

# 2014 Bridge Inventory

It's time to see how the nation's bridges all stack up. Funding remains the No. 1 impediment to improving structurally deficient and functionally obsolete bridges, but time restrictions and a greater need for preventive maintenance are also problematic.

by Tina Grady Barbaccia

*Methodology: The Better Roads Bridge Inventory is an exclusive, award-winning annual survey that has been conducted since 1979. Bridge engineers from every state and Washington, D.C., are sent a survey with both qualitative and quantitative questions. The Federal Highway Administration, in consultation with the states, has assigned a sufficiency rating, or SR, to each bridge (20 feet or more) that is inventoried. Formula SR rating factors are as outlined in the current "Recording and Coding Guide for Structures Inventory and Appraisal SI&A of the Nation's Bridges."*

*The qualitative data are gathered through a questionnaire about major issues concerning bridge conditions and maintenance. For the FHWA's explanation of what makes a bridge structurally deficient and how a bridge becomes functionally obsolete, go to [fhwa.dot.gov/policy/2008cpr/chap3.htm#7](http://fhwa.dot.gov/policy/2008cpr/chap3.htm#7). Better Roads' editorial staff would like to thank all the state highway engineers for their continuing cooperation and special effort to provide current data. The data was collected through October 2014. FHWA, in consultation with the states, has assigned a sufficiency rating to each bridge (20 feet or more) that is inventoried.*

**W**hen it comes to the state of our nation's bridges, money has always been the major barrier to improving the state of our nation's bridges. Funding, though critical – and severely lacking – is just part of the reason. It's also about mindset: Not just waiting for bridges to fall into disrepair but also embrace the preventive maintenance approach. Kind of like fixing those squeaky brakes or going to the doctor with a small problem before it becomes a big one. It's also about the people – the personnel. Sometimes you have to invest a little to make changes.

W. Kyle Stollings, director of the Maintenance Division for the West Virginia Department of Transportation, says that insufficient funding certainly will have a "tremendous impact on getting structures rehabilitated or replaced" but, we also need to "get away from the 'worst first' mentality and focus more on system preservation."

Adam Matteo, P.E., assistant state bridge engineer for the Virginia Department of Transportation, agrees. He notes that insufficient funding will restrict important working in the coming year – that "our desire to keep ahead to the upcoming influx of structures that will require replacement or major rehabilitation is greatly affected by back of funds and personnel."

That being said, Matteo points, "[We] need to change the emphasis of replacing structures with the goal of keeping the good structures good through performing preventive and restorative maintenance."

When asked in the 2014 Bridge Inventory survey if any aspect of his department could be changed to improve bridges, Matteo said: "[To] create a dedicated fund that would be used to repair and replace structures. It would be primarily to keep the structures in good condition good with a secondary goal of slowly bringing the structure in poor condition up to good."

That pesky, perennial problem of funding remains the greatest challenge to lowering Virginia's rate of structurally deficient (SD) and functionally obsolete (FO) bridges in the coming year, but regardless of this roadblock, Matteo says the state still expects to lower its number of SD/FO bridges (23 percent of total combined bridges are SD/FO in Virginia, or 4,816 of 21,061 total bridges in the state).

## How the States Stack Up: A Look at the Top Five

**1. District of Columbia (Washington, D.C.):** Washington, D.C., came in this year with the highest percentage of combined SD/FO bridges. Again, like last year, the nation's capital also expects to be able to lower its rate of SD/FO bridges. Don Cooney, infrastructure project management administrator for the District's agency, told *Better Roads* last year in our Bridge Inventory survey, "all but one of our structurally deficient bridges is in the District's 'Six-Year Plan' for rehabilitation or construction." (For the 2013 Bridge Inventory, go to [betterroads.com/the-state-of-the-nations-bridges](http://betterroads.com/the-state-of-the-nations-bridges).) Cooney reiterated this in this year's survey as well. "All but one of our structurally deficient bridges is in the Department's Six-Year Plan for rehabilitation or construction," Cooney noted in the *Better Roads 2014 Bridge Inventory* survey. "Several are under construction. Only lack of funding would affect the program. Insufficient funding will delay implementing design and construction of bridge projects."

