2014 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

ADAMS COUNTY ENGINEER

Inventory Data - BR 87 NBIS Bridges Only

	NBIS COUNT
NBIS Bridges > 20'	**109**
Bridges 10'-20'	**147**
	256

Possible NBIS length errors 0

Item 95	Inspection Responsibility	CODE	COUNT	%
	County	3	109	100.0%
Item 97	**Maintenance responsibility**			
	County	3	109	100.0%
	City or other local	4	0	0.0%
	Railroad	6	0	0.0%
			109	100.0%
Item 100	**Type service on bridge**			
	Other	0	1	0.9%
	Highway	1	108	99.1%
	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%
			109	99.1%
Item 100	**Type service under bridge**			
Conveyor Bridge	Hwy w/ or w/o Ped	1	1	0.9%
	Railroad	2	0	0.0%
	Ped/Bkwy	3	0	0.0%
	Hwy w/ RR	4	0	0.0%
	Waterway	5	108	99.1%
	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%
	Other	0	0	0.0%
			109	100.0%

	Structure Type		CODE	COUNT	%
	concrete slab simple		111	2	1.8%
	concrete slab continuous		112	4	3.7%
	concrete beam simple		121	4	3.7%
	concrete box beam simple		131	2	1.8%
	concrete frame simple		171	12	11.0%
	prestressed conc. box beam simple		231	2	1.8%
	steel other other	*Conveyor Bridge*	300	1	0.9%
	steel beam simple		321	57	52.3%
	steel beam continuous		322	7	6.4%
	steel truss pony		344	18	16.5%
				109	100.0%

Item 188	Fracture Critical *	CODE		COUNT	%
	fracture critical member	Y		19	17.4%
	fracture critical member	N		90	82.6%
				109	100.0%
	No. of steel trusses and girders		34x, 36x	18	
	1 bridge is conveyor bridge				
	Fracture Critical File to be completed by April 1, 2013			COUNT	
	Required Fracture Critical Files (including written Procedure and FPD)	18	truss/girde	18	
	Gusset Pl. Analysis to be completed by December 31, 2011			COUNT	
	Required Gusset Plate Analysis	18	trusses	18	

Item 189	Underwater	CODE	COUNT	%
	requires dive inspection	N	109	100.0%
	requires dive inspection	Y	0	0.0%
	dive inspection dates		0	0.0%
			109	0.0%

Item 71	Foundation Type *			
	Forward Abutment	U	60	55.0%
	Rear Abutment	U	60	55.0%
	Predominate Pier	U	21	19.3%
	Unknown Pier Foundation on Single Span bridges		14	12.8%

Item 74	Scour			
	Bridge not over waterway	N	1	0.9%
	unknown foundation	U	0	0.0%
	over tidal waters	T	0	0.0%
	foundations on dry land	9	0	0.0%
	stable above footing	8	105	96.3%
	countermeasures installed	7	3	2.8%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	0	0.0%
	stable action needed	4	0	0.0%
	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%
			109	100.0%

Item 87	Plan Information	CODE	COUNT	%
	no plans	0	21	19.3%
	plans available	1	67	61.5%
	field information	2	20	18.3%
	not applicable	N	1	0.9%
			109	100.0%

	Rating Factor *	COUNT	%
	Operating RF and Inventory RF equal to each other	3	2.8%

	Documented Engineering Judgment *	COUNT	%
	Method of Rating = 0 NO PLANS	20	18.3%

	Method Of Rating = 5	COUNT	%
		0	0.0%

	Deep Culverts	COUNT	%
	Culvert fill>6.5'	0	0.0%

	195 Culvert vs 171 Frame	COUNT	%
	# that do NOT meet the 2' Rule	0	0.0%

Item 84	Method of Analysis	CODE	COUNT	%
	Field Eval & Doc. Eng Judgment	0	20	18.3%
	WS or AS	1	71	65.1%
	Load Factor (LF)	2	12	11.0%
	Load & Resistance Factor	3	1	0.9%
	Combination of methods	4	4	3.7%
	Engineering Judgment Superstr	5	0	0.0%
	Load testing	6	0	0.0%
	Engineering Judgment Substr	7	0	0.0%
	Assigned Rating (LFR) HS20	D	0	0.0%
	Assigned Rating (LRFR) HL93	F	0	0.0%
	Not applicable (Ped, RR, Bldg)	X	1	0.9%
			109	100.0%

