GARRISON DIVERSION CONSERVANCY DISTRICT

RED RIVER VALLEY COMMITTEE

AE2S Office
4050 Garden View Drive, Suite 200
Grand Forks, North Dakota

Virtual option is available via Teams

June 26, 2023

A G E N D A

AGENDA

1:45 p.m. I. Call to Order – Al Grasser

1:46 p.m. II. **Consideration of Minutes** – Ken Vein

A. **>February 1, 2023**

1:47 p.m. III. Red River Valley Water Supply Project

A. Construction Update – Kip Kovar

1. Missouri River Intake Contract Closeout
2. Contract 5B, Transmission Pipeline East

B. Biennium Draft Work Plan 2023-2025 – Kip Kovar

1. >Work Plan Map
2. **>Biennium Budget**

C. **Approval of Contract 6A Design** – Kip Kovar ***(Dropbox Link)***

D. **Advertise Contracts 5C, 5D and 6A** – Kip Kovar

E. >Work Plan Update – Kip Kovar, Kurt Ronnekamp and Paul Boersma

1. **Task Orders**

a. **>5371 – Transmission Pipeline Contract 7 Final Design** – Kurt Ronnekamp
b. **>5335 – ENDAWS Contract 3 Final Design** – Kurt Ronnekamp
c. **>5633 – Construction Phase Services 5C, 5D and 6A** – Kurt Ronnekamp
d. **>9510 – User Outreach & Pipeline Ext.** – Paul Boersma/Steve Burian
e. **>1510 – Biennium Program Management Support** – Paul Boersma

F. **General Contract Prequalification** – Kip Kovar and Kurt Ronnekamp ***(PowerPoint Slide)***

G. >Program Schedule – Merri Mooridian

H. >Program Budget – Merri Mooridian

I. Rainbow Energy/City of Washburn Update – Steve Burian

3:10 p.m. IV. Other – Ken Vein

3:15 p.m. V. Adjourn

The following minutes are in draft form subject to review and approval by the Red River Valley Committee at its next meeting.

23-01

GARRISON DIVERSION CONSERVANCY DISTRICT

RED RIVER VALLEY COMMITTEE

Video Conference
February 1, 2023

Garrison Diversion Conservancy District's Red River Valley Committee met by video conference on February 1, 2023. The meeting was called to order by Chairman Ken Vein at 11:48 a.m.

DIRECTORS PRESENT

Committee Chairman Ken Vein
Director Jay Anderson (joined at 11:55 a.m.)
Director Greg Bischoff
Director Jason Siegert
Acting Secretary Kip Kovar

MEMBERS ABSENT

Board Chairman Alan Walter

OTHERS PRESENT

Staff members and others were present. A copy of the registration sheet is attached to these minutes as Annex I.

The meeting was recorded to assist with compilation of the minutes.

CONSIDERATION OF MINUTES

Motion by Director Bischoff to dispense with a reading of the December 21, 2022, Red River Valley Committee minutes and approve them as distributed. Second by Director Siegert. Upon roll call vote, motion carried.

RED RIVER VALLEY WATER SUPPLY PROJECT (RRVWSP)

Construction Update - - Chairman Vein commented the construction update and Contract 5B pipeline schedule were covered at the Lake Agassiz Water Authority (LAWA) Technical Advisory Committee (TAC) meeting, which this committee took part in immediately preceding this meeting.

Missouri River Intake, Screen Structure and Tunnel, Contract 2

Task Order 2530 - Change Order No. 4

Kip Kovar, Acting Secretary, reviewed Change Order No. 4, related to the contractor running into coal during tunneling operations. The contractor is claiming more maintenance was involved due to this occurrence. The task order describes three items of work that transpired. These were a change in site conditions due to the presence of coal , a change related to the addition of two 10-inch outlets that were installed on the screen riser pipe and a change related to permanently plugging pipe extending vertically through the seal plug installed by ICS.

Mr. Kovar stated the change order results in an increase of $33,256.35 to the contract price.

