



Contracting Actions

September 2019

Executive Director-Approved Contract Actions (Information)

Description	Company	Budget Estimate (\$)
<i>Task Orders – Diversion Authority</i>		
Task Order 13, Amendment 21	HMG	\$22,508
Task Order 17, Amendment 8	HMG	\$54,376
Task Order 30, Amendment 2	HMG	\$112,000

Executive Director Contracting Recommendation

Date: 09/04/2019

RECOMMENDATION FOR ACTION:

The Executive Director has reviewed and recommends approval of the following Contract Action(s).

SUMMARY OF CONTRACTING ACTION:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016, and amended August 23, 2018, the Owner’s Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare task orders and task order amendments for existing Master Services Agreements (MSA) and submit them to the Executive Director for review and action.

The Owner’s PMC has prepared the following Contract Action(s):

Houston-Moore Group, LLC

MFDA – Task Order 13, Amendment 21 – Levee Design and Design Support

\$22,508

- Add budget to subtask 2.B.ii.2.i, WP-43G OHB Wetland Mitigation Design

BACKGROUND AND DISCUSSION:

Houston-Moore Group, LLC (HMG) is the Engineer of Record for the design of the levees along the Red River (WP-42 In-Town Levees) and the OHB Ring Levee (WP-43), and has provided levee design and design support services under Task Order 13 from November 8, 2012, to the present time.

Amendment 21 adds budget to subtask 2.B.ii.2.i, WP-43G (OHB Wetland Mitigation Design) for USACE requested design modifications, preparation of revised plans, and review comment closeout.

See the table below for a summary of the amendments to the Task Order.

SUMMARY OF CONTRACTING HISTORY AND CURRENT CONTRACT ACTION:

Original Agreement or Amendment	Budget (\$) Change	Original Project Cost	Revised Project Cost	Agreement Execution Date	Project Completion	Comments
Task Order 13 Amendment 0	-	\$425,000	-	8-Nov-12	30-Sep-13	Initial authorization of 2.B.i and 2.B.ii.
Task Order 13 Amendment 1	\$150,000	-	\$575,000	13-Dec-12	30-Sep-13	Added Ring Levee Evaluations for Oxbow/Hickson/Bakke; Comstock; Christine; and Wolverton. Added Non-Structural Improvement Evaluation for staging area, and public meeting support.
Task Order 13 Amendment 2	\$4,090,000	-	\$4,665,000	8-Aug-13	31-May-15	Added Red River Levees-Phase 2, and VES reports for WP-43A, WP-43C, WP-43D, and WP-43E. Add mapping of impacted residential structures in Staging Area.
Task Order 13 Amendment 3	\$135,000	-	\$4,800,000	14-Nov-13	30-Sep-14	Added landscape architecture and master planning for 2 nd St. corridor. Added master planning svcs for Mickelson to the 4 th St. levee.
Task Order 13 Amendment 4	\$600,000	-	\$5,400,000	13-Feb-14	30-Sep-14	Added 4 th St. Levee Pump Station Replacement.
Task Order 13 Amendment 5	\$55,000	-	\$5,455,000	8-May-14	30-Sep-14	Added laboratory testing for Red River Levees – Phase 1 Design.

Original Agreement or Amendment	Budget (\$) Change	Original Project Cost	Revised Project Cost	Agreement Execution Date	Project Completion	Comments
Task Order 13 Amendment 6	\$549,000	-	\$6,004,000	14-Aug-14	30-Sep-14	Added Phase 2-Design misc design work; misc design work and preparation of bid package for 4 th St. Levee PS. Added land surveying for In-Town Levee and O/H/B Ring Levee.
Task Order 13 Amendment 7	\$115,000	-	\$6,119,000	9-Oct-14	30-Sep-15	Added O/H/B Ring Levee Design Modification – 100-Year Elevation.
Task Order 13 Amendment 8	\$450,000	-	\$6,569,000	5-Feb-15	31-Mar-16	Added Phase II ESAs for Case Plaza and City Hall; conceptual design for 2 nd St. N pedestrian overpass; Mickelson Levee Extension.
Task Order 13 Amendment 9	\$190,000	-	\$6,759,000	12-Mar-15	31-Mar-16	Added El Zagal Phase 2 Design.
Task Order 13 Amendment 10	\$602,000	-	\$7,361,000	11-Jun-15	31-Mar-16	Added Phase 2 Design misc design work.
Task Order 13 Amendment 11	\$418,000	-	\$7,779,000	13-Aug-15	31-Mar-16	Added funding for Upstream Staging Area Ring Levees.
Task Order 13 Amendment 12	\$610,000	-	\$8,389,000	10-Jul-14	31-Dec-16	Added WP-43D (O/H/B Pump Station Design); WP-43 Wetland Mitigation Design; WP-43A (Levee inspection); Land Surveying for ROW Acquisition; extended POP to 31-Dec-16.
Task Order 13 Amendment 13	\$340,723	-	\$8,729,723	23-June-16	31-Jul-17	Closed 2 subtasks, incorporate AWD-00057, add scope and budget for 6 existing subtasks, and add scope and budget for new subtask WP-42E.
Task Order 13 Amendment 14	\$60,000	-	\$8,789,723	10-Nov-16	31-Jul-17	In Town Levees, Phase 2 design closeout budget adjustment.
Task Order 13 Amendment 15	\$391,583	-	\$9,181,306	28-Sep-17	31-Jul-18	Incorporate new MSA terms and conditions; unencumber unused budgets; adjust WP-42E and WP-43G labor rates; add budget to WP-42G, WP-43CD, WP-43E, and ROW surveying; extend POP to July 31, 2018.
Task Order 13 Amendment 16	\$449,195	-	\$9,630,501	26-Apr-18	31-Jul-18	Add WP-42E scope and budget for project changes.
Task Order 13 Amendment 17	\$0	-	\$9,630,501	28-Jun-18	31-Dec-18	Add scope for Hickson Main Avenue re-plat services and extend POP to December 31, 2018.
Task Order 13 Amendment 18	\$74,340	-	\$9,704,841	27-Sep-18	31-Dec-18	Add WP-42E scope and budget for completion of original bid documents and preparation of rebid documents.
Task Order 13 Amendment 19	\$83,250	-	\$9,788,091	04-Jan-19	31-Dec-19	Add WP-43D4 scope and budget for preparation of bid documents, add additional budget for Right of Way Surveying, and extend the Period of Performance (POP) to December 31, 2019.
Task Order 13 Amendment 20	\$0	-	\$9,788,091	9-May-19	31-Dec-19	Reallocate unused budgets from completed subtasks (WP-42E design and WP-43A levee inspection) to subtask WP-43E (Utility Relocation Designs).
Task Order 13 Amendment 21	\$22,508	-	\$9,810,599	9-May-19	31-Dec-19	Add budget for subtask WP-43G (OHB Wetland Mitigation Design).

FINANCIAL CONSIDERATIONS:

The WP-43G (OHB Wetland Mitigation) design was prepared up to the 90% review in 2017, with final plans and specifications to be prepared when the project site became available. The project site became available in 2019, and HMG prepare a 95% review set in April 2019. As part of that review, USACE requested additional tree plantings and floodplain forest mitigation, on adjacent available land, be added to the project to provide additional, required project mitigation.

Amendment 21 is a \$22,508 change request that adds budget to subtask 2.B.ii.2.i, WP-43G (OHB Wetland Mitigation Design) for USACE requested design modifications, preparation of revised plans, and review comment closeout. The detailed draft task order scope of work is attached.

HMG's cost proposal for additional budget to incorporate USACE requested design modifications, prepare revised plans, and closeout review comments is \$22,508.00 and includes 134 hours of professional services at an hourly rate of approximately \$168 per hour.

The labor rates are consistent with 2019 MSA allowed rates. This task order is being billed on a time and material basis for actual costs incurred. Below is a summary of the review.

A summary of Task Order 13 current and proposed Amendment 21 subtask budgets is included on the table below.

TO-13 BUDGETS BY SUBTASK:

Work Package	Activity ID	Current Budget (\$)	Amendment 21 (\$)	Total (\$)
Red River Levees – Phase 1 Design	DE-7430	418,462		418,462
Landscape Arch/MP – 2 nd St. Corridor	DE-7430	48,082		48,082
Master Planning Svcs – Mickelson to 4 th	DE-7430	147,737		147,737
Red River Levees – Phase 2 Design	DE-7430	3,177,858		3,177,858
Red River Levees – VES	DE-7430	25,751		25,751
4 th St. PS Replacement	DE-7430	667,494		667,494
Michelson Levee Ext	DE-7430	116,368		116,368
El Zagal Phase 2 Levee Design	DE-7430	221,654		221,654
WP-42E 2nd St. So. Closure and Pump Station	DE-7430	991,894		991,894
Upstream Staging Area Ring Levees	DE-10150	394,486		394,486
WP-43A Design	DE-10150	362,450		362,450
WP-43C Design	DE-10150	204,372		204,372
WP-43D Design	DE-10150	2,108,254		2,108,254
WP-43E Design	DE-10150	406,358		406,358
O/H/B Ring Levee – VES	DE-10150	33,694		33,694
O/H/B Ring Levee Design Mod	DE-10150	120,287		120,287
O/H/B Wetland Mitigation Design	DE-10150	98,094	22,508	120,602
WP-43A Levee Inspection	DE-10150	3,227		3,227
Land Surveying for ROW Acquisition	DE-10150	241,569		241,569
TOTAL		9,788,091	22,508	9,810,599

The PMC prepared this change and feels the costs and level of effort are complete, accurate, and ready for Executive Director review.

ATTACHMENT(S):

1. DRAFT Task Order 13 Amendment 21
2. HMG cost proposal dated August 12, 2019

Prepared by: Program Management Consultant

John W. Glatzmaier

John Glatzmaier, P.E.

Jacobs

September 4, 2019

Date

Submitted by:

Joel Paulsen Diversion Authority Executive Director
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<i>Concur: September 9, 2019 Non-Concur:</i>

Cc: Technical Advisory Group

- Nathan Boerboom, City of Fargo Engineer/Diversion Authority Project Manager
- David Overbo, Clay County Engineer
- Jason Benson, Cass County Engineer
- Robert Zimmerman, Moorhead City Engineer
- Matt Stamness, Assistant Cass County Engineer/Diversion Authority Project Manager
- Dustin Scott, West Fargo City Engineer

Houston-Moore Group, LLC

Task Order No. 13, Amendment ~~2021~~

FMDA Purchase Order No. 157599

Levee Design and Design Support

In accordance with the Master Agreement for Professional Services between **Fargo-Moorhead Flood Diversion Authority** ("Owner") and **Houston-Moore Group, LLC** (HMG) ("Engineer"), dated May 1, 2017 ("Agreement"), Owner and Engineer agree as follows:

The parties agree that in the event of a conflict between prior versions of this Task Order No. 13 and this Amendment, the terms and conditions in this Amendment shall prevail, provided however, nothing herein shall preclude ENGINEER from invoicing for work authorized under prior versions of this Task Order and performed prior to effective date of this Amendment, even to the extent such prior work was revised by this Amendment. All other terms and conditions shall remain the same and are hereby ratified and affirmed by the parties.

1. Specific Project Data

A. Title: **Levee Design and Design Support**

B. Description: As part of Work-in-Kind (WIK), provide assistance to USACE, in design and design support activities, for design of levees along the Red River to support increased flow through the protected area and for levees in the upstream staging area. Provide Lands, Easements, Rights-of-Way, Relocations, and Disposal areas (LERRDs) assistance to Owner to support the levee designs.

C. Background:

- i. Red River Levees: At the November 8, 2012 Diversion Board meeting, the Board requested the US Army Corps of Engineers (USACE) add levees along the Red River to allow increased flow through the protected area. This task order allows HMG to provide design and design support to USACE for these Red River levees.
 1. Phase 1 – Screening of alternatives and selecting final alignment scope to include: Development of Alternatives, Public Involvement, Surveying, Geotechnical Exploration and Testing, Preliminary Geotechnical Analysis, Preliminary Hydrologic and Hydraulic Analysis, Preliminary Internal Flood Control Analysis, Preliminary Utility Investigation, Preliminary Levee and Structural Design, Transportation Evaluation, Preliminary Environmental Studies, Preliminary Report and Drawings, and Project Management.
 2. Phase 2 – Detailed Plans and Specifications: Based on the alternative selected in Phase 1, conduct a Value Engineering (VE) evaluation of the proposed project and prepare plans and specifications for 65 and 95 percent submittals, and prepare a cost estimate based on the 95 percent design submittal. Notice To Proceed (NTP) will be subject to the completion and signing of the USACE Supplemental Environmental Assessment (EA).
- ii. Upstream Staging Area Levees/Ring Dikes: At the November 8, 2012 Diversion Board meeting, the Board passed AWD-00020 Recommended Board of Authority Position for Post-Feasibility Alternatives Analysis VE-13A vs. VE-13C, which authorized HMG to begin conceptual design and site investigations of potential levees for the Oxbow.