REMINDER:

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

LRFR required for bridges built after 2010

Inspection Condition Data - BR 86 NBIS Bridges Only

General Appraisal	CODE	COUNT	%
9 Excellent	9	10	9.2%
8 Very good	8	9	8.3%
7 Good	7	11	10.1%
6 Satisfactory	6	29	26.6%
5 Fair	5	32	29.4%
4 Poor	4	17	15.6%
3 Serious	3	1	0.9%
2 Critical	2	0	0.0%
1 Imminent Failure	1	0	0.0%
0 Closed	0	0	0.0%
		109	100.0%

Rating Consistency *	COUNT	%
GA <> Summary Items	0	0.0%
1-4 codes <> Summary	71	4.1%

INSPECTION FREQUENCY		COUNT
Number inspections per day		
	Avg.	5.0
	High	13
Recommended Max. 10 per day	# days over 10	3
Maximum 50 reviews per day		

Operating Status *	CODE	COUNT	%
Open, No restriction	A	74	67.9%
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	35	32.1%
Posted for other than load	R	0	0.0%
Closed for other than load	X	0	0.0%
		109	100.0%

Item 41 AGE of BRIDGES	YEAR (built or rehab)	COUNT	
	-1900	0	0.0%
	1901-1910	0	0.0%
	1911-1920	0	0.0%
	1921-1930	4	3.7%
	1931-1940	2	1.8%
	1941-1950	2	1.8%
	1951-1960	3	2.8%
	1961-1970	2	1.8%
	1971-1980	11	10.1%
	1981-1990	26	23.9%
	1991-2000	30	27.5%
	2001-2010	22	20.2%
	2011-2020	7	6.4%
		109	100.0%

(C)	Compliant
(SC)	Substantially Compliant
(CC)	Conditionally Compliant (Adhering to approved pan 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 -	12 mo. + 6 mo. Input	0	100.0%	N/A

ORC is not in Metric 6

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	8	57.9%	(CC)
	6 months to input dates		

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	% COMPLIANT	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 (GA=A or R)	0	100.0%	(C)
Bridges to be posted but aren't (GA code B)	0	100.0%	(C)

METRIC 22 - Inventory (partial review)

Structure Length *	ACTUAL COUNT	COMPLIANCE
Number of bridges with length or span difference	9	depends on sample size
Culvert Span		
unusually long steel culvert spans	0	depends on sample size
LAT/LONG		
missing coordinates	13	depends on sample size