Chairman Vein stated the LAWA TAC approved this change order earlier today. Approval is also required from the Red River Valley Committee.

Motion by Director Siegert to approve Change Order No. 4 on Task Order 2530 for the RRVWSP Missouri River Intake, Screen Structure and Tunnel, Contract 2, in the amount of $33,256.35. Second by Director Bischoff. Upon roll call vote, the following directors voted aye: Bischoff, Siegert and Vein. Those voting nay: none. Absent and not voting: Anderson and Walter. Motion carried.

Contractor Claims Resolution

Missouri River Intake, Contract 2

Mr. Kovar said the committee heard the motion during the LAWA TAC meeting acknowledging the differing site conditions and the construction methodology used to install sheets both played a role in the claim regarding the Missouri River Intake site.

Mr. Kovar said with that in mind, it was agreed the Red River Valley Committee could move forward in an attempt to reach some sort of settlement with Michels Corporation.

EXECUTIVE SESSION

Motion by Director Bischoff to enter into Executive Session pursuant to N.D.C.C. §44-04-11.2 to discuss negotiation of a contractor claim. Second by Director Siegert. Upon voice vote, motion carried.

Executive Session began at 11:56 a.m.

Motion by Director Bischoff to leave Executive Session. Second by Director Siegert. Upon voice vote, motion carried.

Executive Session ended at 1:01 p.m., and the Red River Valley Committee meeting resumed.

Drawings and Specifications

Transmission Pipeline East, Contracts 5C & 5D

Mr. Kovar referred to the drawings and specifications contained in the meeting packet for RRVWSP Transmission Pipeline East Contract 5C, Bordulac to James River, and Contract 5D, Sykeston to Carrington. These were sent out to the committee for review prior to today's meeting.

Mr. Kovar said he has gone through the drawings and specifications entirely. He is comfortable with them and has no further comments. He stated the committee could request more time to review them or, if they agree with them, he would recommend committee approval today.

Motion by Director Bischoff to approve the drawings and specifications for RRVWSP Transmission Pipeline East Contract 5C, Bordulac to James River, and Contract 5D, Sykeston to Carrington. Second by Director Anderson. Upon roll call vote, the following directors voted aye: Anderson, Bischoff, Siegert and Vein. Those voting nay: none. Absent and not voting: Walter. Motion carried.

Motion by Director Siegert to adjourn the committee meeting. Second by Director Anderson. Upon voice vote, motion carried.

The meeting adjourned at 1:07 p.m.

(SEAL)

Ken Vein, Chairman

Kip Kovar, Acting Secretary

Annex I
23-04

REGISTRATION

RED RIVER VALLEY COMMITTEE MEETING
Garrison Diversion Conservancy District

VIDEO CONFERENCE

February 1, 2023

NAME	ORGANIZATION
Bruce Klein	Garrison Diversion
Steve Metzger	Garrison Diversion
Dave Anderson	Garrison Diversion
Mike Tweed	Garrison Diversion
Kip Kovar	Garrison Diversion
Merri Mooridian	Garrison Diversion
Lisa Schafer	Garrison Diversion
Tami Norgard	Vogel Law
Paul Boersma	Black & Veatch
Kurt Ronnekamp	Black & Veatch
Brent Erickson	Advanced Engineering & Environmental Services
Steve Burian	Burian & Associates
Joe Zauner	American Pipe

