequacy	6
36B. Transitions	N	72. Approach Alignment	6
36C. Approach Guardrail	0	Temporary Support	0 No Temporary Supports
36D. Approach Guardrail Ends	0	High Load Hit (M)	No
		Special Insp. Equipment	2
		Underwater Insp. Method	1



Pre 2015 CSIR Element (PDF Report)



MICHIGAN DEPARTMENT OF TRANSPORTATION									
STR [REDACTED] SAFETY INSPECTION REPORT - CORE ELEMENTS [REDACTED]									
Facility	Latitude / Longitude		MDOT Structure ID		Structure Condition				
[REDACTED]	43.944537 / -83.966624		[REDACTED]		Fair Condition(6)				
Feature	Length / Width		Owner						
COUNTY DRAIN	16 / 70.21		[REDACTED]						
Location	Built / Recon. / Paint / Ovly.		TSC		Operational Status				
[REDACTED]	1935 / 1952 / /		[REDACTED]		A Open, no restriction(A)				
Region / County	Material / Design		Last NBI Inspection		Scour Evaluation				
[REDACTED]	1 Concrete / 19 Culvert		05/27/2014 / RJ7M		6 Calcs not made				
NBI INSPECTION									DFEC
Inspector Name		Agency / Company Name			Insp. Freq.		Insp. Date		
[REDACTED]		[REDACTED] INSPECTOR			24		05/14/2012		
CORE ELEMENTS									(English Units)
Element Number	Element Name	Total Quantity	Unit	State 1	State 2	State 3	State 4	State 5	
Substructure									
244/ 3	Three Sided Culvert	70	(LF)	62	8	0	0	xxxxx	
				89%	11%	0%	0%	xxxxx	



Pre 2015 CSIR Work Recommendations (PDF Report)

MICHIGAN DEPARTMENT OF TRANSPORTATION

WORK RECOMMENDATIONS

Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
	43.944537 / -83.966624		Poor Condition(4)	
Feature	Length / Width	Owner		
COUNTY DRAIN	14.8 / 70.21	Region: Bay(4)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
	1935 / 1952 / /		P Posted for load(P)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
	1 Concrete / 19 Culvert	04/01/2015 / Z7WA	6 Calcs not made	

WORK RECOMMENDATIONS

Z7WA

Recommendation Type	Priority	Description
Scour Repair	H	Repair erosion in SW at end of wingwall. Clean channel. (02) 2004 06 (08)10 12 14
Substr Repair	M	Repair wing / return walls. Repair spalls at center const. jt. 2004 06(08)10 12 14



Previous reports remain on older report format.

Inventory & Appraisal | **Inspections / Reports** | Load Ratings | Work Recommendations | Work History | Documents

Special Inspections Required: Fracture Critical (92A) Underwater (92B) Other Special (92C) Fatigue Sensitive (92D) Scour Critical

Inspection Data: (select from folders below) Print Print All

Routine - CSIR

- [Add New](#)
- [06/11/2012](#)
- [06/29/2010](#)
- [06/17/2008](#)
- [06/21/2006](#)
- [06/22/2004](#)
- [06/13/2002](#)
- [03/11/2002](#)
- [04/25/2000](#)
- [02/04/1999](#)
- [02/04/1999](#)
- [03/14/1996](#)

Element

- [06/11/2012](#)
- [06/29/2010](#)
- [06/17/2008](#)
- [06/21/2006](#)
- [06/22/2004](#)
- [06/13/2002](#)
- [03/11/2002](#)
- [04/25/2000](#)

NBI INSPECTION - SLQK

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
	MDOT INSPECTOR	24	06/11/2012

GENERAL NOTES

SPC HS-20 1968 Scour protection, remove log jam. CPM 06.08(10) Inspected 6-11-12

APPROACH/SURFACE

Item	Rating	Comments
1. Pavement	7 GOOD CONDITION	HMA over buried structure. Sealed and unsealed longitudinal and transverse cracks.
2. Sidewalks or Curbs	N NOT APPLICABLE	
3. Headers / Rails	7 GOOD CONDITION	