On self-ranking scale of 1 to 5 (with 1 being the poorest), Cooney gives D.C. a 3.5. Why? "Several rehabilitation projects have been completed and 18 new bridges have been added to the inventory." Washington, D.C., has 209 total bridges, 120 (57 percent) of which are total combined SD/FO.



**2. Rhode Island:** This East Coast state came in as the second highest in percentage of total combined SD/FO at 51 percent. Rhode Island reports having 757 total bridges, and 387 (that 51 percent) are total combined SD/FO. Fifty-one percent (310 out of 612) of its total number of interstate and state bridges are also considered as combined SD/FO. Fifty-three percent of its total combined city/county/township bridges (77 out of 145) meet the SD/FO classification. David Fish, P.E., managing engineer of bridge design for the Rhode Island Department of Transportation (DOT), says he doesn't

expect to lower the states of SD/FO in the coming year. That rate has held steady, though. Last year, Rhode Island also ranked at 51 percent of its total bridges being considered SD/FO. In a self-rating for how well a state's bridges rank, on a scale of 1 to 5 with 1 being the poorest, Fish gave Rhode Island a 2 "[because] Rhode Island currently has the second-lowest bridge ranking in the United States."

How is Rhode Island able to work toward improving its bridges? "Funding" is the biggest challenge in lowering the SD/FO rate, Fish says. Insufficient funding in the coming year "would prevent us from implementing more of the preservation contracts that are needed to help reduce the rate of SD bridges in the state." Producing a list of preservation action that would qualify for federal funding would help the system of planning and maintaining bridges in this country, Fish says. In fact, Fish says if he could change any aspect of his department to improve bridges in the state, he says he would "implement more bridge preservation programs and implement programmatic agreements with regulatory agencies to expedite the design process."

**3. Pennsylvania:** Coming in as the third state in the nation with the highest percentage of total combined SD/FO bridges, 38 percent (8,613) of Pennsylvania's 22,623 bridges are considered SD/FO. Last year, 39 percent (8,752) of all Pennsylvania's bridges (22,593) were considered SD/FO. The state has 16,125 total combined interstate and state bridges, 34 percent (5,433) of which are considered SD/FO.

### A Five-Year Look at America's Bridges

Type of Bridge	2010	2011	2012	2013	2014
<b>Interstate and state bridges</b>					
Total surveyed	291,034	292,085	292,273	300,260	<b>300,001</b>
*SD/FO	61,149	59,250	58,851	58,106	<b>55,235</b>
Percentage	21.0%	20.3%	20.1%	19.4%	<b>18.4%</b>
<b>City/county bridges</b>					
Total surveyed	309,479	310,006	309,881	309,178	<b>308,093</b>
*SD/FO	78,471	77,566	76,806	73,094	<b>69,150</b>
Percentage	25.4%	25%	24.8%	23.6%	<b>22.4%</b>
<b>Total overall bridges surveyed</b>					
Total	600,513	602,091	602,154	609,438	<b>608,094</b>
*SD/FO	139,620	136,816	135,657	131,200	<b>124,385</b>
Percentage	23.3%	22.7%	22.5%	21.5%	<b>20.5%</b>

\*SD/FO = structurally deficient/functionally obsolete

Source: Better Roads 2014 Bridge Inventory and previous year reports

\*Note Mississippi & Nevada did not respond - 2013 figures used

\*\* Note California & Ohio did not report functionally obsolete

Last year, 34 percent (5,530) of the state's total 16,135 total interstate and state bridges were considered SD/FO.

At a more local level, 49 percent (3,180) of Pennsylvania's 6,498 total city/county/township bridges are classified as SD/FO this year. In 2013, 50 percent (3,222) of the state's 6,458 total city/county/township bridges were considered SD/FO.

