

IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE: District 5 **DATE:** January 16th, 2020
ATTENTION: James V. Armstrong **PROJECT:** Davis County
STPN-202-1(5)--2J-26
FROM: Anthony J. Klein **PIN:** 20-26-202-010
OFFICE: District 5 Design
SUBJECT: FY 2021 – Culvert Replacement Project Concept

PROJECT LOCATION MAP: Page 3 or [Click Here](#)

BACKGROUND: Davis/Appanoose County, IA 202

Several drainage structures were identified between MP 2.61 to MP 10 on IA 202. Of these several are wooden box culverts on IA 202 from MP 2.61 to MP 10 and are failing or partially failing. The 15 wooden structures were built in 1936 and extended in 1959. During the 2019 construction season 2 of the locations failed and had to be replaced by an emergency contract. An ER plan, ER-202-2(7)--28-04, is being developed to replace 2 additional locations for similar reasons. The remaining 15 culverts identified are soon thought to fail as well.

As-Built Plans:

[Iowa 202 Moulton South \(1936\).pdf](#)

[Iowa 202 Moulton South \(1936\) - Wood Box Plans.pdf](#)

[Iowa 202 Moulton South \(1936\) - Gap.pdf](#)

[Iowa 202 Moulton South \(1959\) - Wood Box Extension Plans.pdf](#)

[FN-644, 1959 As-builts \(culverts hi-lited\).pdf](#)

RECOMMENDATIONS:

Some locations may require some minor clearing and grubbing.

Of the fifteen (15) identified locations nine (9) of them can be slip-lined based on hydraulic capacity. The other six (6) need a complete removal and replacement, five (5) with a 24” RCP and the other one (1) with a 30” RCP. See table for station locations and work type.

ESTIMATED COST:

Number	Station	Offset	Milepost	Size	Height	Width	Length	Description	Cut and Cover	Slipline	Estimate
1	239+31		4.54	2' x 2' x 31'	2	2	31	Wood Box Culvert	X		\$ 58,900.00
2	137+59		2.61	2.5' x 2' x 39'	2.5	2	39	Wood Box Culvert		X	\$ 10,725.00
3	156+48		2.97	2.6' x 2' x 42'	2.6	2	42	Wood Box Culvert		X	\$ 11,550.00
4	163+25		3.10	2.5' x 2' x 38.5'	2.5	2	38.5	Wood Box Culvert		X	\$ 10,587.50
5	193+13		3.66	2' x 2' x 43'	2	2	43	Wood Box Culvert	X		\$ 81,700.00
6	198+42		3.76	2.5' x 2' x 46'	2.5	2	46	Wood Box Culvert	X		\$ 87,400.00
7	310+73		5.89	2' x 2' x 32'	2	2	32	Wood Box Culvert	X		\$ 60,800.00
8	315+19		5.97	2.5' x 2.5' x 40'	2.5	2.5	40	Wood Box Culvert		X	\$ 11,000.00
9	327+03		6.20	4' x 4' x 58'	4	4	58	Wood Box Culvert		X	\$ 15,950.00
10	338+86.3	46' RT.	6.42	2' x 2' x 32'	2	2	32	Wood Box Culvert	X		\$ 60,800.00
11	356+44		6.75	2.5' x 2.5' x 40'	2.5	2.5	40	Wood Box Culvert	X		\$ 80,000.00
12	363+10		6.88	2' x 2' x 43'	2	2	43	Wood Box Culvert		X	\$ 11,825.00
13	372+00		7.05	3.5' x 3.5' x 49.5'	3.5	3.5	49.5	Wood Box Culvert		X	\$ 13,612.50
14	378+03		7.16	2.5' x 2' x 38'	2.5	2	38	Wood Box Culvert		X	\$ 10,450.00
15	384+83		7.29	2' x 2' x 31'	2	2	31	Wood Box Culvert		X	\$ 8,525.00
									6	9	
										Total =	\$533,825.00
										Total w/ 10% Contingency =	\$587,207.50