2. Services of Engineer

A. General

- i. Red River Levees. Prepare Preliminary Design Report (PDR) and drawings for the construction of levees through town. The work will be done in 2 phases: Phase 1 will include screening of alternatives, preliminary design, and selecting final alignments. Phase 2 will include detailed plans and specifications.
- ii. Support for Upstream Stage Area Levees. Provide, as requested, assistance to USACE for design of ring levees and non-structural improvements in the Upstream Staging Area.
 1. Provide detailed designs for four of the Oxbow/Hickson/Bakke ring levee Work Packages (WP-43A, WP-43C, WP-43D, and WP-43E).

B. Scope of Work

- i. Red River Levees – Work will be done in 2 phases:
 1. Phase 1 - Screening of Alternatives, Selection of Alignment, and Preliminary Design for the area in Fargo, ND along the Red River between the existing railroad embankment near 5th Avenue North and the north end of the existing 4th Street levee (near 2nd Street South). Work will include:
 - a. Development of Alternatives – Develop up to three (3) protection alignment concepts and conceptual level cost estimates. Participate in an alignment selection meeting.
 - b. Public involvement – Meet with affected property owners (5 anticipated), participate in two (2) public meetings, and respond to calls after public meetings. Prepare visualizations of alignment alternatives(s).
 - c. Surveying – Conduct topographic survey of project corridor including elevations, utilities, landscaping, buildings, and streets.
 - d. Geotechnical Exploration and Testing – Determine location of borings, right-of-entry requests, conduct borings, field and laboratory testing, to determine surface and subsurface geological conditions.
 - e. Preliminary Geotechnical Analysis – Conduct preliminary stability analysis on alignment alternatives and report of findings.
 - f. Preliminary Hydrologic and Hydraulic Analysis - Conduct HEC-RAS modeling to complete preliminary evaluation of Red River stage impacts due to proposed project.
 - g. Preliminary Internal Flood Control Analysis – Conduct SWMM model update for existing conditions and proposed conditions with project (including consideration of interior ponding), review of historical precipitation and stream flow, simulation of low river gravity outlet condition, simulation of high river pumped outlet condition, and determine preliminary pump sizing and additional internal storage needs.
 - h. Preliminary Utility Investigation – Determine preliminary utility relocation requirements, conduct utility coordination meeting, and document utility relocation requirements and issues.

- i. Preliminary Levee Design Structural Design – Develop preliminary design of levee protection system, preliminary estimate of embankment and borrow requirements, and prepare a narrative of design criteria.
 - j. Preliminary Structural Design – Develop preliminary design for proposed floodwalls and closures, pump stations, and miscellaneous drainage structures. Prepare a narrative with descriptions of features, design considerations, and criteria assumptions.
 - k. Transportation Evaluation – Develop initial evaluation of transportation impacts, and participate in two (2) coordination meetings with City of Fargo staff and two (2) coordination meetings with railroad staff. Develop up to five (5) alternatives for the 2nd Street road alignment to accommodate flood protection alternatives.
 - l. Preliminary Environmental Studies – Complete Phase 1 Environmental Site Assessment report for six (6) properties.
 - m. Preliminary Design Report and Drawings – Prepare Preliminary Design Report (PDR) with cost estimates and preliminary project plans for selected alignment. Prepare artists renderings of selected plan.
 - n. Project Management – Document coordination and review, schedule and resource management, budgeting, and project team coordination.
 - o. Landscape Architecture/Master Planning- Provide landscape architecture and master planning services for the Red River Levees.
 - i. Provide landscape architecture services for the 2nd St. Corridor from NP Ave. to 4th Ave. Coordinate with the city of Fargo City Hall Project throughout the design phase of the City Hall Project.
 - ii. Provide master planning services from Mickelson to the 4th St. Levee.
2. Phase 2 – Detailed Plans and Specifications: Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the selected alternative from Phase 1. Include required surveying, environmental studies, permitting, removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, floodwalls, closures, traffic evaluations, road realignments and signal changes, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:
- a. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, USACE Consistency, Agency Technical Review (ATR) and USACE Independent External Peer Review (IEPR) review teams.
 - b. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and

specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

- c. Cost Estimate – prepare a cost estimate for the project based on the 95 percent submittal documents.
- d. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Diversion Authority, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.
- e. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.
- f. Additional design work to accommodate requested project changes:
 - i. Increase 2nd Street N pump station size and pumping capacity to 75,000 gpm and add formed pump suction inlets.
 - ii. Coordinate electrical design for connection to new back-up power generator on New City Hall site.
 - iii. Add forty feet of floodwall to the pump station construction package.
 - iv. Use USACE specifications in lieu of City of Fargo Specifications for the pump station.
 - v. Coordinate pump station and floodwall architectural and design and aesthetics with the New City Hall project.
 - vi. Provide Computational Fluid Dynamics (CFD) modeling for the pump station wetwell and pump inlet design.
 - vii. Phase I ESAs were conducted for the Case Plaza and City Hall parking lot sites in 2013 as part of the preliminary design of WP-42 (In Town Levees). The Phase I ESA recommended additional Phase II ESA testing of the soils and groundwater on these sites.
 - 1. Provide up to nine (9) borings at the Case Plaza and City Hall parking lot sites, survey boring locations, and provide the following sampling and testing services: boring logs by a field geologist, continuous soil sampling to the groundwater table, soil head space analysis for volatile organic compounds (VOCs), groundwater sampling, laboratory testing and analysis of samples for the presence of contaminants, and a report of the findings.
 - 2. Deliverables include draft and final Phase II ESA Reports for Case Plaza and City Hall parking lot properties, and laboratory test results.
 - viii. A 2nd St N Pedestrian Overpass between the City Hall project and the Red River at 2nd Avenue N is desired and is integral to the 2nd St N floodwall design. Provide the following conceptual design services:

1. Prepare for and attend four (4) coordination meetings and Commission meeting.
 2. Develop bridge design concepts for prefabricated and pre-stressed options, at-grade crossing concepts, and coordination with landscape design.
 3. Prepare visualizations and graphics for City Commission Meeting.
 4. Provide a summary report.
 - ix. Provide soil characterization for Case Plaza lot, conduct geo-probes and soil characterization to determine if soil is suitable for re-use on the project.
 - x. Provide additional design services for flood wall including wall aesthetics and accommodation of future pedestrian bridge.
 - xi. Provide additional planning and design services and coordination to integrate design with the new Fargo City Hall project.
 - xii. Provide additional design services to prepare multiple bid packages to accommodate construction phasing of flood control features. This includes additional design, plan preparation, and design reviews.
3. Value Engineering Study (VES)
- a. Facilitate a VES in accordance with USACE guidelines (up to 3 days) with staff from the Diversion Authority, Program Management Consultant (PMC), and USACE. Prepare and distribute materials and documents, facilitate the workshop, and prepare a VES report.
4. 4th Street Levee Pump Station Replacement
- a. Background: At the November 8, 2012 Diversion Board meeting, the Board requested the USACE add levees long the Red River to allow increased flow through the protected area. To allow 35 feet through town, the 4th Street levee requires certification. In order to meet certification criteria, the stormwater pump stations on the north end of the levee must be replaced.
 - b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.
 - i. Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the 4th Street Levee Pump Station. Include required surveying, Section 408 permit (if required), removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, closures, traffic evaluations, service road realignments, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:

1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 2. 95 Percent Design Submittal – evaluate and incorporate 35 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 3. Pre-Purchase Specifications - prepare up to 3 pre-purchase specifications, if requested, for:
 - a. Gates
 - b. Pumps
 - c. Electrical Panels
 4. Cost Estimate – prepare a cost estimate for the project based on the 35 percent and 95 percent submittal documents.
 5. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.
 6. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.
- c. Additional design work to accommodate requested project changes:
- i. Increase capacity of the back-up power generator to accommodate power for adjacent sanitary sewer lift station.
 - ii. Modify the pump station and generator building design including: addition/modification of transoms and lintels, lower pump station slab, deletion of fuel storage, addition of louvers, removal of windows and parapets, and modification of brick veneer. Include design of wet well access ladders and lights in plans, to eliminate the need to lower staff into wet well on a harness for routine maintenance.
- d. Deliverables:
- i. Detailed Plans and Specifications
 1. 35 Percent Design Submittal
 2. 95 Percent Design Submittal
 - ii. Pre-Purchase Specifications
 - iii. 35 Percent Cost Estimate
 - iv. 95 Percent Cost Estimate
 - v. Operation and Maintenance Plan
 1. Draft Plan
 2. Final Plan

- e. Work not included in this Scope of Services:
 - i. Environmental permitting
 - ii. Utility Relocation Agreements
 - iii. ROW Acquisition including Appraisals, Title Searches, Title Opinions, Deeds
 - iv. Bid documents and bidding services

5. Mickelson Levee Extension

- a. Background: The Mickelson Levee Extension is a component of In-Town levees that was conceptually evaluated as part of the July 16, 2012 report entitled "*Final Technical Memorandum, AWD-00002 – Flows Through Flood Damage Reduction Area*" and includes an extension of the existing Mickelson levee to the south to tie into high ground.
- b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.
 - i. Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the Mickelson Levee Extension. Include required surveying, Section 408 permit (if required), removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:
 - 1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 - 2. 65 Percent Design Submittal – evaluate and incorporate 35 percent review comments into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 - 3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 - 4. Cost Estimate – prepare a cost estimate for the project based on the 65 percent and 95 percent submittal documents.
 - 5. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.

- 6. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.
 - c. Additional design work to accommodate requested project changes:
 - ii. None.
 - d. Deliverables:
 - iii. Detailed Plans and Specifications
 - 1. 35 Percent Design Submittal
 - 2. 65 Percent Design Submittal
 - 3. 95 Percent Design Submittal
 - iv. 65 Percent Cost Estimate
 - v. 95 Percent Cost Estimate
 - vi. Operation and Maintenance Plan
- 6. El Zagal Phase 2 Levee Design
 - a. Background: The El Zagal Phase 2 Levee is a component of In-Town levees that was conceptually evaluated as part of the July 16, 2012 report entitled “Final Technical Memorandum, AWD-00002 – Flows Through Flood Damage Reduction Area” and includes an extension of recently completed El Zagal Phase 1 Levee to the south to tie into high ground.
 - b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.
 - i. Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the El Zagal Phase 2 Levee. Include required surveying, removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, roadway revisions, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:
 - 1. 65 Percent Design Submittal – advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 - 2. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 - 3. Cost Estimate – prepare a cost estimate for the project based on the 95 percent submittal documents.

4. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.
 5. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.
 - c. Additional design work to accommodate requested project changes:
 - i. None.
 - d. Deliverables:
 - i. Detailed Plans and Specifications
 - ii. 65 Percent Design Submittal
 - iii. 95 Percent Design Submittal
 - iv. 95 Percent Cost Estimate
 - v. Bid Documents
 - vi. Operation and Maintenance Plan
7. WP-42E: 2nd St. So. Closure and Pump Station Design
 - a. Background: The 2nd St. South roadway closure and stormwater pump station project is a component of In-Town levees that was conceptually evaluated as part of the July 16, 2012 report entitled “Final Technical Memorandum, AWD-00002 – Flows Through Flood Damage Reduction Area”. It is being developed as a separate design and construction package to align schedule with other adjacent projects.
 - b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.
 - i. Complete detailed project engineering and design and provide plans and technical specifications (use and refer to City of Fargo Specifications) for the 2nd St. So. Closure and Pump Station project. Include required surveying, removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, roadway revisions, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:
 1. 35 Percent Design Submittal – provide 35 percent preliminary design and submit the design report, and plans for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 2. 65 Percent Design Submittal – evaluate and incorporate 35 percent review comments into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.

