

February 3, 2021

The Honorable Waylon Brown, Chair, Senate Transportation Committee
The Honorable Brian Best, Chair, House Transportation Committee
Glen Dickinson, Director, Legislative Services Agency
Ground Floor, State Capitol Building
Des Moines, Iowa 50319

Re: County Structurally Deficient Bridges Report for FY 2020

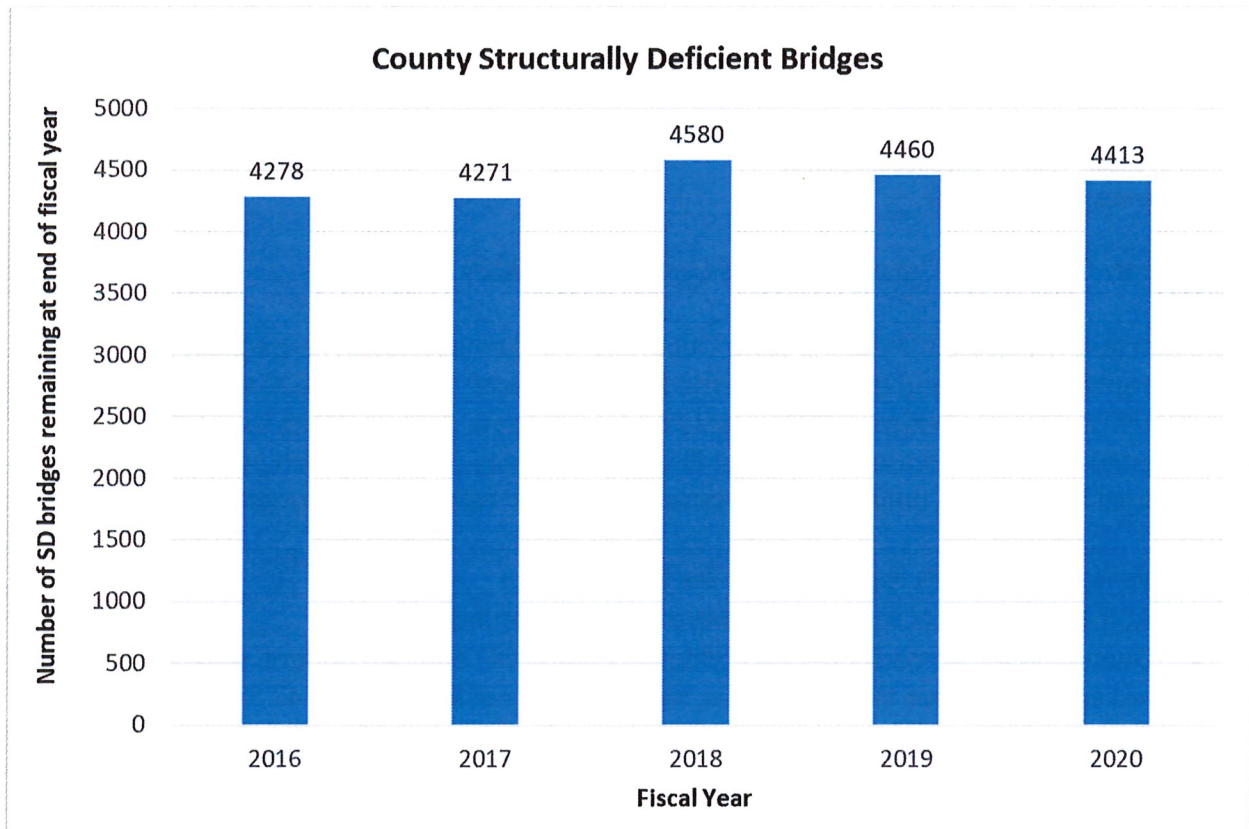
Pursuant to Iowa Code 307.32, the Iowa Department of Transportation respectfully submits the subject report summarizing the progress made during Fiscal Year (FY) 2020 to reduce the number of Structurally Deficient (SD) county bridges in Iowa. Included with the report is “A Guide to the County Structurally Deficient Bridges Summary Report”, which provides background information, definitions, and other information related to the report.

