

County Bridge Match Program Selected Proposal Forms January 15, 2021

NACO District	Lead County	Bridge County	Structure Number	Location	Cost Estimate	Estimated CBMP Funding
Southeast	Cass	Cass	C001314707P	1W 2N NEHAWKA at STREAM	\$168,750	\$92,813
Southeast	Cass	Otoe	C006600405	4.2N 2.3W PALMYRA at STREAM	\$92,050	\$50,628
Southeast	Cass	Otoe	C006603705	12.5S OTOE at STREAM	\$143,005	\$78,653
Southeast	Cass	Otoe	C006602635	3S 3.4E SYRACUSE at STREAM	\$120,150	\$66,083
Southeast	Cass	Gage	C003414725	.4N 3E OF FILLEY at MUD CREEK	\$109,350	\$60,143
Southeast	Cass	Nemaha	C006413210	5S .9W OF AUBURN at STREAM	\$128,020	\$70,411
Southeast	Jefferson	Jefferson	C004813510	4.4N 2E OF JANSEN at CUB CREEK	\$210,000	\$115,500
Southeast	Jefferson	Jefferson	C004800320	2W 2.2S OF GLADSTONE at BUCKLEY CREEK	\$165,000	\$90,750
Southeast	Jefferson	Saline	C007614705	1.2E 1.9S OF WILBER at STREAM	\$200,000	\$110,000
Southeast	Jefferson	Saline	C007622030	1.4E 6N OF WILBER at STREAM	\$185,000	\$101,750
Southeast	Lancaster	Lancaster	C005502010	1.7NE OF MALCOLM at WEST OAK CREEK (E 171)	\$425,000	\$200,000
Southeast	Lancaster	Saunders	C007804303	JCT US77/N63 6.2E 6S at STREAM	\$365,400	\$200,000
Southeast	Richardson	Richardson	C007423425	75/N8 2S7.3E(704-647/648) at STREAM	\$269,848	\$148,416
Southeast	Richardson	Richardson	C007413030	0	\$30,000	\$16,500
Southeast	Sarpy	Sarpy	C007702215	2.3S SPRINGFIELD at BUFFALO CREEK	\$100,000	\$43,137
Southeast	Sarpy	Sarpy	C007702005P	2S SPRINGFIELD at SPRINGFIELD CREEK	\$1,000,000	\$156,863
Southeast	Thayer	Thayer	C008500735	2E DAVENPORT at BIG SANDY CREEK	\$149,039	\$81,971
Southeast	Thayer	Thayer	C008501205	2S DAVENPORT at S FK BIG SANDY CREEK	\$102,685	\$56,477
Southeast	Thayer	Thayer	C008502505	1E 4.2N CHESTER at DRY CREEK	\$102,685	\$56,477
Northeast	Dakota	Dakota	C002213410P	2.4S OF HOMER at OMAHA CREEK	\$439,000	\$200,000
Northeast	Dixon	Dixon	C002631530	S EDGE OF NEWCASTLE at AOWA CREEK	\$400,000	\$200,000
Northeast	Madison	Madison	C005924840	JCT US81/N32 3E 5S at DRAINAGE DITCH	\$81,180	\$44,649
Northeast	Madison	Madison	C005904705	JCT US81/N32 3E 5.5S at STREAM	\$88,900	\$48,895
Northeast	Madison	Madison	C005900530	1.2S 3W of Meadow Grove at Dry Creek	\$77,971	\$42,884
Northeast	Nance	Nance	C006301215P	1.5S 5W OF BELGRADE at TIMBER CREEK	\$750,000	\$200,000
Northeast	Platte	Platte	C007102030	5.2W OF TARNOV at STREAM	\$96,160	\$52,888
Northeast	Stanton	Stanton	C008424420	10.7S 1.5E OF STANTON at STREAM	\$494,128	\$189,573
Northeast	Stanton	Stanton	C008412005	3.9W 1N OF STANTON at STREAM	\$10,000	\$5,213
Northeast	Stanton	Stanton	C008412010	3.7W 1N OF STANTON at STREAM	\$10,000	\$5,213
Northeast	Wayne	Wayne	C009001110	4.5W 1.1N OF WINSIDE at STREAM	\$88,900	\$48,895
Northeast	Wayne	Wayne	C009001115	4.5W 2.5N OF WINSIDE at SOUTH LOGAN CREEK	\$68,170	\$37,494
Northeast	Wayne	Thurston	C008701905	2.5E .2N OF THURSTON at COW CREEK	\$88,900	\$48,895
Northeast	Wayne	Thurston	C008700505P	2N 4W OF THURSTON at STREAM	\$88,900	\$48,895
Central	Buffalo	Buffalo	C001012210	1.5S 3.2E OF MILLER at WOOD RIVER	\$459,371	\$200,000
Central	Custer	Custer	C002148810	2SE OF OCONTO #567 at WOOD RIVER	\$170,000	\$58,621
Central	Custer	Custer	C002168925	2N 1W OF SARGENT at MILBURN-SARGENT CANAL	\$95,000	\$32,759
Central	Custer	Custer	C002167530	2N 8W OF SARGENT at MILBURN-SARGENT CANAL	\$95,000	\$32,759
Central	Custer	Custer	C0E2110705	4.7S 3E OF MASON C. #621A at STREAM	\$110,000	\$37,931
Central	Custer	Custer	C002162010	3.5N 1W OF COMSTOCK #60 at BIG OAK CANYON	\$110,000	\$37,931
Central	Franklin	Franklin	C003114015	F and 38 at BOSTWICK DRAINAGE DITCH	\$60,000	\$33,000
Central	Franklin	Franklin	C003122305	31 & Hiway 136 at FRANKLIN CANAL	\$6,300	\$3,465
Central	Harlan	Harlan	C004211115	2.7E OF STAMFORD at SAPPAN CREEK	\$156,125	\$85,869
Central	Polk	Polk	C007201805	7W 5N OF OSCEOLA at CLEAR CREEK	\$200,000	\$100,000
Central	Polk	Polk	C007202120	4W 7.5N OF OSCEOLA at CLEAR CREEK	\$200,000	\$100,000
Central	Sherman	Sherman	C008213605P	1S OF LITCHFIELD at STREAM	\$99,790	\$54,885
Central	Sherman	Sherman	C008224310	.5N OF ASHTON at STREAM	\$82,190	\$45,205
West Central	Frontier	Frontier	C003221405	1S 9E OF CURTIS at MITCHELL CREEK	\$300,000	\$165,000
West Central	Hayes	Hayes	C004302510P	1N OF PALISADE at FRENCHMAN CREEK	\$442,000	\$200,000

APPLICATION FORM County Bridge Match Program 2021

84% percent complete

Applying County	Cass	Date of Application	12/3/2020
Agency Name	Cass County	Contact Person Title	Highway Superintendent
Contact Person Name	Lenny Thorne	Address Line 1	13860 12th
E-mail	lennyt@cassne.org	Address Line 2	Weeping Water, NE
Phone Number	(402) 296-9353	zip code	68463
NACO District	Southeast		

Proposal Name / Location	CBMP 2020 - C001314707P, C006600405, C006603705, C006602635, C003414725, C006413210
Multi-County Proposal	Yes
Proposal Priority Number	2

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C001314707P	S-1-NS-1800	1W 2N NEHAWKA at STREAM	Cass	30.00	18.00	Steel Stringer/Multi-beam or Girder	Local
C006600405	0.00	4.2N 2.3W PALMYRA at STREAM	Otoe	31.00	16.00	Wood or Timber Stringer/Multi-beam or Girder	Local
C006603705	0.00	12.5S OTOE at STREAM	Otoe	30.00	15.00	Steel Stringer/Multi-beam or Girder	Local
C006602635	0.00	3S 3.4E SYRACUSE at STREAM	Otoe	32.00	16.00	Steel Stringer/Multi-beam or Girder	Local
C003414725	I-E-23-1	.4N 3E OF FILLEY at MUD CREEK	Gage	24.00	16.00	Steel Stringer/Multi-beam or Girder	Local
C006413210	0.00	5S .9W OF AUBURN at STREAM	Nemaha	24.00	15.60	Steel Stringer/Multi-beam or Girder	Local

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C001314707P	No	No	25
C006600405	No	No	25
C006603705	No	No	25
C006602635	No	No	20

C003414725	No	No	35
C006413210	No	No	35

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Corrugated metal culvert pipes are a cost-effective replacement alternative for deficient bridges in the State of Nebraska. The design and construction process is streamlined with the utilization of standard plan and construction practices. Local culvert suppliers are available and competitive, often resulting in cheaper material prices to the County. Culvert construction will be completed by County forces, an innovative approach that reduces cost and utilizes the local County assets. Typical culvert pipe construction can be completed within 1-2 weeks which minimizes the impact to local resident, agricultural and commercial traffic. Corrugated metal culvert pipe's primary innovation is the simplicity of their design and construction. Metal culvert pipes, with prefabricated headwall & turndowns are quickly and easily installed by most experienced road crews. Additional innovations include; the use of standardized sheet pile and cable tie-back retaining systems, relative ease of transporting and off-loading materials, utilization of 3 x 1 and 5 x 1 corrugation (resulting in stronger culverts and a reduction in wall thickness) and inlet and outlet aprons (scour reduction.) Historically, culvert maintenance activities and costs are minor in comparison to other replacement structures. Load and/or equipment restricting guardrail is typically not required which is particularly beneficial to regional agricultural and commodity transportation. A considerable number of streams in the eastern part of Nebraska are significantly degraded. Proper culvert design is often utilized to stabilize the streambed and adjacent banks upstream of the structure. The replacement's required size may remove the structure from the bridge inventory. This proposal is being submitted by multiple counties, in a cooperative effort to streamline the design, bid, and build process through project bundling. Innovative, because counties have not actively reached across established map lines in the name of cooperation and efficiency.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Corrugated metal culvert pipes are a cost effective and efficiently constructed alternative to an expensive bridge replacement.

Standardized design and construction practices provide a significant cost and time savings to the owner.

Culvert construction will be completed by County forces resulting in a considerable cost and time savings.

Guardrail is typically not required, therefore no material, construction, or maintenance costs for guardrail are associated with the project.

Additional savings are realized throughout the culvert's anticipated life-span (50-75 years) in costs associated with general maintenance and repair.

Culvert pipe replacement structures are generally simpler and relatively inexpensive when compared to box culverts or bridges. Typical culvert pipe construction (including removal of the existing structure) can be completed within 1-2 weeks resulting in lower direct project costs (overall) and minimizes the impact to local resident, agricultural and commercial traffic.

Removal of a structure from the bridge inventory would save time and costs associated with general management and inspection.

It is anticipated that each county in the bundling package will recognize savings in engineering and construction costs. Design fees for a standard culvert crossing are significantly less costly than a traditional bridge or concrete box culvert. The bidding of a "materials, only" bundled project reduces the monetary and time costs associated with the contracting process.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Corrugated metal culvert pipe standardization of design and construction can be utilized by all Counties in Nebraska.

The process of collaboration between Counties can easily be shared and is available to all Counties. A derivative of the cooperation between counties will likely be education, through the exchange of ideas that will occur throughout the process. The engaged entities will discuss and implement what has/hasn't been efficient or successful and incorporate those "lessons learned" into future replacement projects. Successful results are easily conveyed to other Counties, culvert pipes provide a time-saving, quality product at low cost.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

Peterson

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

In general, each stream crossing is significant to the local individuals, communities and agricultural related activities occurring in rural Nebraska. The width and weight restrictions of structurally deficient bridges may limit the required access to property and create an inconvenience to the residents of the area who utilize them daily, or during agriculturally related "heavy traffic" times of the year.

Additionally, these rural roadways may function as a vital route for localized traffic between the smaller communities of the area.

Specifically, this project provides the following functions to the local individuals, Cass/Otoe/Gage/Nemaha Counties, and the State of Nebraska:

C001314707P:

The structure/roadway is used as a bus route.

The structure/roadway is utilized as an emergency services route; it will be the only access during construction of a bridge to the south.

The current detour for this structure is 5 miles to restricted traffic. This is considered excessive for this area.

Local agricultural operations will rely on this structure/roadway as a "farm to market" route.

Replacement of the bridge will provide the required access for the areas home and property owners.

C006600405:

This structure/roadway is used as a mail and bus route.

Emergency services use this structure/roadway for access to the area.

Current detour length for this structure is 7.5 miles to un-restricted traffic; considered excessive.

A local business Burr Oak Lodge uses the roadway heavily. Local agricultural traffic utilizes the roadway for as a "farm to market" route.

C006603705:

The structure/roadway is utilized as a mail and bus route.

