2014 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

PIKE COUNTY ENGINEER

Inventory Data - BR 87 NBIS Bridges Only

		NBIS COUNT
NBIS Bridges > 20'		**168**
Bridges 10'-20'		**169**
		337
Possible NBIS length errors	0	

Item 95	Inspection Responsibility		CODE	COUNT	%
	County		3	168	100.0%
Item 97	**Maintenance responsibility**				
	County		3	160	95.2%
	City or other local		4	0	0.0%
	Railroad	*	6	8	4.8%
				168	100.0%
Item 100	**Type service on bridge**				
	Other		0	0	0.0%
	Highway		1	162	96.4%
	Railroad	*	2	6	3.6%
	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%
				168	100.0%
Item 100	**Type service under bridge**				
	Hwy w/ or w/o Ped		1	6	3.6%
	Railroad	*	2	2	1.2%
	Ped/Bkwy		3	0	0.0%
	Hwy w/ RR		4	0	0.0%
	Waterway		5	160	95.2%
	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%
	Other		0	0	0.0%
				168	100.0%

	Structure Type		CODE	COUNT	%
	concrete slab simple		111	8	4.8%
	concrete slab continuous		112	11	6.5%
	concrete beam simple		121	3	1.8%
	concrete box beam simple		131	1	0.6%
	concrete arch deck		153	1	0.6%
	concrete arch filled		155	2	1.2%
	concrete frame simple		171	22	13.1%
	concrete culvert filled		195	7	4.2%
	prestressed conc. beam simple		221	2	1.2%
	prestressed conc. box beam simple		231	33	19.6%
	steel beam simple		321	56	33.3%
	steel beam continuous		322	3	1.8%
	steel box beam simple		331	2	1.2%
	steel girder deck		363	1	0.6%
	steel girder thru		364	2	1.2%
	steel culvert other	*	390	1	0.6%
	steel culvert filled		395	3	1.8%
	steel truss (pony)		34A	10	6.0%
				168	100.0%

Item 188	Fracture Critical *	CODE		COUNT	%
	fracture critical member	Y		12	7.1%
	fracture critical member	N		156	92.9%
				168	100.0%
	No. of steel trusses and girders		34x, 36x	13	
		1 RR girder			

	Fracture Critical File to be completed by April 1, 2013			COUNT
	Required Fracture Critical Files (including written Procedure and FPD)	13	truss/girde	12

	Gusset Pl. Analysis to be completed by December 31, 2011			COUNT
	Required Gusset Plate Analysis	10	trusses	10

Item 189	Underwater	CODE	COUNT	%
	requires dive inspection	N	168	100.0%
	requires dive inspection	Y	0	0.0%
	dive inspection dates		0	0.0%
			168	0.0%

Item 74	Scour				
	Bridge not over waterway	N	8	4.8%
	unknown foundation	U	0	0.0%
	over tidal waters	T	0	0.0%
	foundations on dry land	9	1	0.6%
	stable above footing	8	114	67.9%
	countermeasures installed	7	4	2.4%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	38	22.6%
	stable action needed	4	2	1.2%
POA?	scour critical - unstable	3	1	0.6%
	scour critical - scour present	2	0	0.0%
	scour critical - failure imminent	1	0	0.0%
	scour critical - bridge failed	0	0	0.0%
			168	100.0%

Item 71	Foundation Type				
	Forward Abutment		U	6	3.6%
	Rear Abutment		U	6	3.6%
	Predominate Pier	*	U	7	4.2%
	Unknown Pier Foundation on Single Span bridges			5	3.0%

Item 87	Plan Information	CODE	COUNT	%
	no plans	0	16	9.5%
	plans available	1	106	63.1%
	field information	2	41	24.4%
	not applicable	N	5	3.0%
			168	100.0%

	Rating Factor	COUNT	%
	Operating RF and Inventory RF equal to each other	0	0.0%

	Documented Engineering Judgment	*	COUNT	%
	Method of Rating = 0 NO PLANS		15	8.9%