Inventory & Appraisal | **Inspections / Reports** | Load Ratings | Work Recommendations | Work History | Documents

Special Inspections Required: Fracture Critical (92A) Underwater (92B) Other Special (92C) Fatigue Sensitive (92D) Scour Critical

Inspection Data: (select from folders below) Print Print All

Routine - CSIR

- [06/11/2012](#)
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- [06/22/2004](#)
- [06/13/2002](#)
- [03/11/2002](#)
- [04/25/2000](#)

Element

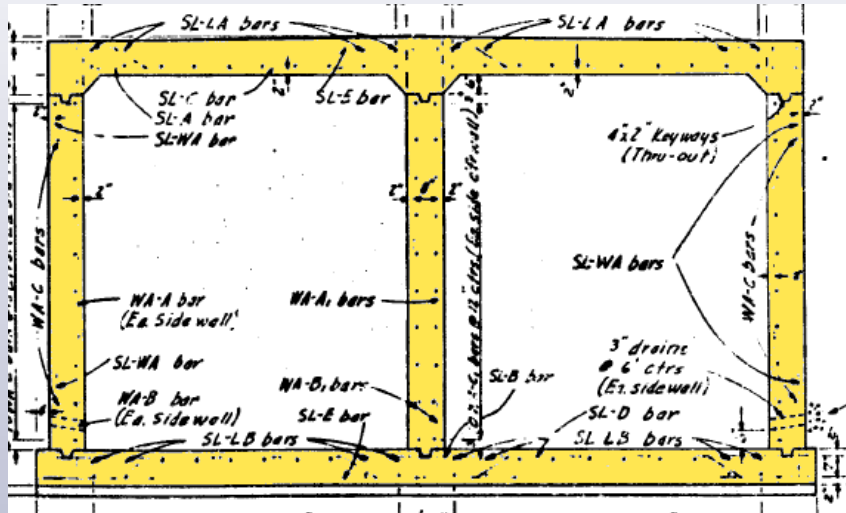
- [06/11/2012](#)
- [06/29/2010](#)
- [06/17/2008](#)
- [06/21/2006](#)
- [06/22/2004](#)
- [06/13/2002](#)
- [03/11/2002](#)
- [04/25/2000](#)

ELEMENT INSPECTION - SLQK

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
	MDOT INSPECTOR	24	06/11/2012

CoRE ELEMENTS

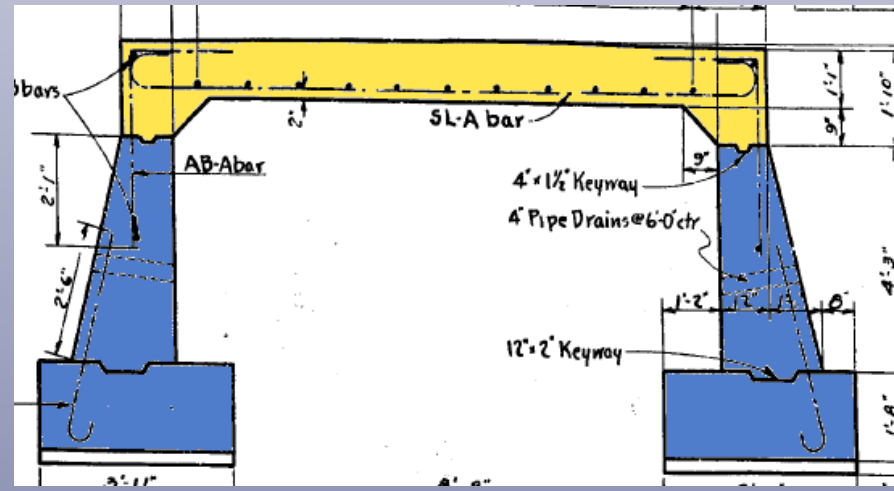
Elem. Key	Element	Env.	Quantity	Unit	Qty 1	Qty 2	Qty 3	Qty 4	Qty 5
Substructure	240	Metal Culvert	3	262 (LF)	0	262	0	0	0
					0%	100%	0%	0%	0%



Double Barrel CIP Culvert
CSIR Form?



