

Minutes of Meeting

Souris River Joint Water Resource Board

Thursday, February 9, 2017

A regular meeting of the board of directors of the Souris River Joint Water Resource Board was called to order by Chairman David Ashley on Thursday, February 9, 2017, in the Community Room of the Minot City Auditorium in Minot, North Dakota. Joint Board members attending the meeting were Dave Ashley, Clif Issendorf, Dan Jonasson, Roger Sauer and Tom Klein. A roster of those attending the meeting is listed on Attachment A.

The Joint Board discussed the proposed Agenda for the meeting. The following revisions were made to the Agenda: Agenda Item 16(a) was added to discuss FEMA Flood Insurance; Agenda Item 16(b) was added to allow Frank Durbian of the U.S. Fish and Wildlife Service to provide an updated flow forecast. Dan Jonasson made a motion to adopt the Agenda, as revised. Tom Klein seconded the motion. The motion passed without opposition.

The Minutes of the January 12, 2017, meeting were discussed. Roger Sauer made a motion to approve the Minutes of the January 12, 2017, meeting, and Clif Issendorf seconded the motion. The motion was approved without opposition.

The Joint Board discussed Agenda Item No. 4 regarding bills. The following bills were discussed:

- Barr Engineering	(Environmental and Design)	\$52,548.69
	(MI-2A Construction Perkett)	\$6,607.50
	(USACE Feasibility Study)	\$350.00
	(StARR Program)	\$13,453.76
	(BU-1 Burlington)	\$70,271.26
	(Outlaw Creek)	\$1,212.50
- Houston Engineering	(Engineering & Design)	\$33,289.93
	(MI-5 4 th Ave Tieback)	\$370.00
- Ackerman-Estvold	(Administration)	\$16,916.50
- Scherbenske Inc.	(MI-2A Construction Perkett)	\$21,435.03
- ND Guaranty	(StARR Program)	\$510,040.53
- TOTAL		\$726,495.70

Clif Issendorf questioned the lack of mobilization charges to the bill from Scherbenske Inc. Ryan Ackerman explained that the mobilization price is a bid item that is paid in proportion to the completion of the project as recommended by the construction engineers. Tom Klein made a motion to approve the bills for a total amount of \$726,495.70. Roger Sauer seconded the motion. The motion was approved without opposition.

Emily Huettl provided an update to the Joint Board regarding the StARR Program. Emily Huettl indicated that the first two closings of the acquisitions of the StARR Program were scheduled for the following week, and that another four to six properties were closing within the next month. Emily Huettl requested the Joint Board to consider the Agenda Items No. 5(a), 5(b), and 5(c).

- In order to issue formal authority to Emily Huettl to make binding, written offers in accordance with the StARR Policy, the Joint Board considered Agenda Item No. 5(a). Roger Sauer made a motion to authorize the StARR Program Manager, Emily Huettl, to sign StARR Agreements within the bounds of the approved StARR Policy. Tom Klein seconded the motion. The motion passed without opposition.
- Previously, Chairman David Ashley had appointed a committee to handle the StARR Offer Value Appeals Policy, consisting of Clif Issendorf, Roger Sauer, Bruce Walker, and Tom Larson. Emily Huettl recommended that the Joint Board formally approve the Chairman's appointments to the StARR Appeals Committee. Dan Jonasson made a motion to approve the Chairman's appointments listed above. David Ashley seconded the motion. Clif Issendorf provided a clarification that Roger Sauer had presided as the Chairman at the last StARR Appeals Committee meeting. The motion was passed without opposition.
- The Joint Board discussed Emily Huettl's memo summarizing the recommendations of the StARR Appeals Committee regarding three separate appeals.
 - The Joint Board discussed the recommendation of the Appeals Committee to deny Appeal No. 1 regarding vacant residential lots. Clif Issendorf moved to approve the Appeal Committee's recommendation to deny Appeal No. 1. Dan Jonasson seconded the motion. Shelly Wepler from Ward County questioned whether a denial of compensation for vacant land was consistent with other successful applicants who are compensated for land near structures. The Joint Board discussed that the StARR Policy was intended to compensate property owners for the loss of structures. A vote was cast. The motion was approved without opposition.
 - The Joint Board discussed the recommendation of the Appeals Committee to deny Appeal No. 2 regarding an application for compensation that the Appeal Committee found to be a duplication of benefits. Tom Klein made a motion to approve the Appeals Committee's recommendation to deny Appeal No. 2. Dan Jonasson seconded the motion. The motion was approved without opposition.
 - The Joint Board discussed Appeal No. 3 regarding the appraised value of an eligible structure. After reviewing the documentation provided by the applicant, the Appeals Committee recommended to revise the offer by reducing the depreciation of the structure, which would therefore increase the offer. Dan Jonasson made a motion to

approve the Appeal Committee's recommendation to revise the offer. Tom Klein seconded the motion. The motion was approved without opposition.

Ryan Ackerman provided the Board with an update on the United States Corps of Engineers Feasibility Study. Ryan Ackerman indicated that the Study had reached the alternatives milestones and that the Study would be moving forward with the next milestone. Ryan Ackerman reported that the USACE has taken a modest interest in a portion of the Project, which is essentially the collecting link between Phase I, Phase II, and Phase III—the Maple Diversion. Ryan Ackerman indicated that the Feasibility Study process is scheduled to be completed in December of 2019 at this time, and that the Project could be considered for federal funding at that time.

Jerry Bents gave the Joint Board an update on Phase MI-1, which is the Broadway to 3rd Street segment of the Project (4th Avenue Floodwals). Jerry Bents also gave the Joint Board an update on MI-5, which is the northeast extension of the Project (4th Avenue Tieback).

Jason Westbrook provided the Joint Board with an update on Phase MI-2 (Napa Valley) and MI-3 (Forest Road) Jason Westbrook indicated that Barr Engineering has nearly completed the design for the above-described segments, and that recent efforts have been directed towards the Environmental Impact Statement. Ryan Ackerman indicated that the EIS will be signed in July, and that the entire package will be bid, but no contract will be awarded until all permits are in hand. Ryan Ackerman indicated that the Project is still on track for 2017 construction.

Jason Westbrook also provided the Joint Board with the BU-1 (Burlington) portion of the Project. Jason Westbrook indicated that the geotechnical work and other work relating to Burlington reach is under way.

Ryan Ackerman provided the Joint Board with an update regarding the Independent Peer Review provided by HDR Engineering. Ryan Ackerman presented Task Order No. 2 (attached as Attachment B) and recommended its approval by the Joint Board. Tom Klein moved to approve Task Order No. 2. Roger Sauer seconded the motion. Clif Issendorf questioned HDR's billing rates. Ryan Ackerman indicated that the rates for HDR and its consultant Schnabel Engineering were included to Task Order No. 2. A vote was cast. The motion was approved without opposition. Ryan Ackerman presented Task Order No. 3 (attached as Attachment C) and recommended its approval. Dan Jonasson motioned to approve Task Order No. 3. Tom Klein seconded the motion. The motion was approved without opposition.

The Joint Board discussed the Utility Relocation Agreements (URA's) between the Joint Board and Montana-Dakota Utilites Co. (MDU), Midcontinent Communications, SRT Communications, and XCEL Energy. The final proposed URA's were included in the Board Packet.

- Jack Dwyer directed the Board's attention to the Joint Board's approved Utility Relocation Policy and indicated that the above-named utility companies had taken issue with a provision in the initial URA's that were presented to the utility companies, which required the utility companies to pay for utility relocations for properties that were being bought out as part of the flood project. This provision aligned with the Joint Board's Utility Relocation Policy, but was removed

as part of the negotiations due to the strong resistance from the utility companies. Jack Dwyer recommended that, in order to approve the URA's, the first order of business would be to strike provision D.1.a from the Utility Relocation Policy, so that the final URA's would align with the Joint Board's Utility Relocation Policy. A discussion ensued. Roger Sauer made a motion to strike D.1.a. from the Utility Relocation Policy. Clif Issendorf seconded the motion. A vote was cast. Roger Sauer, Tom Klein, Clif Issendorf, and David Ashley voted in favor of the motion. Dan Jonasson voted in opposition of the motion. Motion carried.

- The Joint Board discussed the four URA's. Jack Dwyer reported that MDU had recently requested a change to the MDU URA that was included in the Board Packet. Specifically, MDU had requested that Section 14 of the URA be eliminated. Jack Dwyer handed out a proposed final URA for MDU, which incorporated the change requested by MDU. Dan Jonasson made a motion to accept the MDU URA that was presented to the Board by Jack Dwyer. Tom Klein seconded the motion. The motion was approved without opposition. The URA that was approved by the Joint Board is attached as Attachment D.
- The Joint Board discussed the URA's with Midcontinent Communications, SRT Communications, and XCEL Energy, which were included in the Board Packet. Tom Klein made a motion to approve the URA's with Midcontinent Communications, SRT Communications, and XCEL Energy. Dan Jonasson seconded the motion. The motion was approved without opposition.
- The Joint Board discussed the Amendment No. 2 to the Sub-Agreement between the Joint Board the City of Minot which was provided in the Board Packet. Jack Dwyer indicated that the Amendment No. 2 had been negotiated with the lawyer for the City of Minot to allow the City of Minot to review and approve all utility work prior to approval by the Joint Board's design consultants. Tom Klein moved to approve Amendment No. 2 to the Sub-Agreement between the Joint Board and the City of Minot. Dan Jonasson seconded the motion. The motion was approved without opposition.

Ryan Ackerman provided a legislative update to the Joint Board. Ryan Ackerman indicated that , preliminarily, \$70M to \$80M will be coming from the State of North Dakota, with a potential for up to a \$120M more via bonding. Ryan Ackerman indicated that a bill had been proposed by Representative Jim Schmidt which could be potentially damaging to the Project, in that it would limit the State's participation in a flood control project that provides protection in excess of a 100-year flood event. There are potential amendments to the bill which would reduce or eliminate any impact on the Project.

Ryan Ackerman provided an update regarding local funding. Ryan Ackerman reported the City of Minot has created a committee to examine potential changes to its sales tax structure. Under current projections, the one-half cent sales tax would not cover the local match in a timely manner. Ryan Ackerman indicated that committee is considering a number of needs, and how to meet those needs. Bob Schempf provided comments relating to the method of funding for the previous flood project. Dan

Jonasson indicated that the committee and the Joint Board will have to collaborate and explore all options to meet future needs.

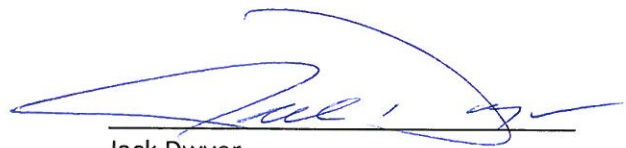
Ryan Ackerman provided an update to the Joint Board on current Souris River Basin conditions. Ryan Ackerman indicated that on the Mouse River Plan website, a new tool called "Current Conditions" has been added to access the most recent data from the National Weather Service for snow-water equivalents, which includes historical data for drawing comparisons.

Frank Durbian from the Fish and Wildlife Service provided an update to the Joint Board on current flow conditions:

- Frank Durbian indicated that the flow at Alameda is currently 120 cfs, which will be increasing to 141 cfs in the next few days, with a goal 211 cfs to reduce the elevation of Alameda.
- Frank Durbian reported that the goal at Lake Darling would be to drop the lake 2 ft. from 1596 ft. to 1594 ft. in order to provide an additional 20,000 acre feet of storage. Currently, the flow is 160 cfs, which will be increasing 50 cfs every 4 or 5 days until the flow reaches 400 cfs, depending on how the River responds.
- Regarding the J. Clark Salyer Refuge, Frank Durbian reported that Gate 357 has open all winter to move water.
- Lastly, Frank Durbian reported that Canada is forecasting minor flooding at this time, and that Canadian dams are down to their winter operating levels.
- Roger Sauer indicated that the gates are closed at Mouse River Park.

David Ashley reported that rural residents have reported surprising FEMA flood insurance premium rate increases. Tom Klein indicated that one couple, who had been paying \$477 per year, received a letter indicating that their new rate was \$5,069 per year. Shelly Wepler indicated that Ward County had been receiving similar reports, and provided a process for impacted individuals to seek relief. Bob Schempf indicated that it would be beneficial to maintain the old levels as long as possible. Ryan Ackerman indicated that the Joint Board should continue to advise landowners to maintain or obtain flood insurance in order to realize the maximum increase in premiums of 18% per year until the actuarial rates are reached to realize flood insurance cost savings.

There being no further business, the meeting was adjourned.



Jack Dwyer

3330 Fiechtner Dr. • Suite #102 • Fargo, ND 58103
PHONE: (701) 235-2040 EMAIL: Jack@NDwaterlaw.com

<u>NAME</u>	<u>Organization</u>
Gally Johnson	Senator Hoeven
Dan Jonassen	City of Minot / SRJB
Bob Schemp	
Shay Wypien	Ward County
Tom Mc	Ward Co / SRJB
Josh Wolke	The Minot voice.com
SHANNON STRAIGHT	CITY of MINOT. WARD 1
Mark Lyman	Odney
Jason Westhac	Barr
Duffy Zimmerman	Achenman-Estold

Task Order No. 02
January 26, 2017

**TYPE II INDEPENDENT EXTERNAL PEER REVIEW (IEPR) / SAFETY ASSURANCE REVIEW (SAR)
Mouse River Enhanced Flood Protection Project, North Dakota
Design Phase BU-1**

Applicable to Agreement Dated September 18, 2015

between

HDR
4503 Coleman St, Suite 105
Bismarck, ND, 58503

Souris River Joint Water Resources Board
PO Box 5005
Minot, ND 58702

Designated Representative:

Dennis Reep, Project Manager

Designated Representative:

David Ashley, Chairman

I. Scope Language

1. Background and Overview

The Souris River is officially called the Mouse River by the State of North Dakota, while it is recognized as the Souris River by the national and international communities. The Mouse River Basin encompasses a total of 23,600 square miles in the United States and Canada, about 9,000 square miles of which are in the United States. The river itself is about 700 miles long with 360 miles in the United States, all in North Dakota. A major tributary to the Mouse River, called the Des Lacs River, enters at Burlington, ND. The Mouse River has experienced severe flooding over the years, most often due to snowmelt runoff. Major flooding prior to the 2011 event occurred in 1882, 1904, 1969, 1975, 1976, and 1979.

In June, 2011 the Mouse River basin experienced catastrophic flooding as the result of significant snow pack and substantial rains throughout the basin and subsequent torrential rains in the upstream Canadian reaches. The flood resulted in a peak flow rate of approximately 27,400 cubic feet per second through the City of Minot. Damage occurred throughout the entire Mouse River basin. The 2011 flood impacted 4,700 commercial, public, and residential structures from Sherwood to Westhope and sustained building and content damage of \$690 million (USACE). There were significant additional costs of flood fighting efforts, infrastructure damage, agricultural damage, and rural transportation damages. An estimated 45,000 acres of pasture and crop land were damaged, in addition to numerous rural farmsteads and rural residences throughout the basin.

In response to the 2011 flood, and decades of smaller but frequently damaging floods, the SRJB requested the North Dakota State Water Commission (NDSWC) initiate a flood protection plan for the Mouse River basin. In September, 2011 the NDSWC commissioned the MREFPP, with the goal of reducing damages to urban and agricultural interests from future flooding. The comprehensive plan consists of the following components:

- MREFPP Preliminary Engineering Report (PER) for the reach of the Mouse River from Burlington to Velva and Mouse River Park. (February 2012)
- MREFPP – Rural Flood Risk Reduction Alternatives Evaluation. (Rural Alternatives Study) (May 2013)

The PER generally focused on structural flood protection of the urban areas including Burlington, Minot, Sawyer, and Velva. Each of these communities has an existing federally authorized flood protection system. Modification and expansion of the existing flood protection systems in these communities will require obtaining authorization from the USACE through a 408 approval process. The MREFPP recommends that protection be constructed to levels reached during the 2011 flood. For the Minot portion of the MREFPP, the PER has established a design flow rate of 27,400 cubic feet per second with flood protection features having a minimum of three feet of freeboard.