The structure/roadway is used as an emergency services route.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

 **84%** percent complete

When your application is complete and you are ready to submit it for review go to:

<http://dot.nebraska.gov/projects/tia/bridge-match/>

Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Jefferson	Date of Application	12/4/2020
Agency Name	Jefferson County	Contact Person Title	Highway Superintendent
Contact Person Name	Jefferson County Highway Superintendent	Address Line 1	PO Box 394
E-mail	jeffcohydept@jeffco.nebraska.us	Address Line 2	Fairbury, NE
Phone Number	(402) 729-6373	zip code	68352
NACO District	Southeast		

Proposal Name / Location	Saline/Jefferson
Multi-County Proposal	yes
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C004813510	575 AVE	4.4N 2E OF JANSEN at CUB CREEK	Jefferson	69.00	19.70	Steel Truss - Thru	Local
C004800320	0.00	2W 2.2S OF GLADSTONE at BUCKLEY CREEK	Jefferson	29.00	19.90	Steel Stringer/Multi-beam or Girder	Local
C007614705	H 25 W 3	1.2E 1.9S OF WILBER at STREAM	Saline	48.00	20.30	Wood or Timber Stringer/Multi-beam or Girder	Local
C007622030	L 24 N 2	1.4E 6N OF WILBER at STREAM	Saline	24.00	20.00	Steel Stringer/Multi-beam or Girder	Local
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Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C004813510	no	no	40
C004800320	no	no	15
C007614705	no	no	25
C007622030	no	no	30

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C004813510	Replace	Concrete Box Culvert	42.00	40.00	Contract	\$210,000	\$115,500	3 - 12' x 7' CBC
C004800320	Replace	Concrete Box Culvert	42.00	12.00	Contract	\$165,000	\$90,750	12' x 10' CBC
C007614705	Replace	Concrete Box Culvert	42.00	46.00	Contract	\$200,000	\$110,000	2-12' x 14' CBC
C007622030	Replace	Concrete Box Culvert	42.00	28.00	Contract	\$185,000	\$101,750	2- 10' x 10' CBC
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$760,000	\$418,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

This project will replace four deficient bridges with Concrete Box Culverts. Concrete Box Culverts provide a durable and long lasting solution to stream crossings in Nebraska. Concrete Box Culverts are hydraulic efficient and allow counties to replace deficient bridges in a cost effective manner. There are multiple contractors with vast experience in construction of concrete box culverts. Multiple contractors will bid on these bundled projects which ensures that each county is receiving the best possible price for the structure. Additionally, the buried box culverts allow modern agriculture equipment to pass with no guardrail or barrier interference. The project is a joint effort between Jefferson and Saline counties which will replace two structures in each county. Saline and Jefferson county have successfully partnered together on previous rounds of the CBMP as well as together on County funded lettings.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Concrete Box Culvert construction is typically completed in six to eight weeks, whereas bridge construction can take twice as long. The hydraulic efficiency of the box culverts aids in cost reduction. Concrete box culverts have been a staple in transportation construction in the state of Nebraska for decades and have shown their value by the long history of low maintenance costs. Properly designed and constructed concrete box culverts will have a life span well beyond 100 years. They can also help reduce maintenance costs on upstream structures by arresting stream degradation. In addition, there are numerous contractors in the state who build concrete box culverts; this allows counties to have multiple bidders on projects like this ensuring the lowest possible price.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Most counties have already discovered that building projects can produce a significant cost savings. Both Jefferson and Saline counties have a significant history of bundling projects. Each county has bundled projects within their own county as well as with surrounding counties. Jefferson and Saline county will gladly share these experiences with any interested county.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

As previously mentioned, concrete box culverts have been utilized in Nebraska for decades and have an outstanding history of low maintenance costs. They are particularly useful for areas with stream degradation. These structures can help stop stream degradation thereby reducing the maintenance cost of structures upstream of the concrete box culvert. They truly are a work horse for rural stream crossings due to their low initial cost and are enhanced by their longevity and durability. Properly designed and constructed concrete box culverts will have a life span well beyond 100 years.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

This proposal will remove four structurally deficient bridges from our inventory including one fracture critical truss bridge in Jefferson County. Removing fracture critical bridges is significant to the county as these bridge inspection costs are much higher than other bridge inspections. Both counties have the goal of removing as many fracture critical bridges as possible. Structure No. C004813510 is a fracture critical truss bridge. It is the only bridge on Road 575 between Highway 136 to the south and Highway 4 to the north. Replacing this structurally deficient, narrow bridge will provide a safer route for traffic between these highways. Structure No. C007614705 is a timber bridge which have higher maintenance costs for counties. Structure No's. C004800320 and C007622030 are steel girder bridges built in the 1950's. Both structures are narrow and are at the end of their anticipated service life. Replacement of all four structures with box culverts will greatly enhance the road networks of Saline and Jefferson county and will also significantly reduce future maintenance costs. All of these projects have been identified by each county on their one and six year plan to be replaced as soon as their budget allows. This significant aid from the State of Nebraska through the County Bridge Match Program will accelerate these replacements drastically.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

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100% percent complete

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Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

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Applying County	Lancaster	Date of Application	12/3/2020
Agency Name	Lancaster County	Contact Person Title	Highway Superintendent
Contact Person Name	Pamela Dingman	Address Line 1	444 Cherrycreek Rd Bldg C
E-mail	pdingman@lancaster.ne.gov	Address Line 2	Lincoln, NE
Phone Number	402-441-7681	zip code	68528
NACO District	Southeast		

Proposal Name / Location	Lancaster-Saunders 2020 C00550210, C007804303
Multi-County Proposal	Yes
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information							
NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C005502010	E-171	1.7NE OF MALCOLM at WEST OAK CREEK (E 171)	Lancaster	33.00	24.00	Steel Stringer/Multi-beam or Girder	Local
C007804303	0.00	JCT US77/N63 6.2E 6S at STREAM	Saunders	28.00	30.10	Steel Stringer/Multi-beam or Girder	Other Arterial
<Enter SN here>							

Eligibility			
NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C005502010	No	No	88
C007804303	No	No	161

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C005502010	Replace	Concrete Box Culvert			Contract	\$425,000	\$200,000	Triple 12x10 CBC
C007804303	Replace	Concrete Box Culvert			Contract	\$365,400	\$200,000	Twin 12x10 CBC
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$790,400	\$400,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Saunders and Lancaster County are working together to submit this proposal to replace two deficient bridges using concrete box culverts (CBC) with 12-foot by 10-foot barrels. This proposal will replace one structure in Saunders County and one structure in Lancaster County. Bundling projects with another county can realize significant cost savings and efficiencies; last year, Lancaster County successfully partnered with Saline County to replace structures in the southern half of our county and we are now looking forward to partnering with Saunders County and replacing a structure in the northern half of our county.

Additionally, the structure to be replaced in Saunders County is just north of the Lancaster/Saunders County line and on a roadway that is going to be paved within the next five years which will tie in with a future Lancaster County paving project. The Saunders County CBC will be on a new alignment as there are safety issues/concerns with the existing alignment. The new roadway alignment in Saunders County will affect the alignment of the roadway in Lancaster County; bundling this structure will aid in coordinating the two paving projects and is an innovative method to combining the work effort and promoting communication between the two counties.

Concrete box culverts are a cost-effective alternative for the replacement of short-span structurally deficient (SD) bridges in the State of Nebraska. Bundling more than one CBC of the same size into a single project is innovative and offers additional savings and efficiencies in design, letting, mobilization, construction, inspection, and construction management services. Proper concrete box culvert design is often utilized to stabilize the streambed and adjacent banks upstream of the structure. Working across county lines will promote future cooperation and strengthen relationships.

Construction of this structure type is much safer and simpler for contractors to build and as such may be completed much more rapidly than stringer/girder and slab type designs; concrete box culvert construction is typically completed within 60 calendar days which minimizes the impact to local resident, agricultural and commercial traffic. Long-term cost savings over the lengthy service life of this structure type are realized in reduced maintenance costs due to the inherent simplicity and durability of the design type. The buried nature of the CBC allows modern agriculture equipment to pass with no guardrail or barriers to impede them. Additionally, the absence of the need for a rail system in favor of providing a recovery zone free of lateral obstructions not only results in reduced maintenance costs but also improves the safety of the travelling public.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Cost of concrete box culvert construction is a fraction of that of traditional stringer/girder and slab bridge type designs. It is anticipated that both counties in the bundling package will recognize savings in engineering and construction costs by awarding the contract to a single contractor with one set of contract documents. There are numerous contractors in the state who build concrete box culverts; this asset allows counties to have multiple bidders on projects like this ensuring the lowest possible price. Standardized design and construction practices also provide a significant cost and time savings to the owner. Preliminary design indicates the proposed structures will be concrete box culverts with 12-foot by 10-foot barrels; however, with additional analysis it may be possible to downsize to 10-foot by 10-foot barrels in the final design. In this case both structures will have the identical barrel size for final design and construction. Therefore, the contractor will recognize savings in time and materials by utilizing the same forms from one box to the next. In addition, crews quickly become accustomed to how the forming, shoring and false work needs to be done and this greatly increases efficiency for the next CBC. Flexibility and efficiencies will be gained by the contractor having multiple sites in the same geographic area to allocate time, equipment, and other resources. Typical concrete box culvert construction is completed within 6 to 8 weeks which reduces construction costs and minimizes the duration of the closure and disruption to the travelling public; bridge construction can take twice as long. This proposal will also save time and increase efficiency as bundling projects will aid in coordination of the Saunders County CR 11 and Lancaster County N 162nd St paving projects.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Bridge to box design and construction can be utilized by all counties in Nebraska. Most counties have discovered that bundling projects can produce significant cost savings whether bundling within one county or in cooperation with another county. Bundling projects with identical box sizes in similar geographic areas is an innovation that will save time and material costs; bundling between counties allows efficiencies to be realized by not only partnering but by bundling more of the same size CBCs. A contractor can utilize the same forms from one box to the other. In addition, crews quickly become accustomed to how the forming, shoring and false work needs to be done and greatly increases efficiency for the second box culvert. CBCs can be designed much more rapidly than traditional bridge designs with Counties having the option of requesting LRFD compliant reinforced concrete box culvert plans designed and detailed by NDOT. A considerable number of streams in the eastern part of Nebraska are significantly degraded; replacing a bridge with a properly designed concrete box culvert can stabilize the streambed and adjacent banks upstream of the structure.

The process of collaboration between counties to not only bundle structures but coordinate future paving/roadway projects can easily be shared, and Lancaster and Saunders County will gladly share our experiences with any interested county. A derivative of the cooperation between counties will likely be education, through the exchange of ideas that occurs throughout the process. Counties will discuss and implement what has/hasn't been efficient or successful and incorporate those "lessons learned" into future replacement and construction projects.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

Concrete box culverts have a low initial cost and are extremely durable with a useful service life expectancy of 100 years and beyond, exceeding that of traditional stringer/girder and slab bridge design types. CBCs have an outstanding history of low maintenance costs while considerable resources are expended to complete the required maintenance activities on deficient bridges. The lack of width restriction provided by a CBC with the proper clear zone would reduce the need to repair bridge rail and signs damaged by over width equipment. The recovery zone is free of lateral obstructions and results in reduced maintenance costs associated with impact damage to the guardrail. The lack of guardrail on a CBC also facilitates the ease of mowing and snowplow operations. Maintenance activities and costs associated with deck repair are non-existent over the life of the culvert. Inspection cost savings will be realized as the routine inspections will be less time consuming. The buried nature of the design type reduces exposure to vehicular collision and de-icing chemicals and provides for improved distribution of the live loads applied to the structure, contributing to the ease of their preservation. CBCs are more readily repaired and lengthened than other bridge type structures. Maintenance activities are often of a nature that can be accomplished with County forces rather than the need to acquire outside contract services.

Additionally, safety issues with the intersection of N 162nd St/CR-11 and CR-A in Saunders county will be addressed with the new alignment of the Saunders County CBC.

CBCs can also be utilized to control a degraded stream with significant benefits to upstream structures in the basin. Maintenance and/or replacement of these upstream structures can be minimized or eliminated due to the positive effects of stream stabilization. Additional costs are associated with bank stabilization (scouring) and the backfill of roadway settlement. Replacement with this type of structure will eliminate many of these costs of time, material and labor.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

In general, each stream crossing is significant to the local individuals, communities, and agricultural related activities occurring in rural Nebraska. The width and weight restrictions of structurally deficient bridges may limit the required access to property and create an inconvenience to the residents of the area who utilize them daily, or during agriculturally related "heavy traffic" times of the year; this proposal will remove two SD bridges from our inventories. Replacing the bridges with CBCs increases the safety of the travelling public as it creates a horizontal clear zone free of lateral obstructions. Additionally, these rural roadways may function as a vital route for localized traffic between the smaller communities of the area. Specifically, these projects provide the following functions to the local individuals, Lancaster/Saunders Counties, and the State of Nebraska:

Lancaster County C005502010 (E-171):

This bridge/roadway is closed and is not being utilized as a mail and school bus route.