The Commonwealth of Pennsylvania is taking advantage of the public-private partnership (P3) tool that Republican Gov. Tom Corbett Jr. (governor at the time this article was written, which was before the Nov. 4 election) signed into law in 2012 to start an initiative to help improve the state's bridges. With the P3 approach, the Pennsylvania Department of Transportation (PennDOT) says it will be able to replace hundreds of these bridges more quickly, save money, as well as minimize the impact on the traveling public. (For more specifics, go to [dot.state.pa.us/Internet/P3info.nsf/Bridge?ReadForm](http://dot.state.pa.us/Internet/P3info.nsf/Bridge?ReadForm).)

For a list of the Final Rapid Bridge Replacement Project Bridge List, current as of Sept. 22, 2014, go to <ftp://ftp.dot.state.pa.us/public/Bureaus/Press/P3/P3RBRBridgeList.xlsx>.

As of Oct. 24, 2014, a team had been selected to replace 558 bridges through the P3 project. The team, which included 11 Pennsylvania-based subcontractors in its proposal, must begin construction in summer 2015 and complete the replacements within 36 months, according to a written statement from PennDOT. The state retains ownership of the bridges, but the team is responsible for maintaining each bridge for 25 years after its replacement. (For the official press release, go to <ftp://ftp.dot.state.pa.us/public/Bureaus/Press/>)



P3/rls-DOT-P3BridgeTeamSelect%20102414.pdf.)

PennDOT Secretary Barry J. Schoch said in the press release that this initiative reflects Gov. Tom Corbett Jr.'s "strong commitment to taking innovative steps to bring improvements to the state's roads and bridges more quickly and at reasonable cost." He also notes that the agreement helps Pennsylvania "take a big step to cutting further into its backlog of structurally deficient bridges."

Pennsylvania didn't return the comments section of the 2014 Bridge Inventory survey, but from these initiatives it's clear that it is working aggressively toward improving bridges in the state.

To preserve bridge safety, PennDOT says that it along with local bridge owners, are in the process of adding new weight restrictions or lowering existing weight restrictions on nearly 1,000 bridges throughout the state. For the full list of bridges that will receive new restrictions or have their current weight limits lowered, go to [tinyurl.com/PA-new-bridge-restrictions](http://tinyurl.com/PA-new-bridge-restrictions).

**4. Hawaii:** The Aloha State is No. 4 in terms of the highest percentage of overall total combined SD/FO bridges in the nation. Hawaii has 1,163 bridges in the state, and 428 of them (37 percent) are classified as combined SD/FO. Breaking it down, 771 of its 290 (38 percent) of its total combined interstate/state bridges are considered SD/FO. In terms of its total city/county/township bridges, 138 of 392 (35 percent) these bridges are a total combined SD/FO.

Paul Santo, bridge design engineer for the Hawaii Department of Transportation (HDOT), says he expects that Hawaii will be able to lower its rates of SD/FO bridges in the coming year. "A couple of bridges are rehabilitated, so the total number of SD/FO bridges should be less," Santo says.

In a self-rating scale of 1 to 5, with 1 being the poorest, of how Hawaii should be rated in terms of the health of the state's bridges, Santo gives it a 3. "We have a high percentage of bridges that are deficient with insufficient funding to be effective," he notes. If he could change any aspect of his department to improve his state's bridges, Santo says it would be to "allocate more funds to improve the bridges."

When asked to what extent insufficient funding will restrict important working in the coming year, Santo noted that it was the "same as the previous year."