CIP Slab w/Abutments
CSIR Form?





Changes to the Culvert Safety Inspection Report (CSIR)

Released in MiBRIDGE on 1/29/2015

The Culvert Safety Inspection Report (CSIR) has been updated and combined with the Element Level report to create one report for collecting the condition information.

This is the first attempt to create a structure specific all inclusive report for the collection of condition information.

Several items were removed from the old CSIR report that did not apply to a culvert type structure (deck, deck soffit, pipe, and abutment).



MiBRIDGE uses CSIR when Item 43B = 19 (Culvert)

Item 43 - Structure Type, Main

MAT(X), DES(XX)

Record using 2 segments the predominant type of structure for the main span(s).

<u>Segment</u>	<u>Description</u>	<u>Length</u>
43A	Kind of material (MAT)	1 digit
43B	Type of design (DES)	2 digits

<u>MAT</u>		<u>DES</u>	
1	Concrete	00	Other
2	Concrete continuous	01	Slab
3	Steel, simple or Cantilever.		(71 Slab Timber - Composite
4	Steel continuous	15	Movable - Lift
5	Prestressed concrete*	16	Movable - Bascule
6	Prestressed concrete continuous*	17	Movable - Swing
7	Timber	18	Tunnel
8	Masonry	19	Culvert (Box, Pipe or Pipe Arch)(includes frame culverts)
9	Aluminum, W.I. or C.I.	20	Mixed types (Note: applicable only to approach span - Item 44)
0	Other	21	Segmental Box Girder
		22	Channel Beam (Inverted Channel)
			(33 Girder & Floorbeam - Composite Girder
			(25 Girder - Thru (Include conc. Camelbacks)

* Post-tensioned concrete should be coded as prestressed concrete



New CSIR Report (*NBI Items*)

CULVERT SAFETY INSPECTION			KATHRENS
Inspector Name	Agency / Company Name	* Insp. Freq.	Insp. Date
Rich Kathrens	MDOT - Bridge Field Services	24	04/01/2016

GENERAL NOTES

[Prev. Comment](#)

* Posting Signs in Place

NBI INSPECTION

Item	Rating	Comments
* 1. Culvert (SIA-62)	6 FAIR CONDITION 01/15 - 7	Culvert comments should be noted under the appropriate Culvert Element below
* 2. Channel (SIA-61)	6 FAIR CONDITION 01/15 - 6 Prev. Comment	Debris built up at west inlet blocking 80% of inlet. Debris dam is approx. 2' high in front of culvert. Upstream channel banks have erosion and trees falling inward.
* 3. Scour Inspection (NEW)	4 POOR CONDITION 01/15 - Prev. Comment	Footings are exposed in some locations.

MISCELLANEOUS

GUARD RAIL		OTHER	
Item	Rating	Item	Rating
* 36A. Bridge Railings	1 Meets Standards	71. Water Adequacy	6 Equal Minimum
* 36B. Transitions	1 Meets Standards	* 72. Approach Alignment	6 Equal Min Criteria
* 36C. Approach Guardrail	1 Meets Standards	Special Insp. Equipment	2 Waders
* 36D. Approach Guardrail Ends	1 Meets Standards	* Underwater Insp. Method	1 Wading and Probe



MDOT NBI Rating Guidelines

BSIR #22 DRAINAGE CULVERTS

This item is for noting damage or poor drainage characteristics in the approach drains. There is no rating scale. The inspector can note in the comments if there is ponding of water at the casting due to build up of debris or erosion of approach fill into the manhole.