PRELIMINARY FHWA 23 Metric Matrix

23 metrics used by FHWA to measure NBIS compliance

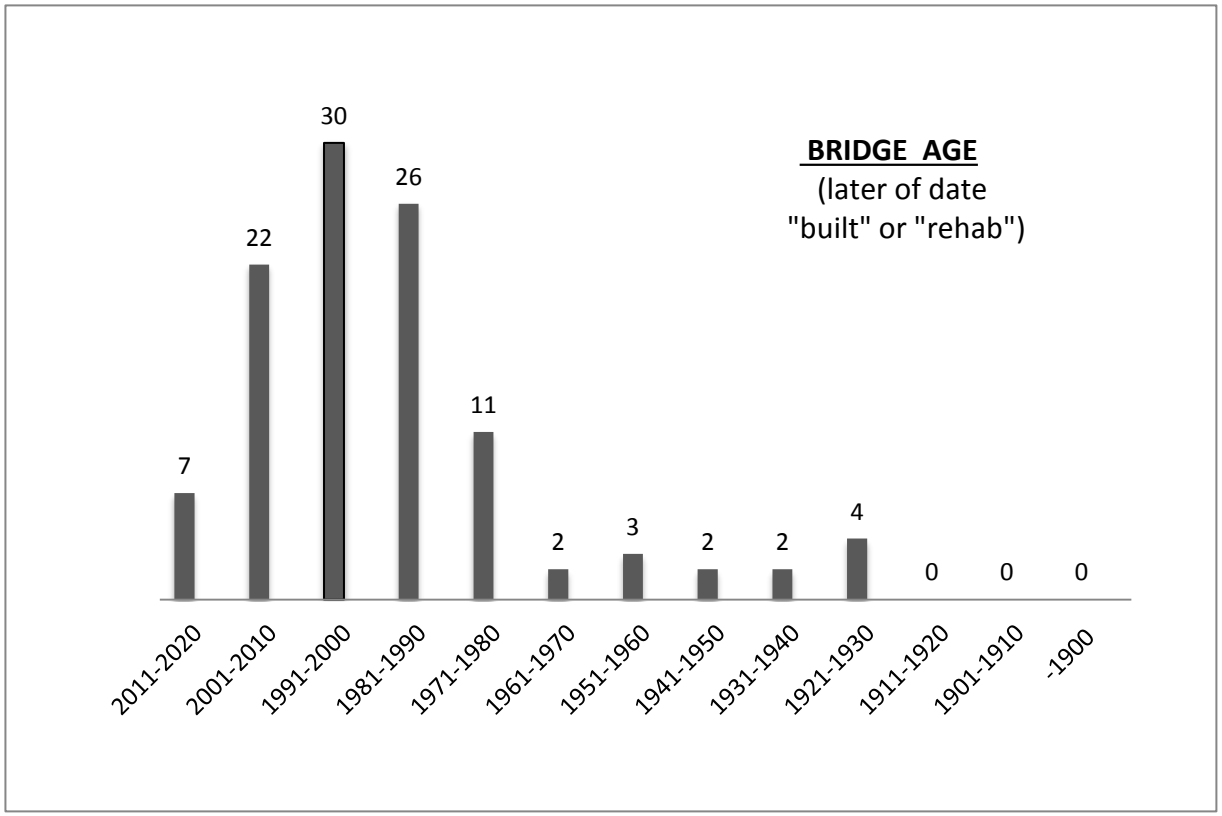
Compliance Codes for the following Metrics:

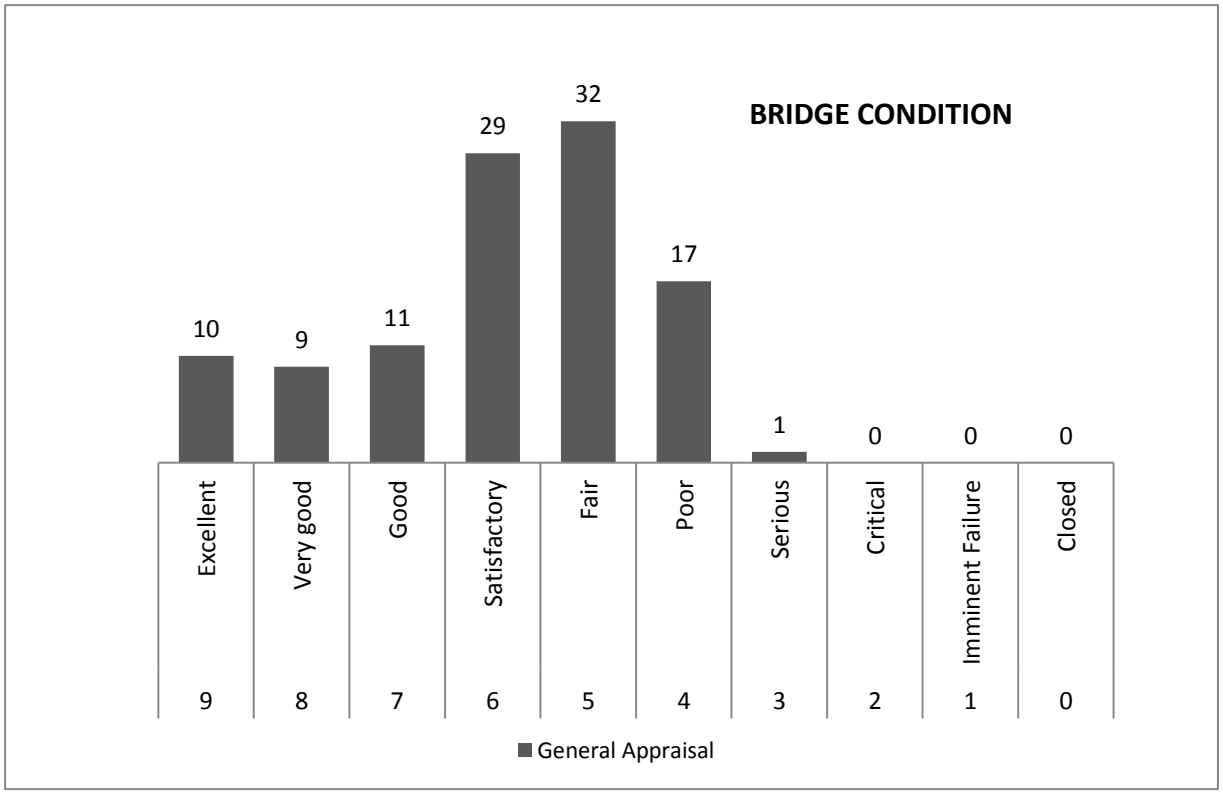
(C) Compliant
(SC) Substantially Compliant
(CC) Conditionally Compliant (Adherin
(NC) Not Compliant

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 ** 96%				
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 ** 94%				
23	Updating of Data				

** based on results of Field Review

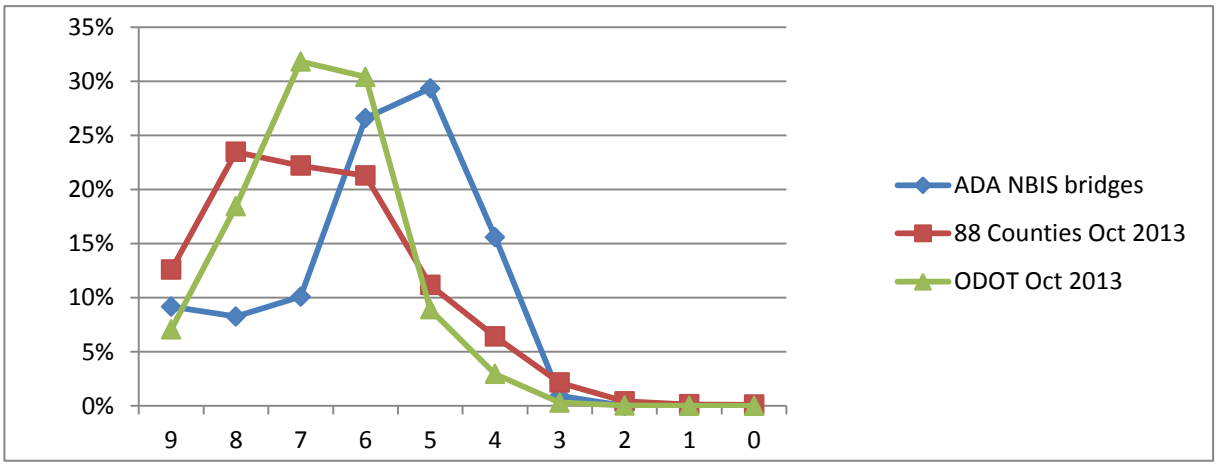
Metric	Action Needed
10	update 2012 FC inspection dates to later date