Implementation of certain features of the MREFPP has already begun. Designs of three critical phases of the project within the City of Minot were finished in 2016 (including the IEPR/SAR for those phases under Task Order 1) with anticipated construction to begin in 2017 with funding secured through the State of North Dakota. These three phases include levees, floodwalls, pump stations, and closure structures that will assist Minot in flood fighting in the interim while the remaining portions of the MREFPP are designed and implemented over the next 15 – 20 years. The initial 3 phases of the Minot portion of MREFPP consist of:

- Phase MI-1 (previously referred to as Phase 1): 4th Ave Floodwalls, Street Closure Structures and Utility Modifications
- Phase MI-2 (previously Phase 2): North Napa Valley Levees, Street Extension and Utility Modifications
- Phase MI-3 (previously Phase 3): North and South Forrest Road Levees, Street Closure Structures and Utility Modifications

The SRJB has obtained funding for the preliminary and final design engineering services for Phase BU-1 and MI-5 from the NDSWC. Phase BU-1 consists of the Burlington reach upstream of Minot. The state has appropriated funds for construction of Phases BU-1 and MI-5, and construction is anticipated to commence in 2019. These efforts consist of:

- Phase BU-1: Levees, Floodwalls, 3 Street Closure Structures, 2 Pump Stations, and Utility Modifications
- Phase MI-5: 4th Avenue Tieback Levee, Lift Station, and Utility Modifications

Environmental studies for the reach from Burlington to just downstream of Minot are in the process of being completed through a cooperative effort with the USACE.

All phases of the MREFPP are intended to be designed and constructed to USACE standards to qualify for inclusion in the Rehabilitation and Inspection Program (RIP), under Public Law 84-99. The SRJB has developed a set of Project Design Guidelines to aid in this intention and to provide consistency and uniformity to the process.

The hydrology and hydraulics (H&H) models that form the basis of the project were reviewed in Task Order 1 under this contract for the first 3 design phases (MI-1 through MI-3), and given the alignment from the PER will not be altered significantly, the review under this task order may be at a reduced level of effort. The same approach may be applied to the other features of the project to a lesser extent to the structural measures in Phases BU-1 and MI-5, although they will still require robust review due to the unique features each site presents. These features will be the focus of this Scope of Work (SOW). The measures include levees, floodwalls, closure structures, and pump stations, which will require property acquisition and significant underground utility relocation.

Federal permits/approvals and associated review under the National Environmental Policy Act (NEPA) pose significant challenges to moving the comprehensive MREFPP forward. The SRJB, in conjunction with the USACE, has pursued the reach of the Mouse River from upstream of Burlington to downstream of Minot as an initial environmental focus. It is a hydraulically independent from upstream and downstream reaches and includes project features that are authorized for design. Federal regulatory approvals will be required for portions of the project because of modification to the existing USACE civil works project. The most significant approvals will be the USACE Section 408 approval that is required when existing federal facilities are modified, and Section 404 permits that are required when fill is placed in the waters of the U.S. The environmental reviews are expected to be completed in early 2017, paving the way for a 2017 construction start on the initial three phases of the project. Subsequent environmental assessments will be addressed in the future for other identified MREFPP features as needed. A review of the environmental process was not included in this or previous IEPR/SAR task orders.

Project phases MI-1, MI-2, and MI-3 were designed and constructed under multiple contracts. The same will be true for Phases MI-5 and BU-1.

2. Project Description

Phase BU-1, also referred to as the Burlington Levee System, is located on the west (right) side of the Des Lacs River and the Mouse River, beginning at the intersection of Johnson Street and Park Road at the upstream (north) end and terminating at the railroad embankment on the south end directly across from the intersection of Durango Drive and Johnson Street. The confluence of the Des Lacs River and Mouse River is located approximately half way along the alignment, with the upstream reach protecting the City of Burlington from the Des Lacs and the downstream reach protecting against the Mouse. The alignment parallels or coincides with an existing USACE levee, which begins just upstream of the confluence and terminates in the same general vicinity of Phase BU-1. This phase will also include the construction of the Valley Pump Station and the Johnson Addition Pump Station. Approximately 1,000 feet of floodwall and 7,600 feet of levee will be installed which will require utility modifications and relocations. Three closure structures will be incorporated into the phase, one at Park Road crossing and two at the entrances to the existing ball diamonds (Valley Avenue and River Road). The final design (plans and specs) are anticipated to be completed in 2017, with construction anticipated to start in 2018 or 2019. The figure below shows the general alignment and major features of Phase BU-1.

A task order (Task Order 3) will be conducted concurrently to this task order for the IEPR/SAR for Phase MI-5.



3. Objective

The objective of this work is to assess, analyze, interpret, and evaluate design/engineering and construction criteria through a process known as Type II Independent External Peer Review (IEPR) Safety Assurance Review (SAR) for the Mouse River Enhanced Flood Protection Project, Minot, North Dakota. Reviews will be in general accordance with the Water Resources Development Act (WRDA) 2007 (Public Law 110-114) Section 2035, and the procedures described in USACE, Civil Works Review Policy (Engineer Circular (EC) 1165-2-214, dated 15 December 2012).

IEPR typically assesses the quality of data collection procedures, the robustness of the methods employed, the appropriateness of the methods used, the extent to which the conclusions follow from the analysis, and the strengths and limitations of the overall products.

The IEPR will be conducted by subject matter experts with extensive experience in engineering issues associated with flood risk reduction. The subject matter experts will be charged with responding to specific technical questions as well as providing a broad technical evaluation of the overall project. The review panel shall focus on answering the general questions listed in Appendix B for each phase of the project.

The IEPR panel of experts will not perform a detailed review of calculations but shall assess whether the data, models, and assumptions made to develop the design are adequate. The panel should evaluate whether the interpretations of analysis and conclusions based on data and analysis are reasonable. The review panel is granted the flexibility to bring important issues to the attention of decisions makers, however, the review panelists are instructed to not make a recommendation on whether a particular alternative should be implemented. Panelists may, however, offer their opinions as to whether there are sufficient analyses upon which to base a recommendation. Panelists should avoid findings that become "directives" in that they call for modifications or additional studies or suggest new conclusions or

recommendations. The panel team shall be responsible for ensuring that all comments represent the group, be non-attributable to individuals, and where there is lack of consensus, note the non-concurrence and why.

Project Stakeholder representatives may attend panel meetings, but may not participate in the management or control of the group. Stakeholders must refrain from participating in the development of any reports or final work product of the group.

The review may reveal additional documentation that will be required for the IEPR. The IEPR Team will request additional documentation (if necessary).

For review of each specific project phase, it is anticipated that there will be a design review at 60% or greater milestone completion. IEPR teams are not expected to be knowledgeable of Army and administration policies, nor are they expected to address such concerns. However, an IEPR team should be given the flexibility to bring important issues to the attention of decision makers.

4. References

The following references to USACE regulations shall be followed in conducting the IEPR. The most recent documents and subsequent updates shall be used and are available at <http://www.publications.usace.army.mil/>. The Project Stakeholders and IEPR Team shall recommend any additional references or criteria not listed for a determination of adding them to the Scope of Work.

General

- EC 1165-2-214, Water Resources Policies and Authorities - Civil Works Review 15 December 2012
- EM 385-1-1, Safety and Health Requirements, 15 September 2008
- ER 1110-1-12, Engineering and Design - Quality Management, 31 March 2011 (change 2)
- ER 1110-2-112, Required Visits to Construction Sites by Design Personnel, 15 April 1992
- ER 1110-2-1150, Engineering and Design - Engineering and Design for Civil Works Projects, 31 August 1999
-
- ER 1180-1-6, Contracts - Construction Quality Management, 30 September 1995
- Water Resources Development Act of 2007, Sections 2034 & 2035, Pub. L. 110-114. Privacy Act, 5 U.S.C. § 522a as amended

Engineering Geology

- EM 1110-1-1804, Engineering and Design - Geotechnical Investigations, 01 January 2001
- ER 1110-1-1807, Engineering and Design - Procedures for Drilling in Earth Embankments, 01 March 2006
- EM 1110-1-2908, Engineering and Design - Rock Foundations, 30 November 1994
- EM 1110-2-2901, Engineering and Design - Tunnels and Shafts in Rock, 30 May 1997
- EM 1110-1-1802, Geophysical Exploration for Engineering and Environmental Investigations, 31 August 1995
- ER 1110-2-1806, Engineering and Design - Earthquake Design and Evaluation for Civil Works Projects, 31 July 1995

Geotechnical Engineering

- EM 1110-2-1901, Engineering and Design - Seepage Analysis and Control for Dams, 30 April 1993
- EM 1110-2-1902, Engineering and Design - Slope Stability, 31 October 2003
- EM 1110-2-1913, Engineering and Design - Design and Construction of Levees, 30 April 2000
- EM 1110-2-1914, Engineering and Design: Design, Construction and Maintenance of Relief Wells, 29 May 1992

- EM 1110-2-2300, Engineering and Design - General Design and Construction Considerations For Earth and Rock-Fill Dams, 30 July 2004
- EM 1110-2-2502, Engineering and Design - Retaining and Flood Walls, 29 September 1989
- EM 1110-2-2504, Engineering and Design - Design of Sheet Pile Walls, 31 March 1994
- EM 1110-2-2906, Engineering and Design - Design of Pile Foundations, 15 January 1991
- EM 1110-2-1908, Engineering and Design - Instrumentation of Embankment Dams and Levees, 30 June 1995
- ER 1110-2-103, Engineering and Design - Strong-Motion Instruments for Recording Earthquake Motions on Dams, 10 December 1981
- ER 1110-2-110, Engineering and Design - Instrumentation for Safety Evaluations of Civil Works Projects, 8 July 1985

Materials Engineering

- ER 1110-1-1901, Project Geotechnical and Concrete Materials Completion Report for Major USACE Project, 22 February 1999
- EM 1110-2-1906, Laboratory Soils Testing, 20 August 1986
- ER 1110-2-1911, Engineering and Design - Construction Control for Earth and Rock-Fill Dams, 30 September 1995
- EM 1110-2-2000, Engineering and Design - Standard Practice for Concrete for Civil Works Structures, 31 March 2001
- EM 1110-2-2301, Test Quarries and Test Fills, 30 September 1994
- EM 1110-2-2302, Engineering and Design - Construction with Large Stone, 24 October 1990

Structural Engineering

- EM 1110-2-2002, Evaluation and Repair of Concrete Structures, 30 June 1995
- EM 1110-2-2006, Engineering and Design - Roller-Compacted Concrete, 15 January 2000
- EM 1110-2-2100, Engineering and Design - Stability Analysis of Concrete Structures, 1 December 2005
- EM 1110-2-2102, Waterstops and Other Prefomed Joint Materials for Civil Works Structures, 30 September 1995
- EM 1110-2-2104, Engineering and Design - Strength Design for Reinforced-Concrete Hydraulic Structures, 20 August 2003
- EM 1110-2-2105, Engineering and Design - Design of Hydraulic Steel Structures, 31 May 1994
- EM 1110-2-2200, Engineering and Design - Gravity Dam Design, 30 June 1995
- EM 1110-2-2201, Engineering and Design - Arch Dam Design, 31 May 1994
- EM 1110-2-2400, Engineering and Design - Structural Design and Evaluation of Outlet Works, 02 June 2003
- EM 1110-2-2502, Engineering and Design - Retaining and Flood Walls, 29 September 1989
- EM 1110-2-2504, Engineering and Design - Design of Sheet Pile Walls, 31 March 1994
- EM 1110-2-2701, Engineering and Design - Vertical Lift Gates, 30 November 1997
- EM 1110-2-2906, Engineering and Design - Design of Pile Foundations, 15 January 1991
- EM 1110-2-4300, Instrumentation for Concrete Structures, 30 November 1987
- EM 1110-2-6051, Engineering and Design - Time-History Dynamic Analysis of Concrete Hydraulic Structures, 22 December 2003
- EM 1110-2-6053, Engineering and Design - Earthquake Design and Evaluation of Concrete Hydraulic Structures, 01 May 2007
- EM 1110-2-6054, Inspection, Evaluation and Repair of Hydraulic Steel ER 1110-2-100, Periodic Inspection and Continuing Evaluation of Completed Civil Works Structures, 15 February 1995
- ETL 1110-2-584 Hydraulic-Steel-Structures, 30 June 2014
- ETL 1110-2-575 Evaluation-of-I-Walls, 1 September 2011

Hydrologic and Hydraulic Engineering

- EM 1110-2-1602, Engineering and Design - Hydraulic Design of Reservoir Outlet Works, 15 October 1980

- EM 1110-2-1413, Hydrologic Analysis of Interior Areas, 1987.
- EM 1110-2-1603, Engineering and Design - Hydraulic Design of Spillways, 16 January 1990
- EM 1110-2-1619, Risk-Based Analysis for Flood Damage Reduction Studies, 1996
- EM 1110-2-2902, Engineering and Design - Conduits, Culverts, and Pipes, 31 March 1998
- EM 1110-2-3600, Engineering and Design - Management of Water Control Systems, 30 November 1987
- ER 1110-8-2 (FR), Inflow Design Floods for Dams and Reservoirs, 1 March 1991
- ER 1110-2-240, Water Control Management, 8 October 1998
- ER 1130-2-530, Flood Control Operations and Maintenance Policies, 30 October 1996
- ER 1110-2-8156, Preparation of Water Control Manuals, 31 August 1995
- ER 1100-2-8162, Incorporating Sea Level Change in Civil Works Projects, 31 December 2013
- ECB 2014-10, Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs and Projects, 2 May 2014
- ETL 1100-2-1, Procedures to Evaluate Sea Level Change: Impacts, Responses and Adaptations, 30 June 2014

Civil Engineering

- UFC 3-201-01 1 June 2013, Civil Engineering

5. Items Available for Review

- a. 30% (or greater) Basis of Design Report
- b. 30% (or greater) Construction Drawings and Specifications
- c. 30% (or greater) USACE review comments
- d. 60% (or greater) Basis of Design Report
- e. 60% (or greater) Construction Drawings and Specifications
- f. 60% (or greater) USACE Agency Technical Review (ATR) comments

6. Specific Tasks

The IEPR Team, experienced in the assessment, analysis, and evaluation for SAR of projects conducted through their established IEPR process of design, engineering, and construction peer reviews, shall perform general and specific tasks.

The IEPR Team shall perform reviews in accordance with milestones identified in this SOW. The IEPR Team may recommend to the Stakeholders additional or alternate milestones as a result of the review process.

Note that the IEPR is an extension (not a replacement) of an Agency Technical Review (ATR) (formerly Independent Technical Review) performed by USACE according to the requirements outlined in ER 1110-1-12, Engineering and Design Quality Management; however, the intent of the SAR is to complement an ATR and to avoid impacts to program schedules and cost. Where appropriate and reasonable, an ATR and SAR may be performed concurrently and in concert if it enhances the review process. The SAR is a strategic level review and every effort should be made to avoid having the SAR duplicate the ATR.

This task order does not include a review of the phases during construction. That required IEPR task will be accomplished under a separate task order in the future if and when construction begins.