Although Hawaii ranks as fourth in the nation for highest percentage of SD/FO bridges, HDOT received a Preservation

## What causes the most damage to bridges?

(A)ge (C)orrosion (T)raffic (O)ther

Alabama	A	T		
Arizona	A	C	T	
Arkansas	C	A	T	
California	T	A	C	
Colorado	O			
Delaware	A	C		
District of Columbia	C	A		
Florida	T	C		
Hawaii	C	A	T	
Kansas	T	C	O	
Kentucky	C	T	A	O
Louisiana	O	T	C	A
Maryland	A	C		
Minnesota	O			
Missouri	C	A	T	
Montana	C			
Nebraska	C	T	A	
New Mexico	A	O		
New York	C	A		
North Carolina	A	C	T	
North Dakota	A		T	
Ohio	O	C	A	T
Oklahoma	C	A	T	
Rhode Island	C	A		
South Carolina	A	C	T	
South Dakota	C	A	T	O
Texas	C	T	O	A
Utah	C	A		
Virginia	C	O	T	A
Washington	O	C	T	A
West Virginia	C	O	T	A

Data compiled by Linda Hapner

Source: Better Roads 2014 Bridge Inventory

Commendation in late May for its Hawaii State Historic Bridge Inventory & Evaluation from the Historic Hawaii Foundation's 2014 Preservation Honor Award. The effort evaluated all state and county bridges statewide built before 1968 and assessed their preservation values, according to HDOT. The agency notes that this information will be used to assist and provide guidance in HDOT's future project development. A total of



708 bridges were identified and evaluated for eligibility into the Hawaii State Register of Historic Places or the National Register of Historic Places. (For more about this award and evaluation, go to [tinyurl.com/Hawaii-historic-bridges](http://tinyurl.com/Hawaii-historic-bridges).)

**5 (TIE). Connecticut:** This New England state is tied with Massachusetts and New York for the state with the fifth highest percentage of total combined SD/FO bridges in the nation at 36 percent. The state has 4,202 bridges and 1,501 are considered SD/FO. In terms of combined total interstate and state bridges, 37 percent (1,093) of the 2,951 bridges are considered SD/FO. Thirty-three percent (408) of the total combined city/county/township bridges are considered SD/FO.

Connecticut has an action plan to help improve these numbers. For the Transportation Infrastructure Capital Plan 2014-2018, go to [tinyurl.com/CT-transportation-2014-18](http://tinyurl.com/CT-transportation-2014-18).

**5 (TIE). Massachusetts:** Out of this state's total 5,162 bridges, 36 percent (1,837) are considered combined SD/FO. The interstate and state total combined bridges come in at 36 percent (1,297) of these 3,585 bridges are classified as SD/FO. At a more local level, 34 percent (540) of the total 1,577 city/county/township bridges were found to be total combined SD/FO.

Through April 1, 2014, the latest data available, the Massachusetts Department of Transportation (MassDOT) Accelerated Bridge Program has advertised 191 construction contracts with a combined construction budget valued at \$2.26 billion. (For an active project list, go to [eot.state.ma.us/acceleratedbridges/downloads/ActiveList\\_040113.pdf](http://eot.state.ma.us/acceleratedbridges/downloads/ActiveList_040113.pdf).) Of the 191 advertised construction contracts, at press time, 52 have already, or will, repair/replace over 270 bridges throughout Massachusetts. Thirty-nine are maintenance/preservation projects which perform work to improve the safety of many additional bridges throughout the Commonwealth of Massachusetts. MassDOT has declared 155 of them complete with two additional contracts terminated and the remaining scope transferred to other contracts.

MassDOT says the historic \$3 billion Patrick-Murray Accelerated Bridge Program represents a “monumental investment in Massachusetts bridges.” The agency notes that this program will “greatly reduce the number of structurally deficient bridges in the state system, while creating thousands of construction jobs on bridge projects.”

MassDOT and Department of Conservation and Recreation

(DCR) will rely on the use of innovative and accelerated project development and construction techniques to complete this program. As a result, MassDOT says the projects will be completed on-time, on-budget and with minimum disruption to people and to commerce. (For a photo slideshow of Massachusetts that are part of this program, go to [eot.state.ma.us/acceleratedbridges](http://eot.state.ma.us/acceleratedbridges).)

