

MIAMI County 2021
INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

12/28/2021

Inventory Data - NBIS Bridges Only

		<u>NBIS COUNT</u>	
NBIS Bridges > 20'		211	
Bridges 10'-20'		126	
		337	
Item 22 Inspection Responsibility			
		CODE	# NBIS # ALL
Data Tab	Col B\,B\w County	2	211 337
Item 21 Maintenance responsibility			
		CODE	# NBIS # ALL
Data Tab	County	2	209 336
Col D	City or other local	4	0 0
	Railroad	27	2 2
	Private (tohter than RR)	26	0 0
	State Park	11	0 0
	Local Park	23	0 0
	Township	3	0 0
			211 338
Item 42 Type service on bridge			
		CODE	# NBIS # ALL
Data Tab	Other	0	0 0
Col Q	Highway	1	201 322
	Railroad	2	2 2
	Ped/Bikeway	3	0 0
	Hwy/RR	4	0 0
	Hwy/Ped	5	8 13
			211 337
Item 42 Type service under bridge			
		CODE	# NBIS # ALL
Data Tab	Other	0	1 1
Col R	Hwy w/ or w/o Ped	1	2 2
	Railroad	2	0 0
	Ped/Bkwy	3	0 0
	Hwy w/ RR	4	0 0
	Waterway	5	208 334
	Hwy/waterway	6	0 0
	RR/waterway	7	0 0
	Hwy/waterway/RR	8	0 0
	Relief (for waterways)	9	0 0
			211 337

ITEMS 43A,B,C Structure Type		Data (Col M,N,O)	CODE	# NBIS	# ALL
Other Culvert (incl frame culverts)			019	1	1
Concrete Slab			101	4	53
Concrete Tee Beam			104	9	27
Concrete Box Beam/Girder Multiple			105	18	33
Concrete Frame			107	1	1
Concrete Deck Arch			111	1	1
Concrete Culvert (incl frame culverts)			119	3	17
Concrete Continuous Slab			201	3	3
Concrete Continuous Box Beam/Girder Spread			206	1	1
Steel Beam or Girder			302	22	24
Steel Girder w/ Floor System			303	19	19
Steel Deck Truss			309	1	1
Steel Thru Truss (includes Pony)			310	1	1
Steel Culvert (incl frame culverts)			319	2	9
Steel Continuous Beam or Girder			402	5	5
Prestressed Concrete Thru Arch			502	9	9
Prestressed Concrete Girder w/ Floor System			503	1	1
Prestr. Conc. Cont. Box Beam/Girder Multiple			505	103	124
Prestressed Concrete Continuous Thru Arch			602	4	4
Prestr. Conc. Cont. Box Beam/Girder Multiple			605	2	2
Timber Thru Truss (includes Pony)			710	1	1
				211	337
Item 92 Fracture Critical					
Data Tab		Requires FC Inspection	CODE	# NBIS	# ALL
			Y	19	n/a
Col U,V,Y		Requires FC Inspection	CODE	# NBIS	# ALL
			N	192	n/a
				211	n/a
FC Switch Y/N is Blank				0	n/a

Item 113 Scour				# NBIS	# ALL
Data Tab	Bridge not over waterway		N	3	3
Col AA	unknown foundation		U	0	0
	over tidal waters		T	0	0
	foundations on dry land		9	3	4
	stable above footing		8	152	233
	countermeasures installed		7	0	0
	no scour evaluation made		6	0	0
	stable within footer limits		5	53	97
	stable action needed		4	0	0
	scour critical - unstable		3	0	0
	scour critical - scour present		2	0	0
	scour critical - failure imminent		1	0	0
	scour critical - bridge failed		0	0	0
				211	337
Item 63 Documented Engineering Judgment				# NBIS	# ALL
	Field Eval & Doc EJ			1	n/a
				BR_100 for these bridges?	
Item 92 Underwater				# NBIS	# ALL
Data Tab	requires dive inspection		N	210	n/a
Col W,X,Z	requires dive inspection		Y	0	n/a
				210	