The following sub tasks shall be performed independent of Stakeholder supervision, direction or control to fulfill independence criteria of an IEPR:

Sub Task 1. Work Plan to Conduct the IEPR: The IEPR Team will prepare a draft and final work plan that provides the process for conducting the IEPR, including screening criteria for peer reviewers,

selection of peer reviewers, schedule, charge to peer reviewers (revised as necessary with input from the Stakeholders to include in final IEPR work plan), communications protocols, meetings with Stakeholders quality control procedures, and compilation / documentation / dissemination of peer review comments. The IEPR Team will conduct the IEPR in accordance with this work plan to assure that all services are performed, evaluated, reviewed and provided in a manner that meets professional engineering quality standards. The IEPR Contractor will establish processes to maintain independence and individuality of each expert reviewer's respective discipline, comments, assessments, evaluations, and reports associated with design criteria and project components inherent and related to their respective professional design/engineering and construction discipline to ensure the integrity of the safety assurance review criteria.

This work plan shall include a Communications Plan. All communication to the SRJB and Stakeholders shall go through Dan Jonasson, City of Minot Public Works Director and member of the SRJB with courtesy copies to David Ashley, Chairman of the SRJB.

Also included in this sub task will be one conference call to discuss the SRJB comments to the draft work plan. If needed, the IEPR Team will coordinate with the SRJB Representative, via conference call, to ask questions about key events in the timeline leading up to the completion of the draft report and supporting documentation.

Sub Task 2. Selection of IEPR Panel: The specified peer review will take the form of a panel of experts, and the members are limited to reviewing and commenting on the work being done by others. The peer review can work concurrent with on-going work, be interactive as needed, and provide real time over the shoulder input. Timely input on the appropriateness of hazard analyses, models and methods of analysis used, and the assumptions made is critical to maintaining project schedules.

The IEPR Team will identify an expert(s) for each discipline and level from the list below to serve on the IEPR panel. The experts will also be referenced as expert reviewers. Selection will be based on availability, technical credentials, and absence of perceived or actual conflict of interest (expert reviewers selected are preferred to fully support all required Type II IEPRs for all relevant project phases in order to ensure consistency for review).

At a minimum, one member is required, but the panel composition shall be a size appropriate for the size and complexity of the project. Composition of the panel can change depending on the need of the particular phase of review.

Selection of expert reviewers for IEPR efforts will adhere to the National Academy of Science (NAS) Policy on Committee Composition and Balance and Conflicts of Interest. Prior to submitting the IEPR panel for approval, the Contractor shall obtain a statement from each of the panel members indicating willingness to participate and the absence of a conflict of interest (COI). The Contractor will be required to submit the NAS COI form for all reviewers with the proposed list of panel members. The following website provides academy guidance for assessing composition and the appropriate forms (also available in Appendix C) for prospective panel members in General Scientific and Technical Studies: <http://www.nationalacademies.org/coi/index.html>. The contractor shall also develop criteria for determining if review panels are properly balanced, as defined by criteria in the contract, both in terms of professional expertise as well as in points of view on the project at hand. If necessary, the contractor shall remove and replace panel members during a review if a conflict arises. All potential reviewers carry professional and personal biases, and it is important that these biases be disclosed when reviewers are considered and selected. The contractor leading the review shall determine which biases, if any, will disqualify prospective reviewers.

The IEPR Team will provide the SRJB and USACE with the final independent external expert reviewer list, including their credentials and NAS forms, for approval. Expert reviewers will be industry leaders in their required field of review stated below and have experience in design and construction of projects similar in scope to the MREFPP. Expert reviewers shall be registered professionals in their discipline in the state of North Dakota. The expert reviewers must also have a college degree in their discipline. A

graduate degree in engineering is preferable, but not required except as noted, as hands-on relevant engineering experience in the listed disciplines is more important. Expert reviewers included in the proposal for selection of the base contract shall be submitted first.

The panel members shall not have any financial or litigation association with the SRJB; the Design A/E; their engineering teams, subcontractors or construction contractors. Areas of conflict may include current employment by the Federal or State governments, participation in developing the subject project, a publicly documented statement advocating for or against the subject project, current or future interests in subject project or future benefits from the project, and paid or unpaid participation in litigation against the SRJB or Stakeholders.

The IEPR Team will provide brief biographies and detailed resumes (i.e. long form resumes) for the proposed IEPR panel members with the task order proposal. The detailed resume shall include relevant project experience similar in scale and scope to this project and address the specific expertise described below for each discipline.

The IEPR Team shall consist of the following panel members:

1. **Project Manager** shall be a registered professional engineer in North Dakota with a minimum of 15 years project management experience. The Project Manager shall have extensive knowledge of Civil Works projects including design and construction of levees, floodwalls, pump stations, closure gates, and utility modifications similar to the MREFPP. The Project Manager will also have the necessary skills and experience to lead a virtual team through the IEPR process.
2. **Facilitator** shall be a registered professional engineer with experience in facilitating IEPR's for projects similar to the MREFPP.
3. **Hydrology and Hydraulic (H&H) Engineering panel member(s)** shall be a Level 3 reviewer and a registered professional engineer in North Dakota from an Architect-Engineer or consulting firm, a public agency, or academia with a minimum of 20 years of experience in hydraulics and hydrologic engineering, and have a minimum BS degree or higher in engineering. Active participation in related professional engineering and scientific societies is encouraged. The panel member shall have extensive experience in the application of HEC computer modeling programs, risk and uncertainty analysis, interior drainage considerations, hydraulic engineering with an emphasis on flood risk reduction projects, with extensive background in hydraulic theory and practice, and river geomorphology, and have experience sizing pump stations and other interior drainage features.

The H&H panel member(s) should be familiar with USACE application of risk and uncertainty analyses in flood risk management projects. The H&H panel member(s) shall have experience associated with flood risk management projects, and the analysis and design of hydraulic structures such as outlet works, spillways, and stilling basins, channels and levees, diversion channel design, and large river control structures. The H&H panel member(s) must have performed work in hydrologic analysis, floodplain analysis, hydraulic design of channels and levees using various channel and bank protection works, and river sedimentation. The H&H panel member(s) must demonstrate knowledge and experience with physical modeling and the application of data from physical model testing to the design of stilling basins and scour protection, and in the ability to coordinate, interpret, and explain testing results with other engineering disciplines, particularly structural engineers, geotechnical engineers, and geologists. In regard to hydrologic analysis, the H&H panel member(s) must demonstrate knowledge and experience with the routing of inflow hydrographs through flood control reservoirs utilizing multiple discharge devices, including gated sluiceways and gated spillways –and/or- modeling large river systems and possess a thorough understanding of the dynamics of open channel flow systems, floodplain hydraulics, and interior flood control systems. The H&H panel member(s) shall also have a familiarity with standard Corps hydrologic and hydraulic computer models (including but not limited to HEC-1, HEC-HMS, HEC-RAS, FLO-2D, and HEC-DSS) used in drawdown studies, dam break inundation studies, hydrologic modeling and analysis for levee safety investigations.

The H&H panel member(s) shall have familiarity with preparing plans and specifications for USACE projects, knowledge of USACE design and construction procedures and policies, and USACE levee safety assurance policy and guidance. The H&H panel member(s) shall have experience in evaluating risk reduction measures for levee safety assurance projects.

4. **Civil Engineering** panel member(s) shall be a Level 3 reviewer and a registered professional civil engineer in North Dakota from an Architect-Engineer or consulting firm, a public agency, or academia with a minimum of 20 years of civil engineering experience and have a minimum BS degree or higher in engineering. Active participation in related professional engineering and scientific societies is encouraged. The Civil Engineering panel member(s) shall have experience in the design, layout, and construction of flood risk management structures including levees, floodwalls, road closure gates, and pump stations within a riverine environment. Experience in associated contracting procedures and total cost growth analysis is desired. The Civil Engineering panel member(s) shall have demonstrated knowledge in a variety of construction-related activities involving site layout, surveying, 3-dimensional modeling, construction techniques, grading, hydraulic structures, erosion control, interior drainage, earthwork, concrete placement, design of access roads, retaining walls design, and relocation of underground utilities. Practical knowledge of construction methods and techniques as it relates to structural portions of projects is required.

5. **Geotechnical Engineering** panel member(s) shall be a Level 3 reviewer and a registered professional engineer in North Dakota from an Architect-Engineer or consulting firm, a public agency, or academia with a minimum of 20 years of experience in the geotechnical design of levees, and foundations for floodwalls, pump stations, and gated structures within a riverine environment, experience in subsurface investigations; field & laboratory testing and the determination of in-situ material properties; soil compaction and earthwork construction; soil mechanics; seepage and piping; slope stability evaluations; bearing capacity and settlement; dewatering and excavation in an active stream channels, and scour protection design. A minimum MS degree or higher in geotechnical engineering is required. Active participation in related professional societies is encouraged. The Geotechnical panel member(s) should be a recognized expert in levee design and analysis. Geotechnical panel member(s) shall have at least 20 years or more experience in the general field of geotechnical engineering; experience in: subsurface investigations; field & laboratory testing and the determination of in-situ material properties; soil compaction and earthwork construction; soil mechanics; seepage and piping; landslide and slope stability evaluations; bearing capacity and settlement; liquefaction analyses and analysis of earthquake-induced embankment/structural deformation; dewatering and excavation in an active stream channels; design and construction of foundations on alluvial soils; foundation inspection and assessment; foundation grouting and other foundation treatment methods including construction of foundation seepage barriers; the determination and evaluation of dynamic site-specific response spectra analysis and the evaluation of soil-structure interaction; the design, installation and assessment of instrumentation; the design and installation of geosynthetics and geomembranes; erosion protection design; levee and stream bank protection including soil cement, grouted riprap and stone protection, sheet piling, and retaining wall design; drilling and blasting, and underground tunnel design; preparing plans and specifications for USACE projects, and knowledge of USACE design and construction procedures and policies. The Geotechnical panel member(s) shall have knowledge and experience in the forensic investigation of seepage, settlement, stability, and deformation problems associated with embankments constructed on alluvial soils, and other soft ground geological formations. The Geotechnical panel member(s) shall have experience in evaluating risk reduction measures for dam and levee safety assurance projects.

6. **Structural Engineering** panel member(s) shall be a Level 3 reviewer and a registered professional engineer in North Dakota from an Architect-Engineer or consulting firm, a public agency, or academia with a minimum of 20 years of demonstrated experience, and have a minimum BS degree or higher in engineering on flood risk reduction projects. The Structural Engineering panel member(s) shall have extensive experience in the design and construction of

hydraulic structures for large and complex civil works projects including flood walls, road closure gates, and pump stations within a riverine environment. The Structural engineering panel member(s) should be a recognized expert in stability analysis and structural design of flood risk management gate structures, the determination and evaluation of dynamic site-specific response spectra analysis, and the evaluation of soil-structure interaction; and the design and construction of T-wall and L-wall floodwall design. The Structural Engineering panel member(s) should be proficient in performing stability analysis using limit equilibrium analysis; design and construction of deep sheet pile walls; design and installation of pile foundations; and concrete design. The Structural panel member(s) shall have familiarity with preparing plans and specifications for USACE projects, knowledge of USACE design and construction procedures and policies, and USACE dam safety assurance policy and guidance. The Structural panel member(s) shall have experience in evaluating risk reduction measures for dam and/or levee safety assurance projects.

In addition, at least one of the expert reviewers shall have recent and relevant experience on multi-million dollar projects verifying the constructability of the proposed designs and then verifying that these projects were being constructed per the Plans and Specifications.

The panel responsibilities shall include, but not limited to, the following:

- a. Conduct the review for the subject project in a timely manner in accordance with the study and Review Plan schedule;
- b. Follow the "Charge", but when deemed appropriate by the team lead, request other products relevant to the project and the purpose of the review;
- c. Receive from the SRJB any public written and oral comments provided on the project;
- d. Provide timely written and oral comments throughout the development of the project, as requested;
- e. Assure the review avoids replicating an ATR and focuses on the questions in the "Charge", but the panel can recommend additional questions for consideration. The SAR panel may recommend to the RMO additional or alternate questions;
- f. Offer any lessons learned to improve the review process;
- g. Submit reports in accordance with the review plan milestones;
- h. The facilitator shall be responsible for insuring that comments represent the group, be non-attributable to individuals, and where there is lack of consensus, note the non-concurrence and why.

It is noted that this Sub Task 2 will also encompass the effort for Task Order 3 under this contract (IEPR/SAR for Design Phase MI-5).

Sub Task 3. Peer Review Critical Items List (CIL): The IEPR Team shall prepare an IEPR critical items list that shall include all project components which are critical to the project mission. The criticality of each item shall be evaluated/reviewed and discussed along with possible failure scenarios. Procedures for evaluating/reviewing the critical items in the design; construction; and Operations & Maintenance phases shall be addressed. The onsite staff required for each phase and for each item requiring review shall be discussed. The critical item list will be a final list that should be the best effort given the information available at the start of the IEPR process. As the task progresses, the final list may be modified and the IEPR Team will prepare a revised final list.

Sub Task 4. Orientation Briefing: In coordination with SRJB and Stakeholders, the IEPR Team will participate in an orientation briefing conducted by the SRJB between selected members of the Stakeholders and all of the IEPR Team. The purpose of this first meeting will be to familiarize the IEPR Team members with the project specifics and objectives of the review. This briefing should also provide

an opportunity for the IEPR Team to ask clarifying questions of the Stakeholders to assist in the development of final panel comments. Briefing materials will be provided by the SRJB/Stakeholders one (1) week prior to the briefing. The briefing will take place at via conference call/web meeting.

It is noted that this Sub Task 4 will also encompass the effort for Task Order 3 under this contract (IEPR/SAR for Design Phase MI-5).

Sub Task 5. Progress Communications: Monthly e-mail updates of progress and status shall be sent to SRJB Representative by the IEPR PM. The monthly e-mail updates will include progress conducted during the previous month's period, planned progress for the next month, and any problems encountered. Up to two conference call discussions and updates may be required to maintain and convey progress and to collect/exchange critical information by all parties pertinent to the respective subject matter.

It is noted that this Sub Task 5 will also encompass the effort for Task Order 3 under this contract (IEPR/SAR for Design Phase MI-5).

Sub Task 6. IEPR of Design Phases: Design Phases - This task will be performed for the Project Design Phase package BU-1. The design review will be completed as two separate Subtasks, 6A and 6B, for IEPR of two design review packages, anticipated to correspond to 30% (or greater) and 60% (or greater) completion, respectively. Review will performed of the Design Documentation Report, Plans and Specifications. The SRJB will provide these documents to the IEPR Team electronically for distribution to the peer reviewers.

Processes shall be consistently utilized by the Contractor to maintain independence and individuality of each expert reviewer's respective discipline, comments, assessment, and reports of design/engineering/construction components pertinent to the expert reviewers' respective discipline to ensure the integrity of the safety assurance review criteria. Expert reviewers shall analyze and assess various components identified, but not limited to, as critical items list (further described in appendices) and interrelated components that affect or may affect the critical items list. The IEPR panel shall evaluate/review the Design Phase documents in accordance with the General Charge Guidance (Appendix B) and provide their comments in tabular form to the SRJB.

Sub Task 7. Prepare Project Review Report: This task will be performed for the Peer Review for the Project Design Phases package. The IEPR Team will prepare an Interim Project Review Report for each review conducted to include the peer review of the Design Phase. The Interim Project Review Reports shall focus on answering the general questions in Appendix B and the review panel shall clearly address these questions in the review report. The Interim Project Review Reports shall be submitted for SRJB and USACE approval within 28 calendar days after closeout of comments. At a minimum, each report will include an introduction, the composition of the review team, a summary of the review during design, any lessons learned, and appendices for conflict of interest disclosure forms, for comments to include any appendices for supporting analyses and assessments of the adequacy and acceptability of the methods, models, and analyses used. In addition, the reports shall contain appendices to include documentation of the expert reviews performed under Task 6 and all comments. All comments in the report will be finalized by the panel prior to their release to SRJB for each review plan milestone and all comments shall be back-checked and closed by the time the reports are submitted for SRJB approval.