This closure also results in an adverse effect on emergency services as it causes some minor out-of-the-way travel.

When in service, this structure is also utilized for rural local, residential and agricultural operation/equipment traffic; once replaced, it will be returned to service.

The detour route for this structure is 3.63 miles.

Saunders County C007804303:

This structure is just north of the Saunders/Lancaster County border and is located on a significant Farm to Market Route.

CR11/North 162nd Street is a north/south connection from a paved road in Saunders County to US Highway 6.

Paving CR11 is in Saunders County 5-year plan and paving North 162nd Street is in the Lancaster County 6-year plan.

Replacement of this structure is part of a large overall transportation improvement project in Saunders County and the new alignment at this location will address safety issues/concerns.

This bridge/roadway is utilized as a school bus route and as an emergency services route.

The structure is also utilized for rural local, residential and agricultural operation/equipment traffic.

The structure is located near Ashland, Waverly, and the Village of Ceresco. It is utilized by farmers to get crops to town as there is a large grain facility within ½ mile and a large agricultural business located at 1 mile. It is also utilized as a route to the grain elevator in Waverly. There are chemical and applicator businesses in the area.

The detour route for this structure is 4 miles and is considered excessive.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

87% percent complete

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<http://dot.nebraska.gov/projects/tia/bridge-match/>

Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

84% percent complete

Applying County	Richardson	Date of Application	12/3/2020
Agency Name	Richardson County	Contact Person Title	Highway Superintendent
Contact Person Name	Steve Darveau, jr	Address Line 1	65087 706 Trail
E-mail	rhighway@sentco.net	Address Line 2	Falls City, NE
Phone Number	(402) 245-2614	zip code	68355
NACO District	Southeast		

Proposal Name / Location	CBMP 2020 - C007423425, C007413030
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information							
NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C007423425	25-1-15D-243	75/N8 257.3E(704-647/648) at STREAM	Richardson	62.00	19.70	Steel Truss - Thru	Other Arterial
C007413030	13-1-15C-109	0.00	Richardson	101.00	26.30	Concrete Slab	Local

Eligibility			
NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C007423425	No	No	30
C007413030	Yes	No	20

Bridges on Min Maintenance roads eligible for removal only.

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C007423425	Replace	Concrete Box Culvert			Contract	\$269,848	\$148,416	3-12'x12'x40'
C007413030	Remove	Not Applicable			Contract	\$30,000	\$16,500	Remove from Inventory
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$299,848	\$164,916	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Concrete box culverts are a cost-effective alternative for the replacement of deficient bridges in the State of Nebraska. The design and construction process is streamlined with the utilization of standard plan and construction practices. An experienced pool of contractors active in Nebraska results in a competitive environment, reducing replacement structure construction cost to counties. Typical concrete box culvert construction is completed within 60 calendar days which minimizes the impact to local resident, agricultural and commercial traffic. Historically, concrete box culvert maintenance activities and costs are minor in comparison to other replacement structures. Load and/or equipment restricting guardrail is typically not required which is particularly beneficial to local and regional agricultural and commodity transportation. A considerable number of streams in the eastern part of Nebraska are significantly degraded. Proper box culvert design is often utilized to stabilize the streambed and adjacent banks upstream of the structure. In addition to the replacement projects, Richardson County is proposing removal of Structure C007413030 from the traveled way and NBIS structurally deficient list.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Concrete box culverts are cost effective and an efficiently constructed alternative to an expensive bridge replacement.
Standardized design and construction practices provide a significant cost and time savings to the owner.
Guardrail is typically not required, therefore no material, construction, or maintenance costs for guardrail are associated with the project.
Additional savings are realized throughout the culvert's anticipated life-span, expected beyond 100 years, in costs associated with general maintenance and repair.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Box culverts standardization of design and construction can be utilized by all Counties in Nebraska.

The process of collaboration can easily be shared and is available to all Counties.

A derivative of the cooperation between counties will likely be education, through the exchange of ideas that will occur throughout the process. The engaged entities will discuss and implement what has/hasn't been efficient or successful and incorporate those "lessons learned" into future replacement projects.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

The use of concrete box culvert replacement structures provides significant long-term maintenance cost savings. The structure is considered extremely durable and expected to require minimal maintenance over its expected use, beyond 100 years. The lack of guardrail facilitates the ease of mowing and snow plow operations. There are no costs associated with guardrail maintenance, if damaged. Maintenance activities and costs associated with deck repair are non-existent over the life of the culvert.

If the concrete box culvert is utilized to control a degraded stream, there are significant benefits to upstream structures in the basin. Maintenance and/or replacement of these structures can be minimized or eliminated due to the positive effects of stream stabilization.

The County expends considerable resources to complete the required maintenance activities on deficient bridges. Normal operations include the replacement and repair of timber/concrete decks, abutment back-wall, pile, wing, stringer, and guardrail. Additional costs are associated with bank stabilization (scouring) and the backfill of roadway settlement. Replacement with this type of structure will eliminate many of these costs' of time, material and labor.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

In general, each stream crossing is significant to the local individuals, communities, agricultural and commerce related activities occurring in rural Nebraska. The width and weight restrictions of structurally deficient bridges may limit the required access to property and create an inconvenience to the residents of the area who utilize them daily, or during agriculturally related "heavy traffic" times of the year. Additionally, these rural roadways may function as a vital route for localized traffic between the smaller communities of the area. Specifically, this project provides the following functions to the local individuals, Richardson County and the State of Nebraska:

C007423425:

The detour for the structure is 2 miles for un-restricted traffic.

The structure is utilized heavily by local agricultural operations as a "farm to market" route.

The bridge/roadway is considered "necessary" to the area residents and agricultural operations.

Replacement of the structure would allow large, heavy agricultural equipment to utilize the structure/roadway and efficiently move products from the fields to the local elevators.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

 **84%** percent complete

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Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Sarpy	Date of Application	11/30/2020
Agency Name	Sarpy County	Contact Person Title	Highway Superintendent
Contact Person Name	Rich Weber	Address Line 1	15100 S 84th St
E-mail	weberr@sarpy.com	Address Line 2	Papillion, NE
Phone Number	(402) 537-6912	zip code	68046
NACO District	Southeast		

Proposal Name / Location	Buffalo Road
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C007702215	111.00	2.3S SPRINGFIELD at BUFFALO CREEK	Sarpy	130.00	15.80	Steel Truss - Thru	Local
C007702005P	110.00	2S SPRINGFIELD at SPRINGFIELD CREEK	Sarpy	87.00	15.30	Steel Truss - Thru	Local
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C007702215	No	No	100
C007702005P	No	No	100

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C007702215	Remove	Not Applicable	0.00	0.00	Contract	\$100,000	\$43,137	Bypassed by New Roadway
C007702005P	Replace	Prestressed Concrete Girder	138.00	30.00	Contract	\$1,000,000	\$156,863	1-Span Simple
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$1,100,000	\$200,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Sarpy County has undertaken the task of developing a Bridge Replacement Prioritization list, which categorizes and ranks all of the bridges in its inventory based on a number of relevant criteria. These criteria include items such as functional classification, sufficiency rating, fracture critical designation, replacement cost, and ADT. This program has allowed Sarpy County to focus the planning of their future budget expenditures on bridges that maximize perceived and actual public benefit.

The bridges selected for this proposal rank as #4 and #7 on their Bridge Replacement Prioritization list, which indicates their adequacy for selection in the NDOT CBMP program submittal. Located on Buffalo Road, with less than 2000 feet between the sites, this proposal combines the two projects into a single effort. As currently planned, the existing fracture critical truss structure over Springfield Creek will be replaced with a new prestressed concrete girder superstructure and a new northern bypass roadway will be constructed to allow the elimination of the crossing over Buffalo Creek. The innovation inherent in this proposal stems from both the elimination of the Buffalo Creek structure, as well as the ability to combine these projects into a single construction package. The Contractor selected for this project will be able to fully realize mobilization and sequencing benefits of the close site proximities, both reducing construction time and overall project costs. Construction administration and public involvement will also be combined in the same effort, both increasing the efficiency and reducing effort needed as compared to standalone projects. Additionally, sequencing and staging can be adjusted more effectively to accommodate the traveling public and residents located between the structures.

Designers will be able to incorporate elements of the design that affect both sites into a single effort. Possibly the single most important issue in the design effort and innovation of this project proposal is the fact that both sites lie within FEMA Regulatory Floodway. While both existing structures are pony truss style bridges meeting the structurally deficient criteria for this funding source, replacement designs would be required to meet regulatory guidelines. By eliminating the replacement of the Buffalo Creek crossing, these efforts are effectively halved, significantly reducing the engineering costs and time required for permitting review. The benefits realized from this reduction in regulatory review standpoint alone makes this project innovative in nature.

Additionally, local residents have expressed a strong desire to have these structures replaced or bypassed. Continued discussions with adjacent property owners, where the benefits of the bypass alternative have been explained, has increased their receptiveness and desire to see the project completed. As such, construction of this project will not only include significant current and future cost savings, but also improve the public's perception of the way their tax dollars are utilized.

All of these benefits are realized due to the fact that the structures are located within such close proximity to each other. Not only will the project development and letting procedure benefits realized, but the benefits carry over to construction and regulatory review, not seen on similar sized projects.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

As noted above, this proposal has the opportunity to save time and reduce costs in multiple facets of project planning and implementation.

The planned bypass roadway provides cost saving benefits in multiple areas during engineering, administration, and construction. The existing Buffalo Creek bridge is a 3-span structure, which has an estimated replacement cost upwards of \$1.25 Million dollars. Removal and elimination of this crossing not only avoids this substantial expenditure, but also eliminates the need for future costs required to maintain the structure. In addition, this project will also eliminate two fracture critical structures from Sarpy County's inventory, which are inherently demanding from both a routine inspection and maintenance cost standpoint. The Springfield Creek crossing replacement will utilize a prestressed concrete girder superstructure, which have been historically proven to be cost-effective and low maintenance alternatives.

Substantial cost savings will also be realized by letting these structures as a single package. The close proximity of the existing bridge sites limits Contractor's mobilization efforts between structures and allows for some items to be completed at both sites simultaneously. Additionally, proper construction sequencing of the bypass roadway will eliminate the necessity of a temporary bridge for continued access to residential properties located between the existing bridges, the cost of which would be significant to construct and maintain for the duration of the project.

Regulatory review for bridge projects within FEMA regulated floodway zones have the ability to add months, if not years, in the project development process. Eliminating the replacement of the Buffalo Creek bridge significantly reduces the costs and effort required to duplicate a regulatory hydraulic model, prove the No-Rise condition of the replacement structure, and complete the submittals necessary to obtain required permitting.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

The combination of construction projects has become increasingly more common in recent years, specifically with the implementation of this funding program and the emphasis on bundling projects. This proposal addresses two significant bridge projects on the same road by combining them under the same contract. Design, regulatory, construction administration efforts and the results of the construction sequencing can be shared at both the State and Local levels to fully understand the complexities and benefits of adjacent projects.

This proposal takes the idea of project bundling one step further as it carries into the construction effort. Knowledge gained from this project can and will benefit any County with a similar situation and desire to replace adjacent structures. A presentation of the project goals and knowledge gained could be shared through a presentation at the NACO winter conference after the project is completed.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

The most substantial cost savings realized in this proposal is the elimination of two Fracture Critical truss bridges from Sarpy County's inventory. With the elimination and bypass of the 3-span Buffalo Creek crossing, Sarpy County significantly reduces the future replacement and maintenance funds required to provide uninterrupted service to local traffic. Likewise, the replacement of the Springfield Creek crossing with a new prestressed concrete bridge also eliminates the intensive inspection and maintenance cycles required for fracture critical structures, allowing future funding to be invested towards other projects.

The Springfield Creek replacement design will review the need protect the channel through the use of riprap and other grade control measures, eliminating any continued degradation of the channel in the project vicinity and protecting all residential developments that utilize the structures.

The proposed bridge and bypass roadway will be of adequate width for the existing roadway traffic volume, improving on the reduced width (one-lane) of the existing structures. The new structure will also remove the existing load postings required and eliminate the need for alternative truck routes.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

As noted previously, the bridges selected for this proposal rank as #4 and #7 on the County's Bridge Replacement Prioritization List, indicating that these locations are vital to the continued growth of Sarpy County, specifically the southern half of the County. Being one of the few areas in the state with an increasing population, it is necessary to replace aging infrastructure in areas that will continue to grow. With the replacement of one lane, load posted bridges in an area of with significant development potential, user safety will be greatly improved. The potential impacts to the County with the continued deterioration of the existing structures and their closures in the near future would have devastating impacts to local traffic and require emergency replacements that would be neither cost efficient or innovative in nature. The ability to replace these structures at this time is significant in that it will be replaced under controlled conditions and not due to unforeseen influences outside of the County's control.

