

Crawford County 2019 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

Inventory Data - NBIS Bridges Only

	<u>NBIS COUNT</u>
NBIS Bridges > 20'	126
Bridges 10'-20'	69
	195
*Possible NBIS length errors	0

Item 221	Inspection Responsibility	<u>CODE</u>	<u>COUNT</u>	<u>%</u>
	County	3	126	100.0%
Item 21	Maintenance responsibility			
	County	3	126	100.0%
	City or other local	4	0	0.0%
	Railroad	6	0	0.0%
	Private	7	0	0.0%
	Combination	8	0	0.0%
	Park District	C	0	0.0%
	Township	F	0	0.0%
			126	100.0%
Item 42A	Type service on bridge			
	Other	0	0	0.0%
	Highway	1	124	98.4%
	Railroad	2	0	0.0%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	2	1.6%
	RR Abnd. rails rem'vd	A	0	0.0%
			126	100.0%
Item 42B	*Type service under bridge			
	Hwy w/ or w/o Ped	1	0	0.0%
	Railroad	2	0	0.0%
	Ped/Bkwy	3	0	0.0%
	Hwy w/ RR	4	0	0.0%
	Waterway	5	125	99.2%
	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%
			125	99.2%

ITEMS	Structure Type (Items 43A, 43B, 43C)	CODE	COUNT	%
	concrete slab simple	111	2	1.6%
	concrete slab continuous	112	24	19.0%
	concrete arch deck	153	2	1.6%
	concrete frame simple	171	1	0.8%
	prestressed conc. beam simple	221	1	0.8%
	prestressed conc. box beam simple	231	66	52.4%
	prestressed conc. box beam continuous	232	2	1.6%
	steel beam simple	321	18	14.3%
	steel beam continuous	322	4	3.2%
	steel truss thru	344	3	2.4%
	steel culvert filled	395	1	0.8%
	timber beam simple	421	2	1.6%
			<u>126</u>	<u>100.0%</u>

Item 92A *Fracture Critical	CODE	COUNT	%
fracture critical member	Y	3	2.4%
fracture critical member	N	122	96.8%
		<u>125</u>	<u>99.2%</u>
No. of steel trusses and girders	3 34x, 36x	3	

1 blank (should be N), all Y closed

Item 113 Scour	CODE	COUNT	%
Bridge not over waterway	N	1	0.8%
unknown foundation	U	0	0.0%
over tidal waters	T	0	0.0%
foundations on dry land	9	4	3.2%
stable above footing	8	74	58.7%
countermeasures installed	7	20	15.9%
no scour evaluation made	6	0	0.0%
stable within footer limits	5	20	15.9%
stable action needed	4	7	5.6%
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%
		<u>126</u>	<u>100.0%</u>

Item 92B Underwater	CODE	COUNT	%
requires dive inspection	N	125	99.2%
requires dive inspection	Y	0	0.0%
dive inspection dates		0	0.0%
		<u>125</u>	<u>99.2%</u>

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Item 709	*Plan Information	CODE	COUNT	%
	no plans	0	6	4.8%
	plans available	1	120	95.2%
	field information	2	0	0.0%
	not applicable	N	0	0.0%
			126	100.0%

Item 63	*Documented Engineering Judgment		COUNT	%
	Field Eval & Doc EJ		6	4.8%
	Rating Code in Error	D and F	0	
			0	171 or 195

BR_100 for these bridges?

ITEMS	Rating Factor	(Items 64, 66)	COUNT	%
	Inventory RF = Operating RF		0	0.0%
	Inventory Rating Factor < 40%	Operating RF (Too Low)	0	0.0%
	Operating Rating Factor < 40%	Ohio % Legal (Too Low)	0	0.0%
	Op RF < 0.61	not Posted	0	0.0%
	Op RF in tons	for Eng Judgment	0	0.0%

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

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

Item 63	*Method of Analysis	CODE	COUNT	%
	Field Eval & Doc. Eng Judgment	0	6	4.8%
	Load testing	4	0	0.0%
	No Rating done	5	3	2.4%
	Load Factor (LF)	6	111	88.1%
	WS or AS	7	2	1.6%
	Load & Resistance Factor	8	4	3.2%
	Assigned Rating (LFR) HS20	D	0	0.0%
	Assigned Rating (LFR) HL93	F	0	0.0%
	Not applicable (Ped, RR, Bldg)	X	0	0.0%
			126	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	123	97.6%
	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	3	2.4%
	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%
			126	100.0%