Sub Task 8: Site Visit and Face to Face Meeting: This task will consist of a site visit for the IEPR Panel Members to aid in the understanding of the MREFPP. It will also include a face to face meeting with SRJB representatives and design consultants to foster better and more complete communication of project challenges and goals.

It is noted that this Sub Task 8 will also encompass the effort for Task Order 3 under this contract (IEPR/SAR for Design Phase MI-5).

Sub Task 9: Project Management: This task will consist of project administration, coordination of project activities, and preparation of monthly invoices, including management of subconsultant invoices.

7. Deliverables

The IEPR Team will provide one (1) hard copy and one (1) electronic copy of: the work plan (Task 1), IEPR panel selections (Task 2), IEPR review comments in tabular format (Task 6) and all Review Reports (Task 7) to the SRJB. Electronic submittals shall contain all electronic files on DVD, CD, or other appropriate electronic media. The briefings for the expert reviewers will be furnished in Microsoft PowerPoint or Adobe PDF formats. Reports generated by the IEPR Team will not be released for publication or dissemination without the SRJB Representative's written approval.

See Appendix A for table of Deliverables and Milestones by task.

II. Maximum Compensation and Assumptions ("Service Assumptions") Upon Which Maximum is Based

Client shall pay for Services set forth in Section I as follows:

1. An amount equal to the cumulative hours charged to the Project by each class of personnel times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and subcontractors' charges not to exceed the total maximum compensation of this Task Order.
2. The Standard Hourly Rates charged constitute full and complete compensation for services, including labor costs, overhead and profit; the Standard Hourly Rates do not include Reimbursable Expenses or subcontractors' charges.
3. Standard Hourly Rates and Reimbursable Expenses Schedule are included in our agreement with the SRJB, which were updated as of January 1, 2017.
4. The total maximum compensation for services described in this Task Order shall not exceed \$151,760.48 without prior written approval. A breakdown of the costs is shown in the table below:

Task No.	Task Title	Cost
1	Work Plan	\$1,835.00
2	Selection of the IEPR Panel (includes MI-5)	\$3,920.00
3	Peer Review Critical Items List	\$5,245.00
4	Orientation Briefing (includes MI-5)	\$5,105.00
5	Progress Communications (includes MI-5)	\$5,460.00
6A	IEPR/SAR of Design Phase BU-1, 30% or greater	\$50,720.00
6B	IEPR/SAR of Design Phase BU-1, 60% or greater	\$40,792.50
7	Project Review Reports	\$10,080.00
8	Site Visit and Face to Face Meeting (includes MI-5)	\$14,400.00
9	Project Management	\$2,170.00
	Travel and other reimbursable expenses	\$12,032.98

5. The Standard Hourly Rates and Reimbursable Expenses Schedule will be adjusted annually as of January 1 to reflect equitable changes in the compensation payable.

III. Schedule and Assumptions upon Which Schedule is Based

The work described herein will be dependent on the timing of submittals from the SRJB and its Contractors. An anticipated schedule and task duration is set forth in Appendix A.

ACCEPTED AND AGREED TO:

HDR Engineering

SOURIS RIVER JOINT BOARD

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

APPENDIX A. IEPR Reporting and Milestone Schedule

IEPR Schedule of Deliverables for MREFPP with assumed NTP of February 9, 2017

It is recognized the schedule will be adjusted based on the actual Notice to Proceed, the actual delivery dates of materials to be reviewed, and the availability of IEPR panel members to accommodate the uncertainty of the schedule. The following table presents suggested durations for delivery of sub tasks without hard dates.

Sub Task #	Deliverable (D) or Milestone (M)	Action/Activity	Responsible Party	Calendar Days after NTP	Due Date	Revised/Adj Due Date	Completion Date	Comments
0	M	NTP	SRJB		2/9/2017			
1	D	Work Plan (14d after NTP)	HDR					
2	D	Submit List of IEPR Panel w/ NAS COI-Resumes-Bios (21d after NTP)	HDR					
2	M	Approval of the IEPR Panel (30d after NTP)	SRJB					
3	D	Peer Review Critical Items List (30d after Orientation Briefing)	HDR					
4	M	Orientation Briefing	SRJB/HDR					
5	M	Progress Communications	HDR					
<i>Design Review Phase BU-1</i>								
6A	M	SRJB Delivers 30% or greater Design Pkg	SRJB		2/20/2017			
6A	M	IEPR of 30% or greater Design Pkg Complete (42d after design provided)	HDR					
6A	D	IEPR Comments submitted to SRJB (7d after review complete)	HDR					
6A	M	SRJB Evaluates IEPR Comments (14d after comments submitted)	SRJB					
6A	D	Comment Review Conference Call (7d after evals)	SRJB/HDR					
6B	M	SRJB Delivers 60% or greater Design Pkg	HDR		5/1/2017			
6B	M	IEPR of 60% or greater Design Pkg Complete (42d after design provided)	SRJB					
6B	D	IEPR Comments submitted to SRJB (7d after review complete)	HDR					
6B	M	SRJB Evaluates IEPR Comments (14d after comments submitted)	SRJB					
6B	D	Comment Review Conference Call (7d after evals)	SRJB/HDR					
6B	M	IEPR Comments Backchecked / Closed (15 days after conf call)	HDR					
7	D	IEPR Report of Design Pkg 21 days after comments closed)	HDR					
8	D	Site Visit and Face to Face Meeting (select personnel)	HDR/SRJB		5/1/2017			
9	D	Project Management	HDR					

APPENDIX B. General Charge Guidance

For a Type II - IEPR, the design and construction phases, the review should focus on unique features and changes from the assumptions made and conditions that formed the basis for the concept design. The expert reviewers shall address each of the following evaluation factors for each of the questions in each of the paragraphs below:

- Is the direction of the project appropriate?
- Has SRJB or Stakeholders overlooked any critical items?
- Does the panel have any other observations to add?

A. For the Design Phase Review of the MREFPP, the IEPR should focus on unique features and changes from the assumptions made and conditions that formed the basis for the design. The IEPR shall address the following questions:

1. Are the models used to assess hazards appropriate?
2. Are the assumptions made for hazards appropriate?
3. Is the quality of the surveys, investigations, and engineering for the design in accordance with ER 1110-2-1150 sufficient to support the models and assumptions made for determining the hazards?
4. Does the analysis adequately address the uncertainty given the consequences associated with the potential for loss of life for this type of project?
5. Do the design assumptions made during the decision document phase for hazards remain valid through the completion of design as additional knowledge is gained and the state-of-the-art evolves?
6. Is the design flow profile and other hydraulic profiles necessary for the design of the flood risk reduction project based on appropriate H&H modeling and assumptions, such that there is good confidence in which flood risk reduction evaluations are based off of?
7. Is the design criteria being used and any other design parameter decisions made as part of the design process for these first 3 phases apply well for future phases of design and construction for the flood risk reduction project? Future review panels will need to compare the guidance provided with new phases to future phases of the project.
8. Do the project features adequately address redundancy, resiliency, or robustness with an emphasis on interfaces between structures, materials, members, and project phases?
 - (1) Redundancy. Redundancy is the duplication of critical components of a system with the intention of increasing reliability of the system, usually in the case of a backup or failsafe. The use of multiple lines of defense that are linked to potential failure modes. The most vulnerable failure modes need the greatest redundancy.
 - (2) Resilience. Resiliency is the ability to avoid, minimize, withstand, and recover from the effects of adversity, whether natural or manmade, under all circumstances of use. The use of enhancements to improve the ability of the system to sustain loads greater than the design load to achieve gradual failure modes over some duration rather than sudden failure modes.
 - (3) Robustness. Robustness is the ability of a system to continue to operate correctly across a wide range of operational conditions (the wider the range of conditions, the more robust the system), with minimal damage, alteration, or loss of functionality, and to fail gracefully outside of that range. The use of more conservative assumptions to increase capacity to compensate for greater degrees of uncertainty and risk.

9. Was adequate consideration given to the construction sequencing of features and/or components and do the project features and/or components effectively work as a system?

National Academy of Sciences
National Academy of Engineering
Institute of Medicine
National Research Council

**BACKGROUND INFORMATION
AND
CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE**
For General Scientific and Technical Studies and Assistance

NAME: _____ TELEPHONE: _____

ADDRESS: _____

EMAIL ADDRESS: _____

CURRENT EMPLOYER: _____

NAS/NAE/IOM/NRC COMMITTEE: _____

There are two parts to this form, Part I Background Information, and Part II Confidential Conflict of Interest Disclosure. Complete both parts, **sign** and **date** this form on the last page, and return the form to the responsible staff officer for *The National Academies* project and committee activity to which this form applies. **Retain a copy for your records.**

PART I BACKGROUND INFORMATION

INSTRUCTIONS

Please provide the information requested below regarding **relevant** organizational affiliations, government service, public statements and positions, research support, and additional information (if any). Information is "relevant" if it is related to -- and might reasonably be of interest to others concerning -- your knowledge, experience, and personal perspectives regarding the subject matter and issues to be addressed by the committee activity for which this form is being prepared. If some or all of the requested information is contained in your curriculum vitae, you may if you prefer simply attach your CV to this form, supplemented by additional responses or comments below as necessary.

I. ORGANIZATIONAL AFFILIATIONS. Report your relevant business relationships (as an employee, owner, officer, director, consultant, etc.) and your relevant remunerated or volunteer non-business relationships (e.g., professional organizations, trade associations, public interest or civic groups, etc.).

II. GOVERNMENT SERVICE. Report your relevant service (full-time or part-time) with federal, state, or local government in the United States (including elected or appointed positions, employment, advisory board memberships, military service, etc.).

III. RESEARCH SUPPORT. Report relevant information regarding both public and private sources of research support (other than your present employer), including sources of funding, equipment, facilities, etc.

IV. PUBLIC STATEMENTS AND POSITIONS. List your relevant articles, testimony, speeches, etc., by date, title, and publication (if any) in which they appeared, or provide relevant representative examples if numerous. Provide a brief description of relevant positions of any organizations or groups with which you are closely identified or associated.

V. ADDITIONAL INFORMATION. If there are relevant aspects of your background or present circumstances not addressed above that might reasonably be construed by others as affecting your judgment in matters within the assigned task of the committee or panel on which you have been invited to serve, and therefore might constitute an actual or potential source of bias, please describe them briefly.

PART II CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE

INSTRUCTIONS

It is essential that the work of committees of the institution used in the development of reports not be compromised by any significant conflict of interest. For this purpose, **the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.** Except for those situations in which the institution determines that a conflict of interest is unavoidable and promptly and publicly discloses the conflict of interest, no individual can be appointed to serve (or continue to serve) on a committee of the institution used in the development of reports if the individual has a conflict of interest that is relevant to the functions to be performed.

The term "conflict of interest" means something more than individual bias. There must be an *interest*, ordinarily financial, that could be directly affected by the work of the committee.

Conflict of interest requirements are *objective* and *prophylactic*. They are not an assessment of one's actual behavior or character, one's ability to act objectively despite the conflicting interest, or one's relative insensitivity to particular dollar amounts of specific assets because of one's personal wealth. Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual, the other members of the committee, the institution, and the public interest. The individual, the committee, and the institution should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the work of the committee simply because of the existence of conflicting interests.

The term "conflict of interest" applies only to *current interests*. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but do not currently exist, because such future interests are inherently speculative and uncertain. For example, a pending formal or informal application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is not a current interest.

The term "conflict of interest" applies not only to the personal interests of the individual but also to the *interests of others* with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed. Thus, in assessing an individual's potential conflicts of interest, consideration must be given not only to the interests of the individual but also to the interests of the individual's spouse and minor children, the individual's employer, the individual's business partners, and others with whom the individual has substantial common financial interests. Consideration must also be given to the interests of those for whom one is acting in a fiduciary or similar capacity (e.g., being an officer or director of a corporation, whether profit or nonprofit, or serving as a trustee).

Much of the work of this institution involves scientific and technical studies and assistance for sponsors across a broad range of activities. Such activities may include, for example: defining research needs, priorities, opportunities and agendas; assessing technology development issues and opportunities; addressing questions of human health promotion and assessment; providing scientific and technical assistance and supporting services for government agency program development; assessing the state of scientific or technical knowledge on particular subjects and in particular fields; providing international and foreign country science and technology assessments, studies and assistance. Such activities frequently address scientific, technical, and policy issues that are sufficiently broad in scope that they do not implicate specific financial interests or conflict of interest concerns.

However, where such activities address more specific issues having significant financial implications -- e.g., funding telescope A versus telescope B, government development or evaluation of a specific proprietary technology, promotion or endorsement of a specific form of medical treatment or medical device, connecting foreign research facilities to specific commercial interests, making

recommendations to sponsors regarding specific contract or grant awards, etc. -- careful consideration must be given to possible conflict of interest issues with respect to the appointment of members of committees that will be used by the institution in the development of reports to be provided by the institution to sponsoring agencies.

The overriding objective of the conflict of interest inquiry in each case is to identify whether there are interests – primarily financial in nature – that conflict with the committee service of the individual because they could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization. The fundamental question in each case is does the individual, or others with whom the individual has substantial common financial interests, have identifiable interests that could be directly affected by the outcome of the project activities of the committee on which the individual has been invited to serve? For projects involving advice regarding awards of contracts, grants, fellowships, etc., this institution is also guided by the principle that an individual should not participate in any decision regarding the award of a contract or grant or any other substantial economic benefit to the individual or to others with whom the individual has substantial common financial interests or a substantial personal or professional relationship.

The application of these concepts to specific scientific and technical studies and assistance projects must necessarily be addressed in each case on the basis of the particular facts and circumstances involved. The questions set forth below are designed to elicit information from you concerning possible conflicts of interest that are relevant to the functions to be performed by the particular committee on which you have been invited to serve.

1. **FINANCIAL INTERESTS.** (a) Taking into account stocks, bonds, and other financial instruments and investments including partnerships (but excluding broadly diversified mutual funds and any investment or financial interests valued at less than \$10,000), do you or, to the best of your knowledge others with whom you have substantial common financial interests, have financial investments that could be affected, either directly or by a direct effect on the business enterprise or activities underlying the investments, by the outcome of the project activities of the committee on which you have been invited to serve?

(b) Taking into account real estate and other tangible property interests, as well as intellectual property (patents, copyrights, etc.) interests, do you or, to the best of your knowledge others with whom you have substantial common financial interests, have property interests that could be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(c) Could your employment or self-employment (or the employment or self-employment of your spouse), or the financial interests of your employer or clients (or the financial interests of your spouse's employer or clients) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(d) Taking into account research funding and other research support (e.g., equipment, facilities, industry partnerships, research assistants and other research personnel, etc.), could your current research funding and support (or that of your close research colleagues and collaborators) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(e) Could your service on the committee on which you have been invited to serve create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under FINANCIAL INTERESTS is either "no" or "not applicable," check here _____ (NO).

If the answer to any of the above questions under FINANCIAL INTERESTS is "yes," check here _____ (YES), and briefly describe the circumstances on the last page of this form.

2. **OTHER INTERESTS.** (a) Is the central purpose of the project for which this disclosure form is being prepared a critical review and evaluation of your own work or that of your employer?

(b) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the functions to be performed in this committee activity?

(c) To the best of your knowledge, will your participation in this committee activity enable you to obtain access to a competitor's or potential competitor's confidential proprietary information?