Sarpy County is currently planning improvements to the South half of the County with the installation of a new Wastewater Treatment Plant and water resources infrastructure. Continual updating and replacement of the roadway system infrastructure is needed to keep pace with planned growth and development. These projects align with the goal of providing for infrastructure improvements that support the growth of the community and enhance quality service to County residents, as noted in the Sarpy County Strategic Plan.

Local residents and farmers have also expressed a strong desire to have these structures bypassed or replaced. The existing posted bridges do not provide sufficient capacity to allow equipment access to adjacent fields. As such, this has required local farmers to move their equipment on the adjacent Highway to reach their property. Replacing these structures will greatly improve the mobility of adjacent field owners, while ensuring the safety of the traveling public.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Thayer	Date of Application	11/26/2020
Agency Name	Road Department	Contact Person Title	Highway Superintendent
Contact Person Name	Roger Hofts	Address Line 1	1309 Rd 6100
E-mail	roger.hofts@thayercountyne.gov	Address Line 2	Hebron, NE
Phone Number	(402) 768-6155	zip code	68370
NACO District	Southeast		

Proposal Name / Location	County Force Bridge Replacements
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C008500735	T4N R4W SEC 1 WL	2E DAVENPORT at BIG SANDY CREEK	Thayer	40.00	22.00	Wood or Timber Stringer/Multi-beam or Girder	Local
C008501205	T4N R4W SEC 3 SL	2S DAVENPORT at S FK BIG SANDY CREEK	Thayer	30.00	24.30	Steel Stringer/Multi-beam or Girder	Local
C008502505	T1N R2W SEC 6 L	1E 4.2N CHESTER at DRY CREEK	Thayer	33.00	19.90	Wood or Timber Stringer/Multi-beam or Girder	Local
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C008500735	No	No	27
C008501205	No	No	33
C008502505	No	No	33

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

This proposal replaces three (3) structurally deficient bridges with new bridges consisting of steel substructures and County Force fabricated precast concrete superstructures.

Thayer County owns a crane and all the equipment needed to complete bridge construction. The crew has previously completed bridge replacement with the same structure type that is being proposed.

Thayer County also constructs the precast concrete slabs that are proposed for the superstructure. County Forces have fabricated these slabs for several bridges in the past. The slabs are fabricated during the winter months, inside a climate-controlled shop. This keeps the crew busy through the winter and allows the County to maintain full crew. County Force precast slab fabrication does not occur often in Nebraska but Thayer County stands out as a County that remains progressive in saving bridge construction costs by completing as much of the bridge replacement as possible. Other Counties could see cost savings by participating in similar practices with winter crews that may be looking for tasks to fill the work week. Formwork for the precast slabs is inexpensive and can be used for many years. Slab design was previously completed to meet HL-93 live loading and is applied to each bridge of similar layout, significantly reducing engineering costs.

Thayer County will provide traffic control devices, therefore no outside subcontracting is required for any of these projects.

00735 is on a Local Road that does not see as much traffic now due to the load restriction. The ADT at this bridge will go up significantly if the structure is replaced and no longer load posted.

01205 is on a Local Road and serves as the only all-season road to a residence.

02505 is on a Local Road and serves as the only all-season road to a residence.

Since the bridges will be replaced by County Forces, value will be added to the projects since County Forces are not for profit and County crew can remain busy through winter months.

Each of the proposed structures will be constructed within existing right-of-way; no new right-of-way or construction easements will be required.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Competitive bidding will take place for steel materials needed for substructure elements. All three structures will be tied together for material bids, further increasing the cost savings by including more materials into one bid. County Forces will complete installation, further reducing project cost by eliminating material cost mark-up by a prime contractor.

The County bridge crew can schedule work for these sites and not need to lose time going thru bidding for a contractor and then waiting for their schedule to open up for the work. Bridge contractors seem to still be working to catch up from recent flooding throughout the State. The bridge construction/repair crews will remain stretched but Thayer County has the ability to complete the work and not rely on outside help.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Precast concrete deck panel bridges have proved to be long lasting structures and stand up to high flows. Readily available steel materials, County Force construction experience and County Force precast slab casting abilities make these structure types attractive to local agencies.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

All of the proposed structure types are precast concrete deck panel bridge which will have a lifespan requiring little to no maintenance.

Current condition of bridges will require bridge repairs to maintain passenger car traffic, but even significant repairs would not accommodate agricultural equipment. Replacing this bridge with steel and concrete would eliminate the rotting and splitting issues that the existing timber bridges currently face.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

Thayer County has 173 bridges requiring routine inspection. This is a significant number, but a big issue for Thayer County is the over 300 structures under 20 ft long that are in desperate need of replacement, most of these being narrow timber structures. By selecting Thayer County for cost share under the CBMP, we are able to allocate a portion of our budget to the aging infrastructure that is not eligible for this program.

Structure 00735 has an agricultural surrounding and is main north-south farm to market route to nearby Davenport. Detouring of agricultural equipment occurs due to the reduced load carrying capacity of the existing bridge. Legally loaded vehicles are restricted from crossing due to the 7 ton load posting. This bridge receives addition commercial/farm traffic use when the railroad tracks are blocked in Davenport. The crossing in Davenport can be blocked for up to a week at a time during repair/maintenance of the twin rail line. Crossing also seems to be blocked often as trains frequently stop.

Structure 01205 and 02505 are on the only all-season road to the a nearby residence. By replacing these structures before crossing closure is required, we will eliminate the need to gravel additional miles of roadway that do not receive regular maintenance. By receiving assistance from this program, we can schedule replacement and plan for means of access, providing a timeline meeting the needs of the residents.

Structure 01205 restricts legally loaded vehicles due to the 4 ton load posting.

Structure 02505 restricts legally loaded vehicles due to the 15 ton load posting.

This proposal is significant to Thayer County because it will allow agricultural traffic to take the shortest route possible to their destination with restricting bridges being replaced. The detouring is inconvenient and adds to the cost of traveling for the public, and safety becomes an issue if someone is unwilling to detour the bridge with a load higher than what is posted on the structure. Thayer County has a significant amount of agricultural traffic, and the equipment is getting larger in size and weight. The structures in this proposal are undersized for today's agricultural traffic demand.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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Jodi Gibson

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jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Dakota	Date of Application	11/17/2020
Agency Name	Dakota County	Contact Person Title	Highway Superintendent
Contact Person Name	Fred Kellogg	Address Line 1	1863 N Bluff Rd
E-mail	fkelloggdcroads@live.com	Address Line 2	Hubbard, NE
Phone Number	(402) 632-5006	zip code	68741
NACO District	Northeast		

Proposal Name / Location	Homer South
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C002213410P	SEC 26 T27N R CENT	2.45 OF HOMER AT OMAHA CREEK	Dakota	100.00	19.70	Steel Truss - Thru	Local

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C002213410P	No	No	50

Proposal Construction Details

NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C002213410P	Replace	Steel Girder	140.00	28.50	Contract	\$439,000	\$200,000	3-Span Weathering Steel Girder Br.
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$439,000	\$200,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

The replacement structure for bridge C002213410P will be a three span 28'-6 wide by 140'-0 long end of floor to end of floor bridge. The superstructure will consist of 30-inch deep weathering steel I-Beams with a cast in place composite concrete deck. The bridge will sit on steel HPile at the abutment and piers. The backwalls will consist of steel sheet Pile. The composite design will allow the use of light weight girders while maintaining a center span of 70 feet. The material to build the bridge is readily available. The cost of the concrete deck design with multi-girder steel superstructure provides a lower cost per square foot of waterway opening provided compared to concrete box culverts and precast superstructures.

Criteria 2 - Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

The bridge superstructure will use a simple span design at all three spans of the superstructure. The cast in place concrete deck will allow one pour to complete the deck. The design will allow multiple contractors and fabricators to bid on the bridge project ensuring the County will receive competitive bids. The I-Beams used for the superstructure are produced by multiple domestic steel mills. The bridge's abutments utilize steel H-Pile and steel sheet pile. The steel sheet pile consists of a lightweight section that will be braced allowing for lower cost with a quick construction time. A capable contractor will remove the existing bridge and build the proposed bridge in less than 90 calendar days.

Criteria 3 - Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Dakota County has built several bridges using a similar design over the past 10 years. The bridges have endured the summer flooding of 2018 and the spring flooding of 2019 with little to no damage. The abutments and piers are built outside the normal high-water mark of the creek. The H-Pile at the piers are braced to strengthen and protect during high water flood events. The multi-girder steel design is easily transferred to other counties throughout Nebraska.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

The weathering steel I-Beams will protect the girders from corrosion eliminating future maintenance costs. The county and state expend considerable resources to complete the required inspections and maintenance of the existing fracture critical bridge. Replacement of this structure will eliminate the time-consuming annual inspection of the fracture critical bridge and eliminate many of the maintenance costs.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

The weight restrictions of 3 ton, 10 ton, and 13 ton for Type 3, Type 3S2, and Type 3-3 trucks respectively and the width restriction of 19.7 feet limit access to property and create inconveniences to the residents who utilize the bridge. The structure is virtually closed to heavy agriculture traffic as well as emergency vehicles. The detour length is 5.00 miles long creating increased transportation costs as well as lost time that is an inconvenience the community.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:
Jodi Gibson
402-479-4337
jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Dixon	Date of Application	10/10/2020
Agency Name	Dixon County	Contact Person Title	Highway Superintendent
Contact Person Name	Arnold Mellick	Address Line 1	1491 E Sarpy Rd
E-mail	rsewbz@aol.com	Address Line 2	Jackson, NE
Phone Number	(712) 389-2258	zip code	68743
NACO District	Northeast		

Proposal Name / Location	Newcastle Southwest
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C002631530	0.00	S EDGE OF NEWCASTLE at AOWA CREEK	Dixon	79.00	20.00	Steel Stringer/Multi-beam or Girder	Collector
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C002631530	No	No	195

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

A flood control dam was built upstream of structure C002631530 and will allow us to replace this structure with a box culvert as opposed to a bridge. Our experience has shown a box culvert, minimize maintenance costs in comparison with a bridge. There are a number of contractors that bid in this area that keep construction costs low. The construction will utilize state of nebraska standard plans that will minimize design expenses and provide a low maintenance structure for the crossings.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

The box culvert design will allow for a savings of approximately 25% over a bridge that would be needed to make the same crossing. By using state standard plans, design cost savings are lowered when compared with a standard girder bridge. The design minimizes construction time with the box culverts project generally being complete in 4 to 6 weeks. The design is very low maintenance and eliminates guardrail costs making snow removal and mowing easier.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Standardized plans are available from the Department of Transportation which are easily shared among the counties. The Box design has a proven track record of long term sustainability and minimal maintenance costs. Using state standard box culvert plans allows contractors across the state to build consistently designed structures which a benefit to all counties building box culverts.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

A box culvert construction will minimize the initial construction costs. Our past experience has shown that maintenance costs are also minimized. There are no railings to damage, no beams to rust, or joints maintain. Elimination of guardrail make mowing and snow removal easier.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

Structure C002631530 is located on the western Edge of Newcastle and has a significant rural ADT of 195 vehicles per day. The roadway is classified as a collector and receives significant traffic. The detour to bypass this structure is nearly 4 miles in length. The load posting for single unit trucks is a safety issue for fire response for the Newcastle fire department for needs southwest of Newcastle. The structures load rating also hampers local farming and commercial operations. Improvements to this structures will directly improve local access to the area surrounding the site.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

86% percent complete

Applying County	Madison	Date of Application	12/3/2020
Agency Name	Madison County	Contact Person Title	Highway Superintendent
Contact Person Name	Richard Johnson	Address Line 1	1909 Vicki Lane, Suite 100
E-mail	rjohnson@mwaeng.com	Address Line 2	Norfolk, NE
Phone Number	(402)750-5492	zip code	68701
NACO District	Northeast		

Proposal Name / Location	CBMP 2020 - C005924840, C005904705, C005900530
Multi-County Proposal	No
Proposal Priority Number	2

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C005924840	0.00	JCT US81/N32 3E 5S at DRAINAGE DITCH	Madison	28.00	21.00	Wood or Timber Stringer/Multi-beam or Girder	Local
C005904705	0.00	JCT US81/N32 3E 5.5S at STREAM	Madison	28.00	20.00	Wood or Timber Stringer/Multi-beam or Girder	Other Arterial
C005900530	0.00	1.2S 3W of Meadow Grove at Dry Creek	Madison	41.00	19.50	Steel Stringer/Multi-beam or Girder	Local

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C005924840	No	No	60
C005904705	No	No	20
C005900530	No	No	25

Proposal Construction Details

NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment	
C005924840	Replace	Culvert Pipes			County Forces	\$81,180	\$44,649	2-108"x45' CMPs	
C005904705	Replace	Culvert Pipes			County Forces	\$88,900	\$48,895	3-96"x40' CMPs	
C005900530	Replace	Culvert Pipes			County Forces	\$77,971	\$42,884	3-84"x47' CMPs	
<p>* Length and Width not required for Culverts. Please provide culvert size in comments.</p>						total	\$248,051	\$136,428	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Corrugated metal culvert pipes are a cost-effective replacement alternative for deficient bridges in the State of Nebraska.

