

Hocking County 2019 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

Inventory Data - NBIS Bridges Only

	<u>NBIS COUNT</u>
NBIS Bridges > 20'	197
Bridges 10'-20'	63
	260
*Possible NBIS length errors	0

Item 221	Inspection Responsibility	<u>CODE</u>	<u>COUNT</u>	<u>%</u>
	County	3	197	100.0%
Item 21	Maintenance responsibility			
	County	3	197	100.0%
	City or other local	4	0	0.0%
	Railroad	6	0	0.0%
	Private	7	0	0.0%
	ODNR	A	0	0.0%
	Park District	C	0	0.0%
	Township	F	0	0.0%
			197	100.0%
Item 42A	Type service on bridge			
	Other	0	0	0.0%
	Highway	1	197	100.0%
	Railroad	2	0	0.0%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	0	0.0%
	RR Abnd. rails rem'vd	A	0	0.0%
			197	100.0%
Item 42B	*Type service under bridge			
	Hwy w/ or w/o Ped	1	0	0.0%
	Railroad I & O RR	2	1	0.5%
	Ped/Bkwy	3	0	0.0%
	Hwy w/ RR	4	0	0.0%
	Waterway	5	196	99.5%
	Hwy/Waterway	6	0	0.0%
	RR/Waterway	7	0	0.0%
	Hwy/Wtrway/RR	8	0	0.0%
	Relief (RR w/o tracks)	9	0	0.0%
			197	100.0%

ITEMS	Structure Type (Items 43A, 43B, 43C)	CODE	COUNT	%
	concrete slab simple	111	3	1.5%
	concrete slab continuous	112	3	1.5%
	concrete beam simple	121	62	31.5%
	prestressed conc. beam simple	221	15	7.6%
	prestressed conc. box beam simple	231	112	56.9%
	steel beam continuous	322	2	1.0%
			197	100.0%

Item 92A	Fracture Critical	CODE	COUNT	%
	fracture critical member	Y	0	0.0%
	fracture critical member	N	197	100.0%
			197	100.0%
	No. of steel trusses and girders	0 34 x , 36 x	0	

Item 113	Scour	CODE	COUNT	%
	Bridge not over waterway	N	1	0.5%
	unknown foundation	U	0	0.0%
	over tidal waters	T	0	0.0%
	foundations on dry land	9	3	1.5%
	stable above footing	8	103	52.3%
	countermeasures installed	7	55	27.9%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	33	16.8%
	stable action needed	4	2	1.0%
	scour critical - unstable	3	0	0.0%
	scour critical - scour present	2	0	0.0%
	scour critical - failure imminent	1	0	0.0%
	scour critical - bridge failed	0	0	0.0%
			197	100.0%

High number of code 8

Item 92B	Underwater	CODE	COUNT	%
	requires dive inspection	N	197	100.0%
	requires dive inspection	Y	0	0.0%
	dive inspection dates		0	0.0%
			197	100.0%

Item 709	*Plan Information	CODE	COUNT	%
	no plans	0	4	2.0%
	plans available	1	193	98.0%
	field information	2	0	0.0%
	not applicable	N	0	0.0%
			197	100.0%

Item 63	*Documented Engineering Judgment		<u>COUNT</u>	<u>%</u>
	Field Eval & Doc EJ		4	2.0%
	Rating Code in Error	D and F	0	0 171 or 195

BR_100 for these bridges?

Item 580	Deep Culverts	(depth of fill)	<u>COUNT</u>	<u>%</u>
	Culvert	fill>6.5'	0	0.0%

Items	195 Culvert vs 171 Frame	(Items 43A, 43B, 43C)	<u>COUNT</u>	<u>%</u>
	# that do NOT meet the 2' Rule		0	0.0%

Item 63	*Method of Analysis	<u>CODE</u>	<u>COUNT</u>	<u>%</u>
	Field Eval & Doc. Eng Judgment	0	4	2.0%
	Load testing	4	0	0.0%
	No Rating done	5	0	0.0%
	Load Factor (LF)	6	185	93.9%
	WS or AS	7	0	0.0%
	Load & Resistance Factor	8	8	4.1%
	Assigned Rating (LFR) HS20	D	0	0.0%
	Assigned Rating (LRFR) HL93	F	0	0.0%
	Not applicable (Ped, RR, Bldg)	X	0	0.0%
			197	100.0%

REMINDER:

Load Factor required for bridges built after 1993 (with certain exceptions)
LRFR required for bridges built after 2010

Inspection Condition Data - NBIS Bridges Only

Item 41	Operating Status	CODE	COUNT	%
	Open, No restriction	A	197	100.0%
	Open, posting recommended	B	0	0.0%
	Open, Half width construction	C	0	0.0%
	Open because of temporary fix	D	0	0.0%
	Open using temporary structure	E	0	0.0%
	New struture not yet open	G	0	0.0%
	closed for load capacity reason	K	0	0.0%
	Posted for load capacity	P	0	0.0%
	Posted for other than load	R	0	0.0%
	Closed for other than load	X	0	0.0%
			197	100.0%