(d) If you are or have ever been a U.S. Government employee (either civilian or military), to the best of your knowledge are there any federal conflict of interest restrictions that may be applicable to your service in connection with this committee activity?

(e) If you are a U.S. Government employee, are you currently employed by a federal agency that is sponsoring this project? If you are not a U.S. Government employee, are you an employee of any other sponsor (e.g., a private foundation) of this project?

(f) If the committee activity for which this form is being prepared involves reviews of specific applications and proposals for contract, grant, fellowship, etc. awards to be made by sponsors, do you or others with whom you have substantial common financial interests, or a familial or substantial professional

relationship, have an interest in receiving or being considered for awards that are currently the subject of the review being conducted by this committee?

(g) If the committee activity for which this form is being prepared involves developing requests for proposals, work statements, and/or specifications, etc., are you interested in seeking an award under the program for which the committee on which you have been invited to serve is developing the request for proposals, work statement, and/or specifications -- or, are you employed in any capacity by, or do you have a financial interest in or other economic relationship with, any person or organization that to the best of your knowledge is interested in seeking an award under this program?

If the answer to all of the above questions under OTHER INTERESTS is either "no" or "not applicable," check here _____ (NO).

If the answer to any of the above questions under OTHER INTERESTS is "yes," check here _____ (YES), and briefly describe the circumstances on the last page of this form.

EXPLANATION OF "YES" RESPONSES:

During your period of service in connection with the activity for which this form is being completed, any changes in the information reported, or any new information, which needs to be reported, should be reported promptly by written or electronic communication to the responsible staff officer.

YOUR SIGNATURE

DATE

Reviewed by: _____
Project Manager

Date

HDR Engineering 2017 Hourly Billing Rates

Enclosed are the 2017 Hourly Billable Rates for HDR Engineering. These billing rates shall be adjusted annually to reflect any salary adjustments incurred by employees. The rates listed below do not include Reimbursable Expenses or hourly billing rates for equipment as defined below.

<u>Description</u>	<u>Billing Rate/Hour</u>
Managing Principal	\$210
Senior Project Manager	\$195
Project Manager	\$170
ASME Disciplines	\$175
Engineer V	\$170
Engineer IV	\$155
Engineer III	\$135
Engineer II	\$120
Engineer I	\$105
Engineering Technician III	\$115
Engineering Technician II	\$100
Engineering Technician I	\$90
Cadd/GIS Technician IV	\$130
Cadd/GIS Technician III	\$110
Cadd/GIS Technician II	\$100
Cadd/GIS Technician I	\$90
Right of Way III	\$170
Right of Way II	\$155
Right of Way I	\$130
Environmental Scientist V	\$170
Environmental Scientist IV	\$155
Environmental Scientist III	\$135
Environmental Scientist II	\$120
Environmental Scientist I	\$105
Senior Land Surveyor	\$145
Land Surveyor	\$130
Survey Technician III	\$110
Survey Technician II	\$100
Survey Technician I	\$90
Senior Construction Manager	\$170
Construction Manager	\$140
Construction Engineer	\$120
Construction Field Rep	\$90
Public Involvement III	\$140
Public Involvement II	\$110
Public Involvement I	\$90
Accountant	\$100
Graphic Designer	\$90
Admin Assistant	\$70

HDR has technical experts in various geographic locations that may be utilized based on specific project need. This specialized expertise is not subject to the above rates and associated billing rates are to be determined at the time of contract negotiation.

Specialized Expertise for Mouse River Enhanced Flood Protection Project:

Senior Technical Expert	\$270/hr
-------------------------	----------

Direct Expenses

Traffic Counting Equipment	\$120.00 per hour
Survey/GPS Equipment	\$50.00 per hour
Robotic Total Station	\$50.00 per hour
Side-by-Side Utility Vehicle	\$25.00 per hour
Mileage	\$0.75 per mile

Copies:

24" x 36" Mylar	\$15.00 each
Plots Bond	\$8.00 each
Plain Paper Copies	\$0.15 each
Plain Paper Copies 11" x 17"	\$0.25 each
Color 11" x 17" Copies	\$1.25 each

OTHER REIMBURSABLE EXPENSES

Reimbursable Expense shall mean the actual expenses incurred directly or indirectly in connection with the Project for transportation travel, subconsultants, subcontractors, computer usage, telephone, telex, shipping and express, and other incurred expense. Unless negotiated otherwise in the contract, ENGINEER will add 10% to invoices received by ENGINEER from subconsultants and subcontractors to cover administrative expenses and vicarious liability. Hourly equipment charges apply to specific equipment used on the project.



SCHEDULE OF PERSONNEL FEES – WEST CHESTER, PENNSYLVANIA
Effective until December 31, 2017

Senior Consultant	\$265.00/hr
Principal	\$245.00/hr
Senior Associate / Hydraulic Expert	\$225.00/hr
Associate	\$200.00/hr
Senior Engineer / Scientist / Technologist	\$175.00/hr
Project Engineer / Scientist / Technologist / GIS Specialist	\$150.00/hr
Senior Staff Engineer / Scientist / Technologist	\$130.00/hr
Staff Engineer / Scientist / Technologist	\$115.00/hr
Senior Technician / CADD Technician	\$95.00/hr
Associate Technician / Technician / Engineering Interns	\$87.00/hr
Administrative	\$80.00/hr
Clerical	\$65.00/hr

NOTES:

1. Where forms of agreement for services contain "pay when paid" terms, and the payment override term is in excess of sixty (60) days, the hourly rates presented herein shall be increased by five percent (5%) for each additional 30 days, or portion thereof, that the payment override term exceeds 60 days. Total project budgets presented will also be increased by this increment.
2. Engineering fees will be based upon the actual hours (to nearest 0.3 hr) charged for personnel times the appropriate hourly rate. A two hour minimum will apply for staff engineer and technician services in the field, except for soil sample or concrete cylinder pickup.
3. Travel by auto to and from jobs is based on the IRS prevailing rate. Travel by auto, air or rail, and lodging and meal expense for engineering personnel in the field will be billed at cost plus a 15% handling fee.
4. Subcontracts for subsurface investigations, bulldozers, surveys, etc., and other services and expenses obtained on the client's behalf are marked up 15% to cover the cost of handling, insurance, and overhead.
5. Typing, reproduction, computer expense, and other miscellaneous expenses are usually estimated by a lump sum or percentage of total fees in addition to the above hourly rates.
6. Overtime for senior staff, staff and technician level personnel is time for work on Saturday, Sunday, and national holidays, time in excess of 8 hours per day and time between the hours of 7:00 P.M. and 7:00 A.M. A surcharge of 1.5 times the above hourly rates is added for overtime.
7. Time spent during depositions, hearings, and in court is charged at 1½ times the regular hourly rate.
8. These fees are subject to change on January 1, 2018.

Task Order No. 03
January 26, 2017

**TYPE II INDEPENDENT EXTERNAL PEER REVIEW (IEPR) / SAFETY ASSURANCE REVIEW (SAR)
Mouse River Enhanced Flood Protection Project, North Dakota
Design Phase MI-5**

Applicable to Agreement Dated September 18, 2015

between

HDR
4503 Coleman St, Suite 105
Bismarck, ND, 58503

Souris River Joint Water Resources Board
PO Box 5005
Minot, ND 58702

Designated Representative:

Dennis Reep, Project Manager

Designated Representative:

David Ashley, Chairman

I. Scope Language

1. Background and Overview

The Souris River is officially called the Mouse River by the State of North Dakota, while it is recognized as the Souris River by the national and international communities. The Mouse River Basin encompasses a total of 23,600 square miles in the United States and Canada, about 9,000 square miles of which are in the United States. The river itself is about 700 miles long with 360 miles in the United States, all in North Dakota. A major tributary to the Mouse River, called the Des Lacs River, enters at Burlington, ND. The Mouse River has experienced severe flooding over the years, most often due to snowmelt runoff. Major flooding prior to the 2011 event occurred in 1882, 1904, 1969, 1975, 1976, and 1979.

In June, 2011 the Mouse River basin experienced catastrophic flooding as the result of significant snow pack and substantial rains throughout the basin and subsequent torrential rains in the upstream Canadian reaches. The flood resulted in a peak flow rate of approximately 27,400 cubic feet per second through the City of Minot. Damage occurred throughout the entire Mouse River basin. The 2011 flood impacted 4,700 commercial, public, and residential structures from Sherwood to Westhope and sustained building and content damage of \$690 million (USACE). There were significant additional costs of flood fighting efforts, infrastructure damage, agricultural damage, and rural transportation damages. An estimated 45,000 acres of pasture and crop land were damaged, in addition to numerous rural farmsteads and rural residences throughout the basin.

In response to the 2011 flood, and decades of smaller but frequently damaging floods, the SRJB requested the North Dakota State Water Commission (NDSWC) initiate a flood protection plan for the Mouse River basin. In September, 2011 the NDSWC commissioned the MREFPP, with the goal of reducing damages to urban and agricultural interests from future flooding. The comprehensive plan consists of the following components:

Federal permits/approvals and associated review under the National Environmental Policy Act (NEPA) pose significant challenges to moving the comprehensive MREFPP forward. The SRJB, in conjunction with the USACE, has pursued the reach of the Mouse River from upstream of Burlington to downstream of Minot as an initial environmental focus. It is a hydraulically independent from upstream and downstream reaches and includes project features that are authorized for design. Federal regulatory approvals will be required for portions of the project because of modification to the existing USACE civil works project. The most significant approvals will be the USACE Section 408 approval that is required when existing federal facilities are modified, and Section 404 permits that are required when fill is placed in the waters of the U.S. The environmental reviews are expected to be completed in early 2017, paving the way for a 2017 construction start on the initial three phases of the project. Subsequent environmental assessments will be addressed in the future for other identified MREFPP features as needed. A review of the environmental process was not included in this or previous IEPR/SAR task orders.

Project phases MI-1, MI-2, and MI-3 were designed and constructed under multiple contracts. The same will be true for Phases MI-5 and BU-1.

2. Project Description

Phase MI-5, the 4th Avenue Tieback Levee, consists of approximately 550 feet of floodwall and 3,900 feet of levee on the north (left) bank of the Mouse River. The levee is between the existing 5th Ave NE alignment and the BNSF railroad from 6th Street NE to approximately 400 feet east of 13th Street NE, to where it turns north for approximately 500 feet to tie into high ground. It will include 1 lift station and utility modifications.

The final design (plans and specs) are anticipated to be completed in the fall of 2018, with construction anticipated to start in 2019. The figure below shows the general alignment and major features of Phase MI-5.

A task order (Task Order 2) will be conducted concurrently to this task order for the IEPR/SAR for Phase BU-1.

recommendations. The panel team shall be responsible for ensuring that all comments represent the group, be non-attributable to individuals, and where there is lack of consensus, note the non-concurrence and why.

Project Stakeholder representatives may attend panel meetings, but may not participate in the management or control of the group. Stakeholders must refrain from participating in the development of any reports or final work product of the group.

The review may reveal additional documentation that will be required for the IEPR. The IEPR Team will request additional documentation (if necessary).

For review of each specific project phase, it is anticipated that there will be a design review at 60% or greater milestone completion. IEPR teams are not expected to be knowledgeable of Army and administration policies, nor are they expected to address such concerns. However, an IEPR team should be given the flexibility to bring important issues to the attention of decision makers.

4. References

The following references to USACE regulations shall be followed in conducting the IEPR. The most recent documents and subsequent updates shall be used and are available at <http://www.publications.usace.army.mil/>. The Project Stakeholders and IEPR Team shall recommend any additional references or criteria not listed for a determination of adding them to the Scope of Work.

General

- EC 1165-2-214, Water Resources Policies and Authorities - Civil Works Review 15 December 2012
- EM 385-1-1, Safety and Health Requirements, 15 September 2008
- ER 1110-1-12, Engineering and Design - Quality Management, 31 March 2011 (change 2)
- ER 1110-2-112, Required Visits to Construction Sites by Design Personnel, 15 April 1992
- ER 1110-2-1150, Engineering and Design - Engineering and Design for Civil Works Projects, 31 August 1999
-
- ER 1180-1-6, Contracts - Construction Quality Management, 30 September 1995
- Water Resources Development Act of 2007, Sections 2034 & 2035, Pub. L. 110-114. Privacy Act, 5 U.S.C. § 522a as amended

Engineering Geology

- EM 1110-1-1804, Engineering and Design - Geotechnical Investigations, 01 January 2001
- ER 1110-1-1807, Engineering and Design - Procedures for Drilling in Earth Embankments, 01 March 2006
- EM 1110-1-2908, Engineering and Design - Rock Foundations, 30 November 1994
- EM 1110-2-2901, Engineering and Design - Tunnels and Shafts in Rock, 30 May 1997
- EM 1110-1-1802, Geophysical Exploration for Engineering and Environmental Investigations, 31 August 1995
- ER 1110-2-1806, Engineering and Design - Earthquake Design and Evaluation for Civil Works Projects, 31 July 1995

Geotechnical Engineering

- EM 1110-2-1901, Engineering and Design - Seepage Analysis and Control for Dams, 30 April 1993
- EM 1110-2-1902, Engineering and Design - Slope Stability, 31 October 2003
- EM 1110-2-1913, Engineering and Design - Design and Construction of Levees, 30 April 2000
- EM 1110-2-1914, Engineering and Design: Design, Construction and Maintenance of Relief Wells, 29 May 1992

- EM 1110-2-1413, Hydrologic Analysis of Interior Areas, 1987.
- EM 1110-2-1603, Engineering and Design - Hydraulic Design of Spillways, 16 January 1990
- EM 1110-2-1619, Risk-Based Analysis for Flood Damage Reduction Studies, 1996
- EM 1110-2-2902, Engineering and Design - Conduits, Culverts, and Pipes, 31 March 1998
- EM 1110-2-3600, Engineering and Design - Management of Water Control Systems, 30 November 1987
- ER 1110-8-2 (FR), Inflow Design Floods for Dams and Reservoirs, 1 March 1991
- ER 1110-2-240, Water Control Management, 8 October 1998
- ER 1130-2-530, Flood Control Operations and Maintenance Policies, 30 October 1996
- ER 1110-2-8156, Preparation of Water Control Manuals, 31 August 1995
- ER 1100-2-8162, Incorporating Sea Level Change in Civil Works Projects, 31 December 2013
- ECB 2014-10, Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs and Projects, 2 May 2014
- ETL 1100-2-1, Procedures to Evaluate Sea Level Change: Impacts, Responses and Adaptations, 30 June 2014

Civil Engineering

- UFC 3-201-01 1 June 2013, Civil Engineering

5. Items Available for Review

- a. 30% (or greater) Basis of Design Report
- b. 30% (or greater) Construction Drawings and Specifications
- c. 30% (or greater) USACE review comments
- d. 60% (or greater) Basis of Design Report
- e. 60% (or greater) Construction Drawings and Specifications
- f. 60% (or greater) USACE Agency Technical Review (ATR) comments

6. Specific Tasks

The IEPR Team, experienced in the assessment, analysis, and evaluation for SAR of projects conducted through their established IEPR process of design, engineering, and construction peer reviews, shall perform general and specific tasks.

The IEPR Team shall perform reviews in accordance with milestones identified in this SOW. The IEPR Team may recommend to the Stakeholders additional or alternate milestones as a result of the review process.

Note that the IEPR is an extension (not a replacement) of an Agency Technical Review (ATR) (formerly Independent Technical Review) performed by USACE according to the requirements outlined in ER 1110-1-12, Engineering and Design Quality Management; however, the intent of the SAR is to complement an ATR and to avoid impacts to program schedules and cost. Where appropriate and reasonable, an ATR and SAR may be performed concurrently and in concert if it enhances the review process. The SAR is a strategic level review and every effort should be made to avoid having the SAR duplicate the ATR.