The design and construction process is streamlined with the utilization of standard plan and construction practices.

Local culvert suppliers are available and competitive, often resulting in cheaper material prices to the County.

Culvert construction will be completed by County forces, an innovative approach that reduces cost and utilizes the local County assets.

Typical culvert pipe construction can be completed within 1-2 weeks which minimizes the impact to local resident, agricultural and commercial traffic.

Corrugated metal culvert pipe's primary innovation is the simplicity of their design and construction. Metal culvert pipes, with prefabricated headwall & turndowns are quickly and easily installed by most experienced road crews. Additional innovations include; the use of standardized sheet pile and cable tie-back retaining systems, relative ease of transporting and off-loading materials, utilization of 3 x 1 and 5 x 1 corrugation (resulting in stronger culverts and a reduction in wall thickness) and inlet and outlet aprons (scour reduction.)

Historically, culvert maintenance activities and costs are minor in comparison to other replacement structures. Load and/or equipment restricting guardrail is typically not required which is particularly beneficial to regional agricultural and commodity transportation.

A considerable number of streams in the eastern part of Nebraska are significantly degraded. Proper culvert design is often utilized to stabilize the streambed and adjacent banks upstream of the structure.

The replacement's required size may remove the structure from the bridge inventory.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Corrugated metal culvert pipes are a cost effective and efficiently constructed alternative to an expensive bridge replacement. Standardized design and construction practices provide a significant cost and time savings to the owner. Culvert construction will be completed by County forces resulting in a considerable cost and time savings. Guardrail is typically not required, therefore no material, construction, or maintenance costs for guardrail are associated with the project. Additional savings are realized throughout the culvert's anticipated life-span (50-75 years) in costs associated with general maintenance and repair. Culvert pipe replacement structures are generally simpler and relatively inexpensive when compared to box culverts or bridges. Typical culvert pipe construction (including removal of the existing structure) can be completed within 1-2 weeks resulting in lower direct project costs (overall) and minimizes the impact to local resident, agricultural and commercial traffic. Removal of a structure from the bridge inventory would save time and costs associated with general management and inspection. Design fees for a standard culvert crossing is significantly less costly than a traditional bridge or concrete box culvert. The bidding of a "materials, only" bundled project reduces the monetary and time costs associated with the contracting process.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Corrugated metal culvert pipe standardization of design and construction can be utilized by all Counties in Nebraska.

The process of collaboration between Counties can easily be shared and is available to all Counties. A derivative of the cooperation between counties will likely be education, through the exchange of ideas that will occur throughout the process. The engaged entities will discuss and implement what has/hasn't been efficient or successful and incorporate those "lessons learned" into future replacement projects. Successful results are easily conveyed to other Counties, culvert pipes provide a time-saving, quality product at low cost.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

The use of corrugated metal culvert replacement structures provides significant long-term maintenance cost savings. Properly sized corrugated metal culvert pipes are considered durable and expected to require minimal maintenance over their expected service life of 50-75 years. The lack of guardrail facilitates the ease of mowing and snow plow operations. There are no costs associated with guardrail maintenance, if damaged. Maintenance activities and costs associated with deck repair are non-existent over the life of the culvert. If the culvert is utilized to control a degraded stream, there are significant benefits to upstream structures in the basin. Maintenance and/or replacement of these structures can be minimized or eliminated due to the positive effects of stream stabilization. Removal of a structure from the bridge inventory would save time and costs associated with general management and inspection. The County expends considerable resources to complete the required maintenance activities on deficient bridges. Normal operations include the replacement and repair of timber/concrete decks, abutment back-wall, pile, wing, stringer, and guardrail. Additional costs are associated with bank stabilization (scouring) and the backfill of roadway settlement. Replacement with this type of structure will eliminate many of these costs' of time, material and labor.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

In general, each stream crossing is significant to the local individuals, communities and agricultural related activities occurring in rural Nebraska. The width and weight restrictions of structurally deficient bridges may limit the required access to property and create an inconvenience to the residents of the area who utilize them daily, or during agriculturally related "heavy traffic" times of the year. Additionally, these rural roadways may function as a vital route for localized traffic between the smaller communities of the area. Specifically, this project provides the following functions to the local individuals, Madison County, and the State of Nebraska:

C005924840:

The structure/roadway are used as an emergency services route.

The current detour length for this structure is 6 miles to un-restricted traffic; considered excessive.

Many local agricultural operations rely on this structure/roadway as a "farm to market" route during harvest.

Replacement of this structure would provide continuity through the county. Completion would provide a roadway with no deficient structures from the county line to US Highway 81.

C005904705:

This structure/roadway may be used by emergency services.

The current detour length for this structure is 4 miles to un-restricted traffic; considered excessive.

This structure/roadway is used by local agricultural operations as a "farm to market" route.

If replaced, this roadway would provide a 6 mile continuous roadway with no deficient structures; from the Platte County Line to Nebraska Highway 32.

The roadway is classified as "Other Arterial." The structure is necessary to provide a safe, efficient roadway for local landowners and the traveling public.

C005900530:

The structure/roadway is used as an emergency services route.

The current detour for this structure is 4 miles to un-restricted traffic; considered excessive.

Multiple agricultural operations utilize this structure throughout the year as a "farm to market" route.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

 **86%** percent complete

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Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Nance	Date of Application	11/23/2020
Agency Name	Nance County	Contact Person Title	Highway Superintendent
Contact Person Name	Tony Bernt	Address Line 1	PO Box 338
E-mail	road@nancecountyne.org	Address Line 2	Fullerton, NE
Phone Number	(308) 536-2443	zip code	68638
NACO District	Northeast		

Proposal Name / Location	Belgrade West
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C006301215P	0.00	1.5S 5W OF BELGRADE at TIMBER CREEK	Nance	102.00	15.70	Steel Truss - Thru	Local
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C006301215P	No	No	40

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

In addition to the construction of Structure No. C006301215P, Nance county is proposing to eliminate Structure No. C006311210 and will remove this structure from the NBIS inventory. C006311210 is a functionally obsolete structure, has a sufficiency rating of 36.2, and has a 10 ton posting; C006311210 is only 1/4 mile upstream. By replacing C006301215P and eliminating C006311210, the state inventory has eradicated two deficient bridges.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

The structure type selected will be a low maintenance structure such as a slab bridge or a deck slab bridge. One of the main benefits of a concrete slab bridge is that they can be submerged during a flood event and not be harmed other than by debris that remains on the structure after such event. If the hydraulic study indicates that a different structure, such as a bent plate girder, is feasible at the site without major grading of the roadway, then we may recommend a head to head slab bridge with a bent plate steel bridge or a deck slab bridge.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

The slab bridge is a frequent bridge utilized in the county structure inventory. The standardization of the slab makes construction straightforward and available to many contractors. In addition, concrete slabs utilize local suppliers yielding the concrete for the structure and utilizes the local community for workforce and ancillary supplies.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

It is well known in the County Bridge Match system that the concrete slab bridge is a very low maintenance structure. With no moving parts and typically no salt on the county gravel roads, there is a longer life span to these bridges with no significant complications. Properly designed and constructed concrete slab bridges may have a life span well beyond 100 years.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

This structure serves three permanent residents and the bridge is necessary for emergency services to accommodate these residents directly. The alternate route if the structure was to be closed would be an approximate five mile detour. The bridge would also serve as part of a vital farm to market route for the adjacent agricultural land. This project has been identified by Nance county on their one and six year plan to be replaced as soon as their budget allows. This significant aid from the State of Nebraska through the County Bridge Match Program will accelerate this replacement drastically.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Platte	Date of Application	12/4/2020
Agency Name	Platte County	Contact Person Title	Administrative Assistant
Contact Person Name	Jane Cromwell	Address Line 1	2610 14th St
E-mail	hwy.admin@plattene.us	Address Line 2	Columbus, NE
Phone Number	(402) 563-4909	zip code	68601
NACO District	Northeast		

Proposal Name / Location	CBMP 2020 - C007102030
Multi-County Proposal	No
Proposal Priority Number	3

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C007102030	BG 13-2	5.2W OF TARNOV at STREAM	Platte	30.00	30.00	Steel Stringer/Multi-beam or Girder	Collector

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C007102030	No	No	60

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

This proposal is for the repair of an existing structure that is in good condition. Localized scour on the downstream side of the structure is affecting the stability of the abutments. It is innovative, because the life of the structure is prolonged at a lower cost than replacement. The proposed repairs will remove the structure from the Structurally Deficient List.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Repair of the structure is significantly less expensive than the replacement cost. The work will can be performed in weeks and, if required, the roadway will be out of service for a limited amount of time.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Similar issues with degradation and a bridges' substructure can be found throughout out the state of Nebraska. Successful implementation of the channel repair can be shared among Counties. Design and construction practices can be repeated to save time and money.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

The proposed repair of the abutments and channel stability will prolong the life of the existing structure. Savings to the County is realized by a reduction in maintenance costs, inspection and eventual closure and structure replacement.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

In general, each stream crossing is significant to the local individuals, communities and agricultural related activities occurring in rural Nebraska. The width and weight restrictions of structurally deficient bridges may limit the required access to property and create an inconvenience to the residents of the area who utilize them daily, or during agriculturally related "heavy traffic" times of the year. Additionally, these rural roadways may function as a vital route for localized traffic between the smaller communities of the area. Specifically, this project provides the following functions to the individuals, Platte County and the State of Nebraska:

C007102030:

This structure/roadway is currently used as a mail route.

The structure is currently used by emergency services, and is the only access for a local Hog Confinement Unit.

The current detour for this structure is 5 miles on local roadways to un-restricted traffic. This is not considered excessive.

Large Hog operations in the area rely on this structure/roadway to transport livestock throughout the year, and would be negatively affected if the structure were closed.

Farmers also rely on the structure/roadway as a vital "farm to market" route as it provides direct access to Tarnov, Nebraska.

Replacement of the structure would provide continuity for the county, as it would allow for better access from Boone County to Tarnov, and US Highway 81.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Stanton	Date of Application	12/3/2020
Agency Name	Stanton County	Contact Person Title	Chairman
Contact Person Name	Dennis Kment	Address Line 1	PO Box 347
E-mail	clerk@stantoncountyne.org	Address Line 2	Stanton, NE
Phone Number	(402)439-2222	zip code	68779
NACO District	Northeast		

Proposal Name / Location	CBMP 2020 - C008424420, C008412005, C008412010
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information							
NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C008424420	0.00	10.7S 1.5E OF STANTON at STREAM	Stanton	60.00	28.10	Steel Stringer/Multi-beam or Girder	Collector
C008412005	0.00	3.9W 1N OF STANTON at STREAM	Stanton	60.00	16.30	Steel Girder and Floorbeam System	Local
C008412010	0.00	3.7W 1N OF STANTON at STREAM	Stanton	60.00	16.20	Steel Girder and Floorbeam System	Local

Eligibility			
NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C008424420	No	No	15
C008412005	No	No	50
C008412010	No	No	50

Proposal Construction Details

NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C008424420	Replace	Precast Deck Panels	91.75	28.00	Contract	\$494,128	\$189,574	3-Span Concrete Deck Slab
C008412005	Remove	Not Applicable	0.00	0.00	Contract	\$10,000	\$5,213	Remove from Inventory
C008412010	Remove	Not Applicable	0.00	0.00	Contract	\$10,000	\$5,213	Remove from Inventory
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$514,128	\$200,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Pre-cast deck panel bridges are a quickly constructed, cost-effective replacement alternative for deficient bridges in the State of Nebraska. The design, fabrication, and construction process is streamlined with the utilization of standard plan and construction practices with typical bridge construction completed within 6 weeks. An experienced pool of contractors active in Nebraska results in a competitive environment, reducing replacement structure cost to Counties. The fabrication of the combination driving surface/structural beam at an off-site location reduces construction time significantly. There are currently a number of local suppliers that can produce the deck slab units which can easily be installed by most experienced bridge crews. Contractor innovation of the construction process continues to reduce the required time and material expenditures, reducing overall cost to the owner. Pre-cast concrete deck slab units provide additional benefits regarding permitting and design. Bridge submergence is common and acceptable on the rural county roadways of Nebraska. Low superstructure height reduces the road grading requirements and environmental impacts are minimized by reducing or eliminating channel modification. Permitting requirements are minimized, accordingly. In addition to the replacement projects, Stanton County is proposing removal of Structures C008412005 and C008412010 from the traveled way and NBIS structurally deficient list.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Pre-cast deck slab bridges are typically significantly less costly than traditional cast in place or girder bridges, with cost savings of in the order of 20-25%.