Highlights from this year’s report include the following:

- At the beginning of the FY there were 4,460 SD county bridges.
- During the FY an additional 293 bridges became SD and 340 bridges were repaired or replaced to remove their SD status, resulting in a net reduction of 47 SD bridges.
- Of the 4,413 bridges that remained in SD status at the end of the FY, 4,019 are still open to traffic and 394 are closed.
- Of the 4,019 bridges that are still open to traffic 1,014 (or about 25%) are programmed for replacement or rehabilitation in the next five years.
- Of the 394 bridges that are closed, 324 (or about 82%) are not likely to reopen due to lack of funding for rehabilitation or replacement.

In summary, counties have continued to make progress in reducing the number of SD bridges, but compared to last year, progress has slowed a bit. There are a couple likely reasons for the slowdown in progress. First, even though additional funds have been provided as a result of the Iowa fuel tax increase in 2015 and some modest increases in Federal funding for bridges over the past several years, the buying power of these dollars has continued to erode. According to the Iowa DOT [Price Trend Index for Highway Construction](#), the Structures Index, which represents the costs of key items associated with bridge construction, has risen by about 20% from calendar year 2015 to 2019. Second, a large number of bridges were replaced or repaired during FY 2019. As a result, many counties bridge program balances have decreased to the point that they need to allow them to build up again before they can develop and let additional projects.

The chart on the following page shows the trend of county SD bridges over the past several years.



If you have any questions concerning this report, please feel free to contact me using the phone number or e-mail shown below.

Sincerely,



Scott Marler
Director
Iowa Department of Transportation

County Structurally Deficient Bridges Summary Report - Fiscal Year 2020

In accordance with Iowa Code 309.22A, this report details the manner in which counties use their road use tax funds to replace or repair structurally deficient bridges.