This task order does not include a review of the phases during construction. That required IEPR task will be accomplished under a separate task order in the future if and when construction begins.

The following tasks shall be performed independent of Stakeholder supervision, direction or control to fulfill independence criteria of an IEPR:

Sub Task 1. Work Plan to Conduct the IEPR: The IEPR Team will prepare a draft and final work plan that provides the process for conducting the IEPR, including screening criteria for peer reviewers,

graduate degree in engineering is preferable, but not required except as noted, as hands-on relevant engineering experience in the listed disciplines is more important. Expert reviewers included in the proposal for selection of the base contract shall be submitted first.

The panel members shall not have any financial or litigation association with the SRJB; the Design A/E; their engineering teams, subcontractors or construction contractors. Areas of conflict may include current employment by the Federal or State governments, participation in developing the subject project, a publicly documented statement advocating for or against the subject project, current or future interests in subject project or future benefits from the project, and paid or unpaid participation in litigation against the SRJB or Stakeholders.

The IEPR Team will provide brief biographies and detailed resumes (i.e. long form resumes) for the proposed IEPR panel members with the task order proposal. The detailed resume shall include relevant project experience similar in scale and scope to this project and address the specific expertise described below for each discipline.

The IEPR Team shall consist of the following panel members:

1. **Project Manager** shall be a registered professional engineer in North Dakota with a minimum of 15 years project management experience. The Project Manager shall have extensive knowledge of Civil Works projects including design and construction of levees, floodwalls, pump stations, closure gates, and utility modifications similar to the MREFPP. The Project Manager will also have the necessary skills and experience to lead a virtual team through the IEPR process.
2. **Facilitator** shall be a registered professional engineer with experience in facilitating IEPR's for projects similar to the MREFPP.
3. **Hydrology and Hydraulic (H&H) Engineering panel member(s)** shall be a Level 3 reviewer and a registered professional engineer in North Dakota from an Architect-Engineer or consulting firm, a public agency, or academia with a minimum of 20 years of experience in hydraulics and hydrologic engineering, and have a minimum BS degree or higher in engineering. Active participation in related professional engineering and scientific societies is encouraged. The panel member shall have extensive experience in the application of HEC computer modeling programs, risk and uncertainty analysis, interior drainage considerations, hydraulic engineering with an emphasis on flood risk reduction projects, with extensive background in hydraulic theory and practice, and river geomorphology, and have experience sizing pump stations and other interior drainage features.

The H&H panel member(s) should be familiar with USACE application of risk and uncertainty analyses in flood risk management projects. The H&H panel member(s) shall have experience associated with flood risk management projects, and the analysis and design of hydraulic structures such as outlet works, spillways, and stilling basins, channels and levees, diversion channel design, and large river control structures. The H&H panel member(s) must have performed work in hydrologic analysis, floodplain analysis, hydraulic design of channels and levees using various channel and bank protection works, and river sedimentation. The H&H panel member(s) must demonstrate knowledge and experience with physical modeling and the application of data from physical model testing to the design of stilling basins and scour protection, and in the ability to coordinate, interpret, and explain testing results with other engineering disciplines, particularly structural engineers, geotechnical engineers, and geologists. In regard to hydrologic analysis, the H&H panel member(s) must demonstrate knowledge and experience with the routing of inflow hydrographs through flood control reservoirs utilizing multiple discharge devices, including gated sluiceways and gated spillways –and/or- modeling large river systems and possess a thorough understanding of the dynamics of open channel flow systems, floodplain hydraulics, and interior flood control systems. The H&H panel member(s) shall also have a familiarity with standard Corps hydrologic and hydraulic computer models (including but not limited to HEC-1, HEC-HMS, HEC-RAS, FLO-2D, and HEC-DSS) used in drawdown studies, dam break inundation studies, hydrologic modeling and analysis for levee safety investigations.

hydraulic structures for large and complex civil works projects including flood walls, road closure gates, and pump stations within a riverine environment. The Structural engineering panel member(s) should be a recognized expert in stability analysis and structural design of flood risk management gate structures, the determination and evaluation of dynamic site-specific response spectra analysis, and the evaluation of soil-structure interaction; and the design and construction of T-wall and L-wall floodwall design. The Structural Engineering panel member(s) should be proficient in performing stability analysis using limit equilibrium analysis; design and construction of deep sheet pile walls; design and installation of pile foundations; and concrete design. The Structural panel member(s) shall have familiarity with preparing plans and specifications for USACE projects, knowledge of USACE design and construction procedures and policies, and USACE dam safety assurance policy and guidance. The Structural panel member(s) shall have experience in evaluating risk reduction measures for dam and/or levee safety assurance projects.

In addition, at least one of the expert reviewers shall have recent and relevant experience on multi-million dollar projects verifying the constructability of the proposed designs and then verifying that these projects were being constructed per the Plans and Specifications.

The panel responsibilities shall include, but not limited to, the following:

- a. Conduct the review for the subject project in a timely manner in accordance with the study and Review Plan schedule;
- b. Follow the "Charge", but when deemed appropriate by the team lead, request other products relevant to the project and the purpose of the review;
- c. Receive from the SRJB any public written and oral comments provided on the project;
- d. Provide timely written and oral comments throughout the development of the project, as requested;
- e. Assure the review avoids replicating an ATR and focuses on the questions in the "Charge", but the panel can recommend additional questions for consideration. The SAR panel may recommend to the RMO additional or alternate questions;
- f. Offer any lessons learned to improve the review process;
- g. Submit reports in accordance with the review plan milestones;
- h. The facilitator shall be responsible for insuring that comments represent the group, be non-attributable to individuals, and where there is lack of consensus, note the non-concurrence and why.

It is noted that this Sub Task 2 is accounted for the effort for Task Order 2 under this contract (IEPR/SAR for Design Phase BU-1).

Sub Task 3. Peer Review Critical Items List (CIL): The IEPR Team shall prepare an IEPR critical items list that shall include all project components which are critical to the project mission. The criticality of each item shall be evaluated/reviewed and discussed along with possible failure scenarios. Procedures for evaluating/reviewing the critical items in the design; construction; and Operations & Maintenance phases shall be addressed. The onsite staff required for each phase and for each item requiring review shall be discussed. The critical item list will be a final list that should be the best effort given the information available at the start of the IEPR process. As the task progresses, the final list may be modified and the IEPR Team will prepare a revised final list.

Sub Task 4. Orientation Briefing: In coordination with SRJB and Stakeholders, the IEPR Team will participate in an orientation briefing conducted by the SRJB between selected members of the Stakeholders and all of the IEPR Team. The purpose of this first meeting will be to familiarize the IEPR Team members with the project specifics and objectives of the review. This briefing should also provide

Task 9: Project Management: This task will consist of project administration, coordination of project activities, and preparation of monthly invoices, including management of subconsultant invoices.

7. Deliverables

The IEPR Team will provide one (1) hard copy and one (1) electronic copy of: the work plan (Task 1), IEPR panel selections (Task 2), IEPR review comments in tabular format (Task 6) and all Review Reports (Task 7) to the SRJB. Electronic submittals shall contain all electronic files on DVD, CD, or other appropriate electronic media. The briefings for the expert reviewers will be furnished in Microsoft PowerPoint or Adobe PDF formats. Reports generated by the IEPR Team will not be released for publication or dissemination without the SRJB Representative's written approval.

See Appendix A for table of Deliverables and Milestones by task.

III. Schedule and Assumptions upon Which Schedule is Based

The work described herein will be dependent on the timing of submittals from the SRJB and its Contractors. An anticipated schedule and task duration is set forth in Appendix A.

ACCEPTED AND AGREED TO:

HDR Engineering

SOURIS RIVER JOINT BOARD

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

APPENDIX B. General Charge Guidance

For a Type II - IEPR, the design and construction phases, the review should focus on unique features and changes from the assumptions made and conditions that formed the basis for the concept design. The expert reviewers shall address each of the following evaluation factors for each of the questions in each of the paragraphs below:

- Is the direction of the project appropriate?
- Has SRJB or Stakeholders overlooked any critical items?
- Does the panel have any other observations to add?

A. For the Design Phase Review of the MREFPP, the IEPR should focus on unique features and changes from the assumptions made and conditions that formed the basis for the design. The IEPR shall address the following questions:

1. Are the models used to assess hazards appropriate?
2. Are the assumptions made for hazards appropriate?
3. Is the quality of the surveys, investigations, and engineering for the design in accordance with ER 1110-2-1150 sufficient to support the models and assumptions made for determining the hazards?
4. Does the analysis adequately address the uncertainty given the consequences associated with the potential for loss of life for this type of project?
5. Do the design assumptions made during the decision document phase for hazards remain valid through the completion of design as additional knowledge is gained and the state-of-the-art evolves?
6. Is the design flow profile and other hydraulic profiles necessary for the design of the flood risk reduction project based on appropriate H&H modeling and assumptions, such that there is good confidence in which flood risk reduction evaluations are based off of?
7. Is the design criteria being used and any other design parameter decisions made as part of the design process for these first 3 phases apply well for future phases of design and construction for the flood risk reduction project? Future review panels will need to compare the guidance provided with new phases to future phases of the project.
8. Do the project features adequately address redundancy, resiliency, or robustness with an emphasis on interfaces between structures, materials, members, and project phases?
 - (1) Redundancy. Redundancy is the duplication of critical components of a system with the intention of increasing reliability of the system, usually in the case of a backup or failsafe. The use of multiple lines of defense that are linked to potential failure modes. The most vulnerable failure modes need the greatest redundancy.
 - (2) Resilience. Resiliency is the ability to avoid, minimize, withstand, and recover from the effects of adversity, whether natural or manmade, under all circumstances of use. The use of enhancements to improve the ability of the system to sustain loads greater than the design load to achieve gradual failure modes over some duration rather than sudden failure modes.
 - (3) Robustness. Robustness is the ability of a system to continue to operate correctly across a wide range of operational conditions (the wider the range of conditions, the more robust the system), with minimal damage, alteration, or loss of functionality, and to fail gracefully outside of that range. The use of more conservative assumptions to increase capacity to compensate for greater degrees of uncertainty and risk.

National Academy of Sciences
National Academy of Engineering
Institute of Medicine
National Research Council

**BACKGROUND INFORMATION
AND
CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE**
For General Scientific and Technical Studies and Assistance

NAME: _____ TELEPHONE: _____

ADDRESS: _____

EMAIL ADDRESS: _____

CURRENT EMPLOYER: _____

NAS/NAE/IOM/NRC COMMITTEE: _____

There are two parts to this form, Part I Background Information, and Part II Confidential Conflict of Interest Disclosure. Complete both parts, **sign** and **date** this form on the last page, and return the form to the responsible staff officer for *The National Academies* project and committee activity to which this form applies. **Retain a copy for your records.**

PART II CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE

INSTRUCTIONS

It is essential that the work of committees of the institution used in the development of reports not be compromised by any significant conflict of interest. For this purpose, **the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.** Except for those situations in which the institution determines that a conflict of interest is unavoidable and promptly and publicly discloses the conflict of interest, no individual can be appointed to serve (or continue to serve) on a committee of the institution used in the development of reports if the individual has a conflict of interest that is relevant to the functions to be performed.

The term "conflict of interest" means something more than individual bias. There must be an *interest*, ordinarily financial, that could be directly affected by the work of the committee.

Conflict of interest requirements are *objective* and *prophylactic*. They are not an assessment of one's actual behavior or character, one's ability to act objectively despite the conflicting interest, or one's relative insensitivity to particular dollar amounts of specific assets because of one's personal wealth. Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual, the other members of the committee, the institution, and the public interest. The individual, the committee, and the institution should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the work of the committee simply because of the existence of conflicting interests.

The term "conflict of interest" applies only to *current interests*. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but do not currently exist, because such future interests are inherently speculative and uncertain. For example, a pending formal or informal application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is not a current interest.

The term "conflict of interest" applies not only to the personal interests of the individual but also to the *interests of others* with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed. Thus, in assessing an individual's potential conflicts of interest, consideration must be given not only to the interests of the individual but also to the interests of the individual's spouse and minor children, the individual's employer, the individual's business partners, and others with whom the individual has substantial common financial interests. Consideration must also be given to the interests of those for whom one is acting in a fiduciary or similar capacity (e.g., being an officer or director of a corporation, whether profit or nonprofit, or serving as a trustee).

Much of the work of this institution involves scientific and technical studies and assistance for sponsors across a broad range of activities. Such activities may include, for example: defining research needs, priorities, opportunities and agendas; assessing technology development issues and opportunities; addressing questions of human health promotion and assessment; providing scientific and technical assistance and supporting services for government agency program development; assessing the state of scientific or technical knowledge on particular subjects and in particular fields; providing international and foreign country science and technology assessments, studies and assistance. Such activities frequently address scientific, technical, and policy issues that are sufficiently broad in scope that they do not implicate specific financial interests or conflict of interest concerns.

However, where such activities address more specific issues having significant financial implications -- e.g., funding telescope A versus telescope B, government development or evaluation of a specific proprietary technology, promotion or endorsement of a specific form of medical treatment or medical device, connecting foreign research facilities to specific commercial interests, making

1. FINANCIAL INTERESTS. (a) Taking into account stocks, bonds, and other financial instruments and investments including partnerships (but excluding broadly diversified mutual funds and any investment or financial interests valued at less than \$10,000), do you or, to the best of your knowledge others with whom you have substantial common financial interests, have financial investments that could be affected, either directly or by a direct effect on the business enterprise or activities underlying the investments, by the outcome of the project activities of the committee on which you have been invited to serve?

(b) Taking into account real estate and other tangible property interests, as well as intellectual property (patents, copyrights, etc.) interests, do you or, to the best of your knowledge others with whom you have substantial common financial interests, have property interests that could be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(c) Could your employment or self-employment (or the employment or self-employment of your spouse), or the financial interests of your employer or clients (or the financial interests of your spouse's employer or clients) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(d) Taking into account research funding and other research support (e.g., equipment, facilities, industry partnerships, research assistants and other research personnel, etc.), could your current research funding and support (or that of your close research colleagues and collaborators) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(e) Could your service on the committee on which you have been invited to serve create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under FINANCIAL INTERESTS is either "no" or "not applicable," check here _____ (NO).

If the answer to any of the above questions under FINANCIAL INTERESTS is "yes," check here _____ (YES), and briefly describe the circumstances on the last page of this form.

2. OTHER INTERESTS. (a) Is the central purpose of the project for which this disclosure form is being prepared a critical review and evaluation of your own work or that of your employer?

(b) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the functions to be performed in this committee activity?

(c) To the best of your knowledge, will your participation in this committee activity enable you to obtain access to a competitor's or potential competitor's confidential proprietary information?

(d) If you are or have ever been a U.S. Government employee (either civilian or military), to the best of your knowledge are there any federal conflict of interest restrictions that may be applicable to your service in connection with this committee activity?

(e) If you are a U.S. Government employee, are you currently employed by a federal agency that is sponsoring this project? If you are not a U.S. Government employee, are you an employee of any other sponsor (e.g., a private foundation) of this project?

(f) If the committee activity for which this form is being prepared involves reviews of specific applications and proposals for contract, grant, fellowship, etc. awards to be made by sponsors, do you or others with whom you have substantial common financial interests, or a familial or substantial professional

MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT UTILITY RELOCATION AGREEMENT

This Utility Relocation Agreement (“URA”) is made and entered into, effective as of the date of the Joint Board’s signature, by and between the Souris River Joint Water Resource District (“the Joint Board”) and Montana-Dakota Utilities Co., a division of MDU Resources Group, Inc., a company authorized to do business in the State of North Dakota (“the Utility Company”). The Joint Board and the Utility Company may be referred to collectively as “the Parties” or individually as “Party.”