The counties of Nebraska rarely use de-icing agents therefore steel sheet pile abutments are often utilized as a quick, economical alternative to reinforced concrete. The lack of field cast concrete, which requires curing and is susceptible to weather delay reduces replacement structure installation time.

In general, heavy equipment requirements are minimized, as most construction can be performed with smaller equipment.

Installation time is typically in 6-weeks or less, which is typically half the time of traditional bridges. This results in lower overall cost and a reduction of impacts to the traveling, agricultural, and commodity community.

Additional savings are realized throughout the bridges' anticipated life-span, expected beyond 75 years, in costs associated with general maintenance and repair.

Removal of Structures C008412005 and C008412010 from the inventory will result in a considerable cost and time savings to the County and State. Replacement structure construction, maintenance, mowing, snow removal, rating and inspection activities will not be necessary.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Pre-cast deck slab bridge design and construction is a standardized process in the State of Nebraska, information regarding the process can easily be shared and repeated within other Counties.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

The structure is considered extremely durable and expected to require minimal maintenance over its expected use beyond 75 years.

The County expends considerable resources to complete the required maintenance activities on deficient bridges including the replacement and repair of timber/concrete decks, abutment back-wall, pile, wing, stringer, and guardrail. Additional costs are associated with bank stabilization (scouring) and the backfill of roadway settlement. Replacement with this type of structure will reduce or eliminate many of these costs of time, material and labor.

Removal of Structures C008412005 and C008412010 from the inventory will eliminate the maintenance requirements for each bridge, saving a considerable amount of expenditures in the long term.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

In general, each stream crossing is significant to the local individuals, communities and agricultural related activities occurring in rural Nebraska. The width and weight restrictions of structurally deficient bridges may limit the required access to property and create an inconvenience to the residents of the area who utilize them daily, or during agriculturally related "heavy traffic" times of the year. Additionally, these rural roadways may function as a vital route for localized traffic between the smaller communities of the area. Specifically, this project provides the following functions to the local individuals, Stanton County and the State of Nebraska:

C008424420:

The structure is used heavily by local agricultural operations and commercial seed dealers.

The current detour length for this structure is 4 miles to un-restricted traffic.

The structure is considered "necessary" to the residents of the area. The roadway connects two major Nebraska State highways in the County.

Closure of the structure will create traffic problems along un-maintained detour routes.

Replacement of the structure would provide a safe route for the traveling public through Stanton County.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

85% percent complete

Applying County	Wayne	Date of Application	12/3/2020
Agency Name	Wayne County	Contact Person Title	Highway Superintendent
Contact Person Name	Mark Casey	Address Line 1	510 Pearl St
E-mail	roads@waynecountyne.gov	Address Line 2	Wayne, NE
Phone Number	(402) 375-1153	zip code	68787
NACO District	Northeast		

Proposal Name / Location	CBMP 2020 - C009001110, C009001115, C008701905, C008700505P
Multi-County Proposal	Yes
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information							
NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C009001110	0.00	4.5W 1.1N OF WINSIDE at STREAM	Wayne	31.00	20.30	Steel Stringer/Multi-beam or Girder	Local
C009001115	0.00	4.5W 2.5N OF WINSIDE at SOUTH LOGAN CREEK	Wayne	31.00	17.50	Wood or Timber Stringer/Multi-beam or Girder	Local
C008701905	0.00	2.5E .2N OF THURSTON at COW CREEK	Thurston	24.00	20.40	Wood or Timber Stringer/Multi-beam or Girder	Local
C008700505P	0.00	2N 4W OF THURSTON at STREAM	Thurston	22.00	20.40	Wood or Timber Stringer/Multi-beam or Girder	Local

Eligibility			
NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C009001110	No	No	15
C009001115	No	No	20
C008701905	No	No	25
C008700505P	No	No	20

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Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Corrugated metal culvert pipes are a cost-effective replacement alternative for deficient bridges in the State of Nebraska.

The design and construction process is streamlined with the utilization of standard plan and construction practices.

Local culvert suppliers are available and competitive, often resulting in cheaper material prices to the County.

Culvert construction will be completed by County forces, an innovative approach that reduces cost and utilizes the local County assets.

Typical culvert pipe construction can be completed within 1-2 weeks which minimizes the impact to local resident, agricultural and commercial traffic.

Corrugated metal culvert pipe's primary innovation is the simplicity of their design and construction. Metal culvert pipes, with prefabricated headwall & turndowns are quickly and easily installed by most experienced road crews. Additional innovations include; the use of standardized sheet pile and cable tie-back retaining systems, relative ease of transporting and off-loading materials, utilization of 3 x 1 and 5 x 1 corrugation (resulting in stronger culverts and a reduction in wall thickness) and inlet and outlet aprons (scour reduction.)

Historically, culvert maintenance activities and costs are minor in comparison to other replacement structures. Load and/or equipment restricting guardrail is typically not required which is particularly beneficial to regional agricultural and commodity transportation.

A considerable number of streams in the eastern part of Nebraska are significantly degraded. Proper culvert design is often utilized to stabilize the streambed and adjacent banks upstream of the structure.

The replacement's required size may remove the structure from the bridge inventory.

This proposal is being submitted by multiple counties, in a cooperative effort to streamline the design, bid, and build process through project bundling. Innovative, because counties have not actively reached across established map lines in the name of cooperation and efficiency.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Corrugated metal culvert pipes are a cost effective and efficiently constructed alternative to an expensive bridge replacement.

Standardized design and construction practices provide a significant cost and time savings to the owner.

Culvert construction will be completed by County forces resulting in a considerable cost and time savings.

Guardrail is typically not required, therefore no material, construction, or maintenance costs for guardrail are associated with the project.

Additional savings are realized throughout the culvert's anticipated life-span (50-75 years) in costs associated with general maintenance and repair.

Culvert pipe replacement structures are generally simpler and relatively inexpensive when compared to box culverts or bridges. Typical culvert pipe construction (including removal of the existing structure) can be completed within 1-2 weeks resulting in lower direct project costs (overall) and minimizes the impact to local resident, agricultural and commercial traffic.

Removal of a structure from the bridge inventory would save time and costs associated with general management and inspection.

It is anticipated that each county in the bundling package will recognize savings in engineering and construction costs. Design fees for a standard culvert crossing are significantly less costly than a traditional bridge or concrete box culvert. The bidding of a "materials, only" bundled project reduces the monetary and time costs associated with the contracting process.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Corrugated metal culvert pipe standardization of design and construction can be utilized by all Counties in Nebraska.

The process of collaboration between Counties can easily be shared and is available to all Counties. A derivative of the cooperation between counties will likely be education, through the exchange of ideas that will occur throughout the process. The engaged entities will discuss and implement what has/hasn't been efficient or successful and incorporate those "lessons learned" into future replacement projects. Successful results are easily conveyed to other Counties, culvert pipes provide a time-saving, quality product at low cost.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

The use of corrugated metal culvert replacement structures provides significant long-term maintenance cost savings.

Properly sized corrugated metal culvert pipes are considered durable and expected to require minimal maintenance over their expected service life of 50-75 years.

The lack of guardrail facilitates the ease of mowing and snow plow operations. There are no costs associated with guardrail maintenance, if damaged.

Maintenance activities and costs associated with deck repair are non-existent over the life of the culvert.

If the culvert is utilized to control a degraded stream, there are significant benefits to upstream structures in the basin. Maintenance and/or replacement of these structures can be minimized or eliminated due to the positive effects of stream stabilization.

Removal of a structure from the bridge inventory would save time and costs associated with general management and inspection.

The County expends considerable resources to complete the required maintenance activities on deficient bridges. Normal operations include the replacement and repair of timber/concrete decks, abutment back-wall, pile, wing, stringer, and guardrail. Additional costs are associated with bank stabilization (scouring) and the backfill of roadway settlement. Replacement with this type of structure will eliminate many of these costs' of time, material and labor.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

In general, each stream crossing is significant to the local individuals, communities and agricultural related activities occurring in rural Nebraska. The width and weight restrictions of structurally deficient bridges may limit the required access to property and create an inconvenience to the residents of the area who utilize them daily, or during agriculturally related "heavy traffic" times of the year. Additionally, these rural roadways may function as a vital route for localized traffic between the smaller communities of the area. Specifically, this project provides the following functions to the local individuals, Wayne/Thurston Counties, and the State of Nebraska:

C009001110:

The original structure has been removed and replaced with a temporary culvert to maintain traffic.

The roadway is utilized as a mail and bus route.

The roadway is utilized as an emergency services route.

The detour for this structure is 6 miles (avoiding minimum maintenance and restricted bridges); considered excessive for the area.

Local agricultural operations rely on this structure for a "farm to market" route.

The replacement would provide continuity to recently completed projects in the area and better access to parts of the County.

C009001115:

The existing structure/roadway is currently utilized for mail and a (Winside) bus route.

The existing structure/roadway is utilized as an emergency services route.

The detour for this structure is 9 miles for un-restricted traffic; excessive for the area.

Local agricultural operations utilize this structure/roadway as a "farm to market" route.

Replacement of the structure would provide greater continuity to the local area and other recently completed projects in the area.

C008701905:

The structure/roadway is utilized as an emergency services route.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

85% percent complete

When your application is complete and you are ready to submit it for review go to:

<http://dot.nebraska.gov/projects/tia/bridge-match/>

Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Buffalo	Date of Application	11/27/2020
Agency Name	Buffalo County	Contact Person Title	Highway Superintendent
Contact Person Name	John Maul	Address Line 1	9730 Antelope Ave
E-mail	jmaul@buffalocounty.ne.gov	Address Line 2	Kearney, NE
Phone Number	(308) 236-1237	zip code	68847
NACO District	Central		

Proposal Name / Location	Wood River Fracture Critical Bridge
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C001012210	29-KK	1.5S 3.2E OF MILLER at WOOD RIVER	Buffalo	101.00	19.80	Steel Truss - Thru	Local
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C001012210	No	No	40

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Structure No. C001012210 (12210) spans the Wood River and would be reconstructed as a clear span bridge to prevent debris accumulation and for increased road overtop return flow periods. Background work for Hydraulic Assessments near this bridge will be used in design of this structure to reduce engineering costs.

Proposed structure would be constructed within existing right-of-way. Approach grading modifications will be completed by County Forces to reduce costs associated with Contract Labor.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

12210 will be a clear span, concrete deck steel girder bridge that can be constructed by several local contractors. Concrete deck, steel girder bridge designs are common in today's county road bridge replacement options. Materials and skilled contractors are readily available, which will result in reduced supplier costs and expedited construction timelines. By selecting a clear span structure, we will save time by eliminating work within the channel and active flow. No traffic shoo-fly is anticipated, which will reduce channel impacts to the greatest extent practical and permitting can be expedited.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Concrete deck, steel girder bridges have proved to be long lasting structures and stand up to high flows. Readily available materials, local construction experience and favorable bidding market make these structure types attractive to local agencies. Buffalo County's central location has a history of attracting 5 or more contractors for competitive bidding. This competitive market has resulted in cost saving bids.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

12210 is a fracture critical bridge that is load posted. Legally loaded vehicles are not able to cross this structure due to the load posting of 15/23/29. Extra costs associated with the fracture critical bridge inspection will be eliminated with structure replacement. Proposed structure type is concrete deck, steel girder bridge which will have a lifespan requiring little to no maintenance.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

12210 is on a Local Route that also serves as a bus route and mail route. Agricultural equipment use of this crossing will increase to meet farm to market needs. Buffalo County has a large inventory of bridges, both large and small. Our location within the Platte River and Loup River valley's results with over 340 NBIS structures. Repair and replacement costs for these structures is excessive, proving difficult to maintain the existing system with the available funds. Assistance with replacement is the only way towards progress in updating the system. This structure is currently on the County 6 year road plan for replacement.