3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
 4. BCOE Design Submittal - evaluate and incorporate 95 percent review comments into the design documents, and submit the design report, plans and specifications for comment back check and close-out by the Owner, PMC, and USACE Consistency and ATR review teams.
 5. Cost Estimate – prepare a cost estimates for the project based on the 65 and 95 percent submittal documents, and Final Bid Documents.
 6. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.
 7. Bid Document Development – prepare final plans and technical specifications and assist the PMC with development of bid documents.
- c. Additional design work to accommodate requested project changes:
- i. Addition of a Cold Storage Building for removeable floodwall storage.
 - ii. Coordination and re-work associated with the Main Avenue Reconstruction project.
 - iii. Increased design due to extension of floodwall further east to tie into Main Avenue Bridge.
 - iv. Increased landscape design for Main Avenue Plaza area.
 - v. Increased Electrical design services for pump station and street lighting.
 - vi. Increased Geotechnical design services.
 - vii. Extension of 2nd Street South improvements to tie into WP42A1/A3 street reconstruction limits.
 - viii. Addition of changes to WP42A1 pump station that will be part of WP42E bid package.
 - ix. Modification to 1st Avenue North drainage outfall (WP42F1S) that will be part of the WP42E bid package.
 - x. Resubmittal of 100% Plans with Cold Storage Building removed.
- d. Additional design work to re-bid the project: The project was bid in the spring of 2018. Only one bid was received and it was rejected. This additional work is required to revise plans and specifications and prepare documents to rebid the project.

- i. Client and design team meetings to plan and coordinate the revised project, including additional planning and coordination for the NDDOT Main Avenue project.
 - ii. Revise and incorporate project changes into the plans and specifications:
 - 1. Creating new access layouts for the driveway going into the pump station, regarding the pump station yard, revising the fencing plan, removing the ST-7 retaining wall, and modifying the sidewalk plan.
 - 2. Revisions related to coordination with the NDDOT Main Avenue project including: bid item quantity changes and additions and preparing revised construction schedules and milestones.
 - 3. Preparing the revised plans for the rebid of the project.
 - e. Deliverables:
 - i. 35 Percent Design Submittal
 - ii. 65 Percent Design Submittal with cost estimate
 - iii. 95 Percent Design Submittal with cost estimate
 - iv. BCOE Submittal
 - v. Plans and Technical Specifications for Bid Documents
 - vi. Plans and Technical Specifications to rebid the project
 - vii. Operation and Maintenance Plan
- ii. Upstream Staging Area Ring Levees:
 - 1. Provide support as defined below and as requested in writing. Types of requests may include:
 - a. Respond to information requests by affected residences and develop information for presentations or public meetings.
 - b. Conduct a geotechnical site visit(s) of the levee site(s) to observe surface features and, if requested, conduct subsurface investigations.
 - c. Determine existing utilities and utility relocation requirements.
 - d. Begin conceptual design of the levees and/or floodwalls and floodgates, interior layout (which may include street layout, storm water sewer, storage, and lift station sizing, house relocation planning, and golf course layout), and external infrastructure (road raises for egress).
 - 2. Oxbow/Hickson/Bakke – Ring Levee Evaluation:
 - a. Prepare a proposed ring levee system to reduce flood risk to Oxbow/Hickson/Bakke, ND during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for ring levee, and evaluate access during periods of Diversion operation.
 - b. The ring levee will impact the golf course and clubhouse. Provide conceptual design services for re-design of the golf course and clubhouse.

- i. Provide an updated conceptual design of golf course and clubhouse based on update levee alignment to accommodate a total of 80 replacement residential lots.
- c. Initial Survey and Geotechnical Activities for Levee Design:
 - i. Work with USACE to develop a geotechnical investigation plan for the alternative Levee alignments for approval.
 - ii. Stake the location of approved borings and record the coordinates and elevations of the borings.
 - iii. Conduct laboratory testing on boring samples provide by the USACE for the OHB ring levee alternative alignments and Wild Rice River mirco-siting evaluation. Laboratory testing to include the following: Atterberg Limits, Water Content, Hydrometer and Sieve analysis, Proctor Density, Triaxial Compression-unconsolidated/undrained, Triaxial Compression-consolidated/undrained, Torsional Ring Shear, Consolidation Reporting P-e, and TWT Extrusion and Description. Approximately 580 laboratory tests are planned.
 - iv. Obtain and comply with right of entry (ROE) and right of way (ROE) requirements for each property entered.

The construction of the Oxbow/Hickson/Bakke (O/H/B) ring levee and associated work is phased. The work has been divided into five (5) Work Packages, which include: three (3) levee design packages, an interior drainage and road raise package, and a demolition and utility relocations package. One of the levee design packages (WP-43B) will be completed by the USACE. The remaining 4 design packages (WP-43A, WP-43C, WP-43D and WP-43E) will be completed in this scope of work. See Figure 1, attached.

Assumptions for WP-43A, WP-43C, WP-43D and WP-43E include:

- No additional surveys required (included in WP- 43B).
- Soil exploration, laboratory testing, and instrumentation costs included under WP-43B. Geotechnical design of the levee is required. Groundwater evaluation is required to determine impacts to existing septic systems, sewer systems and basements.
- No staging area water hydrologic and hydraulic (H&H) modeling required (included in WP- 43B). H&H for local drainage and interior drainage is required.
- Include design of levee, vegetation free zone, and ditching (input from WP-43B and WP-43D). CR-81 road raise will be in WP-43D. Retention basin/pump station design will be in WP-43D. Utility relocation design and demolition design will be in WP-43E.
- Coordination between designers for WP-43B, WP-43C, WP-43D, and WP-43E is required, along with review of design submittals from WP-43B.
- Develop design, plans, ROW drawings, technical specs, Design Documentation Report (DDR), cost estimate, and engineering considerations.

- Preliminary Engineering Report (PER) -35% review includes internal review, Sponsor review, and USACE Consistency and ATR review.
 - Draft Technical Report (DTR) -65% review includes internal review, Sponsor review, USACE Consistency, ATR, and USACE IEPR. IEPR will be accomplished by the Natural Resources Conservation Service (NRCS)
 - Final Technical Report (FTR) -95% review includes internal review, Sponsor review, and USACE ATR.
 - Final Technical Certification (Bid Documents). Provide final documents for closeout of remaining comments and technical signoff. There will not be a review associated with this submittal.
 - Bid set will include final Plans and Specifications.
 - Assume limited work effort during the bid period consisting of: responding to bidders' questions and preparing amendments.
 - Provide final contract award CD of all work items.
 - Weekly coordination meetings will be held and will include: tech lead, geotech, cost/specs, and H&H designers. Assume the meetings for WP-43A and WP-43C, WP-43D, and WP-43E will be combined into one weekly meeting.
 - Provide right of way drawings for the WP-43B portion of the levee.
- d. WP-43A – Levee Section from Riverbend Road to CR81 (southeast): Design approximately 7,300 lineal feet (lf) of levee, interior buffer zone, and interior drainage swale (if required – based on interior drainage developed in WP-43D), including geotechnical design, civil design, permitting, cost estimates, and preparation of drawings and technical specifications; coordinate design of interior levee buffer zone (drainage swale, snow drop area, and tree screen) and recreational features with O/H/B community and developer/golf course designer; determine effect of levee and exterior impounded water on existing septic systems, sewer systems, and basements. Coordinate with design of Retention Basin (WP-43D). Coordinate with design of road raise of CR-81 (design WP-43D). To be constructed with interior drainage stormwater pump station (WP-43D).
- i. Deliverables:
1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.
 2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR & IEPR review teams.

3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR & IEPR review teams.
 4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.
 5. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.
- e. WP-43C - Levee Section from CR-81 (northeast) to Riverbend Road: Design approximately 5,000 lf of levee, including geotechnical design, civil design, permitting, cost estimates, and preparation of drawings and technical specifications; coordinate design of interior levee drainage with interior drainage design as part of WP-43D; coordinate design of interior levee slope and recreational features with O/H/B community and golf course designer. Removal/demolition of existing structures and utility cut, cap and removal will be designed under WP-43E.
- i. Deliverables:
 1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.
 2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR and IEPR review teams.
 3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.
 4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.
 5. Bid Document Development – incorporate 95 percent review comments into the design

documents and assist the PMC with development of bid documents.

- f. WP-43D –Interior Drainage and CR-81 Road Raises: Design interior drainage system for the O/H/B communities, including both new drainage infrastructure and required rehabilitation or upgrades to existing drainage infrastructure; design stormwater retention pond and new stormwater pump station, including surveying, H&H to determine ditch cross sections and slopes, culvert sizes and slopes, geotechnical, structural, electrical, architectural, civil, permitting, cost estimates, and preparation of drawings and technical specifications. Design road raises of CR-81, including geotechnical, geology, civil, cost estimates, and preparation of drawings and technical specifications, coordinate with levee design teams.

i. Deliverables:

1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.
2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR and IEPR review teams.
3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.
4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.
5. Operation and Maintenance Plan – prepare draft O&M Plan for review by Diversion Authority, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.
6. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.
7. Provide a separate bid package for the pump station and gatewell pre-consolidation construction package.
8. Provide an above ground building for the stormwater pump station.

- ii. WP-43D4 - Hickson Main Avenue Storm Sewer, Drainage, and Street Reconstruction Project, which includes extending the OHB interior storm sewer drainage system and associated infrastructure from the southern portion of the OHB Ring Levee service area to the North Pond.
 - 1. Prepare 90 percent plans and specifications, based on previously packaged design of this interior drain system, and submit for review by the Diversion Authority and PMC review teams.
 - 2. Prepare a cost estimate for the project based on the 90 percent submittal documents.
 - 3. Bid Document Development: incorporate 90 percent review comments into the design documents and submit 100 percent plans and specification bid documents and update cost estimate.
- g. WP-43E – Demolition and Utility Relocations: Develop demolition plan for WP-43C Levee area (CR-81 (northeast) to Riverbend Road, including utility identification, identification of structures to be sold or demolished in place, environmental Phase 1, permitting, and required remediation. Develop Plans and Technical Specifications package for demolition of two (2) residences that are outside of the OHB ring levee (but within project staging area). Design utilities to be cut, capped, and removed, and utilities to be relocated (coordinate with developer of new City of Oxbow infrastructure), including cost estimates, and drawings and technical specifications. Review adequacy of existing wastewater pump station and forcemain for the 38 additional residential units.
 - i. Deliverables:
 - 1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.
 - 2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR and IEPR review teams.
 - 3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.
 5. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.
- h. VES or Value Based Design Charrette (VBDC) – facilitate a VES or VBDC in accordance with USACE guidelines (up to 3 days) with staff from the Diversion Authority, PMC, and USACE. Prepare and distribute materials and documents, facilitate the workshop, and prepare a VES report.
- i. Coordinate and lead VES or VBDC of the five (5) O/H/B levee design packages (WP-43A through WP-43E).
- i. O/H/B Ring Levee Design Modification - 100-year Elevation
- Provide the following design services to provide a modified levee design for WP-43C and WP-43D to protect to the without project 100-year event elevation. Work tasks include:
- i. Update interior flood control model based on 100-year levee earthwork quantities.
 - ii. Update WP-43D plans to include 100-year levee design.
 - iii. Update WP-43C plans to include 100-yr levee design.
 - iv. Calculate earthwork balance for 100-year levee design.
 - v. Update stormwater pond designs for 100-year levee earthwork quantities.
 - vi. Provide roadway replacement plans and traffic control for gravity drain construction area on Cass County Highway 81.
 - vii. Update pump station design based on 100-yr levee scenario. Includes reconfiguration of pump station elevation as well as general civil for access, etc.
 - viii. Update DDRs for WP-43C and WP-43D, including interior flood control, to include 100-year levee design documentation.
 - ix. Provide QA/QC review of design modifications.
- j. WP-43A –Levee Inspection
- The WP-43A levee was constructed in 2014, and has not been formally inspected or maintained since that time. Anecdotal observations suggest that the levee could benefit from maintenance in 2016. This subtask will provide for the Engineer to inspect the levee and determine the needed maintenance activities. The Engineer’s recommendation will be provided to the Owner in the form of a technical brief.
- k. WP-43D – O/H/B Pump Station Redesign

Prepare revised engineering contract documents for the O/H/B pump station, based on the full-height 100 year flood elevation. Modify design elements as required to be compliant with building classification (e.g., non-explosion proof wetwell equipment changes).

I. WP-43G – Wetland Mitigation Design

Perform wetland delineation for existing conditions on the current site. Provide design for the OHB Wetland Mitigation site located on the former Oxbow Country Club. Provide environmental and design assistance on the wetland mitigation for the Diversion Inlet and CH16/CH17 bridge/roadway.

3. Comstock – Ring Levee Evaluation:

- a. Prepare a proposed ring levee system to reduce flood risk to Comstock, MN during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for ring levee, and evaluate access during periods of Diversion operation.