	Method Of Rating = 5	COUNT	%
		0	0.0%

	Deep Culverts	*	COUNT	%
	Culvert	fill>6.5'	2	1.2%

195 Culvert vs 171 Frame *	COUNT	%
# that do NOT meet the 2' Rule	1	0.6%

Item 84	Method of Analysis	CODE	COUNT	%
	Field Eval & Doc. Eng Judgment	0	15	8.9%
	WS or AS	1	32	19.0%
	Load Factor (LF)	2	103	61.3%
	Load & Resistance Factor	3	7	4.2%
	Combination of methods	4	5	3.0%
	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	6	3.6%
			168	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	42	25.0%
8 Very good	8	28	16.7%
7 Good	7	26	15.5%
6 Satisfactory	6	25	14.9%
5 Fair	5	21	12.5%
4 Poor	4	17	10.1%
3 Serious	3	7	4.2%
2 Critical	2	2	1.2%
1 Imminent Failure	1	0	0.0%
0 Closed	0	0	0.0%
		168	100.0%

Rating Consistency *	COUNT	%
GA <> Summary Items	0	0.0%
1-4 codes <> Summary	19	0.5%

INSPECTION FREQUENCY		COUNT
Number inspections per day		
	Avg.	8.2
	High	25
Recommended Max. 10 per day	# days over 10	16
Maximum 50 reviews per day		

Operating Status *	CODE	COUNT	%
Open, No restriction	A	152	90.5%
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	2	1.2%
Posted for load capacity	P	12	7.1%
Posted for other than load	R	2	1.2%
Closed for other than load	X	0	0.0%
		168	100.0%

Item 41 AGE of BRIDGES	YEAR (built or rehab)	COUNT	
	-1900	1	0.6%
	1901-1910	0	0.0%
	1911-1920	2	1.2%
	1921-1930	2	1.2%
	1931-1940	4	2.4%
	1941-1950	7	4.2%
	1951-1960	15	8.9%
	1961-1970	9	5.4%
	1971-1980	6	3.6%
	1981-1990	16	9.5%
	1991-2000	53	31.5%
	2001-2010	41	24.4%
	2011-2020	12	7.1%
		168	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	0	100.0%	(NC)

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	0	depends on sample size
Culvert Span		
unusually long steel culvert spans	0	depends on sample size
LAT/LONG		
missing coordinates	0	depends on sample size

PRELIMINARY FHWA 23 Metric Matrix

23 metrics used by FHWA to measure NBIS compliance

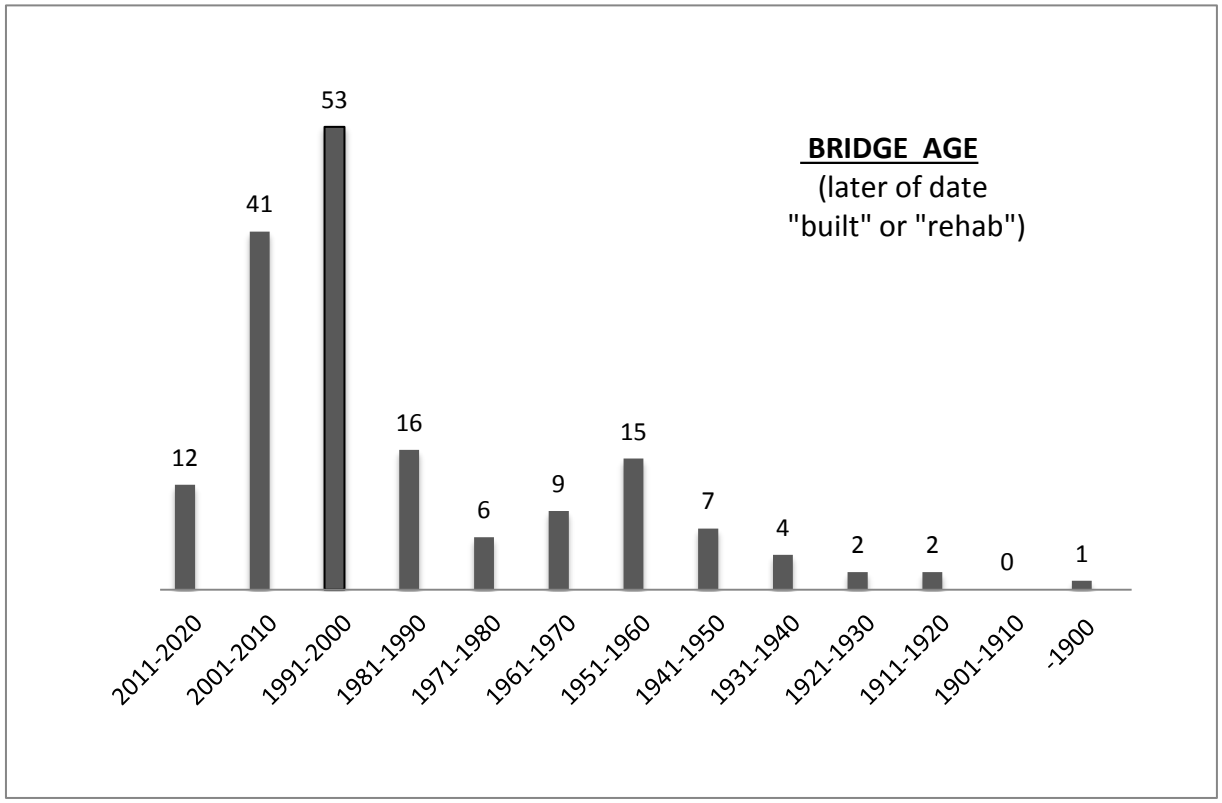
Compliance Codes for the following Metrics:

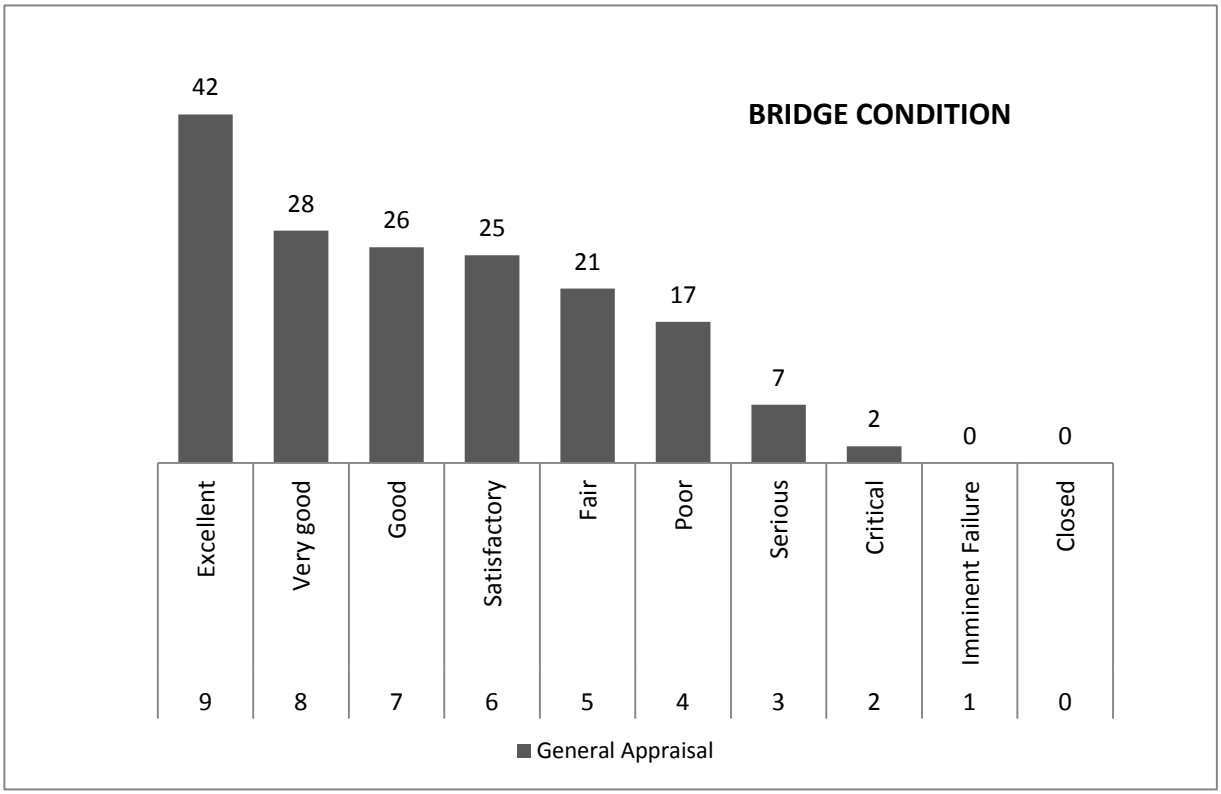
(C) Compliant
(SC) Substantially Compliant
(CC) Conditionally Compliant (Adherin
(NC) Not Compliant

