

## HARDIN County 2021

### INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

7/5/2021

( Nov 21 Data update)

#### Inventory Data - NBIS Bridges Only

				<u>NBIS COUNT</u>		
NBIS Bridges > 20'					237	
Bridges 10'-20'					121	
					358	
<b>Item 22 Inspection Responsibility</b>						
				<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	Col BV,BW	County		2	237	358
<b>Item 21 Maintenance responsibility</b>						
				<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab		County		2	233	354
Col D		City or other local		4	0	0
		Railroad		27	4	4
		Private (tohter than RR)		26	0	0
		State Park		11	0	0
		Local Park		23	0	0
		Township		3	0	0
					237	358
<b>Item 42 Type service on bridge</b>						
				<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab		Other		0	0	0
Col Q		Highway		1	233	354
		Railroad		2	4	4
		Ped/Bikeway		3	0	0
		Hwy/RR		4	0	0
		Hwy/Ped		5	0	0
					237	358
<b>Item 42 Type service under bridge</b>						
				<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab		Other		0	0	1
Col R		Hwy w/ or w/o Ped		1	4	4
		Railroad		2	0	0
		Ped/Bkwy		3	0	0
		Hwy w/ RR		4	0	0
		Waterway		5	233	353
		Hwy/waterway		6	0	0
		RR/waterway		7	0	0
		Hwy/waterway/RR		8	0	0
		Relief (for waterways)		9	0	0
					237	358

<b>ITEMS 43A,B,C Structure Type</b> (Col M,N,O)		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Concrete Slab		101	5	31
Concrete Girder		103	1	1
Concrete Tee Beam		104	4	6
Concrete Box Beam/Girder Multiple		105	69	124
Concrete Frame		107	0	6
Concrete Deck Arch		111	0	1
Concrete Culvert (incl frame culverts)		119	0	9
Steel Beam or Girder		302	82	85
Steel Girder w/ Floor System		303	1	1
Steel Box Beam or Girder Multiple		305	2	2
Steel Thru Truss (includes Pony)		310	24	24
Steel Culvert (incl frame culverts)		319	1	9
Steel Continuous Beam or Girder		402	4	4
Prestr. Conc. Cont. Box Beam/Girder Multiple		505	44	45
Aluminum or Iron Culvert (incl frame culverts)		919	0	10
			237	358

<b>Item 92 Fracture Critical</b>		<b>CODE</b>	<b># NBIS</b>	<b># ALL</b>
Data Tab	Requires FC Inspection	Y	24	n/a
Col U,V,Y	Requires FC Inspection	N	213	n/a
			237	n/a
	FC date blank		0	n/a
missing Y/N switch RIC-T0258-0040_(7031093)				

<b>Item 11: Scour</b>			<b># NBIS</b>	<b># ALL</b>
Data Tab	Bridge not over waterway	N	4	5
Col AA	unknown foundation	U	0	0
	over tidal waters	T	0	0
	foundations on dry land	9	0	0
	stable above footing	8	0	0
	countermeasures installed	7	0	0
	no scour evaluation made	6	0	0
	stable within footer limits	5	233	353
	stable action needed	4	0	0
	scour critical - unstable	3	0	0
	scour critical - scour present	2	0	0
	scour critical - failure imminer	1	0	0
	scour critical - bridge failed	0	0	0
			237	358

Item 63 Documented Engineering Judgment			# NBIS	# ALL	
	Field Eval & Doc EJ		17	n/a	
<b>BR_100 for these bridges?</b>					
Item 92 Underwater			CODE	# NBIS	# ALL
Data Tab	requires dive inspection	N	237	n/a	
Col. W,X,Z	requires dive inspection	Y	0	n/a	
			237		
	dive insp date blank		0	n/a	
Item 70 Plan Information			CODE	# NBIS	# ALL
Data Tab	plans not avail	0	17	28	
Col. A/W	plan avail	1	190	298	
	field measured	2	25	27	
	Field Testing	3	0	0	
	not applicable	N	4	4	
			236	357	
Item 63 Method of Analysis			CODE	# NBIS	# ALL
Data Tab	Field Eval & Doc. Eng Judgme	0	17	28	
Col. AV	Load testing	4	0	0	
	No Rating done	5	4	0	
	Load Factor (LF)	6	108	0	
	w/S or AS	7	69	0	
	Load & Resistance Factor	8	38	78	
	Assigned Rating (LFR) HS20	D	0	127	
	Assigned Rating (LRFR) HL90	F	0	82	
	Not applicable (Ped, RR, Bldg)	X	0	42	
			236	357	
<b>REMINDER:</b>					
<b>Load Factor required for bridges built after (exceptions: timber, etc.)</b>					
<b>LRFR required for bridges built after 2010</b>					

HAR-C0200-1035\_(3350208) Inactive  
New bridge in 2021 not open yet

HAR-C0200-1035\_(3350208) Inactive  
New bridge in 2021 not open yet

HAR-C0065-0110\_(3330664) should be re-load rated last rated in 2013

## Inspection Condition Data - NBIS Bridges Only

Item 41 Operating Status		CODE	# NBIS	# ALL
Data Tab	Open, No restriction	A	226	347
CalAM	Open, posting recommended	B	0	0
	Open, Half width constr.	C	0	0
	Open because of temp. fix	D	0	0
	Open using temp. structure	E	0	0
	New structure not yet open	G	1	1
	closed for load cap. reason	K	0	0
	Posted for load capacity	P	10	10
	Posted for other than load	R	0	0
	Closed for other than load	X	0	0
			237	358