General Appraisal		CODE	COUNT	%		
GOOD	83.3%	9 Excellent	9	4.8%		
		8 Very good	8	42.1%		
		7 Good	7	36.5%		
FAIR	10.3%	6 Satisfactory	6	6.3%		
		5 Fair	5	4.0%		
POOR	6.3%	4 Poor	4	4.0%		
		3 Serious	3	0.0%		
		2 Critical	2	K	0	0.0%
		1 Imminent Failure	1	K	1	0.8%
		0 Closed	0	K	2	1.6%
			126	100.0%		

FHWA Performance Measures

Performance	% Deck Area		Lowest of GA or Deck	COUNT	Deck s.f
GOOD	85.5%	4.6%	9 Excellent	4	11,387
		36.7%	8 Very good	40	91,001
		44.3%	7 Good	57	109,988
FAIR	10.1%	7.0%	6 Satisfactory	11	17,459
		3.0%	5 Fair	6	7,500
POOR	4.4%	2.7%	4 Poor	5	6,705
		0.0%	3 Serious	0	0
		0.0%	2 Critical	0	0
		0.6%	1 Imminent Failure	1	1,561
		1.1%	0 Closed	2	2,648
		100.0%	100.0%	126	248,249

Items	AGE of BRIDGES	(Items 27, 106)	YEAR (built or rehab)	COUNT	
	-1900	3	-1900	1	0.8%
	1901-1910	1	1901-1910	0	0.0%
	1911-1920	1	1911-1920	1	0.8%
	1921-1930	4	1921-1930	3	2.4%
	1931-1940	2	1931-1940	0	0.0%
	1941-1950	0	1941-1950	0	0.0%
	1951-1960	4	1951-1960	0	0.0%
	1961-1970	21	1961-1970	17	13.5%
	1971-1980	37	1971-1980	32	25.4%
	1981-1990	18	1981-1990	26	20.6%
	1991-2000	25	1991-2000	28	22.2%
	2001-2010	7	2001-2010	9	7.1%
	2011-2020	3	2011-2020	9	7.1%
		<u>126</u>		<u>126</u>	<u>100.0%</u>

Load Rating Errors	COUNT
Missing Item in Ohio Legal Loads	1
Percent Legal can't be > 150%	1
Legal Load RF should not be equal to each other except when Method of Rating = 0,4,5 or metal culverts	1

Load Ratings Due	COUNT
SHV due end 2020 DONE	0
SHV Load Ratings Due end 2020	12
EV Load Ratings DONE	0
EV Load Ratings Due end 2022 ON HOLD	27
EV Load Ratings needed because of date	0

(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	100.0%	(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