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 ** 100%				
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 ** 93%				
23	Updating of Data				

** based on results of Field Review

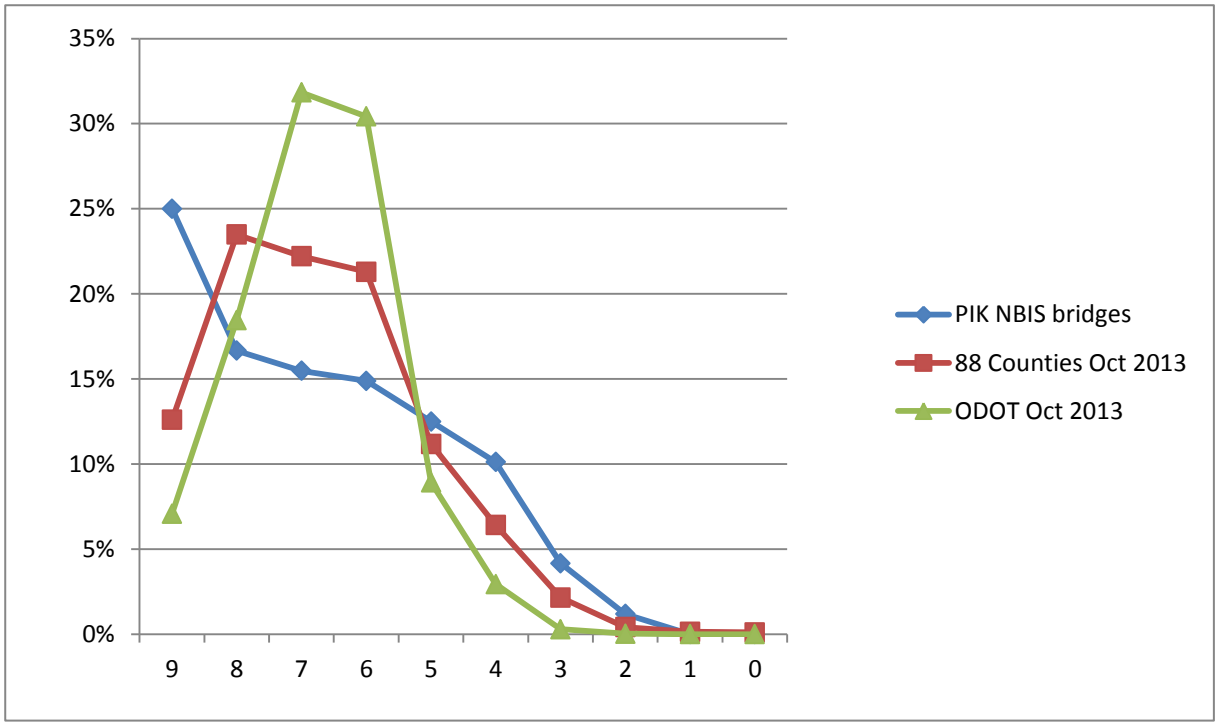
Metric	Action Needed
13	add PE name and stamp to all load ratings


BRIDGE AGE
(later of date
"built" or "rehab")
12
41
53
16
6
9
15
7
4
2
2
0
1
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
42
28
26
25
21
17
7
2
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