[Estimate IA 202 Culverts 01162020.xlsx](#)

Below is a link to a folder that contains images of the culverts:

ADDITIONAL PHOTOS:

[Photos Link](#)

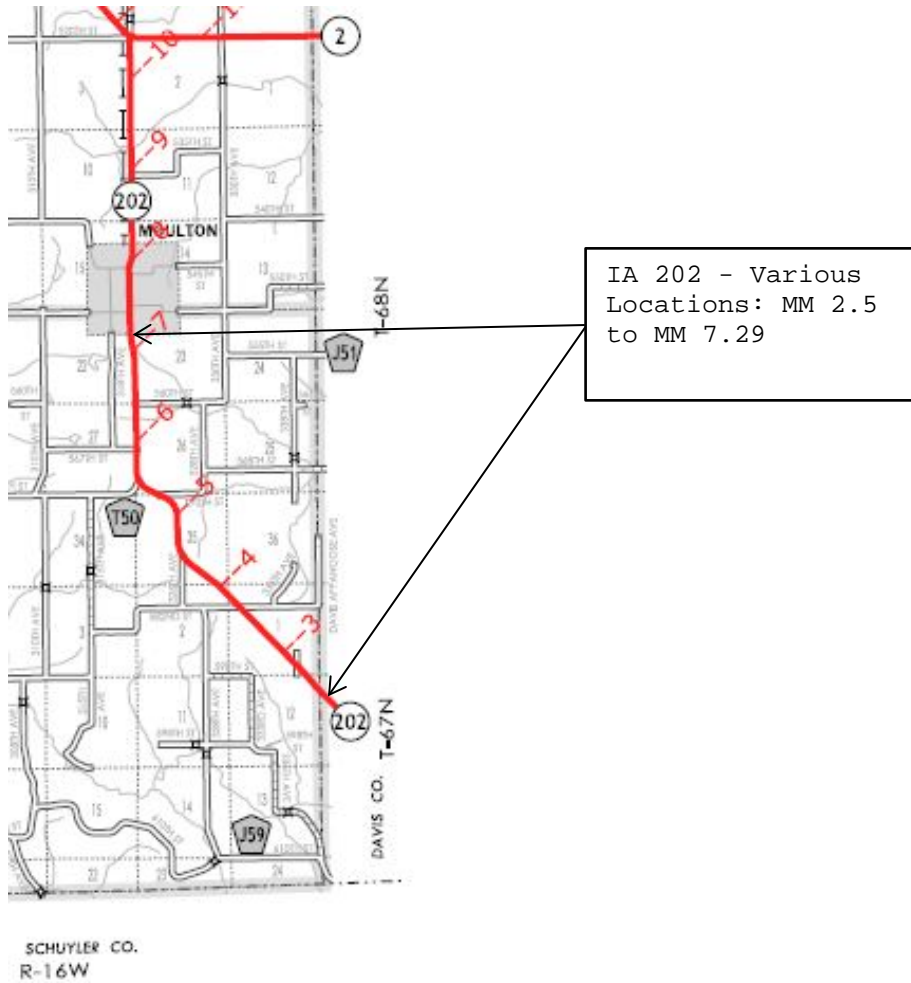
Typical Condition Photo



FUNDS PROGRAMMED:

It has been identified by the District 5 office for construction in FY 2021. A schedule of events for plan development will be determined following approval of the Project Concept.

LOCATION MAP:



cc:

C. Purcell
S. J. Megivern
M. Nop
D. R. Tebben
J. W. Laaser-Webb
E. C. Wright
N. M. Miller
B. E. Azeltine
S. J. Gent
J. Selmer
M. Van Dyke
J. R. Phillips
B. M. Clancy
D. Claman

M. J. Kennerly
J. S. Nelson
M. A. Swenson
K. Brink
W. A. Sorenson
M. E. Ross
C. C. Poole
B. D. Hofer
S. Anderson
K. K. Patel
J. R. Webb
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