County	Beginning Status			Structures taken off SD status				Structures that remained in SD status at end of year						
	Carry over and newly designated SD			Bridges removed from structurally deficient status: restored to full legal load capacity				In Service (Open) - Still SD			Out of Service (Closed)			Total SD Remaining
	SD at beginning of reporting period	Became SD during FY 2020	Total SD during this FY	via Replacement	via Major Rehabilitation	via Light Rehabilitation	Total Restored	Partially Rehabed	Programmed for Replace or Rehab	Not yet Programmed	Closed: plan to replace	Closed: programmed to replace	Closed: Not likely to reopen	
Adair	61	1	62	2	0	0	2	0	3	47	0	0	10	60
Adams	54	2	56	1	0	0	1	0	3	45	0	0	7	55
Allamakee	21	0	21	1	0	0	1	0	7	13	0	0	0	20
Appanoose	50	7	57	2	0	0	2	1	16	34	0	1	3	55
Audubon	31	2	33	3	0	0	3	0	5	14	2	2	7	30
Benton	67	10	77	2	0	0	2	0	34	38	0	1	2	75
Black Hawk	15	3	18	1	0	0	1	0	10	5	0	1	1	17
Boone	43	0	43	1	0	0	1	0	5	35	0	0	2	42
Bremer	37	1	38	1	0	0	1	0	12	21	0	2	2	37
Buchanan	28	2	30	5	0	0	5	1	13	9	0	2	0	25
Buena Vista	50	0	50	0	0	0	0	0	4	42	0	0	4	50
Butler	54	2	56	11	0	0	11	0	24	19	0	1	1	45
Calhoun	33	14	47	3	1	0	4	0	15	26	0	1	1	43
Carroll	16	0	16	1	0	0	1	0	6	8	0	1	0	15
Cass	86	1	87	3	0	0	3	1	20	59	0	2	2	84
Cedar	72	1	73	9	0	0	9	0	14	46	0	1	3	64
Cerro Gordo	19	0	19	0	0	0	0	0	6	13	0	0	0	19
Cherokee	65	8	73	7	0	0	7	0	4	56	0	0	6	66
Chickasaw	57	7	64	4	0	0	4	0	8	49	0	1	2	60
Clarke	52	8	60	2	0	0	2	0	11	41	0	2	4	58
Clay	17	1	18	0	0	0	0	1	6	11	0	0	0	18
Clayton	36	1	37	7	0	0	7	0	9	21	0	0	0	30
Clinton	9	0	9	0	0	0	0	0	3	4	0	0	2	9
Crawford	39	7	46	13	0	0	13	0	8	25	0	0	0	33
Dallas	10	1	11	1	0	0	1	0	3	5	0	0	2	10
Davis	56	4	60	7	0	0	7	0	10	39	0	1	3	53
Decatur	74	1	75	2	0	0	2	0	9	56	0	1	7	73
Delaware	18	0	18	2	0	0	2	0	1	14	0	0	1	16
Des Moines	24	1	25	0	0	0	0	0	5	16	0	0	4	25
Dickinson	12	12	24	1	0	0	1	0	9	13	0	0	1	23
Dubuque	41	7	48	12	0	0	12	0	2	30	0	0	4	36
Emmet	20	0	20	3	0	0	3	0	1	11	0	0	5	17
Fayette	65	4	69	3	0	0	3	0	9	56	0	0	1	66
Floyd	28	1	29	0	0	0	0	1	5	20	0	0	3	29
Franklin	34	1	35	4	1	0	5	0	11	14	0	2	3	30
Fremont	37	4	41	3	0	0	3	0	7	27	0	1	3	38
Greene	16	0	16	2	0	0	2	0	1	13	0	0	0	14
Grundy	66	0	66	2	1	0	3	0	27	32	0	3	1	63
Guthrie	82	11	93	3	1	0	4	0	7	78	0	0	4	89
Hamilton	30	3	33	0	0	0	0	0	10	21	0	0	2	33
Hancock	31	2	33	5	1	0	6	0	9	18	0	0	0	27
Hardin	46	6	52	4	0	2	6	0	13	29	2	0	2	46
Harrison	50	2	52	3	0	0	3	0	15	31	0	1	2	49
Henry	30	2	32	2	0	0	2	0	4	25	0	1	0	30
Howard	53	2	55	0	0	0	0	0	19	23	0	3	10	55
Humboldt	15	0	15	2	0	0	2	0	7	6	0	0	0	13
Ida	27	1	28	2	0	0	2	0	3	22	0	0	1	26
Iowa	47	0	47	2	0	0	2	0	6	35	0	1	3	45
Jackson	47	3	50	3	0	0	3	0	9	37	0	0	1	47
Jasper	127	3	130	13	0	0	13	0	19	89	0	1	8	117
Jefferson	39	1	40	3	0	0	3	0	20	17	0	0	0	37
Johnson	26	1	27	2	0	0	2	0	8	16	0	1	0	25
Jones	12	3	15	2	0	0	2	0	3	8	0	0	2	13
Keokuk	26	0	26	3	0	0	3	0	9	11	0	0	3	23
Kossuth	30	15	45	12	0	0	12	0	15	18	0	0	0	33
Lee	18	6	24	1	0	0	1	0	7	14	0	1	1	23
Linn	11	0	11	0	0	0	0	0	8	3	0	0	0	11
Louisa	21	1	22	1	0	0	1	0	7	11	0	1	2	21
Lucas	61	1	62	3	0	0	3	0	6	46	0	0	7	59
Lyon	55	8	63	13	0	0	13	0	8	28	0	0	14	50
Madison	82	12	94	3	0	0	3	7	20	58	0	2	4	91
Mahaska	81	0	81	1	0	0	1	0	9	65	0	0	6	80
Marion	43	1	44	9	0	0	9	1	8	24	0	0	2	35
Marshall	112	6	118	1	0	0	1	0	18	96	0	0	3	117
Mills	37	0	37	2	0	0	2	0	4	29	0	0	2	35
Mitchell	21	3	24	3	0	0	3	0	4	15	0	1	1	21
Monona	46	1	47	4	0	0	4	0	9	25	1	2	6	43
Monroe	43	1	44	3	0	0	3	0	6	32	0	0	3	41
Montgomery	54	7	61	5	0	0	5	0	12	36	0	0	8	56
Muscatine	30	2	32	0	0	0	0	0	8	20	0	0	4	32

