

# 2013 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

ALLEN COUNTY ENGINEER

## Inventory Data - BR 87 NBIS Bridges Only

	<u>NBIS COUNT</u>
NBIS Bridges > 20'	250
Bridges 10'-20'	<u>122</u>
	372

Possible NBIS length errors

12

\*

Item 95	Inspection Responsibility	CODE	COUNT	%
	County	3	250	100.0%
<b>Item 97</b>	<b>Maintenance responsibility</b>			
	County	3	250	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%
	ODNR	A	0	0.0%
	Park District	C	0	0.0%
	Township	F	0	0.0%
			250	100.0%
<b>Item 100</b>	<b>Type service on bridge</b>			
	Other	0	0	0.0%
	Highway	1	239	95.6%
	Railroad	2	0	0.0%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	11	4.4%
	RR Abnd. rails rem'vd	A	0	0.0%
			250	100.0%

Item 100 Type service under bridge				
Hwy w/ or w/o Ped	1	0	0.0%	
Railroad	2	2	0.8%	*
Ped/Bkwy	3	0	0.0%	
Hwy w/ RR	4	0	0.0%	
Waterway	5	247	98.8%	
Hwy/Waterway	6	0	0.0%	
RR/Waterway	7	1	0.4%	
Hwy/Wtrway/RR	8	0	0.0%	
Relief (RR w/o tracks)	9	0	0.0%	
Other	0	0	0.0%	
		250	100.0%	

P&G overpass on Thayer?  
RR arch over Serif and Bluelick?

Structure Type	CODE	COUNT	%
concrete slab simple	111	8	3.2%
concrete slab continuous	112	11	4.4%
concrete arch filled	155	3	1.2%
concrete girder thru	164	5	2.0%
concrete culvert filled	195	2	0.8%
prestressed conc. box beam simple	231	134	53.6%
prestressed conc. box beam continuous	232	3	1.2%
steel beam simple	321	33	13.2%
steel beam continuous	322	13	5.2%
steel truss thru	344	1	0.4%
steel culvert filled	395	14	5.6%
stone arch filled	555	1	0.4%
steel truss pony	34A	22	8.8%
		250	100.0%

Item 188 Fracture Critical			
	CODE	COUNT	%
fracture critical member	Y	22	8.8%
fracture critical member	N	228	91.2%
		250	100.0%
No. of steel trusses and girders	34_, 36_ Struct. Type	23	*
<b>Fracture Critical File</b> to be completed by April 1, 2013		<b>COUNT</b>	
Required Fracture Critical Files (including written Procedure and FPD)	23 truss/girder	22	
<b>Gusset Pl. Analysis</b> to be completed by December 31, 2011		<b>COUNT</b>	
Required Gusset Plate Analysis	23 trusses	22	

Item 189	Underwater	CODE	COUNT	%
	requires dive inspection	N	250	100.0%
	requires dive inspection	Y	0	0.0%
	dive inspection dates		0	0.0%
<b>Item 74</b>	<b>Scour</b>			
	Bridge not over waterway	N	2	0.8%
	unknown foundation	U	0	0.0%
	over tidal waters	T	0	0.0%
	foundations on dry land	9	27	10.8%
	stable above footing	8	210	84.0%
	countermeasures installed	7	0	0.0%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	11	4.4%
	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%
			250	100.0%
<b>Item 71</b>	<b>Foundation Type</b>			
	<b>Compare with Scour "Unkown Foundation"</b>			
	Forward Abutment	U	0	1.4%
	Rear Abutment	U	0	1.4%
	Predominate Pier	U	3	1.2%

<b>Item 74</b>	<b>Scour</b>	Unknown Foundation	0	
<b>Item 71</b>	<b>Foundation Type</b>	Unknown Foundation	3	*

Item 87	Plan Information	CODE	COUNT	%
	no plans	0	5	2.0% *
	plans available	1	245	98.0%
	field information	2	0	0.0%
	not applicable	N	0	0.0%
			250	100.0%