McCLUSKY CANAL INTAKE & PUMPING STATION
$0.80M PRELIMINARY DESIGN

11-MILE ENDAWS PIPELINE
$3.06M FINAL DESIGN

HYDRAULIC BREAK TANKS
$0.50M PRELIMINARY DESIGN

BIOTA WTP
$3.20M PRELIMINARY DESIGN

10-MILE CONTRACT 5D PIPELINE
$64.60M CONSTRUCTION
$5.85M ENGINEERING SERVICES DURING CONSTRUCTION
$70.45M TOTAL

9-MILE CONTRACT 6A PIPELINE
$58.45M CONSTRUCTION
$5.31M ENGINEERING SERVICES DURING CONSTRUCTION
$63.76M TOTAL

27-MILE CONTRACTS 4A & 4B PIPELINES
$8.30M FINAL DESIGN

8-MILE CONTRACT 5C PIPELINE
$59.00M CONSTRUCTION
$5.36M ENGINEERING SERVICES DURING CONSTRUCTION
$64.36M TOTAL

13-MILE CONTRACT 7 PIPELINE
$2.93M FINAL DESIGN

McHenry County
Sheridan County
Pierce County
Wells County
Benson County
Wells County
Harvey
Eddy
Tiffany Flats
Camp Grafton
Nelson County
Griggs County
Sheridan
North Dakota
Sheridan County
Wells County
Carrington
Foster
Griggs
Foster County
Griggs County
Sheridan County
Burleigh County
Wells County
Kidder County
Wells County
Stutsman County
Foster County
Stutsman County
Arrow Wood National Wildlife Refuge
Burleigh County
Kidder County
Kidder County
Stutsman County
Stutsman County
Barnes County
Griggs Co
Barnes Co
Stutsman
Sevenm

Ct1 Ct2 Ct3 Ct4A Ct4B Ct5D Ct5A Ct5B Ct5C Ct6A Ct6B Ct7

2144 ft 2055 ft 2005 ft 1935 ft 2314 ft 1884 ft 1575 ft 1730 ft

PIPELINE CONTRACTS

- RRVWSP TPE Ct 4A, 4B
- RRVWSP TPE Ct 5A, 5B, 5C, 5D
- RRVWSP RRVTP Ct 6A, 6B
- RRVWSP RRVTP Ct7
- ENDAWS Ct 1, 2, 3
- Contact Break Line

RED RIVER VALLEY WATER SUPPLY PROJECT
GARRISON DIVERSION
Lake Agassiz Water Authority
BLACK & VEATCH
AE2S
KLJ

N

Date: 6/13/2023

North Dakota

Edited by: lrengstorf
Coordinate System: UTM Zone 14N
C:\Data\Projects\Nasuni\B\Black & Veatch\00200-2021-005\GIS\GDCD RRVWSP 2021-2022 Land Services - Misc Mapping and Analysis.aprx

RED RIVER VALLEY WATER SUPPLY PROJECT

2023 to 2025 Biennium Work Plan

($244.0 mil Total Funding: $180 mil State; $61 mil Local Users; $3.0 mil MR&I)