County	Beginning Status			Structures taken off SD status				Structures that remained in SD status at end of year						
	Carry over and newly designated SD			Bridges removed from structurally deficient status: restored to full legal load capacity				In Service (Open) - Still SD			Out of Service (Closed)			Total SD Remaining
	SD at beginning of reporting period	Became SD during FY 2020	Total SD during this FY	via Replacement	via Major Rehabilitation	via Light Rehabilitation	Total Restored	Partially Rehabed	Programmed for Replace or Rehab	Not yet Programmed	Closed: plan to replace	Closed: programmed to replace	Closed: Not likely to reopen	
O'Brien	7	0	7	2	0	0	2	0	5	0	0	0	0	5
Osceola	14	0	14	0	0	0	0	3	1	8	0	0	2	14
Page	61	0	61	0	0	0	0	0	8	47	0	1	5	61
Palo Alto	25	0	25	1	0	0	1	0	2	22	0	0	0	24
Plymouth	107	0	107	7	0	0	7	0	27	72	0	0	1	100
Pocahontas	50	2	52	5	0	0	5	0	3	36	0	0	8	47
Polk	24	2	26	2	0	0	2	0	8	15	0	0	1	24
Pottawattamie	56	4	60	4	0	0	4	0	19	31	0	0	6	56
Poweshiek	92	21	113	2	0	0	2	0	10	95	0	0	6	111
Ringgold	104	6	110	5	0	0	5	2	10	75	0	2	16	105
Sac	74	0	74	5	0	0	5	0	23	40	0	3	3	69
Scott	22	1	23	2	0	0	2	0	15	6	0	0	0	21
Shelby	29	3	32	4	0	0	4	0	9	17	0	0	2	28
Sioux	12	2	14	2	0	0	2	0	8	3	0	0	1	12
Story	43	0	43	1	0	0	1	0	9	28	0	0	5	42
Tama	113	0	113	5	0	0	5	0	13	86	0	0	9	108
Taylor	105	2	107	7	0	0	7	0	18	55	0	2	25	100
Union	57	5	62	0	0	0	0	0	5	46	0	1	10	62
Van Buren	54	0	54	5	0	0	5	0	7	38	0	0	4	49
Wapello	39	3	42	5	0	0	5	0	18	17	0	0	2	37
Warren	60	1	61	6	1	0	7	0	10	39	0	1	4	54
Washington	39	1	40	4	0	0	4	0	8	27	0	0	1	36
Wayne	38	3	41	4	0	0	4	1	17	11	1	2	5	37
Webster	47	5	52	5	0	0	5	0	33	11	0	2	1	47
Winnebago	21	5	26	7	0	0	7	0	15	4	0	0	0	19
Winneshiek	72	1	73	4	0	0	4	2	11	50	0	2	4	69
Woodbury	82	3	85	6	0	0	6	2	28	42	3	4	0	79
Worth	18	2	20	0	0	0	0	0	8	11	0	0	1	20
Wright	49	3	52	1	0	0	1	0	10	37	0	0	4	51
Totals	4460	293	4753	332	6	2	340	23	1014	2982	9	61	324	4413

SD Structures to account for: 4753

Restored: 340
Still SD: 4413

Still open: 4019

Closed: 394

Net Improvement: 47

A Guide to the County Structurally Deficient Bridges Summary Report

Prepared by the Iowa Department of Transportation
January 2021

Background

Except when more frequent inspection cycles are required, counties must inspect all bridges at least every 24 months for structural integrity and overall condition. Some counties inspect all of their bridges every other year while others inspect roughly one-half of their bridges each year.