4. Christine – Ring Levee Evaluation:

- a. Prepare a proposed ring levee system to reduce flood risk to Christine, ND during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for ring levee, and evaluate access during periods of Diversion operation.

5. Wolverton – Ring Levee Evaluation:

- a. Prepare a proposed ring levee system to reduce flood risk to Wolverton, MN during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for ring levee, and evaluate access during periods of Diversion operation.

6. Staging Area – Non-Structural Improvement Evaluation:

- a. Identify individual residential properties within the staging area and evaluate the potential benefit from non-structural improvements to reduce flood risk to residential structures during operation of the Diversion Project and staging of water. Show the location of potential improvements and evaluate access during periods of Diversion operation.
 - i. Provide mapping of residential structures and farmsteads impacted by the Staging Area for the 100-year event, and include estimated depth of impact for the structures with and without the project.
 - ii. Where technically feasible, provide concept for non-structural improvements and estimate cost of improvements.
 - iii. Develop database of impacted properties that includes relevant project information (such as depth of impact with and without project, etc.)

- iv. Assist in preparation, provide meeting materials, and attend one-on-one meetings with impacted landowners.
7. Assist with preparation of materials for public meetings.
- iii. Provide land surveying services for In Town Levee and OHB Ring Levee projects. The surveying is required to create Right of Way descriptions and certificates of survey for 34 partial takes for the OHB Ring Levee and 17 certificates for the In Town Levee project.
 - 1. Provide real estate drawings for the El Zagal project per USACE requirements.
 - 2. Hickson Re-Platting and Boundary Survey Services
 - a. Prepare a re-plat of properties bordering Main Avenue in Hickson, North Dakota. The bounds of the re-plat generally include:
 - i. Eastern Re-plat bound: West property border of Oxbow Country Club and Estates Plat.
 - ii. Southern Re-plat bound: North property border of Clubhouse Drive on the west side of Main Avenue, and North property border of Riverbend Road on the east side of Main Avenue.
 - iii. West Re-plat bound: East property border of 1st Avenue
 - iv. North Re-plat bound: Southern property border of County Hwy 81
 - b. Conduct boundary survey of existing properties to assist in the development of the re-plat.
 - c. Prepare a Preliminary Plat to show the proposed property boundary adjustments, corrections to any encroachments, and temporary and permanent easements necessary for the Hickson Main Avenue Storm Sewer, Drainage, and Street Reconstruction Project.
 - d. Submit the Preliminary Plat to Owner for review prior to the formal Plat Application submittal to the appropriate governing entity.
 - i. Collect additional survey data and revise Preliminary Plat based on Owner's comments.
 - ii. revise individual landowner exhibits based on review comments.
 - e. Assist Owner and PMC with presenting the Preliminary Plat to impacted property owners, submitting the Preliminary Plat to the

governing entity, and obtaining signatures from the impacted property owners.

- i. Attend and participate in landowner meetings and site visits.
 - ii. Place survey stakes in the field to demonstrate existing right-of-way boundary vs proposed project right-of-way.
- f. Assist Owner and PMC with all requirements for platting and plat applications within the Village of Hickson.
 - g. Revise the Preliminary Plat as necessary based on feedback from reviews and landowner meetings.
 - h. Prepare Final Plat and submit the Final Plat for recording at the County Recorder's office.

iv. Deliverables

1. Red River Levees – Phase 1

- a. Project Schedule with milestone dates for key activities and monthly updates
- b. Monthly Progress Reports and meeting minutes
- c. Alignment selection TM
- d. Geotechnical TM, including:
 - Geotechnical field and laboratory findings
 - Geotechnical stability analysis
 - Survey data
 - Geotechnical field logs
- e. Hydrologic and Hydraulic analysis TM
- f. Transportation TM
- g. Phase 1 Environmental Site Assessment reports
- h. Preliminary Design Report, including:
 - Preliminary pump sizing and storage needs
 - Utility relocation requirements and issues
 - Preliminary Levee design
 - Preliminary Structural design
 - Cost Estimate
 - Preliminary Drawings
- i. Landscape concepts and plans for the 2nd St. Corridor from NP Ave. to 4th Ave.
- j. Master Plan from Mickelson to 4th St. Levee.

2. Red River Levees - Phase 2

- a. 65 Percent Design Submittal
- b. 95 Percent Design Submittal
- c. Cost Estimates
- d. Operation and Maintenance Plan
 - i. Draft Plan
 - ii. Final Plan

3. Red River Levees – VES reports

4. Support for Upstream Staging Area Levees

- a. Oxbow/Hickson/Bakke TM
- b. WP-43A

- i. 35 Percent Design Submittal
 - ii. 65 Percent Design Submittal
 - iii. 95 Percent Design Submittal
 - iv. Cost Estimates
 - v. 2016 Engineer’s Inspection Report
 - c. WP-43C
 - i. 35 Percent Design Submittal
 - ii. 65 Percent Design Submittal
 - iii. 95 Percent Design Submittal
 - iv. Cost Estimates
 - d. WP-43D
 - i. 35 Percent Design Submittal
 - ii. 65 Percent Design Submittal
 - iii. 95 Percent Design Submittal
 - iv. Cost Estimates
 - v. Operation and Maintenance Plan
 - 1. Draft Plan
 - 2. Final Plan
 - e. WP-43E
 - i. 35 Percent Design Submittal
 - ii. 65 Percent Design Submittal
 - iii. 95 Percent Design Submittal
 - iv. Cost Estimates
 - f. VES or VBDC reports
 - g. Comstock TM
 - h. Christine TM
 - i. Wolverton TM
 - j. Staging Area Non-Structural Improvements TM
 - k. WP-43D O/H/B-Diversion Inlet-CH16/CH17 Wetland Mitigation Design
 - i. 30 Percent Design Submittal
 - ii. 90 Percent Design Submittal
 - iii. Cost Estimates
 - iv. Additional design and permitting assistance
- v. Work not included in this Scope of Services, unless noted otherwise
 - 1. Environmental permitting
 - 2. Utility Relocation Agreements
 - 3. ROW Acquisition including Appraisals, Title Searches, Title Opinions, Deeds
 - 4. Bid documents and bidding services

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in the Agreement.

4. Times for Rendering Services

<u>Subtask</u>	<u>Start Time</u>	<u>Completion Time</u>
2.B.i Red River Levees – Phase 1	November 8, 2012	September 30, 2013
2.B.ii Upstream Staging Area Ring Levees	November 8, 2012	September 30, 2013

<u>Subtask</u>	<u>Start Time</u>	<u>Completion Time</u>
Amendment 1 all work	December 13, 2012	September 30, 2013
2.B.ii.2.d WP-43A Bid Documents	August 8, 2013	May 4, 2014
Amendment 2 other work	August 8, 2013	May 31, 2015
Amendment 3 all work	November 14, 2013	September 30, 2014
Amendment 4 all work	February 13, 2014	September 30, 2014
Amendment 5 all work	May 8, 2014	September 30, 2014
Amendment 6 all work	August 14, 2014	September 30, 2015
Amendment 7 all work	October 9, 2014	September 30, 2015
Amendment 8 all work	February 5, 2015	March 31, 2016
Amendment 9 all work	March 12, 2015	March 31, 2016
Amendment 10 all work	June 11, 2015	March 31, 2016
Amendment 11 all work	August 13, 2015	March 31, 2016
Amendment 12 all work	February 2, 2016	December 31, 2016
Amendment 13 all work	June 23, 2016	July 31, 2017
Amendment 15 all work		July 31, 2018
Amendment 16 all work		July 31, 2018
Amendment 17 all work		December 31, 2018
Amendment 18 all work		December 31, 2018
Amendment 19 all work		December 31, 2019

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered as follows:

- i. Compensation for services shall be on a Time and Material basis in accordance with the Standard Hourly Rates shown in Paragraph 14 the Agreement.
- ii. The total compensation for services identified under the Task Order for Subtasks 2.B.i through 2.B.iii is not-to-exceed amount as defined in the table below.
 1. Engineer will notify Owner when eighty percent (80%) of a subtask budget is expended.
 2. Engineer will prepare and submit an amendment for additional compensation when ninety percent (90%) of a subtask budget is expended.
 3. Engineer will not perform work beyond one hundred percent (100%) of a subtask budget without Owner's authorization by an amendment to this Task Order.

Subtask	Activity ID	Current Budget (\$)	Change (\$)	Revised Budget (\$)
2.B.i.1 Red River Levees – Phase 1 Design	DE-7430	418,462	0	418,462
2.B.i.1.o.i Landscape Architecture/Master Planning - 2nd St. Corridor from NP Ave. to 4th Ave.	DE-7430	48,082	0	48,082
2.B.i.1.o.ii Master Planning Services - Mickelson to the 4th St. Levee	DE-7430	147,737	0	147,737
2.B.i.2 Red River Levees – Phase 2 Design	DE-7430	3,177,858	0	3,177,858
2.B.i.3 Red River Levees – VES	DE-7430	25,751	0	25,751

Subtask	Activity ID	Current Budget (\$)	Change (\$)	Revised Budget (\$)
2.B.i.4 4 th Street Levee Pump Station Replacement	DE-7430	667,494	0	667,494
2.B.i.5 Michelson Levee Extension	DE-7430	116,368	0	116,368
2.B.i.6 El Zagal Phase 2 Levee Design	DE-7430	221,654	0	221,654
2.B.i.7 2 nd St. So. closure and Pump Station Design	DE-7430	991,894 119	0 (13,225)	991,894
2.B.ii Upstream Staging Area Ring Levees (Allowance)	DE-10150	394,486	0	394,486
2.B.ii.2.d WP-43A Design	DE-10150	362,450	0	362,450
2.B.ii.2.e WP-43C Design	DE-10150	204,372	0	204,372
2.B.ii.2.f WP-43D Design	DE-10150	2,108,254	0	2,108,254
2.B.ii.2.g WP-43E Design	DE-10150	406,358 0	0 14,998	406,358
2.B.ii.2.h OHB Ring Levee – VES	DE-10150	33,694	0	33,694
2.B.ii.2.h.i OHB Ring Levee Design Modification - 100-Year Elevation	DE-10150	120,287	0	120,287
2.B.ii.2.i O/H/B Wetland Mitigation Design	DE-10150	98,094	22,508	120,602 98,094
2.B.ii.2.j WP-43A Levee Inspection	DE-10150	3,227 0	0 (1,773)	3,227
2.B.iii Right of Way Surveying	DE-10150	241,569	00	241,569
TOTAL		9,788,091	22,508	9,810,599 78 8,091

- B. The terms of payment are set forth Paragraph 15 of the Agreement.
- C. When invoicing work, Engineer shall note the Activity ID (shown in the table above) associated with each invoiced activity.
6. Consultants:
- Braun Intertec Corporation
 - Northern Technologies, Inc.
 - Robert Trent Jones II, LLC
7. Other Modifications to Agreement: None
8. Attachments: None
9. Documents Incorporated By Reference:
- AWD-00045, REV-0, WP - 42F.1 Phase II Environmental Site Assessment (ESA), dated December 11, 2014.
 - AWD-00047, REV-0, El Zagal Phase 2 Levee Design, dated February 5, 2015.
 - AWD-00049, REV-0, Soil Characterization for Case Plaza for Work Package 42F.1S, dated June 11, 2015.
 - AWD-00057, REV-0, WP-42A.1 4th Street Pump Station Wet Well Design Modifications, and WP-43E.2C OHB Ring Levee Home Demolition
 - HMG Task Order 13 Amendment 21 cost proposal dated August 12, 2019

10. Terms and Conditions: Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is November 8, 2012.

ENGINEER:

Houston-Moore Group, LLC

Signature _____ Date _____

Jeffry J. Volk

Name

President

Title

**DESIGNATED REPRESENTATIVE FOR
TASK ORDER:**

C. Gregg Thielman

Name

Sr. Project Manager

Title

**925 10th Avenue East
West Fargo, ND 58078**

Address

cgthielman@houstoneng.com

E-Mail Address

(701) 237-5065

Phone

Fax

OWNER:

Fargo-Moorhead Metro Diversion Authority

Signature _____ Date _____

Joel Paulsen~~Michael J. Redlinger~~

Name

**Co-Executive Director, ~~Flood Diversion Board of
Authority~~**

Title

**DESIGNATED REPRESENTATIVE FOR
TASK ORDER:**

Nathan Boerboom

Name

Diversion Authority Project Manager, City of Fargo

Title

**225 4th Street North
Fargo, ND 58102**

Address

nboerboom@cityoffargo.com

E-Mail Address

(701) 476-6743

Phone

Fax

Executive Director Contracting Recommendation

Date: 09/13/2018

RECOMMENDATION FOR ACTION:

The Executive Director has reviewed and recommends approval of the following Contract Action(s).