**5 (TIE). New York:** Also coming in at 36 percent in terms of total percentage of overall SD/FO bridges, 6,223 of the state's 17,397 bridges are SD/FO. The state's has 8,339 total combined interstate and state bridges, 38 percent (3,208) of which are classified as SD/FO. The state's 9,058 total combined city/county/township bridges have 33 percent (3,015) considered as SD/FO. However, New York doesn't expect to lower its rate or SD or FO bridges in the coming year, according to the New York State Department of Transportation's (NYSDOT) responses on the 2014 Bridge Inventory survey. That being said, NYSDOT self-rates itself as a 3 on a scale of 1 to 5, with 1 being the poorest, in terms of condition of its state's bridges. Why? NYSDOT says that 67 percent of its bridges are in good conditions – not SD or FO.

Funding availability will remain as the biggest challenge in lowering the states rate of SD/FO bridges, but other restrictions such as specs, contracts or time restrictions won't affect how well the agency is able to replace or repair deficient bridges.

NYSDOT tells *Better Roads* in the 2014 *Bridge Inventory* survey that insufficient funding will “significantly” restrict important work in the coming year “since our aging bridge population requires continual investment in repair and maintenance.”

There have been 70 bridges closed in the last five years, and this year, 18 have been closed in the state because of deficiency, structural failure or collapse – but some of these bridges are slated for repair.

For the full state-by-state listing (and Washington, D.C.) of how the nation's bridges fare, see the table on page 24.

For continual coverage on the data from the 2014 Bridge Inventory, look for coverage on [BetterRoads.com](http://BetterRoads.com) (or sign up for the free daily newsletter during the work week to get the information delivered to your inbox) and in upcoming issues of *Better Roads*. We'll be posting tables sorted by percentages, by numbers, DOT wish lists and the great challenges to lowering the state rate of SD/FO bridges. ❖

## How deficient and obsolete bridges break out in 2014

States and the District of Columbia have provided separate counts for the latest numbers on the breakdown of their structurally deficient (SD) and functionally obsolete (FO) bridges.

For the Federal Highway Administration's (FHWA) explanation of what makes a bridge structurally deficient and how a bridge becomes functionally obsolete, go to [www.fhwa.dot.gov/policy/2008cpr/chap3.htm#7](http://www.fhwa.dot.gov/policy/2008cpr/chap3.htm#7). Better Roads' editorial staff would like to thank all of the state highway engineers for their continuing cooperation and special effort to provide current data. The data was collected through October 2014. FHWA, in consultation with the states, has assigned a sufficiency rating to each bridge (20 feet or more) that is inventoried.