June 21, 2023

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]			2025-27 Bien Project Cost	Future Bien Project Cost
					Total	Federal 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%		
1.	**Garrison Diversion Conservancy District Budget** Scope: Account for all costs for which Garrison Diversion is responsible not included in other Task Orders listed here. Need: Budget allocation for GDCD direct costs associated with the Red River Valley Water Supply Project.	Garrison Diversion's costs for the RRVWSP, including internal mgmt, admin, legal, communication, insurance advisory, misc., etc.		GDCD				$ 2.50	$ 1.87	$ 0.63					
2.	**Property, Easements, and Crop Damage Payments**[4] Scope: Costs to obtain easements and acquire property for associated facilities. Crop damage payments to landowners. Need: Secure land for installing future pipeline segments staying years ahead of pipeline design/construction needs. Purchase property on which to build all remaining facilities so property will be in hand before final design begins.	Acquire easements in Sheridan and Wells County for 32-mi pipeline. Pay bonus payment to all easement holders. Acquire property for Biota WTP, Hydraulic Break Tanks, McClusky Canal Intake, and James River sites. Pay for crop damage.		RRVWSP ENDAWS ENDAWS Facilities Crp Dmg	$ 0.49 $ 2.00	$ 0.37 $ 1.50	$ 0.12 $ 0.50	$ 2.21 $ 0.78	$ 1.66 $ 0.58	$ 0.55 $ 0.20					
3.	**Transmission Pipeline East Contract 5C** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	8± mi of 72" pl, including two 96" tunnels. Pipeline extends eastward from Contract 5B NE of Bordulac to a termination point just east of the James River.	Jul-23 Aug-23	Prof Srvs Const, 2026 Fin							$ 5.36 $ 59.00	$ 4.02 $ 44.25	$ 1.34 $ 14.75		
4.	**Transmission Pipeline East Contract 5D** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	10± miles of 72" pl, including several 96" tunnels. Pipeline section extends westward from Contract 5A south of Carrington to a termination point south of Sykeston.	Jul-23 Aug-23	Prof Srvs Const, 2026 Fin							$ 5.85 $ 64.60	$ 4.39 $ 48.45	$ 1.46 $ 16.15		
5.	**RRV Transmission Pipeline Contract 6A** Scope: Pipeline installation, including construction phase engineering services by Engineer. Need: Continue progress of transmission pipeline installation for completion of RRVWSP by the target end date.	9± mi of 72" pl, including several 96" tunnels. Pipeline section extends eastward from Contract 5C just east of the James River to a termination point south of Glenfield.	Jul-23 Sep-23	Prof Srvs Const, 2026 Fin							$ 5.31 $ 58.45	$ 3.98 $ 43.84	$ 1.33 $ 14.61	$ 1.8 $ 22.0	
6.	**ENDAWS Transmission Pipeline Contract 3** Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Continue progress of transmission pipeline installation for completion of RRVWSP/ENDAWS by the target end date.	11± mi of 72" pipeline, including 96" tunnels. Pipeline section extends west from the west end of Contract 4 to the Sheridan Wells County line.	Jul-23	ENDAWS	$ 3.06	$ 2.30	$ 0.76							$ 90	$ 169
7.	**Transmission Pipeline East Contracts 4A and 4B** Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have the next pipeline section bid-ready when State funding becomes available (likely the 2025-27 biennium).	27± mi of 72" pl, including several 96" tunnels. Pipeline extends from the west end of Contract 5D south of Sykeston west to a termination point NE of Hurdsfield at HBTs.	Oct-23	Prof Srvs				$ 8.30	$ 6.23	$ 2.07				$ 202	

RED RIVER VALLEY WATER SUPPLY PROJECT

Lake Agassiz Water Authority

2023 to 2025 Biennium Work Plan

($244.0 mil Total Funding: $180 mil State; $61 mil Local Users; $3.0 mil MR&I)