CSIR #1 CULVERT (SI&A Item 62)

This item evaluates the alignment, settlement items associated with culverts. The rating is based on the evaluation of the culvert. Integral wing walls shall be included in the evaluation. Additions shall be collected using the element level form.

Updated 3/15/2016

MDOT Bridge Safety Inspection NBI Rating Guidelines			
CSIR #1 CULVERT (SI&A #62)			
Code	Condition	Material	Description
9	NEW	All	New Condition
8	GOOD	All	No Settlement or misalignment. Members retain full section properties and function as designed with limited deterioration.
7	GOOD	Concrete	Shrinkage cracks, light scaling, and insignificant spalling which does not expose reinforcing steel.
		Steel	Metal culverts have a smooth symmetrical curvature with superficial corrosion and no pitting. No problems with joints or seams.
		Timber	Checks or shakes penetrate less than 5% of the member thickness.
		All	No Settlement or misalignment. Members retain full section properties and function as designed with limited deterioration.
6	FAIR	Concrete	Minor chloride contamination, cracking with some leaching, or spalls on concrete or masonry walls and slabs
		Steel	Metal culverts have a smooth curvature, non-symmetrical shape, significant corrosion or moderate pitting.
		Timber	Decay or section loss affecting less than 5% of the member section. Splits arrested and concerns mitigated.
		All	Local minor scouring at curtain walls, wingwalls, or pipes.
5	FAIR	Concrete	Extensive cracking and leaching, or spalls on concrete or masonry walls and slabs.
		Steel	Metal culverts have significant distortion and deflection in one section, significant corrosion or deep pitting.
		Timber	Decay or section loss affecting 5% to 10% of the member section. Checks, shakes, and splits have no effect on capacity.
		All	Moderate to major deterioration or disintegration. Noticeable scouring or erosion at curtain walls, wingwalls, or pipes.
		Concrete	Large spalls, heavy scaling, and cracks, considerable disintegration.



New CSIR Report (*AASHTO Elements*)

AASHTO ELEMENTS								
<input type="checkbox"/>	Elem. Key	Element	Quantity	Unit	Good	Fair	Poor	Severe
Culvert (Add)								
<input type="checkbox"/>	240 - Steel Culvert		75	ft <input checked="" type="radio"/>	25	47	3	0
				% <input type="radio"/>	33	63	4	0
Comments								
<input type="text"/>								

Inspector is required to add a minimum of (1) culvert type element. This will allow them to gain access to add comments.

Unfortunately there was no easy way to map the previous comments to the new CSIR. Therefore the inspector will have to re-enter them for the first time.

Previous reports contained relevant culvert information in the Deck, Deck Soffit, Pipe, Abutments, Piers, and Culvert components.



Users can view the previous PDF report and copy the appropriate comments into the new CSIR report.

11. Pipe	5	5	5	Waded. Moderate corrosion on bottom 1/3 of culvert, appears to be originating behind bolt heads. Moderate to heavy scale @ water line. Heavy leaching from construction joints and bolts. (06/12)
17. Culvert Rating (SIA-62)	5	5	5	Moderate corrosion on bottom 1/3 of culvert, appears to be originating behind bolt heads. Moderate to heavy scale @ water line. Heavy leaching from construction joints and bolts. Debris build up at west inlet blocking 80% of inlet. Debris dam is approx. 2' high in front of center pier. Upstream channel banks have slid into channel. (06/12)