State	Interstate & State Bridges							City/County/Township Bridges							Combined Total All Bridges							Fracture Critical	
	Total Bridges	Total FO	%	Total SD	%	Total SD/FO	%	Total Bridges	Total FO	%	Total SD	%	Total SD/FO	%	Total Bridges	Total FO	%	Total SD	%	Total SD/FO	%	Total	%
Alabama	5,753	921	16%	109	2%	1,030	18%	10,153	1,052	10%	1,211	12%	2,263	22%	15,906	1,973	12%	1,320	8%	3,293	21%	201	1%
Alaska	822	71	9%	78	9%	149	18%	148	23	16%	20	14%	43	29%	970	94	10%	98	10%	192	20%	112	12%
Arizona	4,849	368	8%	108	2%	476	10%	2,833	219	8%	87	3%	306	11%	7,682	587	8%	195	3%	782	10%	47	1%
Arkansas	7,332	724	10%	305	4%	1,029	14%	5,316	796	15%	479	9%	1,275	24%	12,648	1,520	12%	784	6%	2,304	18%	630	5%
California***	12,363	***	***	298	2%	298	2%	12,288	***	***	1,171	10%	1,171	10%	24,651	***	***	1,469	6%	1,469	6%	1,029	4%
Colorado	3,437	429	12%	216	6%	645	19%	4,773	398	8%	306	6%	704	15%	8,210	827	10%	522	6%	1,349	16%	158	2%
Connecticut	2,951	886	30%	207	7%	1,093	37%	1,251	240	19%	168	13%	408	33%	4,202	1,126	27%	375	9%	1,501	36%	167	4%
Delaware	856	112	13%	56	7%	168	20%	11	5	45%	1	9%	6	55%	867	117	13%	57	7%	174	20%	28	3%
District of Columbia	209	108	52%	12	6%	120	57%	0	0	n/a	0	n/a	0	n/a	209	108	52%	12	6%	120	57%	22	11%
Florida	6,370	665	10%	64	1%	729	11%	5,091	911	18%	149	3%	1,060	21%	11,461	1,576	14%	213	2%	1,789	16%	342	3%
Georgia	6,671	718	11%	124	2%	842	13%	8,004	851	11%	763	10%	1,614	20%	14,675	1,569	11%	887	6%	2,456	17%	35	0%
Hawaii	771	243	32%	47	6%	290	38%	392	99	25%	39	10%	138	35%	1,163	342	29%	86	7%	428	37%	7	1%
Idaho	1,322	205	16%	50	4%	255	19%	2,372	144	6%	258	11%	402	17%	3,694	349	9%	308	8%	657	18%	126	3%
Illinois	8,320	999	12%	588	7%	1,587	19%	18,281	926	5%	1,631	9%	2,557	14%	26,601	1,925	7%	2,219	8%	4,144	16%	518	2%
Indiana	5,879	499	8%	343	6%	842	14%	13,057	1,433	11%	1,512	12%	2,945	23%	18,936	1,932	10%	1,855	10%	3,787	20%	413	2%
Iowa	4,124	268	6%	105	3%	373	9%	20,139	811	4%	4,873	24%	5,684	28%	24,263	1,079	4%	4,978	21%	6,057	25%	1,101	5%
Kansas	5,441	585	11%	77	1%	662	12%	19,536	1,099	6%	2,313	12%	3,412	17%	24,977	1,684	7%	2,390	10%	4,074	16%	628	3%
Kentucky	9,000	1,789	20%	571	6%	2,360	26%	5,022	1,217	24%	572	11%	1,789	36%	14,022	3,006	21%	1,143	8%	4,149	30%	328	2%
Louisiana	7,887	1,321	17%	786	10%	2,107	27%	4,934	425	9%	1,041	21%	1,466	30%	12,821	1,746	14%	1,827	14%	3,573	28%	301	2%
Maine	2,094	243	12%	277	13%	520	25%	231	11	5%	74	32%	85	37%	2,325	254	11%	351	15%	605	26%	120	5%
Maryland	2,922	419	14%	82	3%	501	17%	2,321	512	22%	225	10%	737	32%	5,243	931	18%	307	6%	1,238	24%	275	5%
Massachusetts	3,585	1,007	28%	290	8%	1,297	36%	1,577	383	24%	157	10%	540	34%	5,162	1,390	27%	447	9%	1,837	36%	329	6%
Michigan	4,463	720	16%	265	6%	985	22%	6,514	558	9%	1,026	16%	1,584	24%	10,977	1,278	12%	1,291	12%	2,569	23%	123	1%
Minnesota	3,900	234	6%	83	2%	317	8%	9,900	315	3%	1,023	10%	1,338	14%	13,800	549	4%	1,106	8%	1,655	12%	127	1%
Mississippi *	5,727	751	13%	221	4%	972	17%	10,837	452	4%	1,997	18%	2,449	23%	16,564	1,203	7%	2,218	13%	3,421	21%	214	1%
Missouri	10,371	908	9%	1,058	10%	1,966	19%	13,977	1,666	12%	2,200	16%	3,866	28%	24,348	2,574	11%	3,258	13%	5,832	24%	948	4%