June 21, 2023

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]			2025-27 Bien Project Cost	Future Bien Project Cost
					Total	Federal 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%		
8.	**RRV Transmission Pipeline Contract 7** Scope: Final design (30% docs to biddable plans and specs) and bidding assistance. Need: Have the next pipeline section bid-ready when State funding becomes available (likely the 2025-27 biennium).	14± mi of 72" pipeline, including several 96" tunnels. Pipeline extends from the east end of Contract 6B to the outfall on the Sheyenne River southeast of Cooperstown.	Jul-23	Prof Srvs				$ 2.93	$ 2.20	$ 0.73				$ 105	
9.	**McClusky Canal Intake and Pumping Station** Scope: Conceptual and preliminary design of an intake and pumping station at the McClusky Canal. Need: Preliminary designs are necessary so site acquisition can begin and final design can commence when land is secured.	Siting; passive intake screens, pumping station similar to MRI, and utility extension design can begin for new facility to be located near McClusky, ND.	Oct-23	Prof Srvs	$ 0.80	$ 0.60	$ 0.20								$ 49
10.	**Biota Water Treatment Plant and Main Pumping Station** Scope: Conceptual and preliminary designs for a Biota WTP and Main Pumping Station, including hydraulic surge facility. Need: Complete design to a point where land acquisition can begin and project can move into final design next biennium.	165-cfs biota WTP, with chlorine and UV disinfection to meet NDPDES permit and FEIS requirements per Reclamation. Chloramines for residual disinfectant in pipeline.	Oct-23	Prof Srvs	$ 3.20	$ 2.40	$ 0.80								$ 189
11.	**Hydraulic Break Tanks** Scope: Preliminary design of above-ground tanks and associated facilities at or near the continental divide. Need: Complete design to a point where land acquisition can begin and project can move into final design next biennium.	Two 5 MG above-ground storage tanks and accessories, site piping and valves, monitoring, and utility extensions necessary for a new greenfield site.	Oct-23	Prof Srvs	$ 0.50	$ 0.37	$ 0.13								$ 31
12.	**PMIS Annual Licenses & Continued Maint/Upgrades** Scope: Annual software license renewal for expanded team and consulting support for training and configuration services. Need: Create greater efficiency and documentation for voluminous amount of construction related documents.	Vendor fees (e-Builder & DocuSign) for licenses of expanded team and consulting support for training of contractors/ subcontractors and workflow/report additions and modifications.	Oct-23	Vend & Prof Srvs				$ 0.50	$ 0.38	$ 0.12					
13.	**Prg Mgmt to Support Larger Spend and Expanded Team** Scope: Overall program management, planning, budgeting, scheduling, and other support for Garrison Diversion. Need: Consulting services of a broad programmatic nature not included under project-specific design or construction TOs.	Overall planning, management, administration, scheduling, budgeting, coordination, meeting preparation/attendance, regulatory interface, reporting, etc.	Jul-23	Prof Srvs				$ 0.66	$ 0.50	$ 0.16					
14.	**Outreach, Plng, and Design to Secure User Commitments** Scope: User briefings and necessary support, including conceptual designs, to secure project commitments. Need: Define pipeline extensions to identify for users how and a what cost water will be delivered to their communities.	Size pipelines, pumping stations, channels, storage, etc. and other necessary infrastructure to deliver raw water to end users. Update capex to reflect current market.	Jul-23	Prof Srvs				$ 1.70	$ 1.28	$ 0.42					

RED RIVER VALLEY WATER SUPPLY PROJECT

Lake Agassiz Water Authority

2023 to 2025 Biennium Work Plan

($244.0 mil Total Funding: $180 mil State; $61 mil Local Users; $3.0 mil MR&I)

June 21, 2023

No.	Scope of Work	Feature	Date Task Orders Auth	Note	2023-25 Bien ENDAWS Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Development Budget (mil $)			2023-25 Biennium RRVWSP Project Constr Budget (mil $)[1,2,3]			2025-27 Bien Project Cost	Future Bien Project Cost
					Total	Federal 75%	Local 25%	Total	State 75%	Local 25%	Total	State 75%	Local 25%		
15.	**Operational Planning and Asset Management Phase 3** Scope: System modeling, evaluation, planning, and report development documenting results/findings/outcomes. Need: Finalize Garrison Diversion, State Water Commission, and USACE roles for system operation.	Refine details of diversions to/from Lake Ashtabula. Finalize stakeholder roles and responsibilities as it relates to system operation.	Jan-24	Prof Srvs				$ 0.50	$ 0.38	$ 0.12					
16.	**Financial Planning Support** Scope: Continue to refine the financial model and provide scenarios as required to support users and the program. Need: Accurate water bill estimates and affordability for customers are necessary to gain approval from users.	Update financial models; address state loan and financing program changes; end user funding, financing, and cost-share analyses; continued funding and finance outreach.	Jul-23	Prof Srvs				$ 0.59	$ 0.44	$ 0.15					
17.	**Contingency** Scope: A budget reserve for task order additions to professional services, construction, legal, real estate, etc. TOs. Need: Address and pay for changes that are sure to occur.	Budget flexibility to adapt to work plan changes and to pay for construction change orders typically running from 3 to 5% of original construction costs at bid time.	N/A	GDCD	$ 0.60	$ 0.45	$ 0.15	$ 1.03	$ 0.77	$ 0.25	$ 13.08	$ 9.81	$ 3.27		
TOTAL PROGRAM BUDGET					**$ 10.65**	**$ 7.99**	**$ 2.66**	**$ 21.70**	**$ 16.29**	**$ 5.40**	**$ 211.65**	**$ 158.74**	**$ 52.91**	**$ 421**	**$ 438**