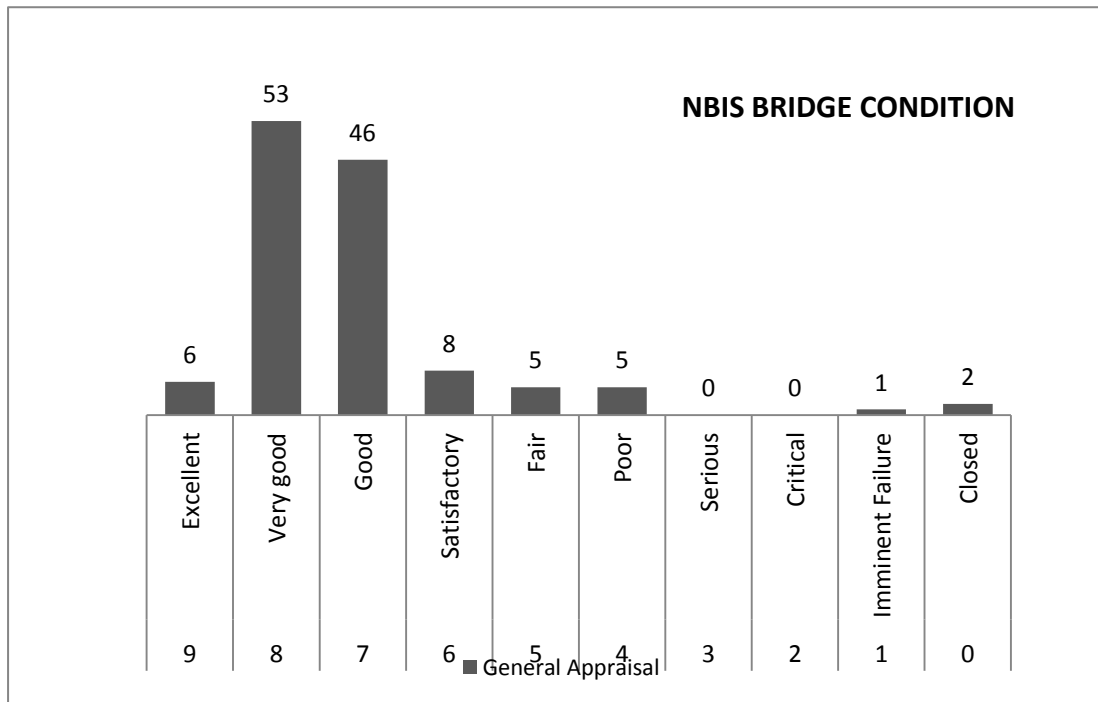
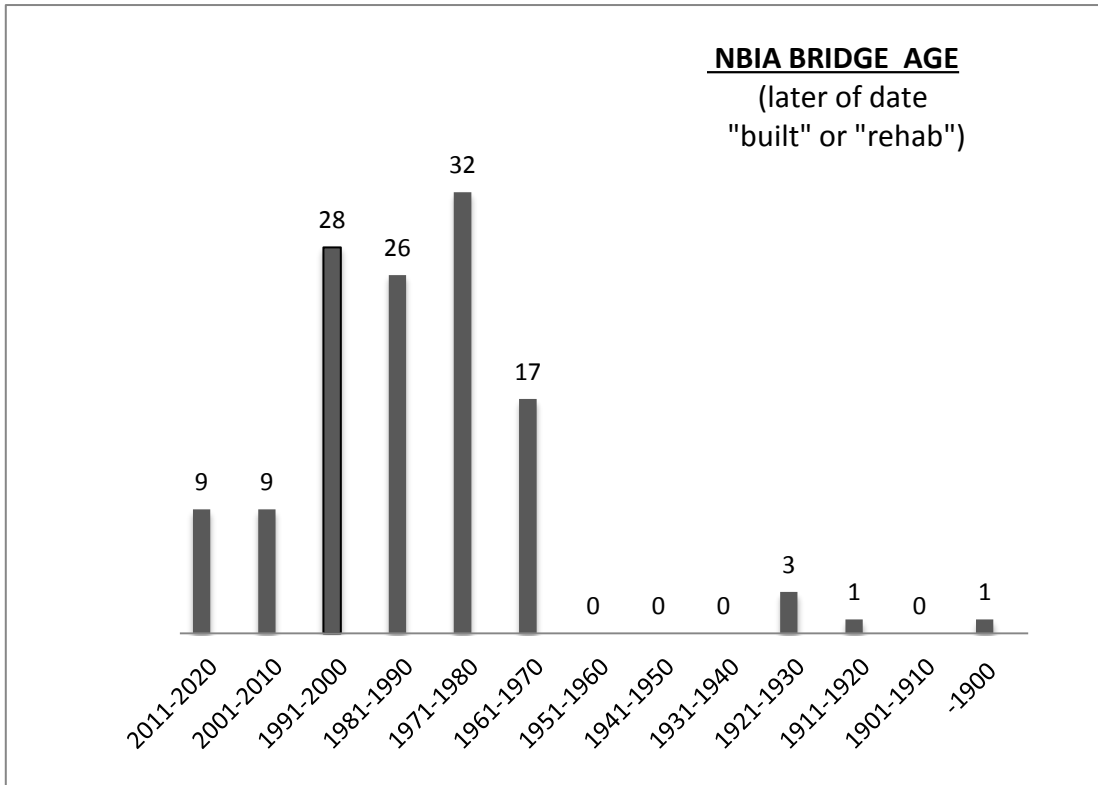
Metric	Description	(C)	(SC)	(CC)	(NC)
1	State Bridge Inspection Organization				
2	Program Manager Qualification				
3	Team Leader Qualification				
4	Load Rating Engineer Qualification				
5	UW Bridge Inspection Diver Qualification				
6	Routine Inspection Frequency - Low Risk				
7	Routine Inspection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