SUMMARY OF CONTRACTING ACTION:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016 and amended August 23, 2018, the Owner’s Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare task orders and task order amendments for existing Master Services Agreements (MSA) and submit them to the Executive Director for review and action.

The Owner’s PMC has prepared the following Contract Action(s):

Houston-Moore Group, LLC

Task Order 17, Amendment 8 – WP-42 SDB and SDC

\$54,367

- Add additional Subtask B (SDC) budget for WP-42A1A3 construction engineering
- Add additional Subtask D (On Call) budget for WP-42A1A3 litigation support
- Extend Period of Performance (POP) to December 31, 2020

BACKGROUND AND DISCUSSION:

Houston-Moore Group, LLC (HMG) is the Engineer of Record for the In-Town Levees (WP-42) projects, and has provided Services During Bid (SDB) and Services During Construction (SDC) for WP-42 projects from July 10, 2014, to the present time.

This amendment adds WP-42A1A3 (4th St. So. Pump Station and 2nd St. So. Floodwall) budget to Subtask B (SDC) and Subtask D (On Call Services) for additional construction engineering and litigation support services, and extends the POP to December 31, 2020.

The table below summaries the contracting history for this task order and the current contracting action.

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Budget (\$) Change	Revised Project Cost	Agreement Date	Project Completion	Comments
Task Order 17 Amendment 0	\$ -	\$1,550,000	10-Jul-14	30-Sep-16	Initial WP-42 SDB and SDC agreement for WP- 42A.1, WP-42A.2, and WP42A.3.
Task Order 17 Amendment 1	\$693,000	\$2,243,000	8-Aug-15	30-Sep-16	Adds SDB and SDC for WP-42F.1S; SDB for WP- 42H.2; SDB for WP-42I; and, SDB for WP-42C.2.
Task Order 17 Amendment 2	\$1,605,000	\$3,848,000	2-Feb-16	30-Jun-17	Incorporated AWD-00052; added additionalSDC period of performance and budget for WP- 42A.2 and WP-42A.1/A.3; added SDC for WP- 42H.2, WP-42I.1, and WP-42C.1; and, added SDB for 42F.1N.
Task Order 17 Amendment 3	\$751,000	\$4,599,000	26-May-16	31-Jul-17	Incorporates AWD-00058 and includes additional SDC services for 42F.1N. Adds requirement for Engineer to note Activity ID on monthly invoices.
Task Order 17 Amendment 4	\$333,000	\$4,932,000	23-Jun-16	31-Jul-17	Incorporates AWD-00059 scope amendment budget changes for WP42F.1S, WP42H.2, and WP42I.1. Add SDC scope and budget for WP42F.2.

Original Agreement or Amendment	Budget (\$) Change	Revised Project Cost	Agreement Date	Project Completion	Comments
Task Order 17 Amendment 5	\$411,413	\$5,343,413	26-Oct-17	31-Dec-18	Incorporate new MSA terms and conditions, add WP-42G SDC and SDB scope and budget, reallocate SDB and PM budgets, incorporate MSA bill rate increase for SDC budget, increase SDC budgets closeout projects, and extend the POP to Dec 31, 2018.
Task Order 17 Amendment 6	\$777,864	\$6,121,277	24-Oct-18	30-Jun-20	Add WP-42E SDC scope and budget and extend the POP to June 30, 2020.
Task Order 17 Amendment 7	\$9,378.82	\$6,130,655.82	29-Nov-18	30-Jun-20	Add additional WP-42E SDB budget for re-bid.
Task Order 17 Amendment 8	\$54,367	\$6,185,02282	29-Nov-18	31-Dec-20	Add additional WP-42A1A3 SDC and On Call budget, and extend POP to December 31, 2020.

FINANCIAL CONSIDERATIONS:

HMG is the Engineer of Record for WP-42A1A3, has prepared the technical specifications and drawings for the bid package, has provided SDB services, and has provide SDC services for the project.

Task Order 17 Amendment 8 adds budget to Subtask B (SDC) for Change Order 10 construction engineering services, adds budget to Subtask D (On Call Services) for litigation support services, and extends the task order POP to December 31, 2020. The detailed draft task order amendment is attached.

HMG provided the attached cost proposal and the PMC has reviewed it. The labor rates are consistent with approved 2019 rates. This is a time and material task order, and only work performed will be paid. Below is a summary of the review.

1. Subtask B (SDC) WP-42A1A3 Construction Engineering Services:

- a. Background Information: The WP-42A1A3 project included furnishing and installing a back-up generator in a separate building from the project's Storm Water Lift Station No. 18 that serves as an emergency power supply for both Lift Station No. 18 and the adjacent Sanitary Sewer Lift Station No. 1.
 - i. The back-up generator design included a 2000A breaker for Lift Station No. 18 (LS#18), a 800A breaker for the Lift Station No. 1 (LS#1), and a 500KW load bank with overcurrent protection integral to its control panel or provided with associated equipment.
 - ii. The Contractor's shop drawing did not provide a control panel/disconnect switch in the load bank with integral overcurrent protection or a separate breaker (disconnect switch) for the load bank, the Contractor did not submit an RFI regarding how the load bank should connect to the back-up generator, and the issue was not identified and addressed during the shop drawing review process.
 - iii. During start-up and testing of the back-up generator, May 2017, the issue was identified and the Contractor temporarily used the existing Lift Station No. 1 800A breaker for initial LS#18 testing, but a permanent solution was not pursued at that time. In addition, the as-built drawing mark-ups provided by the Contractor did not show the electrical wiring deviation from the design drawings.

- iv. WP-42A1A3 project final completion was not reached or granted by the Owner, project completion issues were not resolved via mediation between the Owner and the Contractor, and the Contractor has since filed a lawsuit against the Owner.
- v. Providing emergency power to both pump stations necessitated the need to resolve this issue in a timely manner and not lump it into the litigation process. After consideration of several options, the Owner decided to address this by issuing Change Order 10 to supply and install the additional electrical components.
- b. Change Order 10 Engineering Services: Change Order 10 added a new breaker box and breaker to address the missing breaker and allow it to serve the two pump stations as designed.
 - i. HMG provided a \$9,367.00 cost proposal for services related to developing Change Order 10. This included subcontractor costs plus an MSA allowed mark-up of subcontractor services.
 - ii. HMG's subcontractor, HDR, provide a cost proposal of \$8,515.18 for services related to Change Order 10.
 1. This includes 42.75 hours of labor at an average rate of approximately \$200 per hour.
 - a. A majority of these costs, approximately \$7,788.00 for 38.75 hours of service, have been incurred to support development of Change Order 10 and perform an initial submittal review.
 - b. Four hours, or approximately \$727.00, is estimated to complete the review of the Change Order 10 submittal.
 - iii. HMG included an MSA allowed 10 percent mark-up of subcontractor costs, or \$851.52.
2. Subtask D (On Call Services) WP-42A1A3 Litigation Support Services: Disputes between the Contractor and the Owner regarding various project costs and schedule could not be resolved via mediation and the Contractor has filed a lawsuit against the Owner. The court trial is schedule for 2020.
 - a. HMG provided a \$42,893 cost proposal for these services that included an estimated 100 hours of HMG services, and estimated 100 hours of subcontractor services, plus an MSA allowed mark-up of subcontractor services.
 - b. HMG proposed \$18,712.00 for 100 hours of services at an average rate of approximately \$187 per hour.
 - c. HMG's subcontractor, HDR, proposed \$21,982.36 for 100 hours of services at approximately \$220 per hour.
 - i. HMG included an MSA allowed 10 percent mark-up of subcontractor costs, or \$2,198.24.
 - d. Approximately half of these services have already been incurred to support the mediation proceedings and initial litigation services. Approximately half of these services are estimated future hours to provide services as requested to support the litigation.
 - e. Since half of these are estimated hours and no expenses were included in the estimate, the PMC recommends rounding up the budget amendment for this subtask by \$2,107 to \$45,000.00.
3. Time Extension: The WP-42A1A3 litigation is scheduled to occur in 2020. Therefore, the PMC recommends that the POP for this task order be extended to December 31, 2020.

The table below lists the task order budgets by subtask.

Table 2: WP-42 Task Order Budgets by Subtask:

Subtask	Current Budget (\$)	Amendment 8 (\$)	Revised Budget (\$)
A. SDB	181,378.82		181,378.82
B. SDC	5,929,277.00	9,367	5,938,644.00
C. PM	0.00		0.00
D. On Call	20,000.00	45,000	65,000.00
TOTAL	6,130,655.82	54,367	6,185,022.82

The PMC prepared this task order amendment, and feels the information is accurate, complete, and ready for Executive Director review.

ATTACHMENT(S):

1. Draft Task Order 17, Amendment 8
2. HMG cost proposal dated August 12, 2019

Prepared by: Program Management Consultant

John W. Glatzmaier

John Glatzmaier, P.E.
Jacobs

September 13, 2019

Date

Submitted by:

Joel Paulsen Diversion Authority Executive Director
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<i>Concur: September 13, 2017 Non-Concur:</i>

Cc: Technical Advisory Group

- Nathan Boerboom, City of Fargo Engineer/Diversion Authority Project Manager
- David Overbo, Clay County Engineer
- Jason Benson, Cass County Engineer
- Robert Zimmerman, Moorhead City Engineer
- Matt Stamness, Assistant Cass County Engineer/Diversion Authority Project Manager
- Dustin Scott, West Fargo City Engineer

Houston-Moore Group, LLC

Task Order No. 17, Amendment ~~78~~

FMDA Purchase Order No. 174124

Services During Construction – Work Package 42

In accordance with the Master Agreement for Professional Services between **Fargo-Moorhead Flood Diversion Authority** (“Owner”) and **Houston-Moore Group, LLC** (HMG) (“Engineer”), dated May 1, 2017 (“Agreement”), Owner and Engineer agree as follows:

The parties agree that in the event of a conflict between prior versions of this Task Order No. 17 and this Amendment, the terms and conditions in this Amendment shall prevail, provided however, nothing herein shall preclude Engineer from invoicing for work authorized under prior versions of this Task Order and performed prior to effective date of this Amendment, even to the extent such prior work was revised by this Amendment. All other terms and conditions shall remain the same and are hereby ratified and affirmed by the parties.

1. Specific Project Data

- A. Title: SERVICES DURING CONSTRUCTION – WORK PACKAGE 42
- B. Description: Provide Services During Bid (SDB) and Services During Construction (SDC) for projects designed by HMG for the Fargo-Moorhead Area Flood Diversion Project (Project).
- C. Background: The scope of work for this Task Order includes SDB and SDC. Owner will be issuing various construction packages for bid. Engineer will assist Owner with SDC, including SDB. It is anticipated that the following construction contracts will be required:
 1. WP-42A.1, A.3 – Red River Levees – 4th Street Lift Station, Gatewell, and Outfall Structure
 2. WP-42A.2 – Red River Levees – 2nd Street Lift Station and Gatewell Structure
 3. WP-42F.1S – Flood Control, 2nd Street North, South of Pump Station
 4. WP-42H.2 – El Zagal Area Flood Risk Management – Phase 2 (SDB and SDC)
 5. WP-42I.1 – Mickelson Levee Extension (SDB and SDC)
 6. WP-42C.2 – Park East Demolition (SDB and SDC)
 7. WP-42C.1 – HoJo, Old Shakey’s, and FPS Demolition (SDB and SDC)
 8. WP-42F.1N – Flood Control, 2nd Street North, North of Pump Station (SDB only)
 9. WP-42F.2 - Flood Control, 2nd Street South, (Park East) (SDB and SDC)
 10. WP-42G – General Landscaping and Plantings (SDB and SDC)
 11. WP-42E – 2nd St. So. and Main Ave. Flood Mitigation (SDB and SDC)

2. Services of Engineer

The following functions and activities describe the general services authorized under this Task Order, Engineer will perform activities to accomplish the scope described herein, as well as other services that may be mutually agreed to by the parties pursuant to the terms of the Agreement.

A. SERVICES DURING BIDDING

1. Respond to bidder inquiries forwarded by Owner's Representative during advertisement period and prepare addenda as necessary to provide a clear, biddable set of solicitation documents.
2. Attend and participate in pre-bid meetings and site visits.
3. Attend bid openings and, if requested, assist in evaluation of bids.
4. Incorporate addenda into the plans and technical specifications to create a set of Contract Award Documents.
5. Prepare a submittal register based on the Contract Documents indicating required submittals, the specific technical submittals requiring review and/or approval by the Engineer, and administrative submittals that can be reviewed by the Owner's Representative.