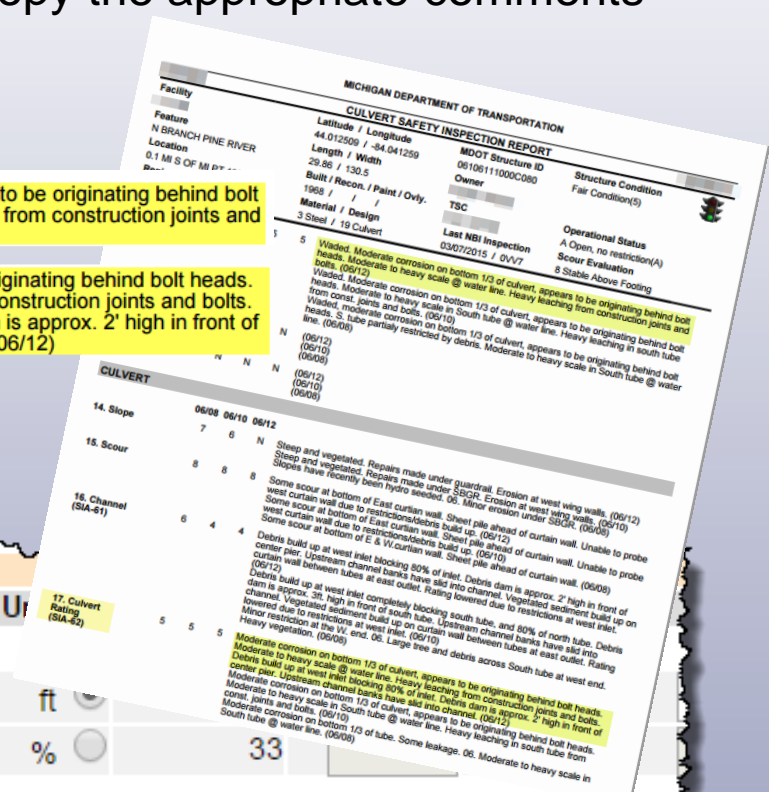
AASHTO ELEMENTS

<input type="checkbox"/>	Elem. Key	Element	Quantity	Unit
<input type="checkbox"/>	240	Steel Culvert	75	ft
<input type="checkbox"/>				%

Comments

[Prev. Comment](#)

Scour Cou Moderate corrosion on bottom 1/3 of culvert, appears to be originating behind bolt heads. Moderate to heavy scale @ water line. Heavy leaching from construction joints and bolts.



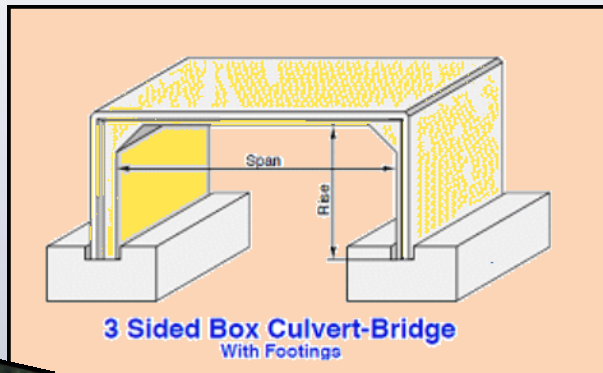


New CSIR Report (AASHTO Elements)

- Select Element ---
- 240 - Steel Culvert
 - 241 - Reinf Conc Culvert
 - 242 - Timber Culvert
 - 243 - Other Culvert
 - 244 - Masonry Culvert
 - 245 - Prestressed Conc Culvert
 - 851 - Reinf Conc Culvert 3-Sided
 - 857 - Culvert Joints
 - 861 - Culvert Wingwall
 - 862 - Culvert Footing
 - 863 - Culvert Headwall



Element 240



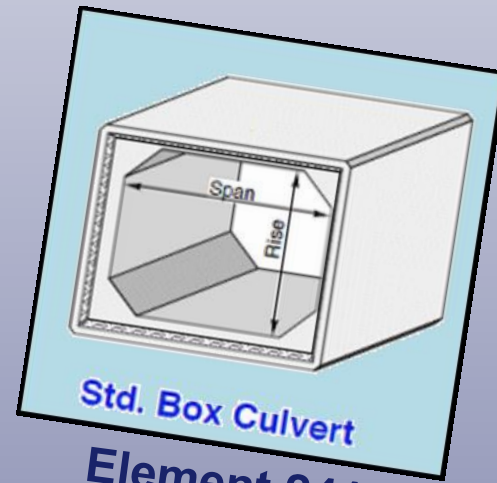
Element 851



Element 242



Element 243



Element 241





New CSIR Report (AASHTO Elements)