In accordance with Iowa Code 309.22A, this report summarizes the manner in which counties used their road use tax funds to replace or repair structurally deficient bridges. Each year the county engineers submit this information to the Iowa DOT as part of the county annual report of road and bridge expenditures required by Iowa Code 309.22. Additionally, more detailed information is available from the Iowa DOT upon request.

What is a “structurally deficient” (SD) bridge?

This classification does not mean a bridge is unsafe. SD bridges can safely remain in service (open to vehicular traffic) but often must be posted for weight limits that are less than the maximum allowed by law.

A bridge is classified as SD when significant load carrying elements are found to be in poor or worse condition due to deterioration and/or damage or when the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable traffic interruptions. This classification is determined based on the latest bridge inspection data and criteria prescribed by the National Bridge Inspection Standards (NBIS) published by the Federal Highway Administration (FHWA).

Please note, in accordance with the Pavement and Bridge Condition Performance Measures final rule published by FHWA in January of 2017, the use of the term of “structurally deficient” has been discontinued by the FHWA. The new definition which takes its place is “poor”. The “poor” definition no longer includes the structural condition (Item 67) or waterway adequacy (Item 71) ratings in the criteria. This presentation continues use of the previous rule in order to allow valid comparisons within the State of Iowa. However, direct comparisons with other states may not be accurate because of the discontinued use of the SD definition.

What do each of the columns of this report mean?

Beginning Status – This section shows how the starting total of SD bridges for the reporting period are calculated.

SD at the beginning of the reporting period – This is the number of bridges which were classified as SD at the beginning of the reporting period.

Became deficient during this FY – This is the number of bridges which moved into SD status during the reporting period.

Total SD during this FY – This is the sum of the previous two columns, which provides the total of SD bridges to be accounted for during the reporting period.

Structures Taken Off SD Status – This section shows the number of bridges that were restored to full legal load capacity, thereby removing the SD classifications. It also provides a breakdown of how these bridges were fixed.

Replacement – This is the number of SD bridges which were replaced by a new bridge or culvert.

Major Rehabilitation – This is the number of SD bridges which were not completely reconstructed but which had repairs made that were substantial enough to improve the condition enough to remove the SD condition designation. Examples might include complete deck replacements, beam replacements, or major repairs to the bridge piers or abutments (substructure supports).

Light Rehabilitation – This is the number of SD bridges for which only minor repairs were needed to improve the condition enough to remove the SD condition designation. Examples might include deck patching, beam strengthening, or less substantial repairs to the bridge piers (substructure supports).

Total Restored – This is the sum of the previous three columns, representing the total number of SD bridges replaced or repaired during the reporting period so that they no longer have a SD condition designation.

Structures Remaining in SD Status at the End of the Year – This section describes the status of bridges that did not have their SD status removed through the work accomplished during the year. These bridges are grouped into two main categories and several subcategories, as shown below:

In Service (open) Still SD – These bridges are still open to traffic while remaining in SD condition.

Partial Rehabilitation – This is the number of SD bridges on which minor repairs were made but not enough to remove the SD condition. Examples might include limited deck patching, bridge approach pavement repairs, bridge railing repairs, or joint replacements.

Programmed for Rehab or Replace – This is the number of SD bridges included in the county's five-year program which are scheduled for repair or replacement.

Not yet programmed – This is the number of SD bridges not yet included in the county's five-year program for repair or replacement.

Out of Service (Closed) – These bridges are closed to vehicular traffic and remain in SD condition.

Closed: Plan to Replace – This is the number of SD bridges that had an inspection which revealed issues that were serious enough to warrant closing the structure.

Closed: Programmed to Replace – This is the number of SD bridges which are closed to traffic and which will be replaced with an upcoming project. These structures may or may not be in the county's five-year plan.

Closed: Not Likely to Reopen – This is the number of SD bridges which are closed to traffic and for which the county has no current plans for repair or replacement.

Total SD Remaining – This is the total number of bridges that remain in SD status at the close of the reporting period.

Net Improvement – This is the difference between the number of SD bridges at the beginning of the reporting period and the number of SD bridges remaining at the end of the reporting period.