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

	Good 5's from culverts	COUNT	%
	Culvert fill>6.5'	2	0.8% *

(24 Non-NBIS)

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	2	0.8%
	WS or AS	1	52	20.8%
	Load Factor (LF)	2	184	73.6%
	Load & Resistance Factor	3	2	0.8%
	Combination of methods	4	4	1.6%
	Engineering Judgment Superstr	5	5	2.0%
	Load testing	6	0	0.0%
	Engineering Judgment Substr	7	1	0.4%
	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%
			250	99.2%

**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	3	1.2%
	8 Very good	8	49	19.6%
	7 Good	7	115	46.0%
	6 Satisfactory	6	44	17.6%
	5 Fair	5	19	7.6%
	4 Poor	4	13	5.2%
	3 Serious	3	5	2.0%
	2 Critical	2	0	0.0%
	1 Imminent Failure	1	0	0.0%
	0 Closed	0	2	0.8%
			250	100.0%

Rating Consistency		COUNT	%
GA <> Summary Items		6	2.4% *
1-4 codes <> Summary		50	1.0% *

INSPECTION FREQUENCY		COUNT
Number inspections per day		
	Avg.	3.7
	High	11
Recommended Max. 10 per day	# days over 10	1
Maximum 50 reviews per day		

Operating Status	CODE	COUNT	%
Open, No restriction	A	229	91.6%
Open, posting recommended	B	3	1.2%*
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	0.8%
Posted for load capacity	P	16	6.4%
Posted for other than load	R	0	0.0%
Closed for other than load	X	0	0.0%
		250	100.0%

Item 41	AGE of BRIDGES	YEAR (built or rehab)	COUNT	
		-1900	1	0.4%
		1901-1910	1	0.4%
		1911-1920	0	0.0%
		1921-1930	6	2.4%
		1931-1940	4	1.6%
		1941-1950	6	2.4%
		1951-1960	18	7.2%
		1961-1970	37	14.8%
		1971-1980	66	26.4%
		1981-1990	44	17.6%
		1991-2000	45	18.0%
		2001-2010	19	7.6%
		2011-2020	3	1.2%
			250	100.0%

(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 - 12 mo. + 6 mo. Input	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	% 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 below 100% legal but not posted (GA=A or R)	6	97.6%	(C) *
Bridges to be posted but aren't (GA code B)	3	98.8%	(C) *

Post or other action within 90 days

**METRIC 22 - Inventory (partial review)**

Structure Length	ACTUAL COUNT	COMPLIANCE
Number of bridges with length or span difference	2	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:

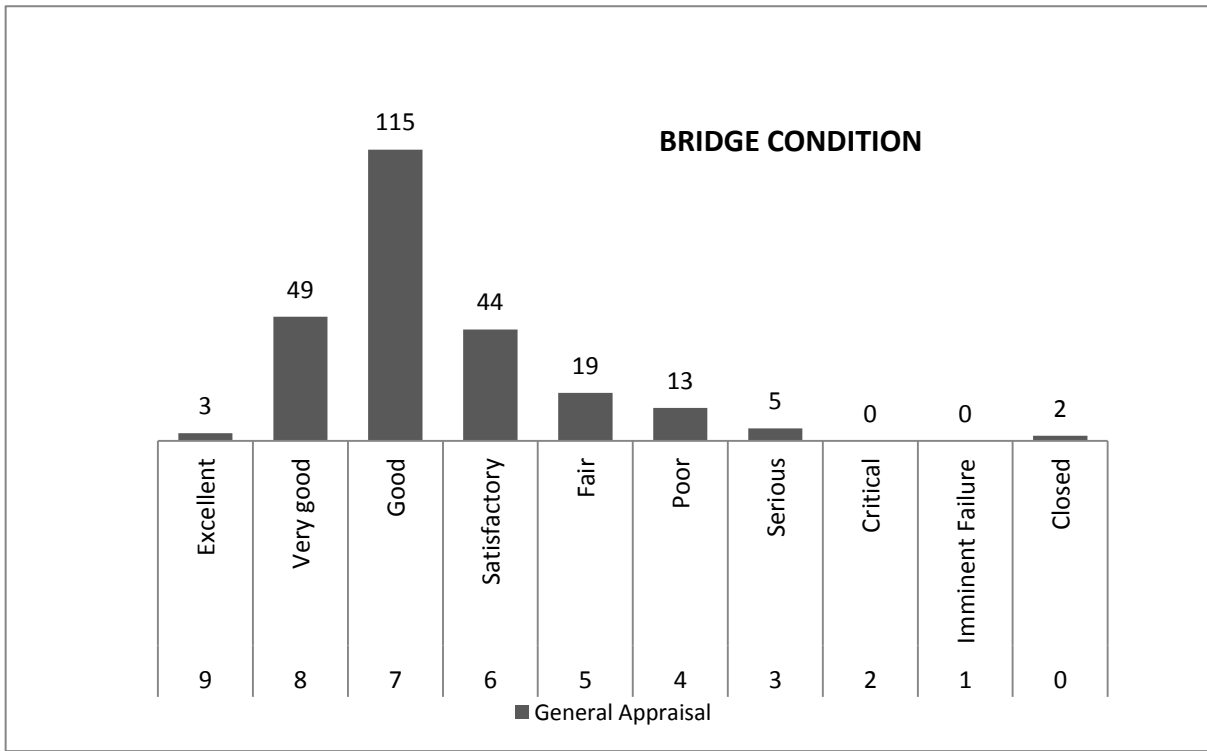
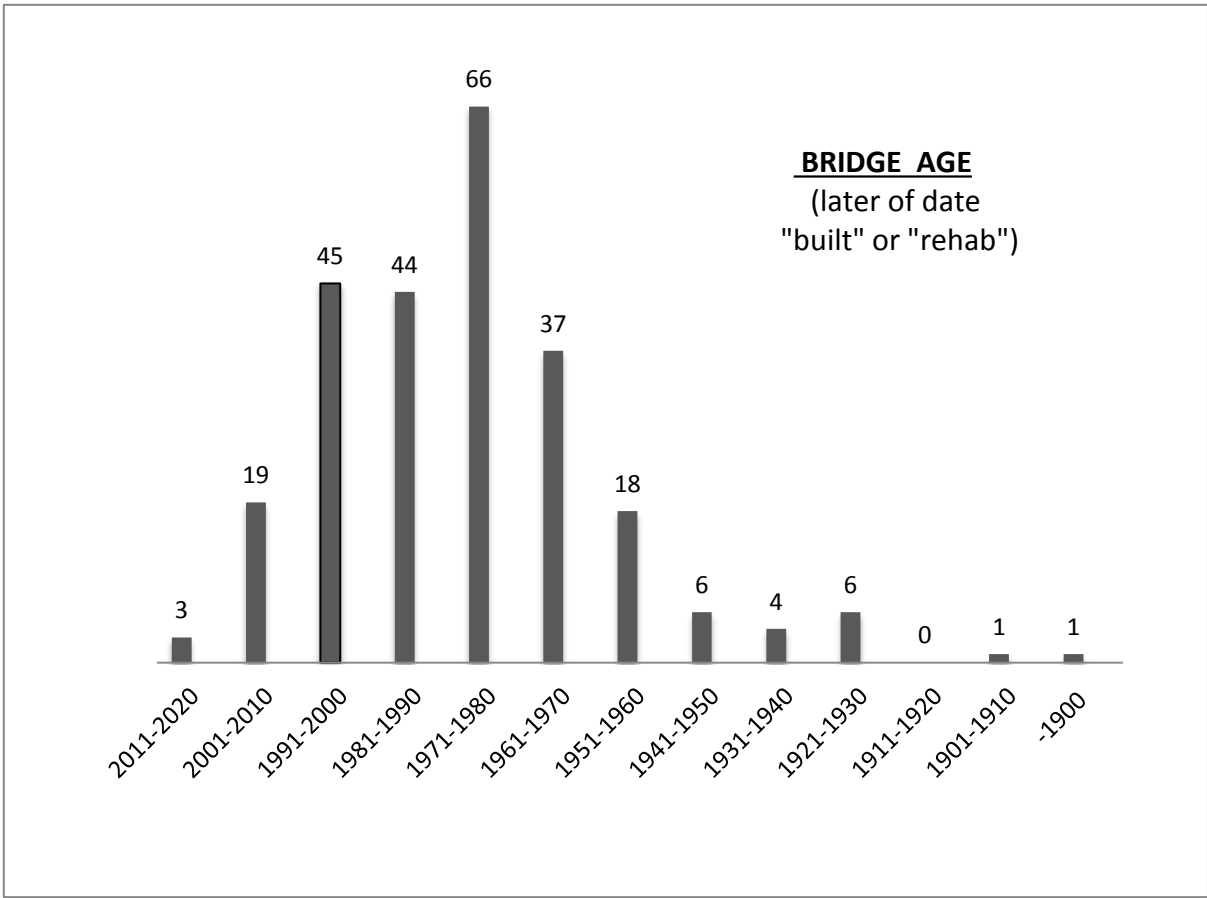
- (C) Compliant
- (SC) Substantially Compliant
- (CC) Conditionally Compliant (Adhering to approved PCA)
- (NC) Not Compliant