---Select Element---

- 240 - Steel Culvert
- 241 - Reinf Conc Culvert
- 242 - Timber Culvert
- 243 - Other Culvert
- 244 - Masonry Culvert
- 245 - Prestressed Conc Culvert
- 851 - Reinf Conc Culvert 3-Sided
- 857 - Culvert Joints
- 861 - Culvert Wingwall
- 862 - Culvert Footing
- 863 - Culvert Headwall



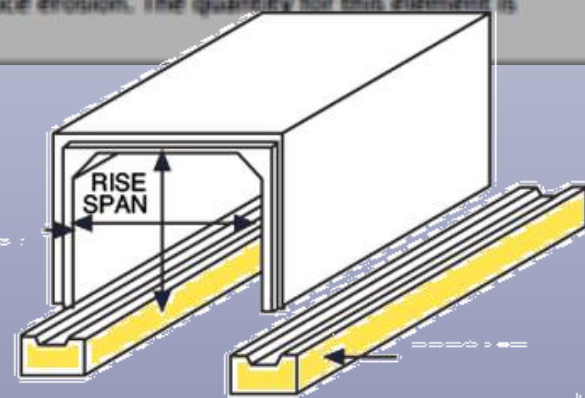
No.	Name	CS Table	Unit	Description/Commentary
CULVERT				
851	3-Sided Reinforced Concrete Culvert	1	ft.	Reinforced 3-sided concrete culvert.
857	Culvert Joint	8	ea	This element is only added when the joint between culvert sections is distressed or leaking. The quantity for this element is measured as "each". NOTE: This element is only to be added when defects matching the condition state table exist.
861	Culvert Wingwall	**		Wingwalls added to the ends of the culvert. Includes all materials. The quantity for this is measured as "each". ** NOTE: Use the appropriate condition state table base on material.
862	Culvert Footing	1	ft.	This element is to be used for 3-Sided Box or Arch Culverts that are constructed with a footing.
863	Culvert Headwall	1	ea	Culvert Headwall attached to culvert to reduce erosion. The quantity for this element is measured as "each".



New CSIR Report (AASHTO Elements)

No.	Name	CS Table	Unit	Description/Commentary
CULVERT				
851	3-Sided Reinforced Concrete Culvert	1	ft.	Reinforced 3-sided concrete culvert.
857	Culvert Joint	8	ea	This element is only added when the joint between culvert sections is distressed or leaking. The quantity for this element is measured as "each". NOTE: This element is only to be added when defects matching the condition state table exist.
861	Culvert Wingwall	**		Wingwalls added to the ends of the culvert. Includes all materials. The quantity for this is measured as "each". ** NOTE: Use the appropriate condition state table base on material.
862	Culvert Footing	1	ft.	This element is to be used for 3-Sided Box or Arch Culverts that are constructed with a footing.
863	Culvert Headwall	1	ea	Culvert Headwall attached to culvert to reduce erosion. The quantity for this element is measured as "each".