I. INTRODUCTION

1. The Mouse River Enhanced Flood Protection Project (“Project”) is a public, multiple-phased project intended to provide flood risk reduction to the Mouse River basin lying in North Dakota. The Project was initiated following the Mouse River flood of 2011.
2. The Joint Board, a North Dakota political subdivision, is a joint water resource board formed under N.D.C.C. § 61-16.1-11 between the water resource boards of the counties of Renville, Ward, McHenry and Bottineau. The Joint Board has entered into an agreement with the North Dakota State Water Commission, which obligates the Joint Board to provide local sponsorship, cooperation, and coordination of the Project. As the local sponsor, the Joint Board is authorized to enter into agreements that relate to the Project, including this URA.
3. The Utility Company provides natural gas utility services throughout the Mouse River basin, and has Utilities at locations that could interfere with the construction of the Project. The Joint Board has requested or will request the Utility Company to relocate certain Utilities that could interfere with the Project.
4. It is the intent of the Parties that the Joint Board and its Design Consultants will provide Project Plans to the Utility Company, and that the Utility Company’s Relocation Design Professionals will design the Relocation so that the remaining Utilities will not interfere with the Project. It is the intent of the Parties that the Utility Company’s Relocation Contractor(s) will perform the Utility Work and Relocation. For all Utility Work performed under an authorized and executed Work Order, the Utility Company shall invoice the Joint Board, who will reimburse the Utility Company for the costs of Utility Work in accordance with this URA.
5. The Joint Board and the Utility Company desire to enter into this URA to set forth the rights and obligations of the Joint Board and the Utility Company in relation to Utility Work that is necessary because of the Project. Increased coordination between the Joint Board and the Utility Company and timely performance of the Project and the Utility Work necessitated by the Project is in the public interest and will reduce delays and costs of construction for both the Joint Board and the Utility Company.

6. The Utility Company has entered into franchise agreements with municipalities affected by the Project, or alternatively municipalities affected by the Project have enacted franchise ordinances granting to the Utility Company permission to construct, maintain, and install its Utility Facilities within corporate limits of the municipality in question. The Joint Board and the Utility Company intend that this URA will replace and supersede any franchise agreement between the Utility Company and the subject municipality or franchise ordinance enacted by the subject municipality, but only to the extent that a relocation of Utility Facilities is necessary as a result of the Project. Upon request from the Utility Company, the Joint Board shall provide written verification to the Utility Company that this URA is fully binding upon the Parties regardless of any such franchise agreement or ordinance with any municipality.
7. This URA is not intended to apply to any new construction, development, installation, connections, or services provided by the Utility Company to any entity, including the Joint Board, except to the extent the Project may require relocation of Utilities installed after the date hereof. Subject to the foregoing regarding relocation of Utilities installed after the date hereof, any new construction, development, installation, connection, or services provided by the Utility Company will fall under the Utility Company's standard and customary rates and practices.
8. This URA does not commit any present funding by either Party and is subject to future budgeting, authorization and appropriation processes, as applicable, and is to be implemented through a work-order process.

II. AGREEMENT

The Joint Board and the Utility Company agree to the following terms and provisions regarding Relocations of Utilities that are necessary as a result of the Project.

1. Definitions:

- a. *Abandonment* means (i) the relinquishment by the Utility Company of all right, title, claim and possession of a Utility and (ii) the Utility Work that is necessary to retire a Utility from service but not physically remove the Utility from its installed location. The Utility Company may not Abandon Utilities within Project ROW or other Project ROW property without the Joint Board's consent, as evidenced by the Joint Board's signature on the Work Order.
- b. *Betterment* means the upgrading (e.g., increase in capacity) of a Utility that is not attributable to construction of the Project and is made solely for the benefit of and at the election of the Utility Company (not including a technological improvement which is able to achieve such upgrade at costs equal to or less than the costs of a "like-for-like" replacement or Relocation). The use of new materials or compliance with the Utility Company's Relocation Standards in the performance of Relocation is not considered a Betterment. Betterment does not include special design or construction features required to protect the utility, including encasing

pipelines, or providing structural support for Utility Facilities with minimum cover. In the case in which the Utility Company upgrades their utilities as part of the relocation, the Utility Company will be required to submit a breakdown showing the difference in cost for the betterment versus the cost of replacing with existing material. Where betterments are not necessitated by the Project, but are to be installed solely for the benefit of the Utility Company, the cost of installing such betterment items will not be eligible for reimbursement.

- c. *Cost of Relocation* means the entire amount paid for Utility Work that is properly attributable to the Relocation. The Cost of Relocation does not include costs associated with Incidental Utility Work.
- d. *Design Consultants* mean(s) the professional surveyors, technicians, engineers, and other technical professionals hired by the Joint Board to undertake the design of the Project.
- e. *Force Majeure* means fire; explosion; action of the elements; strike; interruption of transportation; rationing; shortage of labor, equipment or materials; court action; illegality; unusually severe weather; act of God; act of war; adverse weather conditions, terrorism; or any other cause that is beyond the control of a Party.
- f. *Incidental Utility Work* means tasks performed by any Party that are duplicative of Utility Work undertaken by the Utility Company, including without limitation: exchange and review of documentation with respect to identifying Utilities or unidentified utilities; meetings, whether internal or with the other Party or other affected utility companies, jurisdictions, federal and state agencies, organizations or special districts or other affected third parties; procurement of and coordination with Relocation Design Professionals or Relocation Contractors; coordination and interfacing of the Utility Company's Relocation schedule the Project; preparation, negotiation and execution of Work Orders and Work Order exhibits. **Neither Party shall be reimbursed for costs incurred or time expended in performing Incidental Utility Work.**
- g. *Project Plans* means the detailed maps, drawings, plans, and profiles of the Project.
- h. *Project Right-of-Way* or *Project ROW* means real property (which term is inclusive of all estates and interests in real property, including Public Lands but exclusive of temporary construction permissions) owned or controlled by the Joint Board that is necessary for operation of the Project after such Project has been constructed.
- i. *Protection in Place* or *Protect in Place* means activity necessary to ensure the safe operation and structural integrity of a Utility that will not be removed or transferred to another location, including without limitation, modification of location (such as lowering the Utility); construction staking of the Utility location during Project or Project-related construction; adjustment of Relocation Plans to avoid exposing a Utility to construction equipment; installing steel plating or concrete slabs;

encasement of the Utility; temporarily de-energizing power lines; or installing physical barriers.

- j. *Public Lands* means, solely for purposes of this URA, real property dedicated to or created as public right-of-way (but specifically excluding land owned in fee by a political subdivision which has not been dedicated to the public for right-of-way purposes).
- k. *Relocate or Relocation* means the adjustment of a Utility, including without limitation: Removal and reinstallation, including necessary temporary facilities; transfer or modification of location; acquiring necessary right-of-way at a new location; moving, rearranging, or changing the type of Utility (exclusive of Betterments); abandonment; Protection-In-Place; and construction of a replacement utility that is functionally equivalent.
- l. *Relocation Contractor(s)* means the contractors, consultants, and subcontractors, hired by the Utility Company to undertake construction of a Relocation.
- m. *Relocation Design Professionals* mean(s) the professional surveyors, technicians, engineers, and other technical professionals hired by the Utility Company to undertake the design of the Relocation.
- n. *Relocation Plans* means the preliminary and final Utility Relocation design plans and construction documents prepared by the Relocation Design Professionals. Relocation Plans shall comply with the Relocation Standards and with the terms of this URA.
- o. *Relocation Standards* means the USACE EM 1110-2-1913 Design and Construction of Levees; USACE EM 10-2-2902, Conduits, Culverts, and Pipes; and Guidance and Requirements for horizontal Directional Drilling in the Red River Valley of the North Under Flood Risk Reduction Projects, St. Paul District USACE.
- p. *Removal* means the removal of Utility materials, including the demolishing, dismantling, removing, transporting, or otherwise disposing of Utility materials and cleaning up to leave the Relocation site in a neat and presentable condition, all in accordance with federal, state, and local law.
- q. *Utility or Utilities* means all electric, telephone, gas, cable, fiber optic, water, and sewer lines, including all conduits, poles, wires, cables, buried cable, pipes and other fixtures, including necessary appurtenances, owned and/or operated by the Utility Company that has been identified as potentially posing a conflict with the implementation of the Project. Utility shall also refer to any such facility during and after Relocation.

- r. *Utility Work* means tasks, obligations and duties, exclusive of Incidental Utility Work, required to either accomplish Relocation or confirm that no Relocation is required for a Utility, including:
 - (i) design of the Relocation, including the creation of Relocation Plans;
 - (ii) construction of the Relocation, including labor, materials and equipment procurement, temporary Relocation, and Relocation of existing service lines connecting to any Utility, regardless of the Utility Company of such service lines or of the property served by such service lines; and
 - (iii) activities undertaken to effectuate the Relocation, hereinafter collectively referred to as “Utility Coordination,” including without limitation:
 - 1. verification by survey, potholing or otherwise that a Utility is, or is not, in conflict with the Project;
 - 2. provision of survey coordinate data, field surveys, and construction staking in the field for the construction of a Relocation;
 - 3. acquisition of permissions and property interests;
 - 4. public information;
 - 5. traffic control;
 - 6. resurfacing and restriping of streets and reconstruction of curb and gutter and sidewalks as may be required by any relevant authority;
 - 7. development of and delivery to the Joint Board and its Design Consultants of as-builts (or, in the alternative, drawings marked to show changes in the field) showing each Relocation; and
 - 8. activities performed to ensure and document that Utility Work is in accord with Relocation Plans, including, without limitation, materials handling; construction procedures; calibrations and maintenance of equipment; document control; production process control; and any sampling, testing, and inspection done for these purposes (collectively, “Quality Control”).
- s. *Work Order* means the document under which all Relocations shall be implemented in accordance with Paragraph 4, below.

2. Scope of Agreement:

- a. This URA prescribes the process for determining the Utility Work necessitated by implementation of the Project and provides for the scheduling and timely performance of Relocations.
- b. This URA does not commit funding by either Party nor bind any Party to responsibility for the cost or performance of any Relocation. Each Relocation for the Project will be implemented by a Work Order to be negotiated and agreed by the Parties and which shall serve as the documentation binding the Parties as to responsibility for Cost of Relocation and performance of Utility Work. Until a

Work Order is executed by a Party, that Party is not bound with respect to any matters represented therein, including responsibility for cost or performance of any Utility Work.

- c. A Work Order, which shall be consistent with this URA, shall be issued for each Relocation and will identify, among other things, the Parties, the Project, the Utility (by Project-specific identification number and general description) and the Relocation schedule.

3. Coordination on Project and Identification of Utility Work:

- a. For each individual phase of the Project, the Joint Board and its Design Consultants will communicate with the Utility Company as early in the process as possible to determine the location of existing Utilities, identify potential conflicts of the individual phase of the Project with the existing Utility, and develop a plan for additional coordination between the Joint Board and its Design Consultants and the Utility Company and its Relocation Design Professionals for the individual phase of the Project in question.
- b. The Joint Board shall provide the Utility Company with the Project Plans in electronic format at the conclusion of preliminary engineering and conclusion of final design.
- c. The Utility Company and the Joint Board will meet to confirm the conflict status of each of the Utility Company's Utilities, which determination will be made by reference to the Relocation Standards. If a Utility is confirmed to be in conflict with the Project, the Joint Board and the Utility Company shall coordinate to determine the nature of the Relocation required based upon the Relocation Standards. The Parties shall execute a document for each Utility shown in the Project Plans, which document will affirm whether the Utility is or is not in conflict.
- d. The Parties shall attempt to identify any Utilities that can reasonably be Relocated prior to the commencement of any individual phase of the Project; however, to the extent the Utility Company facilities have not been identified, confirmed as conflicted, or Relocated prior to commencement of any individual phase of the Project, the Parties will coordinate and cooperate with one another to complete the Relocation of such Utilities.
- e. As soon as the Utility Company and the Joint Board have identified any conflict for which a Relocation is necessary, the Utility Company shall prepare an estimate, broken down as to estimated cost of labor, construction overhead, materials and supplies, handling charges, transportation and equipment, rights of way, preliminary engineering and construction engineering, all in sufficient detail to provide the Joint Board a reasonable basis for analysis. The estimate provided by the Utility Company shall be the basis of a proposed Work Order.

4. Work Order Content:

- a. In addition to the contents required under Paragraph 2(c) and the estimate set forth in Paragraph 3(e) above, proposed Work Orders shall identify: the existing and

proposed location of the Utility; concise description of the Utility Company's property interests where currently located; the agreed Relocation and detailed scope of work; whether reimbursement, if any, is to be made on a lump sum or actual cost basis; the actual not-to-exceed Cost of Relocation; an indication of whether replacement property interests are required for Relocation; the schedule for commencement and completion of both design and construction of the Relocation; and any other terms and conditions applicable to the Relocation, such as approved service interruptions or negotiated Betterments and payment arrangements therefor, (collectively, "Work Order Content").

- b. To the extent such documentation has not previously been exchanged, the Joint Board and the Utility Company shall coordinate the exchange of all information necessary for preparation of the Work Orders and shall promptly meet to resolve through good faith negotiation any comments or disagreements with respect to Work Order Content. Once the Parties have reached agreement on the Work Order Content, the Work Order shall be prepared by the Utility Company for execution by the Joint Board.
- c. Prior to the execution of any Work Order, the Joint Board will ensure that it has budgeted, authorized, and appropriated funds for all Utility Work costs specified in a Work Order. Execution of a Work Order or Work Order revision by the Joint Board is a representation that it has sufficient funds available, and will pay, for the Utility Work identified in the Work Order. The Joint Board shall not authorize any Work Order or Work Order revision that will cause the lump-sum or estimated not-to-exceed actual cost shown to increase beyond the previously appropriated amounts, unless the Joint Board appropriates additional funds.
- d. Once a Work Order is fully executed, that Work Order shall be conclusive as to all matters represented therein. Any material change to the Work Order scope of work and any change that will result in an increase in the time necessary to complete a Relocation or an increase to the Cost of Relocation above the amount authorized on the Work Order must be shown on a revised duly executed Work Order. Executed Work Orders, as they may be revised from time to time, are incorporated into this URA by this reference.

5. Cost Share and Reimbursement:

- a. For all executed Work Orders, the Cost of Relocation shall be split equally between the Joint Board and the Utility Company, including the following scenarios:
 - i. where the Utility is located in Public Lands or Project ROW that is revocable and/or requires the Utility Company to pay the Cost of Relocation;
 - ii. where the Utility is located within a private property right (such as a permanent easement or fee simple title) held or claimed by the Utility Company.
- b. In the event the Joint Board pays, executes a URA, or otherwise agrees with another utility services provider to pay for more than fifty percent (50%) of the

Cost of Relocation in connection with the Project (“Increased Cost Sharing”), the Joint Board shall immediately notify Utility Company of such payment or agreement regarding the Increased Cost Sharing. Thereafter the Joint Board shall share the Cost of Relocation throughout the term of this URA, and any applicable Work Orders, at the same Increased Cost Sharing as the Joint Board paid on behalf of the other utility service provider.