Notes:

1. Construction costs include management, engineering services during construction, inspection, field quality control, and construction.
2. Projects indicated for construction funding in a given biennium will be shovel ready for construction at the start of the biennium.
3. Future capital costs are escalated to an anticipated midpoint of construction per Finance Team rates of 7, 6, 5, 5, and 3.5 percent per annum thereafter starting in 2022 with an anticipated 2032 finish. All future RRVWSP construction projects and costs are not shown.
4. Land services costs are the amount likely to be paid for real estate, easements, including bonus payments, crop damage, and field obstructions. Estimates include pipeline easements required for the ENDAWS east/west pipeline (none are secured at this point) and remaining easements from the Hydraulic Break Tanks to the Sheyenne River Outfall (25% remain mostly in Wells County).

RRVWSP Work Plan Update
June 8, 2023

CONSTRUCTION

Wet Well Construction Contract 1

The project is closed with the final payment sent in April, 2023.

Pipeline Construction

Contract 5A

Final completion has been achieved, and close out papers are being generated. To date, $8,393,396.44 has been paid on the current contract amount of $8,393,396.44.

Reclaimed Property

Typical Air Release Manhole

Contract 5B

The original pipe delivery of June 15, 2021, was delayed due to a surface blemish in the steel coil. To date, 6,741 feet have been installed out of the nine miles. High groundwater slowed the pipe installation progress.

First Pipe Arriving by Railcar

For year 2023, contractor has been mobilizing, stripping topsoil, performing a significant amount of dewatering and prepping site for tunneling crew. The first pipe is expected to be installed on June 9.

To date, $12,028,525.94 has been paid on the original contract amount of $45,961,700.00. Change Order No. 1 has been approved for -$1,410,437.41, leaving the current contract price at $44,551,262.59.

Discharge Structure Construction

Final payment has been made. Original contract amount was $1,516,955 plus Change Order No. 1 for $4,929 for a final contract price of $1,521,884.

Missouri River Intake Tunnel and Screen Final Design Contract 2

As the apparent low bidder at $18,896,900, Michels was issued notice of award on June 9, 2021. A subcontractor is currently restoring the property, with seeding occurring this week. To date, $17,583,467.82 has been paid on the original contract amount of $18,896,000.00. Five change orders have been approved for a current contract price $20,910,615.60.

Site Overview

Current Site Conditions

<u>DESIGN</u>

Pipeline segments 5C (8 miles), 5D (10 miles) are at 100% complete, and Contract 6 (25 miles) is at 99% complete.

The design team is also working with Reclamation and USFWS routing the pipeline through wetland and other various existing easements.

RRVWSP Task Order 5371 – Red River Valley Transmission Pipeline Contract 7
Final Design Services and Bidding Assistance

Task Order Effective Date: July 1, 2023

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a final design and bidding assistance task order in the amount of $2,852,000 for Red River Valley Transmission Pipeline Contract 7 (the Project) – the 7th pipeline final design project undertaken by Garrison Diversion. The Task Order takes 30-percent plans and specifications to final documents for bidding. Services will begin in July 2023 and finish by October 2025. These professional services are provided on an hourly basis; the fee is an estimate based on the scope and nature of the work and the 28-month schedule. At the conclusion of this task order, the Project will be shovel ready for construction in the 2025-27 biennium.

TASK ORDER SUMMARY

The services to be provided by the engineering team (Black & Veatch, AE2S, KLJ, Materials Testing Services, and Prairie Soil Consulting) are described in the attached Task Order. The following summarizes each of the major tasks.