B. SERVICES DURING CONSTRUCTION

1. Comply with the general guidelines of the Memorandum for Record No. 018 (MFR-018) "Fargo-Moorhead Metro (FMM) Flood Risk Management (FRM) Project - Sponsor Constructed Features Roles and Responsibilities" between the Diversion Authority, US Army Corps of Engineers (USACE), and the Program Management Consultant (PMC) as modified herein.
2. Fulfill the duties of Engineer in accordance with the specific requirements of the Contract Documents for each project. Follow project documentation requirements provided by the PMC.
3. Participate in one or more partnering meetings.
4. Comply with Owner's and Contractor's safety plans.
5. Provide a Resident Project Representative (RPR) that will represent the Engineer and Owner's Representative. RPR will have the duties and defined in the Contract Documents for each project.
6. Provide Quality Assurance Managers and/or Project Engineers to perform general field observation and manage the specific inspections to be performed by third party materials testing firm, and other specialty inspection agents as needed.
 - a. Validate results of tests and inspections, oversee retesting or other actions needed to reconcile deficiencies.
 - b. Maintain a log for each type of test conducted.
 - c. Prepare Daily Reports and submit to Owner's Representative and City of Fargo.
 - d. Prepare Weekly Reports for each project documenting the work performed by Contractor, Quality Assurance activities performed, and current issues and challenges.
7. Respond to Requests for Information and other construction communication provided by the Owner's Representative.

8. Review shop drawings, samples, and operation and maintenance manuals for conformance with the Contract Documents.
9. Lead development and scoping, and coordinate Contractor pricing of Change Orders or other modifications that affect the design or function of the Project, and provide drafts to PMC for review and approval recommendation to Owner.
10. Perform the following survey tasks in accordance with MRF-015, Survey Standards:
 - a. Additional project control, if required.
 - b. Benchmark checks during construction.
 - c. Existing conditions surveys.
 - d. Quantity surveys for Contractor's monthly payment application.
 - e. As-built construction surveys
11. Maintain a set of full-scale contract drawings indicating as-built conditions. Assemble redline information from Contractor, Engineer's Resident Project Representative, and other sources to maintain these drawings.
12. Prepare or review site visit reports for site visits by Engineer, USACE or their external peer review team, or other authorities.
13. Provide commissioning activities, including equipment testing, demonstrations of capability and operability, and training of operating staff.
14. Assist Owner's Representative with determination of monthly pay application quantities.
15. Identify issues on a punch list for the Contractor to resolve. Upon completion of punch list items, coordinate a final inspection. Document each inspection.
16. Following completion of construction, update the Design Document Report to reflect the design changes, contract modifications, site conditions encountered, testing, and submittals.
17. Provide Final As-Built drawings in conformance with the same standards as the design drawings.
18. Prepare a post construction Inspection and Monitoring Plan specifying annual inspections required to verify satisfactory maintenance and performance of the flood risk management features.
19. Provide flood risk reduction certifications as required by Owner.
20. Deliverables:
 - a. Contract Award Document(s)
 - b. Log of QC Tests
 - c. Daily Reports
 - d. Weekly Reports
 - e. Site Visit Reports
 - f. Punch List(s)

- g. Updated Design Document Report
- h. Final As-Built Drawings
- i. Inspection and Monitoring Plan
- j. Flood Risk Reduction Certifications

C. PROJECT MANAGEMENT (budget for these tasks included in Subtask 2.B)

- 1. Provide project management, including monthly status reports and invoicing to PMC, on Engineer's task activity.
- 2. Participate in regular and periodic meetings or teleconferences with contractors, the Owner's Representative, City of Fargo, Owner, and USACE.
- 3. Deliverables:
 - a. Monthly status reports and invoices

D. ON-CALL SERVICES

- 1. Respond to requests for services from Owner or Owner's Representative for tasks not included in individual Task Orders. Services will be provided only with written authorization from Owner or Owner's Representative.

1-a. Litigation support services.

- 2. Deliverables:
 - a. On-call services deliverables as requested.

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in the Agreement.

4. Times for Rendering Services

<u>Subtask</u>	<u>Start Time</u>	<u>Completion Time</u>
All Work	July 10, 2014	September 30, 2016
Amendment 2	January 28, 2016	June 30, 2017
Amendment 3	May 1, 2016	July 31, 2017
Amendment 5	July 31, 2017	December 31, 2018
Amendment 6	October 24, 2018	June 30, 2020
Amendment 7		June 30, 2020
<u>Amendment 8</u>		<u>December 31, 2020</u>

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered as follows:

- I. Compensation for services in Subtasks A, B, and C shall be on a Time and Material basis in accordance with the Standard Hourly Rates shown in Paragraph 14 of the Agreement.
- II. The budgets for Subtask D is an allowance.

B. Engineer will notify Owner when 80 percent of the budget is expended.

- C. Engineer will submit an amendment for additional compensation when 90 percent of the budget is expended, or confirm to Owner that this Task Order can be completed for the remaining budget.
- D. Engineer will not perform work beyond 100 percent of the budget without Owner's written authorization ~~by an amendment to this Task Order.~~

Subtask	Activity ID	Current Budget (\$)	Change (\$)	Revised Budget (\$)
A. Services During Bid	CN-9520 WP-42SDC	181,378.821 72,000	9,378.82	181,378.82
B. Services During Construction	CN-9520 WP-42SDC	5,929,277	9,3670	5,938,6445, 929,277
C. Project Management	CN- 9520 WP-42SDC	0		0
D. On-Call Services	CN-9520 WP-42SDC	20,000	45,000	45,00020,00 0
TOTAL		6,130,655.82 6,121,277	54,3679,378 .82	6,185,022.8 26,130,655. 82

- E. The terms of payment are set forth in Paragraph 15 of the Agreement.
- F. When invoicing work, Engineer shall note the Activity ID (shown in the table above) associated with each invoiced activity.

6. Sub consultants:

- A. Barr Engineering (geotechnical inspections and support)
- ~~B.~~ SRF (signaling and lighting and landscaping)
- ~~B-C.~~ HDR

7. Other Modifications to Agreement: No additions or modifications

8. Attachments: None.

9. Documents Incorporated By Reference:

- A. Agreement between Owner and Engineer for Professional Services -Task Order Edition, dated May 1, 2017.
- B. AWD-00050 REV-0, Services During Bidding-WP-42F.1S, dated July 9, 2015.
- C. AWD-00052 REV 0, WP-42C.2 SDCand WP-42C.1SDB, dated November 12, 2015.
- D. AWD-00058 REV0, WP-42F.1N SDCand WP-42F.2 SDB, dated May 12, 2016.
- E. AWD-00059 REV0, WP-42F.1S, WP-42H.2, and WP-421.1additional SDC, dated May 26, 2016.
- ~~F.~~ HMG cost proposal received October 17, 2018.
- ~~F-G.~~ HMG cost proposal received August 12, 2019.

10. **Terms and Conditions:** Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is July 10, 2014.

ENGINEER:

Houston-Moore Group, LLC

OWNER:

Fargo-Moorhead Metro Diversion Authority

Signature Date

Jeffrey J. Volk

Name

President

Title

Signature Date

Joel Paulsen~~Michael J. Redlinger~~

Name

~~Co~~-Executive Director

Title

DESIGNATED REPRESENTATIVE FOR
TASK ORDER:

C. Gregg Thielman

Name

Sr. Project Manager

Title

925 10th Avenue East
West Fargo, ND 58078

Address

cgthielman@houstoneng.com

E-Mail Address

(701) 237-5065

Phone

Fax

DESIGNATED REPRESENTATIVE FOR
TASK ORDER:

Nathan Boerboom

Name

Diversion Authority Project Manager, City of Fargo

Title

225 4th Street North
Fargo, ND 58102

Address

nboerboom@cityoffargo.com

E-Mail Address

(701) 476-6743

Phone

Fax

HDR Engineering Inc.
FM Metro Diversion Authority
42A1A3 - 4th Street Pump Station - 800 amp breaker Support

Overhead Rate			
1. Direct Labor Costs:	FM Diversion Rates		
		Hours	Labor Only Fee
Labor Category	(\$/Hour)		
Project Manager	\$199.00	37.00	\$7,363.00
Project Manager	\$199.00	0.00	\$0.00
Lead Project Engineer	\$167.34	0.00	\$0.00
Senior Civil Engineer	\$213.20	0.00	\$0.00
Civil Engineer	\$150.03	0.00	\$0.00
Senior Structural Engineer	\$189.88	0.00	\$0.00
Structural Engineer	\$146.55	0.00	\$0.00
Senior Geotechnical Engineer	\$198.73	0.00	\$0.00
Geotechnical Engineer	\$153.08	0.00	\$0.00
Senior Electrical Engineer	\$203.51	0.75	\$152.63
Electrical Engineer	\$178.04	4.00	\$712.16
Senior Mechanical Engineer	\$238.79	0.00	\$0.00
Mechanical Engineer	\$162.41	0.00	\$0.00
Senior Environmental Engineer	\$218.01	0.00	\$0.00
Environmental Engineer	\$146.32	0.00	\$0.00
Senior Hydrologic/Hydraulic Engineer	\$226.65	0.00	\$0.00
Hydrologic/Hydraulic Engineer	\$176.19	0.00	\$0.00
Senior Architect	\$201.42	0.00	\$0.00
Architect	\$157.83	0.00	\$0.00
Landscape Architect	\$155.77	0.00	\$0.00
Senior Surveyor	\$154.26	0.00	\$0.00
Resident Construction Representative	\$149.97	0.00	\$0.00
GIS	\$120.90	0.00	\$0.00
Senior Engineering Technician	\$127.68	0.00	\$0.00
CADD Operator	\$118.44	0.00	\$0.00
Cost Estimator	\$160.95	0.00	\$0.00
Archaeologist	\$148.21	0.00	\$0.00
Economist	\$186.38	0.00	\$0.00
Biologist	\$127.21	0.00	\$0.00
Scheduler	\$245.72	0.00	\$0.00
BIM/Visual Services/IT	\$169.05	0.00	\$0.00
Administrative	\$95.45	0.00	\$0.00
Accountant	\$129.21	1.00	\$129.21
ITR Engineer	\$267.12	0.00	\$0.00
Senior Project Manager	\$267.90	0.00	\$0.00
Technical Specialist	\$299.96	0.00	\$0.00
QA/QC Manager	\$314.73	0.00	\$0.00
Managing Principal	\$348.37	0.00	\$0.00
Program Specialist	\$348.37	0.00	\$0.00
SUBCONTRACTORS			
1. Subtotal Labor Fee		42.75	\$8,357.00
2. Travel			\$0.00
3. Other Direct Costs			\$ 158.18
3a. Other Direct Cost Items			
3b. Markup on Direct Cost Items		0%	\$ -
4. Subconsultants			
4a. Subconsultants (Direct Costs)			\$ -
4b. Markup on Subconsultants		5%	\$0.00
HDR 899 ODC Subtotal (Items 2,3,4)			\$158.18
HDR Labor and ODC Total			\$8,515.18
SUBTOTAL (Items 1 - 4) - HDR Fee			\$8,515.18
TOTAL AMOUNT (ITEMS 1-4)		Fee	\$8,515.18

HDR Engineering Inc.
FM Metro Diversion Authority
42A1A3 - 4th Street Pump Station - Litigation Support