MIA-00033-0323_(5530001) Column X Item 92B is blank DATA TAB

Item 70 Plan Information		CODE	# NBIS	# ALL
Data Tab	plans not avail	0	1	2
Col. AV	plan avail	1	201	326
	field measured	2	7	7
	Field Testing	3	0	0
	not applicable	N	2	2
			211	337
Item 63 Method of Analysis				
Item 63 Method of Analysis		CODE	# NBIS	# ALL
Data Tab	Field Eval & Doc. Engr Judgment	0	1	2
Col. AV	Work Stress	1	0	0
	LFR	2	0	0
	LRFR	3	1	1
	load test	4	2	2
	No rating done	5	2	22
	LFR	6	171	270
	AS	7	1	1
	LRFR	8	33	39
	Assigned LFR HS20	D	0	0
	Assigned LRFR HL93	F	0	0
	not appl (RR, etc)	X	0	0
			211	337
REMINDER:				
Load Factor required for bridges built after 195 (exceptions: timber, etc.)				
LRFR required for bridges built after 2010				

Inspection Condition Data - NBIS Bridges Only				
Item 41 Operating Status		CODE	# NBIS	# ALL
Data Tab	Open, No restriction	A	190	316
Col AM	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 struture not yet open	G	0	1
	closed for load cap. reason	K	0	0
	Posted for load capacity	P	21	21
	Posted for other than load	R	0	0
	Closed for other than load	X	0	0
			211	338
Load Rating Data				
Load Rating Tab		# OF ERRORS		
Col. AN	Op RF greater than Inv RF?		0	
Col. AD	Posting and % Legal OK?		8	
Col. AP	"0" used instead of blank		0	
Col. AT	% legal <> lowest RF		39	
Col. AV	Item 70 correct?		1	
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	

The 8 bridges below have a coding of A or P in column S, but does not match the Legal % in Column T See Load rating TAB

MIA-C0025-0182_(5531470); MIA-C0166-0262_(5535344);

MIA-T0101-0014_(5533910); MIA-T0200-0076_(5536219)

MIA-00047-0128_(5532612); MIA-00065-0045_(5532981);

MIA-00066-0124_(5533023); MIA-C0021-0036_(5531136)

See Column AT errors

MIA-00047-0128_(5532612) This structure has multiple errors, see Load Rating TAB

21 bridges less tha 100% legal are lacking Date for posting sign installed in the field. See Load Rating TAB

KEY METRICS

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

METRIC 2 – Program Manager Qualification (from files examination)

From Files review	Missing	#sampled	% 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 Qualification (from files examination)

From Files review	Missing	#sampled	% 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. Y ORC - Calendar Year	0	100.0%	(C)
BIM - 18 months	0	100.0%	(C)

METRIC 8 – Insp. Frequency Underwater

Dive Inspections Overdue	Overdue	Total 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	5	19	97.6%	(SC)

MIA-00009-1574_(5530415); MIA-C0023-0011_(5531284); MIA-C0023-0274_(5531306);
MIA-C0113-0057_(5534178); MIA-T0200-0076_(5536219)

METRIC 12 - Routine Inspection					
Field Ratings		# > +/-1	# Ratings	% PASS	COMPLIANCE
	field ratings	0	24	100.0%	(C)
Comments		Missing	# < 6	% PASS	
Tab	Comments when Rating < 6	19	209	90.9%	(C)
		Error	total Score	% PASS	
Comment	Rating should be = Scour	4	208	98.1%	within tolerance +/- 1
Tab	Noncompliant Scour Rating E	1	208	99.5%	(C)

See Comments TAB

MIA-C0015-0452_(5537258); MIA-C0111-0005_(5534100);

MIA-C0136-0077_(5534615); MIA-C0166-0425_(5535360)

MIA-C0015-0452_(5537258)

METRIC 14 - Posting		Load rating data tab			
From Files review		# errors	# sampled	% PASS	COMPLIANCE
	Op RF < 3 tons but not closed	0	211	100.0%	(C)
	Op RF = 0 but not closed	0	211	100.0%	(C)
	% Legal < 100 but not posted	0	211	100.0%	(C)
	Item 41 = B	0	211	100.0%	(C)
METRIC 16 - Fracture Critical Ins (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 Inspecti (from files examination)					
From Files review		Missing	# UW	% PASS	COMPLIANCE
	UW Inspection Procedure	0	0	100%	(C)
	Location of UW elements	0	0	100%	(C)
	UW frequency identified	0	0	100%	(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
6	Too many NBIS bridges have missed the 1 year inspection date by more than 6 months
10	5 FC bridges overdue for inspection