Basic Services: The estimated hourly fee and expenses for standard and customary design services and bidding assistance are as follows, for a construction project with an estimated cost of $97 million (72-inch pipe and 2027 dollars at mid-point of construction):

	Fee	% of Const
Task Order Management and Administration	$306,721	
Special Project and Third-Party Meetings	$218,781	
Landowner Communication and Easement Modifications	$141,574	
Field Services	$360,342	
Final Design Services (from 30-percent documents to final plans and specifications)	$1,704,714	
Bidding Assistance (advertisement, bidding, pre- and post-award services)	$118,989	
Energy Recovery Evaluation and Conceptual Design	$74,879	
Totals	$2,926,000	3.0%

Special Services: There are no unique or specialized services required under this task order.

PROJECT OVERVIEW

A map showing the location of the project is included in the background information of the attached Task Order and on the next page. Contract 7 begins just west of 106th Avenue SE and terminates at a point 13.4-miles east to connect to the Sheyenne River Outfall in the vicinity of North Dakota Highway 22 east of 116th Avenue Southeast. Elements of the design project are:

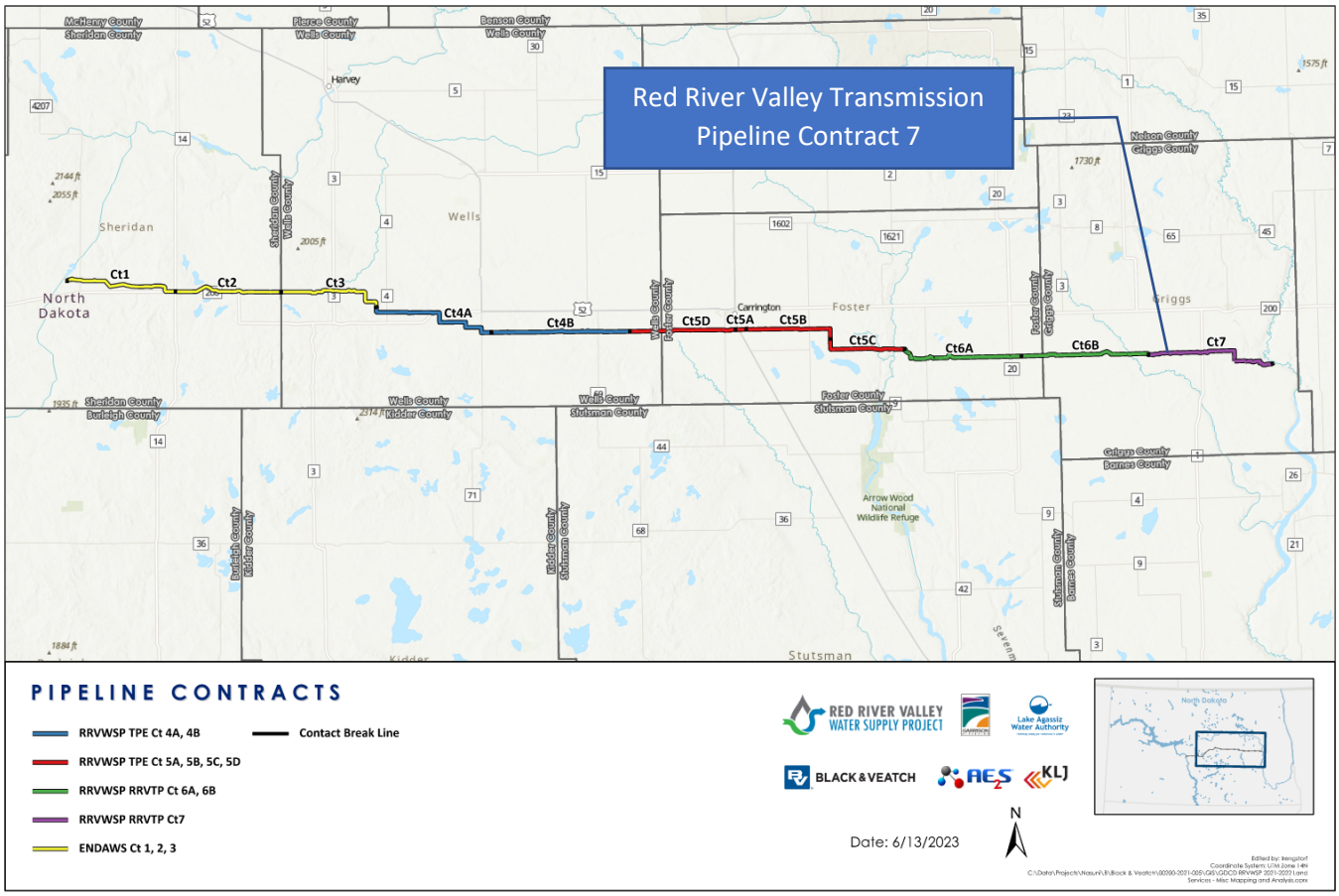
- Surveying services for easement changes if any,
- Review of wetlands classifications considering recent SCOTUS ruling and environmental consulting,
- Crossing and other permitting assistance,
- Subsurface utility engineering, including potholing to locate buried lines,
- Design of 13.4-miles of 72- to 84-inch pipe, with an impressed current corrosion protection system,
- Up to 13 96- to 108-inch diameter trenchless crossings in total (11 wetland, 2 paved county roads); other crossings will be open cut, and