Overhead Rate			
1. Direct Labor Costs:	FM Diversion Rates (\$/Hour)		
Labor Category		Hours	Labor Only Fee
Project Manager	\$199.00	40.0	\$7,960.00
Project Manager	\$199.00	24.0	\$4,776.00
Lead Project Engineer	\$167.34	0.0	\$0.00
Senior Civil Engineer	\$213.20	0.0	\$0.00
Civil Engineer	\$150.03	0.0	\$0.00
Senior Structural Engineer	\$189.88	8.0	\$1,519.04
Structural Engineer	\$146.55	0.0	\$0.00
Senior Geotechnical Engineer	\$198.73	0.0	\$0.00
Geotechnical Engineer	\$153.08	0.0	\$0.00
Senior Electrical Engineer	\$203.51	0.0	\$0.00
Electrical Engineer	\$178.04	0.0	\$0.00
Senior Mechanical Engineer	\$238.79	0.0	\$0.00
Mechanical Engineer	\$162.41	0.0	\$0.00
Senior Environmental Engineer	\$218.01	0.0	\$0.00
Environmental Engineer	\$146.32	0.0	\$0.00
Senior Hydrologic/Hydraulic Engineer	\$226.65	0.0	\$0.00
Hydrologic/Hydraulic Engineer	\$176.19	0.0	\$0.00
Senior Architect	\$201.42	0.0	\$0.00
Architect	\$157.83	0.0	\$0.00
Landscape Architect	\$155.77	0.0	\$0.00
Senior Surveyor	\$154.26	0.0	\$0.00
Resident Construction Representative	\$149.97	0.0	\$0.00
GIS	\$120.90	0.0	\$0.00
Senior Engineering Technician	\$127.68	0.0	\$0.00
CADD Operator	\$118.44	0.0	\$0.00
Cost Estimator	\$160.95	0.0	\$0.00
Archaeologist	\$148.21	0.0	\$0.00
Economist	\$186.38	0.0	\$0.00
Biologist	\$127.21	0.0	\$0.00
Scheduler	\$245.72	0.0	\$0.00
BIM/Visual Services/IT	\$169.05	0.0	\$0.00
Administrative	\$95.45	0.0	\$0.00
Accountant	\$129.21	8.0	\$1,033.68
ITR Engineer	\$267.12	0.0	\$0.00
Senior Project Manager	\$267.90	8.0	\$2,143.20
Technical Specialist	\$299.96	0.0	\$0.00
QA/QC Manager	\$314.73	0.0	\$0.00
Managing Principal	\$348.37	4.0	\$1,393.48
Program Specialist	\$348.37	8.0	\$2,786.96
SUBCONTRACTORS			
1. Subtotal Labor Fee		100	\$21,612.36
2. Travel			\$0.00
3. Other Direct Costs			\$ 370.00
3a. Other Direct Cost Items			
3b. Markup on Direct Cost Items		0%	\$ -
4. Subconsultants			
4a. Subconsultants (Direct Costs)			\$ -
4b. Markup on Subconsultants		5%	\$0.00
HDR 899 ODC Subtotal (Items 2,3,4)			\$370.00
HDR Labor and ODC Total			\$21,982.36
SUBTOTAL (Items 1 - 4) - HDR Fee			\$21,982.36
TOTAL AMOUNT (ITEMS 1-4)		Fee	\$21,982.36

Executive Director Contracting Recommendation

Date: 09/04/2019

RECOMMENDATION FOR ACTION:

The Executive Director have reviewed and recommends approval of the following Contract Action(s).

SUMMARY OF CONTRACTING ACTION:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016 and amended August 23, 2018, the Owner’s Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare task orders and task order amendments for existing Master Services Agreements (MSA) and submit them to the Executive Director for review and action.

The PMC has prepared the following Contract Action(s):

Houston-Moore Group, LLC

Task Order 30, Amendment 2 - Property Structure Mitigation (Design, Bidding, SDC, and Project Management)

\$112,000

- Add scope and budget for WP-50B Property Mitigation Project
- Extend the Period of Performance (POP) to December 31, 2020

BACKGROUND AND DISCUSSION:

The Diversion Authority owns or will be purchasing properties for the Fargo-Moorhead Diversion Project (Project) with structures and other features that require mitigation (relocation, demolition, or structural modifications). Houston-Moore Group, LLC (HMG) has a MSA with the Diversion Authority to provide Engineering services for the Project.

This task order amendment adds scope and budget for WP-50B (design, bidding, services during construction, and project management services) for structure mitigation at ten (10) rural properties, and extends the POP to December 31, 2020.

See the table below for a summary of this task order’s contracting history, including this amendment.

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Budget (\$) Change	Original or Revised Budget	Agreement Execution Date	Project Completion	Comments
Task Order 30 Amendment 0		\$107,000	26-Nov-18	31-Dec-19	Scope and budget for WP-50A.
Task Order 30 Amendment 1	\$0	\$107,000	27-Jun-19	31-Dec-19	No cost subtask budget reallocation.
Task Order 30 Amendment 2	\$112,000	\$219,000	06-Sep-19	31-Dec-20	Add Scope and budget for WP-50B, and extend the POP to December 31, 2020.

FINANCIAL CONSIDERATIONS:

Task Order No. 30, Amendment 2, scope of services includes performing design, bidding support, services during construction, and project management services for the WP-50B property mitigation project, which includes ten (10) rural properties. The detailed draft task order scope is attached.

HMG provided the attached WP-50B cost proposal. The PMC has reviewed the proposal and found that the labor rates are consistent with the 2019 MSA allowed rates and the level of effort is reasonable for this scope of work. This is a time and materials task order, and only services performed are invoiced and paid. Below is a summary of the review.

1. Subtask 2.A: WP-50B Design Services
 - a. This subtask includes preparation of structural mitigation (relocation or demolition) plans and technical specifications for properties included in WP-50B, including utility identification and removal, identification of structures to be relocated or demolished in place, permitting, and site restoration. Work includes preparation of 90 percent plans and specifications for review, a cost estimate, and final bid document plans and specifications.
 - b. HMG proposed 197 hours of design services at an average hourly rate of approximately \$180 per hour for a labor budget of \$35,707 plus \$100 in expenses (mileage, etc.), for a total subtask budget of \$35,807.
 - c. The PMC feels this is a reasonable level of effort for these services.
2. Subtask 2.B: WP-50B Bidding Services
 - a. This subtask includes responding to bidder requests for information, preparation of addenda to the bidding documents, attending the pre-bid meeting and bid opening, support the bid evaluation, and preparing a construction plan set.
 - b. HMG proposed 28 hours of bidding services at an average hourly rate of approximately \$180 per hour for a labor budget of \$5,032 plus \$100 in expenses (mileage, etc.), for a total subtask budget of \$5,132.
 - c. The PMC feels this is a reasonable level of effort for these services.
3. Subtask 2.C: WP-50B Services During Construction
 - a. This subtask includes complying with safety plans, providing quality assurance services, submittal reviews, responses to contractor requests for information, supporting preparation of change orders, reviewing contractor payment application quantities, preparation of outstanding work punchlist, and coordination of a final inspection.
 - b. HMG proposed 339 hours of construction engineering services at an average hourly rate of approximately \$172 per hour for a labor budget of \$58,325 plus \$3,852 in expenses (project site inspection mileage, etc.), for a total subtask budget of \$62,117.
 - i. For expenses, it is assumed that 70 percent of these subtask expenses are for mileage to and from the project site, and this allows for approximately eight (8) site inspection round trips per site at an average distance of 60 miles per round trip.
 - c. The PMC feels this is a reasonable level of effort for these services.
4. Subtask 2.D: WP-50B Project Management
 - a. This subtask includes preparing monthly status reports and invoices, and participation in regular and periodic meetings or teleconferences with contractors, the Owner's Representative, Owner, and USACE.

- b. HMG proposed 44 hours of construction engineering services at an average hourly rate of approximately \$200 per hour for a labor budget of \$8,784 plus \$100 in expenses (mileage, etc.), for a total subtask budget of \$8,884.
 - c. The PMC feels this is a reasonable level of effort for these services.
5. Time of Services
- a. Services for WP-50B are proposed to start in September 2019 and end in the fall of 2020, therefore it is proposed to extend the POP for this task order to December 31, 2020.

The subtask budget changes for this amendment are listed in the table below.

Budgets by Subtasks:

Subtask	Activity ID	Current Budget (\$)	Change (\$)	Revised Budget (\$)
A. WP-50A Design		36,239		36,239
B. WP-50A Bidding		2,761		2,761
C. WP-50A SDC		61,000		61,000
D. WP-50A Project Management		7,000		7,000
E. WP-50B Design			35,807	35,807
F. WP-50B Bidding			5,132	5,132
G. WP-50B SDC			62,117	62,117
H. WP-50B Project Management			8,884	8,884
TOTAL		107,000	112,000	219,000

The PMC prepared this task order amendment, and feels the information is accurate, complete, and ready for Executive Director review.

ATTACHMENT(S):

1. Draft Task Order 30 Amendment 2
2. HMG cost proposal for Task Order 30 Amendment 2

Prepared by: Program Management Consultant

John W. Glatzmaier

John Glatzmaier, P.E.
Jacobs

September 4, 2019

Date

Submitted by:

Joel Paulsen Diversion Authority Executive Director
--

<i>Concur: September 9, 2019 Non-Concur:</i>

Cc: Technical Advisory Group

- Nathan Boerboom, City of Fargo Engineer/Diversion Authority Project Manager
- David Overbo, Clay County Engineer
- Jason Benson, Cass County Engineer
- Robert Zimmerman, Moorhead City Engineer
- Matt Stamness, Assistant Cass County Engineer/Diversion Authority Project Manager
- Dustin Scott, West Fargo City Engineer

Houston-Moore Group, LLC

Task Order No. 30, Amendment ~~1~~2

FMDA Purchase Order No. 203587

Property Structure Mitigation - Design, Bidding, and Services During Construction

In accordance with the Master Agreement for Professional Services between **Fargo-Moorhead Flood Diversion Authority** (“Owner”) and **Houston-Moore Group, LLC** (HMG) (“Engineer”), dated May 1, 2017 (“Agreement”), Owner and Engineer agree as follows:

The parties agree that in the event of a conflict between prior versions of this Task Order No. 30 and this Amendment, the terms and conditions in this Amendment shall prevail, provided however, nothing herein shall preclude ENGINEER from invoicing for work authorized under prior versions of this Task Order and performed prior to effective date of this Amendment, even to the extent such prior work was revised by this Amendment. All other terms and conditions shall remain the same and are hereby ratified and affirmed by the parties.

1. Specific Project Data

- A. Title: **Property Structure Mitigation - Design, Bidding, and Services During Construction**
- B. Description: The scope of services for this task order includes performing design, bidding support, and services during construction for property mitigation projects.
- C. Background: The Owner owns or will be purchasing properties for the Fargo-Moorhead Diversion Project (Project) with structures and other features that require mitigation (relocation, demolition, or structural modifications). This task order provides design, bidding, and services during construction for identified property mitigations within an Owner designated Work Package (WP).
 - i. Work Packages under this task order will start with the designation “WP-50A” and will increase sequentially (i.e. WP-50A, WP-50B, etc.) as they are authorized by the Owner or Owner’s Representative.
 - ii. The Engineer will review each assigned WP and provide a cost proposal for the services requested under that WP. Owner will then review and authorize services under that WP.
- D. Work Packages authorized under this task order: Provide services as specified under paragraphs 2.A, 2.B, 2.C, and 2.D for structures and features located on the following properties in Cass and Richland CountyCounties, North Dakota and Clay County, Minnesota.
 - i. WP-50A: Property Mitigations – Phase 50A:
 - a. 2368 173rd Ave SE, Cass County, North Dakota OIN: 1220
 - b. 17474 52nd St S, Cass County, North Dakota OIN: 1889, 1890, 2182
 - c. 16657 38th St SE, Cass County, North Dakota OIN: 9748
 - d. 2351 173rd Ave SE, Cass County, North Dakota OIN: 1222
 - e. 5021 171st Ave SE, Cass County, North Dakota OIN: 1955
 - f. 17568 Pfiffer Dr, Cass County, North Dakota OIN: 9387
 - g. 17471 49th Street SE, Cass County, North Dakota OIN: 9403
 - h. 17465 49th Street SE, Cass County, North Dakota OIN: 9411
 - ~~i. 16678 3rd St S, Clay County, Minnesota OIN: 1802~~

- ii. WP-50B: Property Mitigations – Phase 50B:
 - a. SW 1/4 of S19, T141, R49, Cass County, North Dakota OIN: 573
 - b. 4510 112 Ave S, Cass County, North Dakota OIN: 1104
 - c. 4107 124 Ave S, Cass County, North Dakota OIN: 1126
 - d. 4905 S County RD 81, Cass County, North Dakota OIN: 9994
 - e. 17554 Pfiffer Dr, Cass County, North Dakota OIN: 9382
 - f. 17107 50 St SE, Cass County, North Dakota OIN: 1914
 - g. 17408 Horse Haven Dr, Richland County, North Dakota OIN: 1405
 - h. 17411 Horse Haven Dr, Richland County, North Dakota OIN: 9253
 - i. 17413 Horse Haven Dr, Richland County, North Dakota OIN: 1604
 - j. 16678 3 St S, Clay County, Minnesota OIN: 1802

2. Services of Engineer

A. Design Services

- i. General: Develop structural mitigation (removal or demolition) plans and technical specifications for properties included in specific Work Packages under this task order. Include utility identification and removal, identification of structures to be relocated or demolished in place, permitting, and required site restoration. Identify utilities to be cut, capped, and removed.
 - a. 90 Percent Design Submittal: prepare 90 percent plans and specifications and submit for review by the Diversion Authority and PMC review teams.
 - b. Cost Estimate: prepare cost estimate for the project based on the 90 percent submittal documents.
 - c. Bid Document Development: incorporate 90 percent review comments into the design documents and submit 100% plans and specification bid documents and update cost estimate.