Load Rating Data		
Load Rating Tab		# OF ERRORS
Col. AN	Op RF greater than Inv RF?	0
Col. AO	Posting and % Legal OK?	0
Col. AP	"0" used instead of blank	0
Col. AT	% legal <> lowest RF	0
Col. AV	Item 70 correct?	0
Col. AW	Method of Rating Alike?	0
Col. AX	Op & Inv RF in Tons as req'd?	0
Col. AY	Item 575 correct?	0
Col. AZ	Depth of fill completed?	0

HAR-C0065-0110\_(3330664) should be re-load rated last rated in 2013

## KEY METRICS

<b>(C)</b>	<b>Compliant</b>	<b>(CC)</b>	<b>Conditionally Compliant</b>
<b>(SC)</b>	<b>Substantially Compliant</b>	<b>(NC)</b>	<b>Non- Compliant</b>
		<b>(NC)</b>	<b>(SC) If corrected within 6/12 months Refresher=6 mo, Comprehensive=12 mo</b>

### METRIC 2 - Program Manager G (from files examination)

From Files review	Missing	#sample	% PASS	COMPLIANCE
PE /Experience	0	1	100.0%	(C)
Comprehensive	0	1	100.0%	(C)
Refresher	0	1	100.0%	(C)

### METRIC 3 - Team Leader Qualif (from files examination)

From Files review	Missing	#sample	% PASS	COMPLIANCE
Degree /Experience	0	3	100.0%	(C)
Comprehensive	0	3	100.0%	(C)
Refresher	0	3	100.0%	(C)

### METRIC 6 Insp. Frequency Routine

Bridge Inspections	Overdue	Overdue	% PASS	COMPLIANCE
Data Tab NBIS - 24 months	0		100.0%	(C)
Col. Y ORC - Calendar Year	0		100.0%	(C)
BIM - 18 months	0		100.0%	(C)

### METRIC 8 - Insp. Frequency Underwater

Dive Inspections	Overdue	Total UW	% PASS	COMPLIANCE
Data Tab Col. Z 60 months	0	0	100.0%	(C)

### METRIC 3 - Team Leader Qualif (from files examination)

From Files review	Missing	#sample	% PASS	COMPLIANCE
Degree /Experience	0	2	100.0%	(C)
Comprehensive	0	2	100.0%	(C)
Refresher	0	2	100.0%	(C)

**METRIC 6 Insp. Frequency Routine**

Bridge Inspections Overdue		# OVERDUE	% PASS	COMPLIANCE
Data Tab	NBIS - 24 months	0	100.0%	(C)
Col. AB	ORC - Calendar Year	0	100.0%	(C)
	BIM - 18 months	0	100.0%	(C)

**METRIC 8 - Insp. Frequency Underwater**

Dive Inspections Overdue		# OVERDUE	# UW	% PASS	COMPLIANCE
Data Tab	Col. Z 60 months	0	0	100.0%	(C)

**METRIC 10 - Insp. Frequency FC Member**

FC Inspections Overdue		# OVERDUE	# FC	% PASS	COMPLIANCE
Data Tab	Col. Y 24 months	0	24	100.0%	(C)

**METRIC 12 - Routine Inspector\*\* (from files examination)**

Field Ratings		# > +/-1	# Rating	% PASS	COMPLIANCE
	field ratings	0	24	100.0%	(C)
Comments		Missing	# < 6	% PASS	
Tab	Comments when Rating < 6	0	229	100.0%	(C)
	Inadequate comments**	0	6	100.0%	(C)
Comments		Error	total Score	% PASS	
Tab	Rating should be = Scour	0	229	100.0%	within tolerance +/- 1
Tab	Noncompliant Scour Rating	0	229	100.0%	(C)

**METRIC 14 - Posting** Load rating data tab

From Files review		# errors	# sample	% PASS	COMPLIANCE
Op RF < 3 tons but not closed		0	237	100.0%	(C)
Op RF = 0 but not closed		0	237	100.0%	(C)
% Legal < 100 but not posted		0	237	100.0%	(C)
Item 41 = B		0	237	100.0%	(C)

**METRIC 16 - Fracture Critical In** (from files examination)

From Files review		Missing	# FC	% PASS	COMPLIANCE
Fract Critical Member ID		0	2	100.0%	(C)
Fatigue Prone Detail		0	2	100.0%	(C)
Gusset Plate Calculations		0	2	100.0%	(C)
FC Inspection Procedure		0	2	100.0%	(C)

**METRIC 17 - Underwater Inspect** (from files examination)

From Files review		Missing	# UW	% PASS	COMPLIANCE
UW Inspection Procedure		0	1	100.0%	(C)
Location of UW elements		0	1	100.0%	(C)
UW frequency identified		0	1	100.0%	(C)

## PRELIMINARY FHWA 23 Metric Matrix

23 metrics used by FHWA to measure NBIS compliance

### Compliance Codes for the following Metrics:

- (C)** Compliant
- (SC)** Substantially Compliant
- (CC)** Conditionally Compliant (Adhering to approved PCA)
- (NC)** Not Compliant

Metric	Description	(C)	(SC)	(CC)	(NC)
1	State Bridge Inspection Organization				
2	Program Manager Qualification				
3	Team Leader Qualification				
4	Load Rating Engineer Qualification				
5	UW Bridge Inspection Diver Qualification				
6	Routine Inspection Frequency - Low Risk				
7	Routine Inspection Frequency - High Risk				
8	UW Inspection Frequency - Low Risk				
9	UW Inspection Frequency - High Risk				
10	FC Inspection Frequency				
11	Frequency Criteria				
12	Inspection Quality				
13	Load Rating				
14	Posted or Restricted Bridges				
15	Bridge Files				
16	FC Bridges				
17	UW inspection procedures				
18	Scour Critical Bridges				
19	Complex Bridges				
20	QC/QA				
21	Critical Findings				
22	Inventory**				
23	Updating of Data				

\*\* based on results of Field Review

Metric	Action Needed