Montana	2,939	301	10%	117	4%	418	14%	2,016	281	14%	115	6%	396	20%	4,955	582	12%	232	5%	814	16%	239	5%
Nebraska	3,521	66	2%	190	5%	256	7%	11,552	899	8%	2,173	19%	3,072	27%	15,073	965	6%	2,363	16%	3,328	22%	1,063	7%
Nevada *	1,077	145	13%	16	1%	161	15%	725	23	3%	17	2%	40	6%	1,802	168	9%	33	2%	201	11%	46	3%
New Hampshire	1,512	196	13%	117	8%	313	21%	1,001	194	19%	190	19%	384	38%	2,513	390	16%	307	12%	697	28%	87	3%
New Jersey	2,426	328	14%	226	9%	554	23%	4,182	802	19%	332	8%	1,134	27%	6,608	1,130	17%	558	8%	1,688	26%	571	9%
New Mexico	2,970	179	6%	171	6%	350	12%	747	129	17%	78	10%	207	28%	3,717	308	8%	249	7%	557	15%	45	1%
New York	8,339	2,429	29%	779	9%	3,208	38%	9,058	1,846	20%	1,169	13%	3,015	33%	17,397	4,275	25%	1,948	11%	6,223	36%	1,548	9%
North Carolina	17,413	2,930	17%	2,087	12%	5,017	29%	858	170	20%	70	8%	240	28%	18,271	3,100	17%	2,157	12%	5,257	29%	85	0%
North Dakota	1,133	27	2%	35	3%	62	5%	3,144	200	6%	554	18%	754	24%	4,277	227	5%	589	14%	816	19%	166	4%
Ohio***	10,874	***	***	353	3%	353	3%	17,156	***	***	1,607	9%	1,607	9%	28,030	***	***	1,960	7%	1,960	7%	1,470	5%
Oklahoma	7,663	541	7%	468	6%	1,009	13%	15,445	689	4%	3,478	23%	4,167	27%	23,108	1,230	5%	3,946	17%	5,176	22%	461	2%
Oregon	2,718	623	23%	82	3%	705	26%	4,034	507	13%	286	7%	793	20%	6,752	1,130	17%	368	5%	1,498	22%	285	4%
Pennsylvania	16,125	2,772	17%	2,661	17%	5,433	34%	6,498	908	14%	2,272	35%	3,180	49%	22,623	3,680	16%	4,933	22%	8,613	38%	1,296	6%
Rhode Island	612	171	28%	139	23%	310	51%	145	44	30%	33	23%	77	53%	757	215	28%	172	23%	387	51%	59	8%
South Carolina	8,418	772	9%	829	10%	1,601	19%	878	137	16%	184	21%	321	37%	9,296	909	10%	1,013	11%	1,922	21%	61	1%
South Dakota	1,797	95	5%	68	4%	163	9%	3,953	112	3%	1,090	28%	1,202	30%	5,750	207	4%	1,158	20%	1,365	24%	142	2%
Tennessee	8,307	840	10%	226	3%	1,066	13%	11,464	1,304	11%	713	6%	2,017	18%	19,771	2,144	11%	939	5%	3,083	16%	161	1%
Texas	34,892	3,487	10%	193	1%	3,680	11%	18,126	4,091	23%	832	5%	4,923	27%	53,018	7,578	14%	1,025	2%	8,603	16%	815	2%
Utah	1,888	163	9%	23	1%	186	10%	1,058	77	7%	60	6%	137	13%	2,946	240	8%	83	3%	323	11%	80	3%
Vermont	1,089	198	18%	65	6%	263	24%	1,627	371	23%	128	8%	499	31%	2,716	569	21%	193	7%	762	28%	129	5%
Virginia	19,414	3,028	16%	1,279	7%	4,307	22%	1,647	335	20%	174	11%	509	31%	21,061	3,363	16%	1,453	7%	4,816	23%	325	2%
Washington	3,294	890	27%	141	4%	1,031	31%	4,033	671	17%	204	5%	875	22%	7,327	1,561	21%	345	5%	1,906	26%	327	4%
West Virginia	6,989	1,371	20%	902	13%	2,273	33%	111	39	35%	38	34%	77	69%	7,100	1,410	20%	940	13%	2,350	33%	518	7%
Wisconsin	5,217	383	7%	174	3%	557	11%	8,833	360	4%	1,020	12%	1,380	16%	14,050	743	5%	1,194	8%	1,937	14%	197	1%
Wyoming	1,955	136	7%	210	11%	346	18%	844	127	15%	175	21%	302	36%	2,799	263	9%	385	14%	648	23%	72	3%
<b>TOTAL</b>	<b>300,001</b>	<b>37,264</b>	<b>12.4%</b>	<b>17,971</b>	<b>6.0%</b>	<b>55,235</b>	<b>18.4%</b>	<b>308,093</b>	<b>28,862</b>	<b>9.4%</b>	<b>40,288</b>	<b>13.1%</b>	<b>69,150</b>	<b>22.4%</b>	<b>608,094</b>	<b>66,126</b>	<b>10.9%</b>	<b>58,259</b>	<b>9.6%</b>	<b>124,385</b>	<b>20.5%</b>	<b>18,577</b>	<b>3.1%</b>