Element 862, Culvert Footing is an ADE that is a child element to Substructure Element 220 Reinforced Concrete Pile Cap/Footing

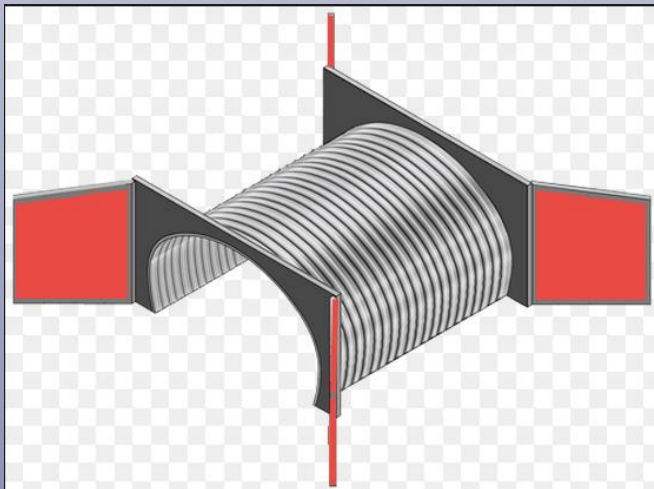


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New CSIR Report (AASHTO Elements)

No.	Name	CS Table	Unit	Description/Commentary
CULVERT				
851	3-Sided Reinforced Concrete Culvert	1	ft.	Reinforced 3-sided concrete culvert.
857	Culvert Joint	8	ea	This element is only added when the joint between culvert sections is distressed or leaking. The quantity for this element is measured as "each". NOTE: This element is only to be added when defects matching the condition state table exist.
861	Culvert Wingwall	**		Wingwalls added to the ends of the culvert. Includes all materials. The quantity for this is measured as "each". ** NOTE: Use the appropriate condition state table base on material.
862	Culvert Footing	1	ft.	This element is to be used for 3-Sided Box or Arch Culverts that are constructed with a footing.
863	Culvert Headwall	1	ea	Culvert Headwall attached to culvert to reduce erosion. The quantity for this element is measured as "each".



861 - Culvert Wingwall ▼
4
(EA)

%

Comments

Steel Sheet-pile Wingwalls all 4 Quadrants



New CSIR Report (*AASHTO Elements*)

No.	Name	CS Table	Unit	Description/Commentary
CULVERT				
851	3-Sided Reinforced Concrete Culvert	1	ft.	Reinforced 3-sided concrete culvert.
857	Culvert Joint	8	ea	This element is only added when the joint between culvert sections is distressed or leaking. The quantity for this element is measured as "each". NOTE: This element is only to be added when defects matching the condition state table exist.
861	Culvert Wingwall	**		Wingwalls added to the ends of the culvert. Includes all materials. The quantity for this is measured as "each". ** NOTE: Use the appropriate condition state table base on material.
862	Culvert Footing	1	ft.	This element is to be used for 3-Sided Box or Arch Culverts that are constructed with a footing.
863	Culvert Headwall	1	ea	Culvert Headwall attached to culvert to reduce erosion. The quantity for this element is measured as "each".





New CSIR Report (*AASHTO Elements*)

AASHTO ELEMENTS			
<input type="checkbox"/>	Elem. Key	Element	Quan
		Culvert (Add)	
		Scour Countermeasure (Add)	
		Other Elements (Add)	

Scour Protection Elements

---Select Element---
829 - Field Stone
830 - Plain Riprap
831 - Heavy Riprap
832 - Channel Armoring
833 - Articulating Conc Block
834 - Gabion
835 - Grout Filled Bags
836 - Sheet Piling
837 - Other Scour Protect
838 - Scour Monitoring

Other Elements

---Select Element---
320 - Prestressed Conc Appr Slab
321 - Reinf Conc Approach Slab
330 - Metal Bridge Railing
331 - Conc Bridge Railing
332 - Timber Bridge Railing
333 - Other Bridge Railing
334 - Masonry Bridge Railing
840 - Reinf Conc Sidewalk