Recent flooding has caused undermining at the abutments. In addition, the northeast and southeast wings are failing and heavy erosion is occurring at the southwest wing. The County may be forced to spend funds to protect the abutments prior to bridge replacement in order to retain backwall fill and provide a safe roadway.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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<http://dot.nebraska.gov/projects/tia/bridge-match/>

Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

81% percent complete

Applying County	Custer	Date of Application	
Agency Name	Custer County	Contact Person Title	Highway Superintendent
Contact Person Name	Chris Jacobsen	Address Line 1	43700 Ryno Rd
E-mail	custer@qwestoffice.net	Address Line 2	Broken Bow, NE
Phone Number	(308) 872-5132	zip code	68822
NACO District	Central		

Proposal Name / Location	Contractor County Collaboration, C002148810, C002168925, C002167530, C0E2110705, C002162010
Multi-County Proposal	
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information							
NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C002148810	567.00	2SE OF OCONTO #567 at WOOD RIVER	Custer	43.00	24.20	Wood or Timber Stringer/Multi-beam or Girder	Local
C002168925	CANAL	2N 1W OF SARGENT at MILBURN-SARGENT CANAL	Custer	44.00	20.20	Wood or Timber Stringer/Multi-beam or Girder	Local
C002167530	CANAL	2N 8W OF SARGENT at MILBURN-SARGENT CANAL	Custer	52.00	20.20	Wood or Timber Stringer/Multi-beam or Girder	Local
C0E2110705	621A	4.75 3E OF MASON C. #621A at STREAM	Custer	32.00	28.40	Wood or Timber Stringer/Multi-beam or Girder	Local
C002162010	60.00	3.5N 1W OF COMSTOCK #60 at BIG OAK CANYON	Custer	31.00	18.60	Wood or Timber Stringer/Multi-beam or Girder	Local
<Enter SN here>							

Eligibility			
NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C002148810	No	No	15
C002168925	No	No	28
C002167530	No	No	45
C0E2110705	No	No	28
C002162010	No	No	15

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Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C002148810	Replace	Culvert Pipes			Contract	\$170,000	\$58,620	Estimated 108" RE CMP's
C002168925	Replace	Culvert Pipes			County Forces	\$95,000	\$32,759	Estimated 96" RE CMP's
C002167530	Replace	Culvert Pipes			County Forces	\$95,000	\$32,759	Estimated 96" RE CMP's
C0E2110705	Replace	Culvert Pipes			Unknown	\$110,000	\$37,931	Esti 96" RE CMP's, Contract or County Forces TBD
C002162010	Replace	Culvert Pipes			Unknown	\$110,000	\$37,931	Esti 96" RE CMP's, Contract or County Forces TBD
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$580,000	\$200,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

The County by implementing the use of both Contractor & County forces to replace multiple structures in an expedited process is offering to replace as many SD structures as they feel possible under the CBMP time constraints while maximizing the financial interest of the County (65%) and distributing the financial obligation of the County Bridge Match Program (35%).

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

The County will implement time and cost savings by: 1) Constructing some of the projects with County Forces, and bundling those projects of similar culvert dimensions to encourage material savings from the manufacturer in set-up and tear-down time; 2) Bundling projects of similar material dimensions constructed by Contractors to encourage (A) material savings by the manufacturer in both set-up & tear-down time, and encourage (B) savings from the Contractor by spreading their overhead over multiple projects.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

We currently have "Material Letting documents", "Contractor Labor & Equipment Only Letting documents", and "Contractor Mat'l Labor & Equipment Letting documents" on file. We have been mixing and matching these documents per project based on preliminary estimates of what looks like the best development & financial outcome for any giving project.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

Removal of wooden structures and replacing them with heavy gauge culvert metal pipes.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

The elimination of a large group of restrictive SD bridges which improves route deliver of commodities and efficiencies for the tax payers throughout the County.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

81% percent complete

When your application is complete and you are ready to submit it for review go to:

<http://dot.nebraska.gov/projects/tia/bridge-match/>

Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Franklin	Date of Application	12/3/2020
Agency Name	Franklin County	Contact Person Title	Highway Superintendent
Contact Person Name	Michael Ingram	Address Line 1	PO Box 151
E-mail	franklinhiway@yahoo.com	Address Line 2	Franklin, NE
Phone Number	(308) 425-3710	zip code	68939
NACO District	Central		

Proposal Name / Location	Franklin County
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C003114015	T1N R13W SEC7 NL	F and 38 at BOSTWICK DRAINAGE DITCH	Franklin	32.00	28.00	Steel Stringer/Multi-beam or Girder	Other Arterial
C003122305	T2N R15W SEC26 EL	31 & Hiway 136 at FRANKLIN CANAL	Franklin	43.00	24.30	Steel Stringer/Multi-beam or Girder	Local

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C003114015	No	No	155
C003122305	No	No	102

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

This proposal will remove two structures from the Structurally Deficient list. The first structure is Structure No. C003114015 (14015) which spans a small Republican River tributary and would be reconstructed to a non-bridge size culvert pipe structure. The second structure is Structure No. C003122305 (22305) which spans the Franklin Canal and would be repaired to no longer be Structurally Deficient.

The site at 14015 is a good candidate for a culvert pipe structure. The flow capacity will be slightly reduced from the existing bridge, but all hydraulic requirements can still be satisfied while retaining an acceptable roadway overtop return. All adjacent land use is agricultural, so in the event of an overtopping flood, minimal damage will be experienced.

14015 will be designed with toe walls and sheet pile wings. By fabricating this culvert structure with headwalls and toewalls, scour potential has effectively been eliminated. Headwalls also reduce the footprint of the structure by reducing required pipe length. This generally eliminates the need for right-of-way acquisition and accommodates existing fence lines. The proposed structure will be constructed within existing right-of-way.

22305 will require a simple and inexpensive repair to restore the abutments to a much better condition. The repair will simply involve anchoring a C-channel to the existing concrete backwall to more evenly distribute the load from the girders which are currently causing the backwall to spall at bearing locations.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Culvert pipe with manufactured headwalls have been used by Franklin County for several other bridge replacement projects. These structure types have been designed to effectively meet roadway overtop expectations and have not required any routine maintenance. County Forces have successfully installed these structures with current crew and without needing to purchase specialized equipment. Several suppliers are readily available and have previous experience with fabrication of these structures.

14015 will be constructed to a non-bridge size structure, so it can be removed from the NBIS Inventory, and biennial NBIS inspections will not be required, so cost savings will be realized since the County will no longer have to pay for this structure to be inspected regularly.

By constructing a culvert pipe structure instead of a bridge, significant cost savings will occur since materials are generally less expensive and more readily available. The culvert pipe construction timeline is also favorable when compared to bridge construction. Additionally, this structure can be constructed almost any time of the year and not see an increase in project cost or timeline due to constructability issues.

Headwall installation reduces the footprint of the structure and allows for construction within existing right-of-way, resulting in cost and significant time savings since acquisition will not be needed. The length of the culvert structure will also accommodate the design standards for the road cross section while eliminating the need for guardrail and approach guardrail; therefore, cost savings are experienced with both the initial cost of the guardrail and any future guardrail maintenance that may be required.

22305 currently only has the one major issue with the concrete backwalls, and the repair is cost-effective. Since there are few materials required, the repair can be made in a timely manner, and the bridge will be restored to an acceptable condition.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Culvert pipe structures with headwalls and wingwalls are becoming more popular due to their simple design, availability of material suppliers and fabricators, and ease of construction. It is often difficult to improve a roadway overtop return with culverts when the existing structure is of significant size, however, when hydraulics will allow a culvert pipe structure, substantial cost savings occur. These structures are an economical choice in all rural areas of Nebraska due to the simplicity of the structure and ability to safely carry traffic in an efficient manner.

Several suppliers are readily available and have previous experience with fabrication of bridge materials and culvert pipe structures. County Forces generally have the equipment needed to remove existing bridges and install culvert pipe structures with current crew.

22305 has a common backwall design for structure crossing canals, so in the event that similar issues arise, the repair plan can easily accommodate other structures with a concrete backwall like this structure.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

14015 will be a culvert pipe structure, requiring little to no maintenance throughout material lifespan. Culvert materials will meet NDOT Specifications for thickness and lifespan will be maximized. The County will also save money on bridge inspection costs since this structure will no longer be require NBIS routine inspections.

22305 will be repaired to a condition where the structure lifespan is significantly increased with minimal maintenance required, whereas allowing the issue to worsen to a severe condition could lead to bridge closure and a much more extensive repair or even a structure replacement.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

14015 is on an Other Arterial route with an agricultural surrounding. Detouring of agricultural equipment occurs due to the reduced load carrying capacity of the existing bridge. Legally loaded vehicles are restricted from crossing due to the current load posting. This route is one of the most heavily traveled in the Franklin County, so installing a structure that will accommodate all legally loaded vehicles is significant to the traveling public.

22305 currently requires an inexpensive repair that will allow the bridge to remain in service for many years to come while saving Franklin County a significant amount of money by avoiding the need for more extensive repairs or even replacement that could be required if the repair is not completed.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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Follow the instructions on the website for uploading this application and supporting documentation.

If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Harlan	Date of Application	12/3/2020
Agency Name	Harlan County	Contact Person Title	Highway Superintendent
Contact Person Name	Tim Burgeson	Address Line 1	PO Box 379
E-mail	road1@harlancountyne.com	Address Line 2	Alma, NE
Phone Number	(308) 928-9800	zip code	68920
NACO District	Central		

Proposal Name / Location	Royce Bridge
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C004211115	T2N-R20W-SEC UR	2.7E OF STAMFORD at SAPPA CREEK	Harlan	91.00	14.70	Steel Truss - Thru	Local

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C004211115	No	No	30

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C004211115	Replace	Culvert Pipes	40.00	0.00	Contract	\$156,125	\$85,868	Length of pipe shown as 40, but is tentative length.
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$156,125	\$85,868	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Structure No. C004211115 (11115) spans Sappa Creek and would be reconstructed to a culvert pipe structure. Hydraulic Assessment was completed in 2015 for a bridge located 3 miles upstream from this structure. Background work for that Hydraulic Assessment will be used in design of this structure and reduce engineering costs.

The site at 1115 is a good candidate for a culvert pipe structure. The flow capacity will be reduced from the existing bridge, but all hydraulic requirements can still be satisfied while retaining an acceptable roadway overtop return. All adjacent land use is agricultural, so in the event of an overtopping flood, minimal damage will be experienced.

11115 will be designed with toe walls and sheet pile wings. By fabricating this culvert structure with headwalls and toewalls, scour potential has effectively been eliminated. Headwalls also reduce the footprint of the structure by reducing required pipe length. This generally eliminates the need for right-of-way acquisition and accommodates existing fence lines. The proposed structure will be constructed within existing right-of-way.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Culvert pipe with manufactured headwalls have been used by Harlan County for several other bridge replacement projects. These structure types have been designed to effectively meet roadway overtop expectations and have not required any routine maintenance. Skilled contractors are readily available which will result in reduced supplier costs and expedited construction timelines. Several suppliers are readily available and have previous experience with fabrication of these structures.

By constructing a culvert pipe structure instead of a bridge, significant cost savings will occur since materials are generally less expensive and more readily available. The culvert pipe construction timeline is also favorable when compared to bridge construction. Additionally, this structure can be constructed almost any time of the year and not see an increase in project cost or timeline due to constructability issues.

Headwall installation reduces the footprint of the structure and allows for construction within existing right-of-way, resulting in cost and significant time savings since acquisition will not be needed. The length of the culvert structure will also accommodate the design standards for the road cross section while eliminating the need for guardrail and approach guardrail; therefore, cost savings are experienced with both the initial cost of the guardrail and any future guardrail maintenance that may be required.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Culvert pipe structures with headwalls and wingwalls are becoming more popular due to their simple design, availability of material suppliers and fabricators, and ease of construction. It is often difficult to improve a roadway overtop return with culverts when the existing structure is of significant size, however, when hydraulics will allow a culvert pipe structure, substantial cost savings occur. These structures are an economical choice in all rural areas of Nebraska due to the simplicity of the structure and ability to safely carry traffic in an efficient manner.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

11115 will be a culvert pipe structure, requiring little to no maintenance throughout material lifespan. Culvert materials will meet NDOT Specifications for thickness and lifespan will be maximized.

11115 is fracture critical and has been closed for some time due to structural defects. Expensive fracture critical inspections can be eliminated by replacing this bridge with a modern design.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

11115 is on a Local Route that also serves as a bus route and mail route. This structure is fracture critical and very narrow. This structure is currently on the County 6 year road plan for replacement, but Harlan County simply does not have the funds to replace the structure. Structure is currently closed.

Harlan County received flood damage in the July 2019 event on an ER Route that did not receive assistance for repair. Harlan County's share for the repair cost was over \$175,000. This was a major undertaking for our County and has left a huge void in funding for repair/replacement of other structures. In addition, FEMA denied funding assistance on a second structure that had been repaired as a result of flooding. This cost was \$104,000 to fix the bridge and had to be funded solely from County budget.