B. Bidding Services

- i. General: Provide the following Services During Bidding (SDB) for projects designed by HMG and authorized by the Owner or Owner’s Representative.
 - a. Respond to bidder inquiries forwarded by Owner’s Representative during advertisement period and prepare addenda as necessary to provide a clear, biddable set of solicitation documents.
 - b. Attend and participate in pre-bid meetings and site visits.
 - c. Attend bid openings and, if requested, assist in evaluation of bids.
 - d. Incorporate addenda into the plans and technical specifications to create a set of “For Construction” Documents.

C. Services During Construction (SDC)

- i. General: Provide the following Services During Construction (SDC) for projects designed by HMG and authorized by the Owner or Owner’s Representative.

- a. Fulfill the duties of Engineer in accordance with the specific requirements of the Contract Documents for each project. Follow project documentation requirements provided by the PMC.
 - b. Comply with Owner’s and Contractor’s safety plans.
 - c. Provide Quality Assurance Managers and/or Project Engineers to perform general field observation and manage the specific inspections to be performed by third party materials testing firm, and other specialty inspection agents as needed.
 - 1) Validate results of tests and inspections, oversee retesting or other actions needed to reconcile deficiencies.
 - 2) Maintain a log for each type of test conducted.
 - 3) Prepare Daily Reports and submit to Owner's Representative.
 - 4) Prepare Weekly Reports for each project documenting the work performed by Contractor, Quality Assurance activities performed, and current issues and challenges.
 - d. Review shop drawings.
 - e. Respond to Requests for Information and other construction communication provided by the Owner's Representative.
 - f. When requested, lead development, scoping, and coordinate Contractor pricing of Change Orders or other modifications that affect the design or function of the Project, and provide drafts to PMC for review and approval recommendation to Owner.
 - g. Assist Owner's Representative with determination of monthly pay application quantities.
 - h. Identify issues on a punch list for the Contractor to resolve. Upon completion of punch list items, coordinate a final inspection. Document each inspection.
- D. Project Management
- i. General: Provide the following Project Management services for projects designed by HMG and authorized by the Owner or Owner’s Representative.
 - a. Provide project management, including monthly status reports and invoicing to PMC, on Engineer’s task activity.
 - b. Participate in regular and periodic meetings or teleconferences with contractors, the Owner’s Representative, Owner, and USACE.
 - c. Deliverables: Monthly status reports and invoices.

3. Owner's Responsibilities

- A. Owner shall have those responsibilities set forth in the Agreement.

4. Times for Rendering Services

<u>Compliance Observation</u>	<u>Start Time</u>	<u>Completion Time</u>
A. WP-50A: Property Mitigations	November 26, 2018	December 31, 2019
<u>B. WP-50B: Property Mitigations</u>	<u>September 4, 2019</u>	<u>December 31, 2020</u>

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered as follows:

- I. Compensation for services in accordance with the Standard Hourly Rates shown in Paragraph 14 of the Agreement.
- II. The total compensation for services identified under the Task Order is not-to-exceed the amount as defined in the table below.
 1. Engineer will notify Owner when eighty percent (80%) of a subtask budget is expended.
 2. Engineer will prepare and submit an amendment for additional compensation when ninety percent (90%) of a subtask budget is expended.
 3. Engineer will not perform work beyond one hundred percent (100%) of a subtask budget without Owner’s authorization by an amendment to this Task Order.

Compliance Observation	Activity ID	Current Budget (\$)	Change (\$)	Revised Budget (\$)
A. WP-50A Design		36,239 32,000 0	0 04,239	36,239
B. WP-50A Bidding		2,761 7,000	0 (4,239)	2,761
C. WP-50A SDC		61,000	0	61,000
D. WP-50A Project Management		7,000	0	7,000
<u>E. WP-50B Design</u>		<u>0</u>	<u>35,807</u>	<u>35,807</u>
<u>F. WP-50B Bidding</u>		<u>0</u>	<u>5,132</u>	<u>5,132</u>
<u>G. WP-50B SDC</u>		<u>0</u>	<u>62,177</u>	<u>62,177</u>
<u>H. WP-50B Project Management</u>		<u>0</u>	<u>8,884</u>	<u>8,884</u>
TOTAL		107,000	<u>112,000</u>	<u>219,000</u> 107,000 0

B. The terms of payment are set forth in Paragraph 15 of the Agreement.

C. When invoicing work, Engineer shall note the Activity ID (shown in table above) associated with each invoiced activity.

6. Consultants:

A. None

7. Other Modifications to Agreement: None

8. Attachments: None

9. Documents Incorporated By Reference:

A. Engineer’s cost proposal for WP-50A Property Mitigations.

A-B. Engineer’s cost proposal for WP-50B Property Mitigations dated August 13, 2019.

10. Terms and Conditions: Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is November 26, 2018.

ENGINEER:

Houston-Moore Group, LLC

OWNER:

Fargo-Moorhead Metro Diversion Authority

Signature _____ Date _____

Jeffry J. Volk

Name

Signature _____ Date _____

~~Joel Paulsen~~ Michael J. Redlinger

Name

President

Title

~~Co~~-Executive Director

Title

DESIGNATED REPRESENTATIVE FOR
TASK ORDER:

C. Gregg Thielman

Name

DESIGNATED REPRESENTATIVE FOR
TASK ORDER:

Nathan Boerboom

Name

Sr. Project Manager

Title

925 10th Avenue East
West Fargo, ND 58078

Address

Diversion Authority Project Manager, City of Fargo

Title

225 4th Street North
Fargo, ND 58102

Address

cgthielman@houstoneng.com

E-Mail Address

nboerboom@cityoffargo.com

E-Mail Address

(701) 237-5065

Phone

(701) 476-6743

Phone

Fax

Fax



**FM Metro Risk Management Project
Task Order No. 30 - Amendment 2**

Task	Activity Description	Personnel Costs																Cost Per Subtask
		Project Manager		Professional Engineer II		Project Coordinator		Project Manager Assistant		Engineering Technician III		Survey Manager		2 Man Survey Crew		CADD Technician III		
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	
Services for Task Order No. 30 - Property Structure Mitigation - Work Package 50B																		
WP-50B Design Services																		
Subtask 2.A.i.a	90 Percent Design Submittal: site visit prior to starting design. Prepare 90 percent plans and specifications and submit for review by the Diversion Authority and PMC review teams. Coordinate utility relocation plans with utility companies	20	\$ 4,140	40	\$ 8,040	20	\$ 3,800	4	\$ 552	12	\$ 1,656	2	\$ 298	12	\$ 3,516	40	\$ 5,320	\$ 27,322
Subtask 2.A.i.b	Cost Estimate: prepare cost estimate for the project based on the 90 percent submittal documents.	2	\$ 414	4	\$ 804		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 1,218
Subtask 2.A.i.c	Bid Document Development: incorporate 90 percent review comments into the design documents and submit 100% plans and specification bid documents and update cost estimate.	12	\$ 2,484	12	\$ 2,412		\$ -	2	\$ 276		\$ -		\$ -		\$ -	15	\$ 1,995	\$ 7,167
	Expenses (mileage, etc.)																	\$ 100
	Subtotal for WP-50B Design Services																	\$ 35,807
WP-50B Bidding Services																		
Subtask 2.B.i.a	Respond to bidder inquiries forwarded by Owner's Representative during advertisement period and prepare addenda as necessary to provide a clear, biddable set of solicitation documents.	2	\$ 414	2	\$ 402		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 816
Subtask 2.B.i.b	Attend and participate in pre-bid meetings and site visits.	4	\$ 828		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 828
Subtask 2.B.i.c	Attend bid openings and, if requested, assist in evaluation of bids.	2	\$ 414		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 414
Subtask 2.B.i.a	Review submittals from Contractor for conformance of Contract Documents	2	\$ 414	2	\$ 402		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 816
Subtask 2.B.i.d	Incorporate addenda into the plans and technical specifications to create a set of "For Construction" Documents.	4	\$ 828		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	10	\$ 1,330	\$ 2,158
	Expenses (mileage, etc.)																	\$ 100
	Subtotal for WP-50B Bidding Services																	\$ 5,132
WP-50B Services During Construction (SDC)																		
Subtask 2.C.i.a	Fulfill the duties of Engineer in accordance with the specific requirements of the Contract Documents for each project. Follow project documentation requirements provided by the PMC.	32	\$ 6,624		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 6,624
Subtask 2.C.i.b	Comply with Owner's and Contractor's safety plans.		\$ -		\$ -		\$ -		\$ -	15	\$ 2,070		\$ -		\$ -		\$ -	\$ 2,070
Subtask 2.C.i.c	Provide Quality Assurance Managers and/or Project Engineers to perform general field observation and manage the specific inspections to be performed by third party materials testing firm, and other specialty inspection agents as needed.	10	\$ 2,070		\$ -		\$ -		\$ -	45	\$ 6,210		\$ -		\$ -		\$ -	\$ 8,280
Subtask 2.C.i.c.1	Validate results of tests and inspections, oversee retesting or other actions needed to reconcile deficiencies.	10	\$ 2,070		\$ -		\$ -		\$ -	45	\$ 6,210		\$ -		\$ -		\$ -	\$ 8,280
Subtask 2.C.i.c.2	Maintain a log for each type of test conducted.	5	\$ 1,035		\$ -		\$ -		\$ -	15	\$ 2,070		\$ -		\$ -		\$ -	\$ 3,105
Subtask 2.C.i.c.3	Prepare Daily Reports and submit to Owner's Representative.		\$ -		\$ -		\$ -		\$ -	30	\$ 4,140		\$ -		\$ -		\$ -	\$ 4,140
Subtask 2.C.i.c.4	Prepare Weekly Reports for each project documenting the work performed by Contractor, Quality Assurance activities performed, and current issues and challenges.		\$ -		\$ -		\$ -		\$ -	24	\$ 3,312		\$ -		\$ -		\$ -	\$ 3,312
Subtask 2.C.i.d	Review submittals/shop drawings	5	\$ 1,035	10	\$ 2,010		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 3,045
Subtask 2.C.i.e	Respond to Requests for Information and other construction communication provided by the Owner's Representative.	5	\$ 1,035	10	\$ 2,010		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 3,045
Subtask 2.C.i.f	When requested, lead development, scoping, and coordinate Contractor pricing of Change Orders or other modifications that affect the design or function of the Project, and provide drafts to PMC for review and approval recommendation to Owner.	16	\$ 3,312	8	\$ 1,608		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 4,920
Subtask 2.C.i.g	Assist Owner's Representative with determination of monthly pay application quantities.	5	\$ 1,035		\$ -		\$ -		\$ -		\$ -	5	\$ 745	20	\$ 5,860		\$ -	\$ 7,640
Subtask 2.C.i.h	Identify issues on a punch list for the Contractor to resolve. Upon completion of punch list items, coordinate a final inspection. Document each inspection.	8	\$ 1,656		\$ -		\$ -		\$ -	16	\$ 2,208		\$ -		\$ -		\$ -	\$ 3,864
	Expenses (mileage, etc.)																	\$ 3,852
	Subtotal for WP-50B Services During Construction (SDC)																	\$ 62,177
WP-50B Project Management																		
Subtask 2.D.i.a	Provide project management, including monthly status reports and invoicing to PMC, on Engineer's task activity	12	\$ 2,484		\$ -		\$ -	4	\$ 552		\$ -		\$ -		\$ -		\$ -	\$ 3,036
Subtask 2.D.i.b	Participate in regular and periodic meetings or teleconferences with contractors, the Owner's Representative, City of Fargo, Owner, and USACE	20	\$ 4,140	8	\$ 1,608		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	\$ 5,748
	Expenses (mileage, etc.)																	\$ 100
	Subtotal for WP-50B Project Management																	\$ 8,884
	Grand Totals	176	\$ 36,432	96	\$ 19,296	20	\$ 3,800	10	\$ 1,380	202	\$ 27,876	7	\$ 1,043	32	\$ 9,376	65	\$ 8,645	\$ 112,000