- c. The Cost of Relocation is negotiated on an actual cost basis; the amount shown on the Work Order shall be an estimated cost, which estimate shall not be exceeded without written amendment of the Work Order. The Utility Company will keep accurate and true records of all expenditures made by it in the process of such Relocation.
- d. The Utility Company may invoice the Joint Board no more than monthly. Invoices shall cover all Utility Work performed since the prior invoice submission. If more than one Work Order has been authorized and executed by the Joint Board, the Utility Company shall invoice against each Work Order separately.
- e. The Joint Board shall make payment within 30 days of receipt of invoice. If the Joint Board reasonably disputes any portion of the invoice, it may withhold payment for the disputed portion while timely remitting payment on the undisputed portion. All invoices for Utility Work must be submitted not later than one year after the performance of the Utility Work. If the Joint Board fails to pay the undisputed portion of any invoice in a timely manner, such delay in payment shall entitle Utility Company to stop all Utility Work under outstanding Work Orders pending Utility Company’s receipt of the undisputed portion of such payment(s) due to Utility Company.
- f. Notwithstanding anything in this URA which may be interpreted to the contrary, if a Relocation of a Utility is required based upon information, surveys, plans or other information which is provided by a Party and the information is incorrect or revised (including but not limited to any change in the Project or Project Plans) causing additional Relocations of the same Utility (or any part thereof), the Cost of Relocation for the second and each subsequent Relocation and all will be paid by the Party that provided the incorrect information or caused the revisions necessitating the subsequent Relocation.

6. Real Property Interests and Utility Corridors:

- a. Where the Utility is originally located in lands upon which the Utility Company owns a real property interest, the Parties shall initially attempt to acquire “like-for-like” replacement real property interests through which the Utility can be Relocated. For instance, if the Utility runs over and across a private easement held by the Utility Company before the Relocation, the Utility should run over and across a private easement held by the Utility Company after the Relocation. If the Parties cannot so Relocate, the Parties shall meet to determine if a suitable Relocation location exists across Public Lands.
- b. Where the Utility is originally located in Public Lands or Project ROW, the Parties shall initially attempt to Relocate into Public Lands. If the Parties cannot so

Relocate, the Parties shall meet to determine a suitable Relocation location and a schedule and plan to acquire any property interests necessary for the Utility's Relocation.

- c. All property acquisition costs are included in Costs of Relocation. Property interests necessary for any Relocation must be obtained prior to commencement of construction of Relocation. Acquisition of property for relocation of utilities shall be the responsibility of the Utility Company.
- d. This URA is not intended to waive the Utility Company's rights to be paid just compensation in the event that the Joint Board should condemn the Utility Company property.

7. Design and Review of Relocation Plans:

- a. Upon execution of a Work Order, the Relocation Design Professionals will draft Relocation Plans in accordance with the Work Order and the Project Plans provided by the Design Consultants. Upon completion, the Utility Company shall submit complete Relocation Plans to the Joint Board, who shall review the Relocation Plans solely for conformance with this URA and with the Relocation Standards. Approval or rejection of Relocation Plans shall be returned to the Utility Company by no later than 14 calendar days after its submission, unless a different time period is expressly provided in the respective Work Order. The Joint Board's approval of Relocation Plans shall be evidenced by an acceptance letter. Rejection of Relocation Plans shall be made in writing and shall specify the grounds for rejection as well as suggestions for correcting non-conformance. Utility shall have no obligation to commence relocation of Utilities under an applicable Work Order unless and until the Relocation Plans are 100% complete and finalized.

8. Construction of Relocations:

- a. After receipt of the acceptance letter as set forth in Paragraph 7(a), the Utility Company shall provide notice to the Joint Board of its anticipated schedule of Relocation construction.
- b. To the extent that Utility Work is performed within Project ROW, the completed construction of Relocation shall be inspected for conformance with the URA and Relocation Plans. Immediately following such Utility Work, the Utility Company shall provide the Design Consultants with a notice thereof, and the Design Consultants shall inspect the Utility Work within 24 hours of such notice. Rejection of construction of Relocation shall be made in writing within 24 hours of inspection and shall specify the grounds for rejection as well as suggestions for correcting non-conformance. The revised Relocation shall be re-inspected for conformance with corrective suggestions immediately following corrective work and either approved or rejected after re-inspection. The Joint Board's approval and acceptance of any construction of Relocation performed shall not be construed as a waiver of any claim that the Joint Board may have under applicable law.

- c. The Utility Company shall provide the Joint Board's Design Consultants with as-built plans or drawings marked to show changes in the field not later than 90 calendar days after construction of any Relocation.

9. Deadlines and Delays:

- a. Time is of the essence in the performance of all Utility Work specified in all Work Orders. Except where due to Force Majeure, if the Utility Company fails to meet a deadline established in the applicable Work Order, the Utility Company shall reimburse the Joint Board for the actual documented costs and damages arising out of any such delay provided that in no event shall Utility Company be liable for any: (i) indirect, consequential, special, punitive damages related to such delay, or (ii) any amount in excess of the sum of all payments to be made under the applicable Work Order. The Utility Company shall not be liable to the Joint Board for any delay in, or failure of performance of, any covenant or promise contained in this URA, nor shall any delay or failure constitute default or give rise to any liability for damages if and only to the extent that such delay or failure is caused by: (x) Force Majeure **and** the Utility Company has provided the Joint Board notice of such Force Majeure, (y) any delay or change in the Project or Project Plans, or (z) any delay caused by another contractor or third party that directly impacts performance of the Utility Work.
- b. In addition to, and without limiting any rights or remedies available under this URA or otherwise, if Utility Company fails to complete Utility Work on or before the deadline established in the applicable Work Order, or if the Joint Board reasonably determines that Utility Company will be unable to timely complete such Utility Work, the Joint Board shall, after providing the Utility Company 14 days to cure or provide a plan to cure, issue a Dispute Notice in accordance with Paragraph 11(a). If the Parties are unable to resolve the Dispute, the Parties shall proceed to court in accordance with Paragraph 11.
- c. In the event of a dispute under this URA, the Parties agree that they will continue their respective performance as required hereunder, including paying invoices, and that such continuation of efforts and payment of invoices shall not be construed as a waiver of any legal right or power: (a) of any Party under this URA, any Work Order, or any other agreement executed pursuant hereto; or (b) otherwise available pursuant to applicable law.

10. Notices; Representatives and Authority.

- a. Notices. Any and all notices required to be given by the Joint Board or the Utility Company pursuant to this URA must be provided in writing, deliverable by e-mail, or first class mail, to the Party representatives identified herein.
- b. Party Representatives. For the purpose of this URA, the individuals identified below are hereby-designated representatives of the Joint Board and the Utility Company. Either Party may from time to time designate in writing new or substitute representatives.

For the Joint Board:

Dan Jonasson
City of Minot Public Works Department
1025 31st Street SE
Minot, ND 58701
dan.jonasson@minotnd.org

with a copy to:

Ryan Ackerman
Ackerman Estvold
1907 17th Street SE
Minot, ND 58701
ryan.ackerman@ackerman-estvold.com

For the Utility Company:

Montana-Dakota Utilities Co.
400 North 4th Street
Bismarck, ND 58501-4092

- c. Authority. Party representatives shall each have the authority to negotiate, approve and execute Work Orders and Work Order revisions and all supporting documentation; review and approve or reject Relocation Plans; inspect and approve or reject construction of Relocation; review invoices for payment; and otherwise act for the Party represented. Either Party may limit the signature authority of its Party representative by submission to the other Party of written notice specifically identifying the extent of and limitations of the Party representative's authority.

11. Dispute Resolution:

- a. Dispute Notice. In the event of any dispute, claim, or controversy arising out of or relating to this URA, any Work Order, or any Utility Work involving or otherwise relating to the Project or the Utility Work ("Dispute"), the complaining Party shall provide a notice of Dispute ("Dispute Notice") to the other Party. The Dispute Notice shall describe the facts surrounding the Dispute in sufficient detail to apprise the other Party of the nature of the complaint.
- b. Good Faith Negotiation. The Joint Board and the Utility Company shall attempt to settle all Disputes. To this effect, the Joint Board and the Utility Company shall conduct at least one face-to-face meeting between the Party representatives identified herein to attempt to reach a solution satisfactory to both the Joint Board and the Utility Company. Such meeting shall take place within 7 calendar days following delivery of a Dispute Notice.

- c. Legal Remedies. If the Joint Board and the Utility Company fail to resolve a Dispute in accordance with Paragraph 11(b) of this URA, either Party may proceed to court. The venue for all disputes shall be in North Dakota state court in the county where the real property at issue is located.
- d. Neither the Utility Company nor the Joint Board shall be entitled to reimbursement for any Utility Work covered by this URA, including costs with respect to real property interests (either acquired or relinquished), except as set forth in the URA and in the Work Order. The terms and conditions of this paragraph shall prevail over any statutory, common law, regulatory or administrative provisions governing the subject matter hereof. This URA, including all executed Work Orders, is intended as a full settlement of all claims regarding the Joint Board's and the Utility Company's responsibility for the Cost of Relocations. Except for obligations undertaken by the Joint Board and the Utility Company pursuant to this URA and the Work Orders, the Utility Company and the Joint Board each waives, releases, and forever discharges the other Party, its members, officers, directors, agents, employees, successors and assigns from any and all claims for reimbursement, whether known or unknown, which either Party ever had or now has, regarding liability for the cost of the Utility Work necessitated by the Project and identified in the Work Order. This paragraph is intended to address only the issue of responsibility for the Cost of Relocation and does not extend to any tort claims that might arise out of the performance of the Utility Work or otherwise Relocation or impact to Utilities that are not covered by a Work Order executed by both parties.

12. Damages to Persons and Property:

- a. The Utility Company shall be responsible for any damage to any persons and property, including Project ROW, Utility Company Property, adjacent property, utilities, adjacent structures, and other third person real or personal property, that is caused by its or its Relocation Contractor's activities associated with the Project or any Relocation. The Utility Company shall require its Relocation Contractors, employees and agents to exercise due precaution and care to avoid causing such damage and the occurrence of any such damage shall immediately be repaired at the expense of the Utility Company. The Parties shall notify one another of any such damage and any claims under this Paragraph 12(a).

13. Insurance:

- a. By the Joint Board.
 - i. The Joint Board shall carry General Liability with limits of liability of no less than \$2,000,000 per occurrence.
- b. By the Utility Company.
 - i. The Utility Company shall maintain (and/or require any Relocation Contractors performing activities hereunder to maintain): (a) Commercial General Liability (Bodily Injury and Property Damage) insurance with limits of liability of not less than \$1,000,000 per occurrence and aggregate,

including the following coverages (or the equivalent, if in a policy form reasonably acceptable to the Joint Board): i) Contractual Liability to cover liability assumed under this URA; ii) Personal Injury with the “employee” and “contractual” exclusions deleted, and iii) Product and Completed Operations Liability Insurance; (b) automobile liability insurance covering owned, non-owned and hired automobiles in an amount not less than \$1,000,000; and (c) Workers’ Compensation insurance as required by law. The Utility Company shall cause the Joint Board, its governing body, and their respective officers, employees and authorized agents to be named as additional insured on the above general liability insurance.

- ii. The Utility Company shall also maintain (and/or cause its Relocation Design Professionals performing design of Relocation to maintain) professional liability coverage with limits of liability not less than \$1,000,000 per occurrence and aggregate.
- iii. Where the Utility Company or its contractors are required to obtain insurance under (i) and (ii) of this provision, the Utility Company shall cause a certificate (or certificates) evidencing the insurance required to be delivered to the Joint Board as a condition precedent to commencement of Utility Work by the Utility Company and by each other party required to provide such insurance, and shall cause such insurance to be maintained in full force and effect until all such Utility Work is completed. Each certificate shall provide that coverage shall not be suspended, voided, canceled or materially reduced in coverage or in limits, except after 30 calendar days’ prior written notice to the Joint Board. If requested by the Joint Board from time to time, the Utility Company shall provide the Joint Board with verification by a properly qualified representative of the insurer that the Utility Company's and/or its Contractors’ insurance complies with this paragraph and shall cause all other parties required to provide insurance pursuant to this paragraph to do the same. All contracts shall be required to have commercial insurance from a provider with a Best’s A- rating.

14. INTENTIONALLY OMITTED.

15. Termination:

- a. The Joint Board may terminate any Utility Work required by a Work Order at any time that the Joint Board determines that the purposes of the distribution of funds under that Work Order would no longer be served by completion of the Utility Work. The Joint Board shall effect such termination by giving written notice of termination to the Utility Company at least 20 calendar days before the effective date of such termination. The Joint Board will reimburse the Utility Company in accordance with the terms of the URA for Utility Work duly performed prior to the date of termination. The Joint Board shall also reimburse the Utility Company for all Utility Work required to restore and maintain safe and reliable utility services to the customers impacted by the Utility Work covered by the terminated Work Order.
- b. Subject to the preceding paragraph, all provisions of this URA that create rights or provide responsibilities for either Party after any termination of Utility Work shall survive such termination with respect to that Utility Work.
- c. All data, studies, surveys, maps, models, photographs and reports or other materials relating to Utilities or property rights or interests or rights of the Utility Company that are provided to the Joint Board by the Utility Company under this URA shall be returned to the Utility Company.

16. No Liens:

- a. Each Party shall keep the Project ROW and any other Joint Board or Utility Company property free from any statutory or common law lien arising out of any Utility Work performed by it, materials furnished to it, or obligations incurred by it, its agents, or its contractors.

17. Retention of Records:

- a. Each Party shall keep and maintain all books, papers, records, accounting records, files, reports and other material relating to the Utility Work it performs (or has performed) pursuant to this URA, including detailed records to support all invoices submitted by each Party, for a period of three years after the date of acceptance of the completed Utility Work. Each Party and any other party or agency providing funding to the Joint Board (including their respective auditors) shall have access to and shall be entitled to audit all such records during normal business hours upon reasonable notice to the Party maintaining such records.
- b. The Joint Board and the Utility Company shall mutually agree upon any financial adjustments found necessary by any audit undertaken.

18. Term:

- a. This Agreement shall remain in effect for five years after the date of execution of this Agreement. Unless Notice is provided by one of the parties to this agreement to

the other parties prior to the expiration of the initial term of this Agreement, this Agreement will automatically renew for an additional five-year term. Thereafter, this agreement will automatically renew for successive five-year terms unless one party provides Notice to the other parties prior to the expiration of any renewal term. Certain provisions that provide rights or create responsibilities for either Party after expiration or termination of any Utility Work, must, by their terms, survive.

19. Appropriations.

- a. The Joint Board's obligations under this URA or any renewal shall extend only to monies appropriated for the purpose of this URA by the Joint Board and encumbered for the purposes of this URA. The Joint Board does not by this URA irrevocably pledge present cash reserves for payments in future fiscal years, and this URA is not intended to create a multiple-fiscal year direct or indirect debt or financial obligation of the Joint Board.

20. Legal Authority:

- a. Each Party warrants that it possesses the legal authority to enter into this URA and that it has taken all actions required by its procedures, by-laws, and/or applicable law to exercise that authority, and to lawfully authorize its undersigned signatory to execute this URA and to be bound to its terms. The person(s) executing this URA on behalf of each Party warrant(s) that such person(s) have full authorization to execute this URA.

21. Severability:

- a. If any provision or provisions of this URA shall be held to be invalid, illegal, unenforceable or in conflict with federal or North Dakota state law, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby, unless the deletion of invalid, illegal or unenforceable provision or provisions would result in such a material change as to cause completion of the transactions contemplated herein to be unreasonable.

IN WITNESS WHEREOF, the Parties hereto have caused this URA to be executed by their respective officers, officials or persons thereunto duly authorized, and this URA is deemed to be dated and to be effective on the date hereinafter stated as the date of its approval.

SOURIS RIVER JOINT BOARD

**MONTANA-DAKOTA UTILITIES, CO., A
DIVISION OF MDU RESOURCES
GROUP, INC.**

By: David Ashley
Its: Chairman

By: _____
Its: _____

Date: _____

Date: _____