BRIDGE AGE
(later of date
"built" or "rehab")
7
22
30
26
11
2
3
2
2
4
0
0
0
2011-2020
2001-2010
1991-2000
1981-1990
1971-1980
1961-1970
1951-1960
1941-1950
1931-1940
1921-1930
1911-1920
1901-1910
-1900

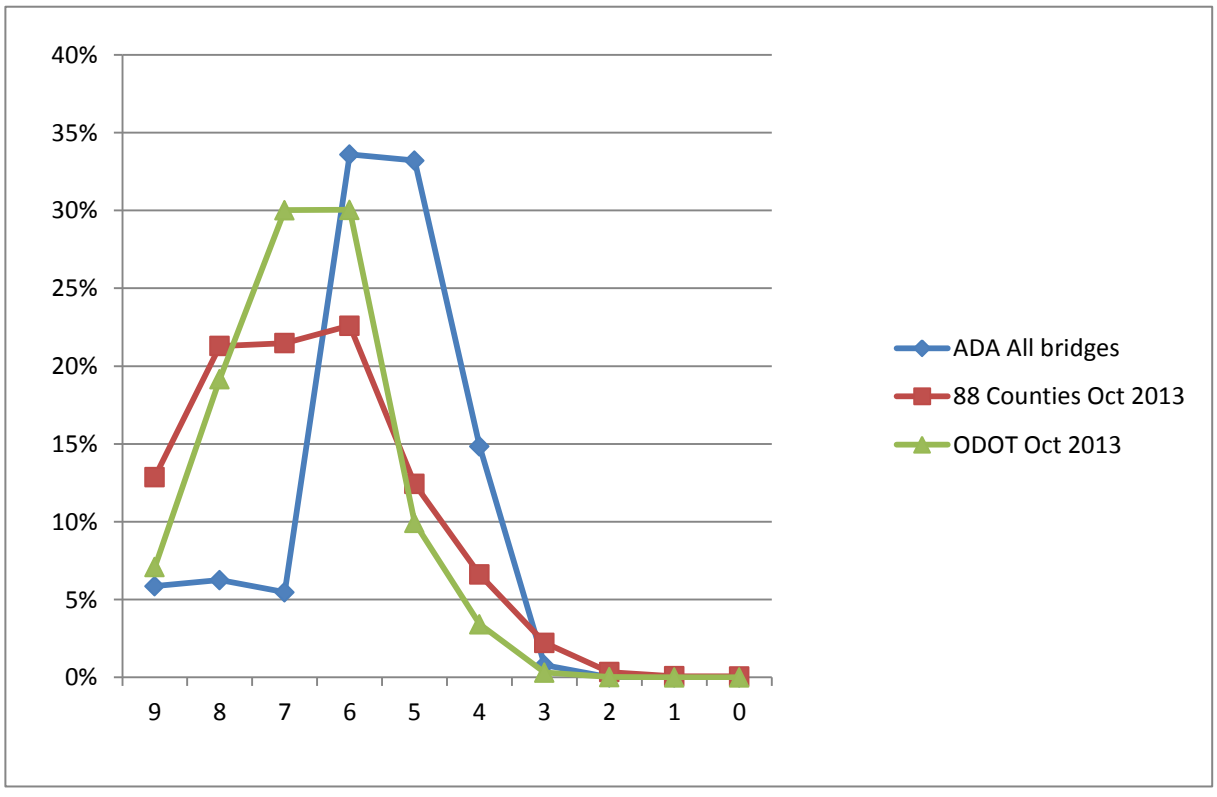

BRIDGE CONDITION
10
9
11
29
32
17
1
0
0
0
Excellent
Very good
Good
Satisfactory
Fair
Poor
Serious
Critical
Imminent Failure
Closed
9
8
7
6
5
4
3
2
1
0
General Appraisal

GENERAL APPRAISAL COMPARISON

NBIS bridges



All Bridges 10' and larger



4	1	4	3	1	3	2	4	22
4	1	4	3	1	3	3	4	23
								0.956522

20	24	22	22	24	23	23	22	180
24	24	24	24	24	24	24	24	192
								0.9375