\* Note Mississippi & Nevada did not respond - 2013 figures used      \*\*\* Note California & Ohio did not report functionally obsolete bridges

Data compiled by Linda Hapner  
Source: Better Roads 2014 Bridge Inventory



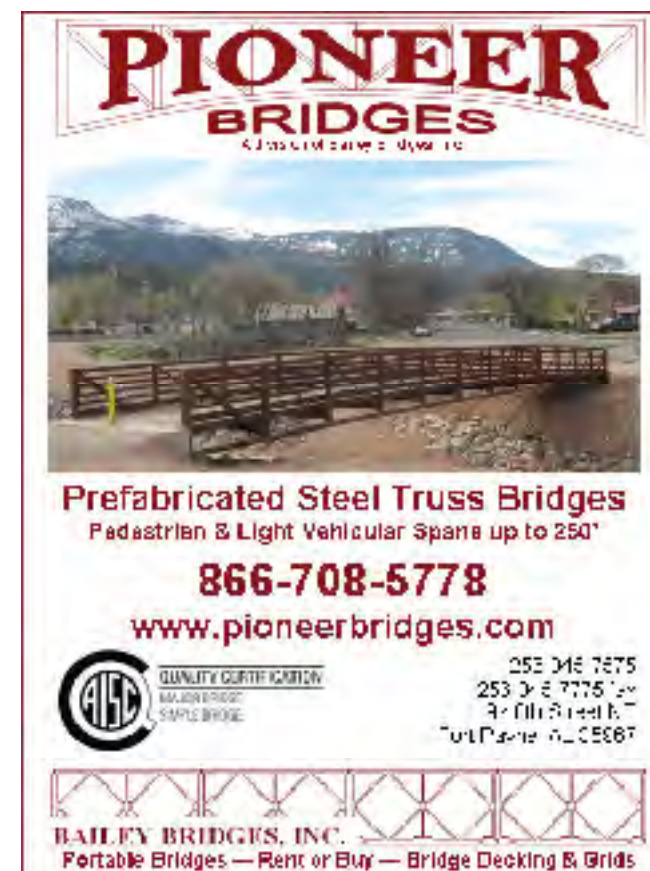
**E-SAXIMETER**  
Pile Inspectors Worldwide Rely On It

Outputs pile driving log, blow count and hammer stroke

Optional pile penetration and hammer kinetic energy

sales@pile.com  
+1 216-831-6131    www.pile.com/esax

Text INFO to 205-289-3789 or visit [www.betterroads.com/info](http://www.betterroads.com/info)



**PIONEER BRIDGES**  
A Division of Bailey Bridges, Inc.

Prefabricated Steel Truss Bridges  
Pedestrian & Light Vehicular Spans up to 250'

**866-708-5778**  
[www.pioneerbridges.com](http://www.pioneerbridges.com)

ALSC QUALITY CERTIFICATION  
MAJOR BRIDGE SAMPLE BRIDGE

253 346 7675  
253 346 7775  
3rd Floor  
Tulsa, Oklahoma 74107

**BAILEY BRIDGES, INC.**  
Portable Bridges — Rent or Buy — Bridge Decking & Grids