Additional changes to MiB^{RIDGE} to both BSIR and CSIR

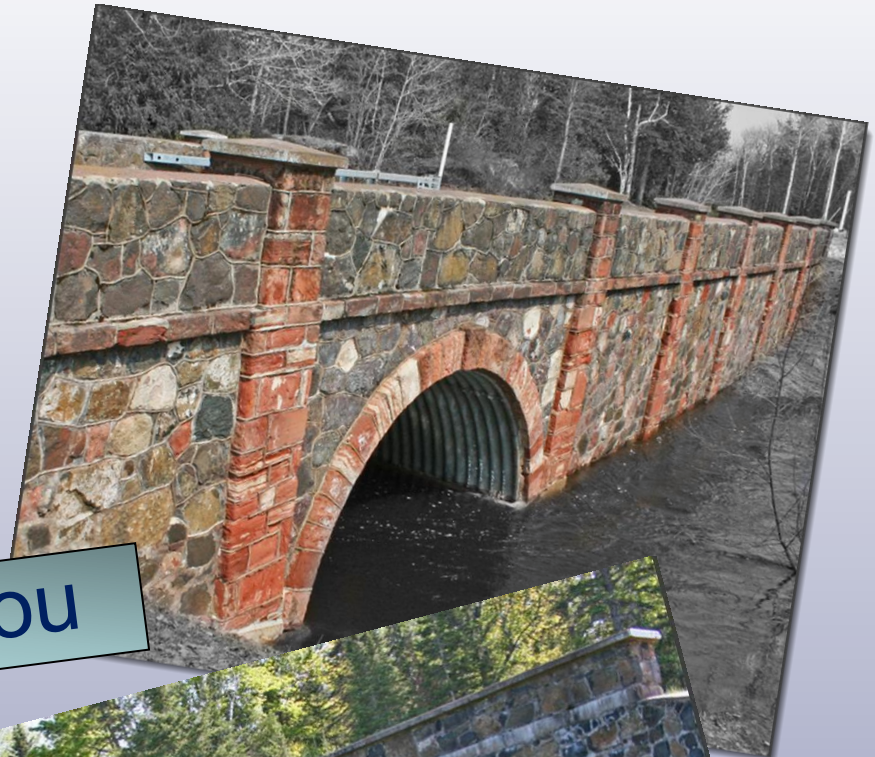
AASHTO ELEMENTS									
<input type="checkbox"/>	Elem. Key	Element	Quantity	Unit	Good	Fair	Poor	Severe	
Culvert (Add)									
<input type="checkbox"/>	240 - Steel Culvert	▼	140	ft <input checked="" type="radio"/>	0	87	48	5	Prot Sys
				% <input type="radio"/>	0	62	34	4	
Comments									
Galvanized Steel Multi-plate arch culvert. Light corrosion on bottom 1/3 of pipe. Appears to be originating behind bolt heads. Light rust and scale on bottom 1/3. There is a 1 square inch hole rusted thru the NW corner of the north tube. Moderate to heavy scaling along water line in both tubes. Scattered areas of light to moderate corrosion on construction joint bolts.									
<input type="checkbox"/>	515 - Steel Protective Coating	▼	6590	sq.ft <input type="radio"/>	3295	0	3295	0	
				% <input checked="" type="radio"/>	50	0	50	0	

- Added Good, Fair, Poor, Severe to the headings indicating CS1, CS2, CS3, and CS4.
- Opened up the comment box for each primary element
- Allow the condition state quantities to be collected by percentages



Determine feasibility of creating combined BSIR/Element Report

Surface:	NBI Rating _____				
	Element Conditions	CS1	CS2	CS3	CS4
<div style="border: 1px solid black; background-color: #e6f2ff; padding: 10px; min-height: 100px;"> <i>Comments</i> </div>					
Joints:	Element Conditions	CS1	CS2	CS3	CS4
	<div style="border: 1px solid black; background-color: #e6f2ff; padding: 10px; min-height: 100px;"> <i>Comments</i> </div>				
Superstructure (SI&A 59)					
	NBI Rating _____				
	Element Conditions	CS1	CS2	CS3	CS4
<div style="border: 1px solid black; background-color: #e6f2ff; padding: 10px; min-height: 100px;"> <i>Comments</i> </div>					



Thank You