General Appraisal			CODE	COUNT	%	
GOOD	69.5%	Excellent	9	4	2.0%	
		Very good	8	49	24.9%	
		Good	7	84	42.6%	
FAIR	29.9%	Satisfactory	6	38	19.3%	
		Fair	5	21	10.7%	
POOR	0.5%	Poor	4	1	0.5%	
		Serious	3	0	0.0%	
		Critical	2	K	0	0.0%
		Imminent Failure	1	K	0	0.0%
		Closed	0	K	0	0.0%
				197	100.0%	

FHWA Performance Measures

Performance	% Deck Area		Lowest of GA or Deck	COUNT	Deck s.f
GOOD	74.5%	1.5%	9 Excellent	4	3,480
		34.6%	8 Very good	49	82,217
		38.4%	7 Good	84	91,102
FAIR	22.9%	15.6%	6 Satisfactory	38	36,937
		7.3%	5 Fair	19	17,442
POOR	2.6%	2.6%	4 Poor	3	6,234
		0.0%	3 Serious	0	0
		0.0%	2 Critical	0	0
		0.0%	1 Imminent Failure	0	0
		0.0%	0 Closed	0	0
		100.0%		197	237,413

Items	AGE of BRIDGES	(Items 27, 106)	YEAR (built or rehab)	COUNT	
			-1900	0	0.0%
			1901-1910	0	0.0%
			1911-1920	0	0.0%
			1921-1930	0	0.0%
			1931-1940	3	1.5%
			1941-1950	1	0.5%
			1951-1960	0	0.0%
			1961-1970	3	1.5%
			1971-1980	7	3.6%
			1981-1990	9	4.6%
			1991-2000	78	39.6%
			2001-2010	64	32.5%
			2011-2020	32	16.2%
				<u>0</u>	<u>100.0%</u>

Load Rating Errors	COUNT
Op RF should not = 3 when Method of Rating = 6,7,8. Op RF should not be plain 3, should 3.000 to show calculation or input actual RF. No longer capped at 3. Make correction at next Load Rating update.	4
Missing item (vehicle, GVW, RF) in Ohio Legal Loads	4

Load Ratings Due	COUNT
SHV due end 2020 DONE	0
SHV Load Ratings Due end 2020	4
EV Load Ratings DONE	0
EV Load Ratings Due end 2022 ON HOLD	5
EV Load Ratings needed because of date	2

(C)	Compliant
(SC)	Substantially Compliant
(CC)	Conditionally Compliant (Adhering to approved plan of corrective action)
(NC)	Not Compliant

METRIC 6 Insp. Frequency Routine

Bridge Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
NBIS - 24 months	0	100.0%	(C)
ORC - Calendar Year	0	100.0%	(C)
BIM - 18 months	0	100.0%	(C)

METRIC 8 - Insp. Frequency Underwater

Dive Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
60 months	0	N/A	(C)

METRIC 10 - Insp. Frequency FC Member

FC Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
24 months	0	#DIV/0!	(C)

METRIC 13 - Load Rating

Type of Metric check	Need for compliance	# Not Rated	% of NBIS Rated	COMPLIANCE
Deck, Super, Sub, Culvert Summary <=4	100%	0	100.0%	(C)
Operating Status = D or E	100%	0	100.0%	(C)
FC=Y	100%	0	100.0%	(C)
Operating Status = P or R	100%	0	100.0%	(C)
Bridges with no restrictions	100%	0	100.0%	(C)

METRIC 14 - Post or Restrict

Bridge posting/closing Follow-through	COUNT	% COMPLIA NT	COMPLIANCE
Bridges below 10% legal but not closed	0	100.0%	(C)
Operating Rating Factor = 0 but not closed	0	100.0%	(C)
Bridges < 100% legal but not posted (OpStatus =A or R)	0	100.0%	(C)
Bridges to be posted but aren't (Op Status code B)	0	100.0%	(C)

METRIC 22 - Inventory (partial review)

Structure Length	ACTUAL COUNT	COMPLIANCE
Number of bridges with length or span difference	0	depends on sample size
Culvert Span		
unusually long steel culvert spans	0	depends on sample size
Location		
Item 9 Location	0	depends on sample size
missing coordinates	0	depends on sample size