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 ** 97%				
23	Updating of Data				

\* based on office review

\*\* based on results of Field Review

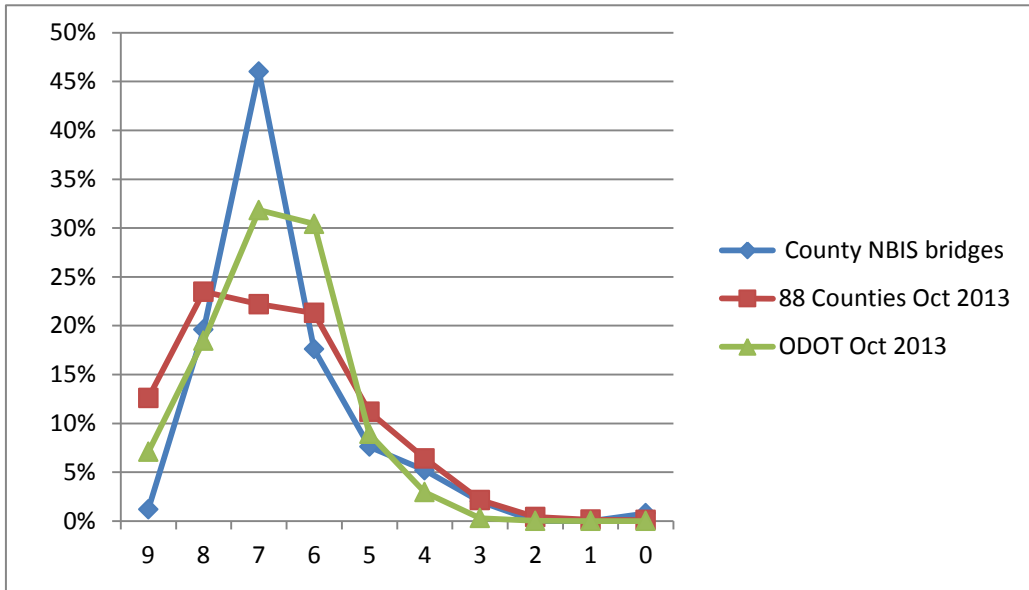
Metric	Action Needed
12	Use complete L-E-S comments when Summary is 5 or lower
16	Develop FC plan and do FC Inspection for SFN 0249580 by next inspection cycle
16	Develop Fatigue Prone details and Procedure for all FC bridges within 1 yr.
21	Develop Critical Findings Procedure





## GENERAL APPRAISAL COMPARISON

### NBIS Bridges



## GENERAL APPRAISAL COMPARISON

### All Bridges