By selecting this bridge for replacement, Harlan County can begin getting back on track for replacing deficient bridges of importance.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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If you have questions or difficulties please contact:

Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Polk	Date of Application	11/20/2020
Agency Name	Polk County	Contact Person Title	Highway Superintendent
Contact Person Name	Dan Theis	Address Line 1	PO Box 366
E-mail	polkchs@windstream.net	Address Line 2	Osceola, NE
Phone Number	(402) 747-2921	zip code	68651
NACO District	Central		

Proposal Name / Location	Osceola NW Box Culverts
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C007201805	NL 30-15-3 54	7W 5N OF OSCEOLA at CLEAR CREEK	Polk	38.00	20.10	Steel Stringer/Multi-beam or Girder	Local
C007202120	WL 11-15-3 43	4W 7.5N OF OSCEOLA at CLEAR CREEK	Polk	40.00	24.50	Other Stringer/Multi-beam or Girder	Local
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C007201805	No	No	30
C007202120	No	No	30

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

This project is innovative in the fact that it will be replacing two structurally deficient bridges with concrete box culverts. The design will allow for the use of NDOT approved standard plans to reduce the engineering costs. Letting multiple projects would also attract a larger amount of contractors therefore receiving more competitive bids. Polk County will require salvage of the steel girders from C007202120. These girders will be used at a later date to add to the superstructure of C007203605 which is also a structurally deficient bridge.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

This project will save time and reduce costs due to the fact that both of the proposed sites are close in proximity. For this reason, both of the proposed box culverts could be built at the same time which would reduce time during construction. Polk County would utilize NDOT standard plans for box culverts in the construction. Contractors would be familiar with the specifications and requirements during the constuction of the box culverts.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Counties in Nebraska can utilize NDOT standard plans for construction of box culverts. Polk County has chosen to increase the size of the project, by selecting two, to hopefully get better results in the bid process.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

This proposal would save money in the long term due to the fact that box culverts are easier to maintain than that of bridges. The proposed box culverts would not require bridge rails. Not having bridge rails makes it easier and less time consuming during snow removal and roadside mowing.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

The significance is that the proposed box culverts will aid in the safety of the travelling public in Polk County. It will also get two narrower bridges off the system so that farm machinery can pass more safely as well as not being managed by tonnage mandates. Having these two new box culverts will aid in traffic flow for the farm and ranch operations in the area. Heavy machinery has a two mile detour to get around C007202120. However, due to the lack of through roads and minimum maintenance roads, there may be as much as a six mile detour to cross C007201805. Both of these proposed sites have little debris upstream that would deter constructing box culverts versus bridges.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

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Jodi Gibson

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jodi.gibson@nebraska.gov

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APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Sherman	Date of Application	12/3/2020
Agency Name	Sherman County	Contact Person Title	Highway Superintendent
Contact Person Name	Lance Harter	Address Line 1	47584 Hwy 92
E-mail	lharter@oakcreekengineering.com	Address Line 2	Loup City, NE
Phone Number	(308) 745-1524	zip code	68853
NACO District	Central		

Proposal Name / Location	Bridges to Culverts
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C008213605P	C-149	1S OF LITCHFIELD at STREAM	Sherman	32.00	24.00	Wood or Timber Stringer/Multi-beam or Girder	Local
C008224310	C-262 Booboo	.5N OF ASHTON at STREAM	Sherman	28.00	27.60	Wood or Timber Stringer/Multi-beam or Girder	Local
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C008213605P	No	No	68
C008224310	No	No	42

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C008213605P	Replace	Culvert Pipes	0.00	40.00	County Forces	\$99,790	\$54,885	Headwalls and wingwalls
C008224310	Replace	Culvert Pipes	0.00	40.00	County Forces	\$82,190	\$45,205	Headwalls and wingwalls
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$181,980	\$100,090	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

Each site is a good candidate for culvert pipe structures with scour mitigation in the proposed design. By installing headwalls and toewalls, scour potential has effectively been eliminated. Headwalls also reduce the footprint of the structure by reducing required pipe lengths. This generally eliminates the need for right-of-way acquisition and accommodates existing fence lines. The proposed structures will be constructed within existing right-of-way. The proposed structures will be designed to eliminate obstacles within the horizontal clear zone and meet adequate return flow periods for road overtopping.

Culvert structure would be replaced by County Forces, value will be added to the projects since County Forces are not for profit.

USACE Nationwide 14 Corp Permits are anticipated; no wetland mitigation will be required.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Competitive bidding for culvert materials had been evident with previous projects similar to these replacement sites.

Sherman County Forces will complete installation of the culvert pipe site to further reduce project cost by eliminating contractor mark-up cost. Sherman County currently has the equipment needed to complete installation.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Several suppliers are readily available and have previous experience with fabrication of culvert pipe structures. County Forces generally have the equipment needed to install these structures with current crew since large bridge construction machines like cranes and pile drivers are not required.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

Culvert type structures require little to no maintenance throughout material lifespan. Culvert materials will meet NDOT Specifications for thickness and lifespan will be maximized. Headwall and toe wall materials will be the same gauge as the culvert pipe material in order to extend the lifespan of the structure.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

These structures are undersized for today's agricultural traffic demand. Detouring of agricultural This proposal is significant to Sherman County because it will allow the agricultural traffic to take the shortest route possible to their destination. Additional traffic is must route around these bridges due to the load posting.

Both sites are on the County 1 & 6 Year Road Plan for replacement.

C008213605P

Original construction predates 1935

Current load posting is 9 ton

Structure is narrow.

C008224310

Original construction predates 1935

Current load posting is 8 ton

Bridge is scour critical with undermining occurring at the north abutment.

County budgets have been severely stretched due to 2019 flooding events and selection by the program will help the county bridge program get back on track with replacement of deficient bridges.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

100% percent complete

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Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

90% percent complete

Applying County	Frontier	Date of Application	12/3/2020
Agency Name	Frontier County	Contact Person Title	Project Engineer
Contact Person Name	Bruce Raddatz	Address Line 1	PO Box 23
E-mail	braddatz@miller-engineers.com	Address Line 2	Holdrege
Phone Number	308-995-6677	zip code	68949
NACO District	West Central		

Proposal Name / Location	Frontier Sec 5-T8N-R27W
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information							
NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C003221405	350827.04	1S 9E OF CURTIS at MITCHELL CREEK	Frontier	33.00	19.50	Wood or Timber Stringer/Multi-beam or Girder	Local
<Enter SN here>							

Eligibility			
NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C003221405	No	No	20

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C003221405	Replace	Concrete Box Culvert			Contract	\$300,000	\$165,000	Triple 10'x12'x70'
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$300,000	\$165,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

If selected, Frontier County will eliminate one of their many structurally deficient bridges with a reinforced concrete box culvert. This will eliminate scour potential and future maintenance by the county. The existing timber bridge was constructed in 1935 and has a sufficiency rating of only 33 and posted at 15 ton.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

Since reinforced concrete box culverts are common and familiar to bridge contractors, several competitive bids should be received. Contractors are becoming very efficient at constructing concrete box culverts so construction time will be a lot less than a conventional bridge. The county should see savings in engineering costs also. Costs for guardrail will not be included for the proposed box culvert.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Standardized box culvert structure plans are available to all counties upon request from the Nebraska Department of Transportation.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

Properly sized concrete box culverts do not require much maintenance or upkeep over their extremely long life expectancy. Since guardrail will probably not be called for, maintenance of guardrail will not be necessary.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

Bridge Number C003221405 is on a local road with relatively low traffic count. The existing posting is 15 ton which is restrictive. The existing bridge has no railing which is hazardous to the motoring public. This project will be in the 2021 1 year plan. If selected, this project will be a significant improvement for the county.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

Submittal Instructions:

90% percent complete

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Jodi Gibson

402-479-4337

jodi.gibson@nebraska.gov

Thank you for your work on behalf of Nebraska's bridges!

APPLICATION FORM County Bridge Match Program 2021

100% percent complete

Applying County	Hayes	Date of Application	11/27/2020
Agency Name	Hayes County	Contact Person Title	Highway Superintendent
Contact Person Name	Phillip Dixon	Address Line 1	31085 280th Rd
E-mail	dixonphillip11@gmail.com	Address Line 2	Pleasanton, NE
Phone Number	(308) 388-3471	zip code	68866
NACO District	West Central		

Proposal Name / Location	Palisade North / Frenchman Creek
Multi-County Proposal	No
Proposal Priority Number	1

Instructions
required input
changes allowed
locked - no input

Structure Information

NBI Structure Number	Local Name	Location	County	Existing Length (ft)	Existing Total Width (ft)	Existing Type	State Classification
C004302510P	0.00	IN OF PALISADE at FRENCHMAN CREEK	Hayes	82.00	25.10	Steel Stringer/Multi-beam or Girder	Collector
<Enter SN here>							

Eligibility

NBI Structure Number	Min. Maintenance Road (yes/no)	Advertised for Construction bids?	Average Daily Traffic
C004302510P	No	No	60

Proposal Construction Details								
NBI Structure Number	Proposed Action	Proposed Structure Type	Proposed Length (ft)*	Proposed Total Width (ft)*	Workforce	Total Estimated Bridge Cost	Anticipated Reimbursement from CBMP	Comment
C004302510P	Replace	Steel Girder	70.00	28.00	Contract	\$442,000	\$200,000	Approach grading by County Forces.
* Length and Width not required for Culverts. Please provide culvert size in comments.					total	\$442,000	\$200,000	OK

Criteria 1 - Innovation (0-20 points)

Describe what is innovative about this proposal.

This bridge replacement project in Hayes County will remove a 3-span concrete bridge with decayed timber piling and replace it with a concrete deck, steel girder bridge. This structure is only 1 mile north of Palisade and on the main traveled road to ag-land north of town, excessive detours are required if this bridge is not open. Pile decay will likely soon cause load capacity adjustment to restrict legal loads.

The plans for replacing a bridge with a bridge is also favorable for the environment as there is considerable amount of standing water which would cause costly dewatering and the placement of a C.M.P. or Box Culvert structure would cause too much impact to the surrounding creek banks and stream bed, resulting in wetland mitigation.

Recent bid lettings for bridges in this area attracted 6 bidders so we feel the bidding environment for structures like this is desirable.

Criteria 2 – Cost or time savings (0-5 points)

Identify aspects of this proposal that saves time and reduces costs.

This clear span, concrete deck steel girder bridge can be constructed by several interested contractors. Concrete deck, steel girder bridge designs are common in today's county road bridge replacement options. Materials and skilled contractors are readily available, which will result in reduced supplier costs and expedited construction timelines.

By selecting a clear span structure, we will save time by eliminating work within the channel and active flow. This structure can be constructed almost any time of the year and not see an increase in project cost due to constructability issues. Channel impacts will be avoided to the greatest extent practical and permitting can be expedited.

Criteria 3 – Sustainability or transferability of innovation (0-10 points)

Describe how the innovation can be shared and used by other Counties.

Several suppliers are readily available and have previous experience with fabrication of bridge materials. County Forces have the equipment needed to complete the approach grading. This project will need minor approach road grade change that County Forces plan to complete.

Additional right-of-way needs are not anticipated for this project nor is wetland mitigation anticipated.

Criteria 4 – Long Term Maintenance Savings (0-5 points)

Describe how this proposal promotes savings of long term maintenance costs.

Long term savings in maintenance costs should be conceived in this project by building a great bridge that would last 100 years or more. Maintenance would be minimal as the structure would be very stable and well constructed to last many years. The bridge structure of long life verses a pipe structure of maybe 40 years of life would promote savings of early replacement and possible yearly costs of debris removal. Concrete box structure would have similar life span to a bridge but would have costs of debris and silt removal and considerable costs for dewatering because of standing and subsurface water.

Criteria 5 – Project Significance (0-20 points)

Describe what makes this proposal significant to your county.

This project is on road classified as a Collector that is the main road for farm to market traffic for Hayes County and its economic agriculture environment. Agriculture is the most significant economic income for Hayes County and a large area of the county must cross this proposed structure. Oil production has also become a economic factor in Hayes County and to keep this product in production and processing it must have traffic moving on roads and structures that are very viable.

The existing structure at this site has several timber piling 50% rotted away and loss of the structure would cause great determent for the traveling public of Hayes County because of the lengthy 3 mile detour it would cause loss of financials and time.

Since the previous CBMP request, Hayes County has had another large bridge on a well traveled route load posted to a reduced capacity. That structure is not on the candidate list for CBMP, so Hayes County will be funding the replacement with local funds only. Hayes County does not have the tax base to keep up with bridge replacement and repair. Outside sources of funded is the only way to work back towards a safe and reliable infrastructure on the main routes within Hayes County.

Criteria 6 – Needs (0-20 points)

Calculated by scoring committee based on the counties SD bridges.

Criteria 7 – Equity (0-20 points)

Determined by scoring committee based on the number of projects awarded to the county.

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