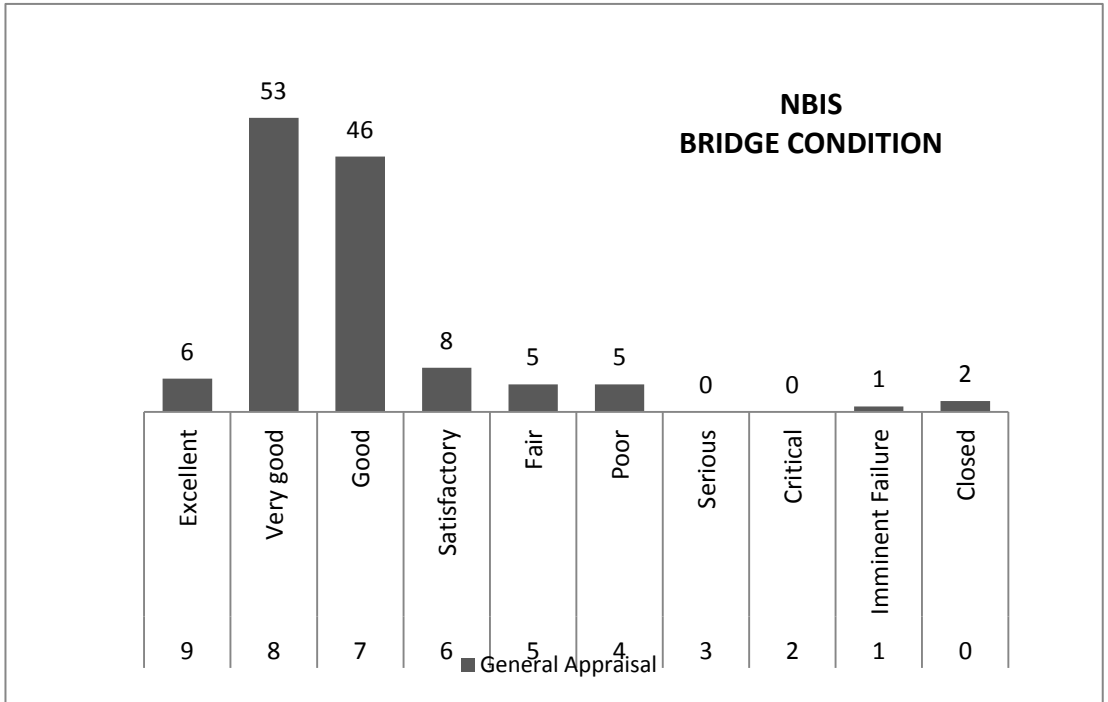
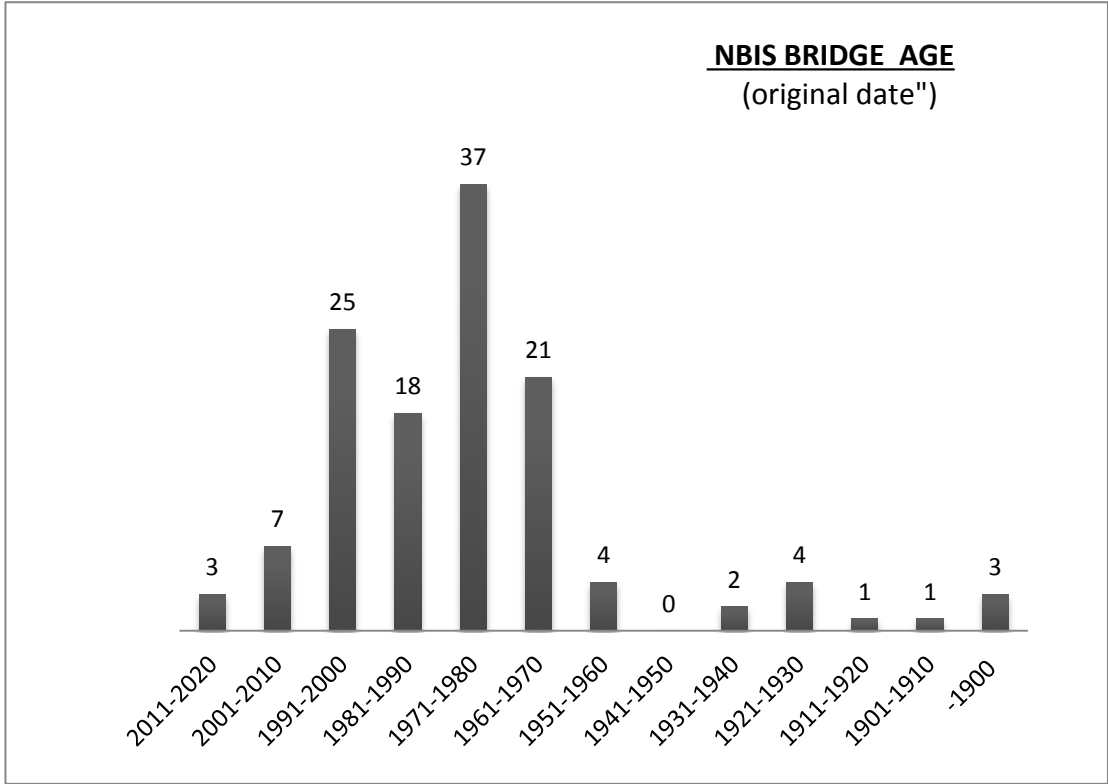
** based on results of Field Review

Metric	Action Needed

AGE VS. CONDITION

Overall Shape of AGE and CONDITION graphs typically mirror each other





GENERAL APPRAISAL COMPARISON