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

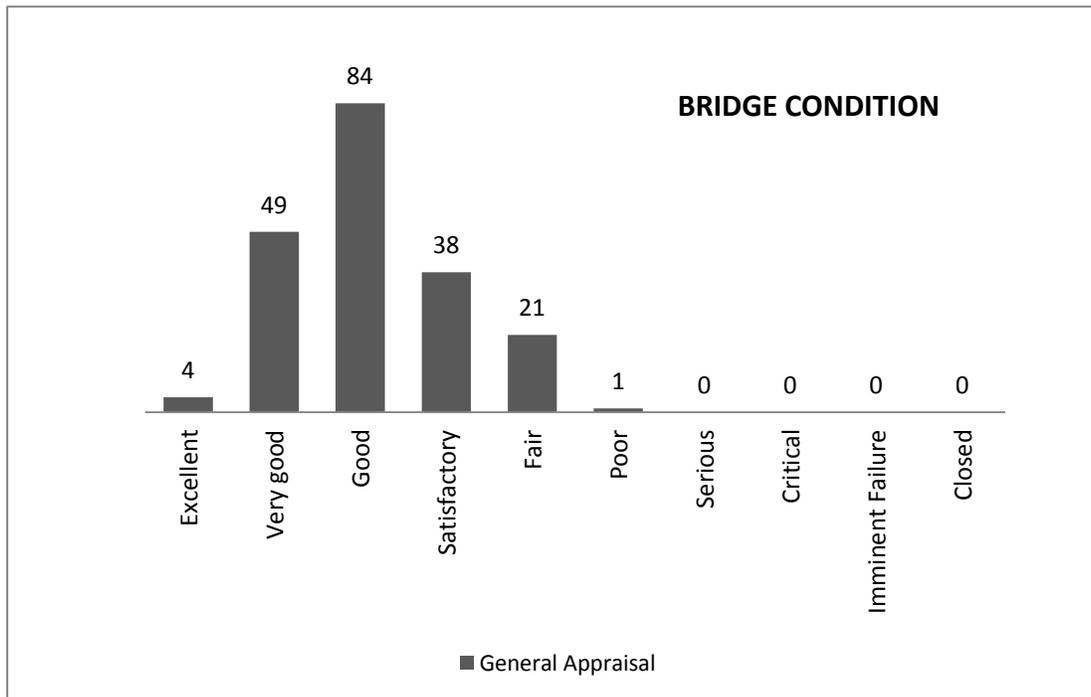
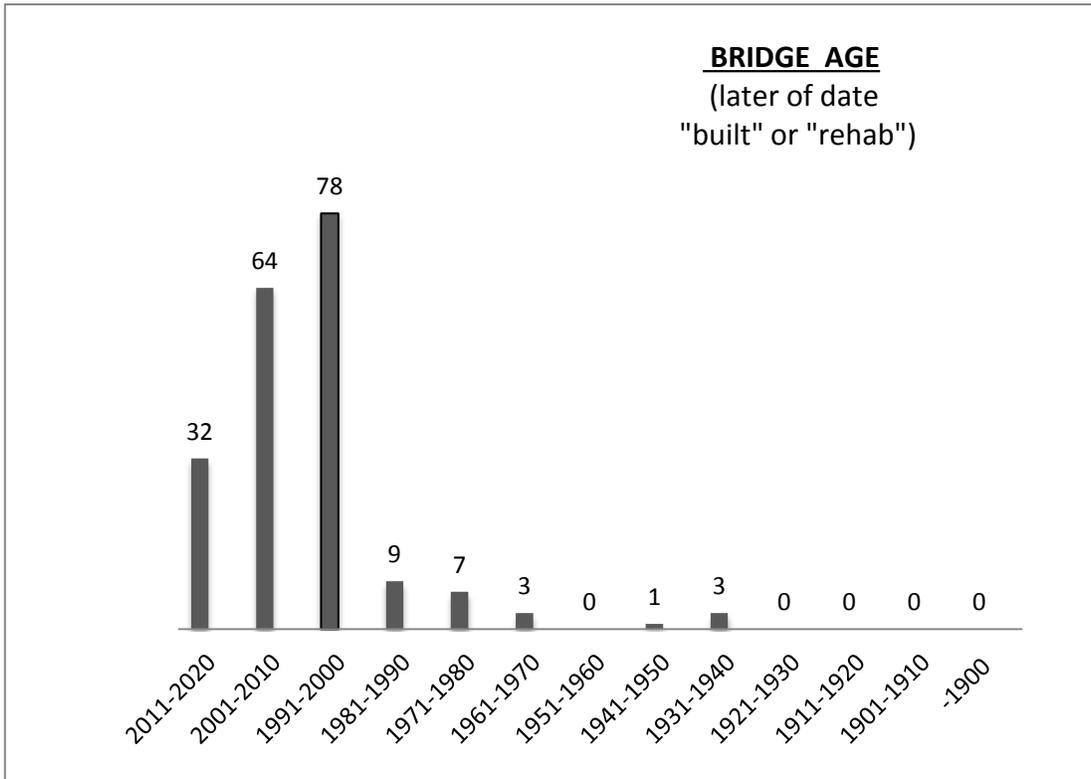
Metric	Description	(C)	(SC)	(CC)	(NC)
1	State Bridge Inspection Organization				
2	Program Manager Qualification				
3	Team Leader Qualification				
4	Load Rating Engineer Qualification				
5	UW Bridge Inspection Diver Qualification				
6	Routine Inspection Frequency - Low Risk				
7	Routine Inspection 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

AGE VS. CONDITION

Overall Shape of AGE and CONDITION graphs typically mirror each other



GENERAL APPRAISAL COMPARISON