- Strict specification provisions concerning stripping, stockpiling, and replacement of topsoil/subsoil to facilitate easement restoration.

An evaluation of energy recovery facilities will be evaluated and several locations along the pipeline alignment will be considered. Concept drawings will be prepared for visualization of what the system entails.

RISK CONSIDERATIONS

Tunneling has a variety of uncertainties and risks beyond those of open-cut pipeline installation. To mitigate Garrison Diversion's exposure to some of these risks, a two-part geotechnical investigation/report – a geotechnical data report and a geotechnical baseline report – will be included in the specifications as a Contract Document. The geotechnical baseline report will outline the conditions the Contractor should expect when tunneling (i.e., the baseline). All contractors will be bidding the same baseline conditions with similar assumptions. Should conditions present vary materially from the baseline (e.g., more boulders are encountered than expected), the Contractor would be entitled to an increase in its contract price.



Red River Valley Transmission Pipeline Contract 7 Location

Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

RRVWSP Task Order 5371 – Red River Valley Transmission Pipeline Contract 7
Final Design Services and Bidding Assistance

Effective Date – July 1, 2023

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Project) will provide a supplemental water supply to eastern and central North Dakota (ND) in the event of drought conditions in the Red River watershed. The Project as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will also supply additional water to support industrial development as well as provide an environmental benefit to local rivers during drought conditions by augmenting natural stream flows. The source water will be withdrawn from the Missouri River and conveyed to a new biota water treatment plant (WTP). A multi-county pipeline will then convey flows from the biota WTP east to the Sheyenne River. Lake Ashtabula located downstream will provide storage allowing for controlled releases to the Red River Valley when flow augmentation is needed.

2. Professional services for final design of the Project will be accomplished through the execution of multiple task orders for design and associated activities as well as for engineering services during construction. A Preliminary Design Report (PDR) prepared by Engineer and authorized by

Owner under previously executed Task Orders will be the foundation on which Project design elements will be based.

3. This Task Order is for final design of an approximate 13.4-mile pipeline segment called Contract 7. The outcome of this Task Order will be a sealed and signed design with Contract Documents (CDs) ready for public advertisement and bidding.

4. The award of a construction contract to a Contractor to build the Engineer-designed pipeline will depend on future project funding. If funding is not available to build the entire Contract 7 transmission main, it may be bid in separate smaller packages. Trenchless crossings will be included within the CDs, including the open-cut portions of the Project.

II. TASK ORDER OBJECTIVES

1. The alignment and limits of the pipeline being designed under this Task Order are shown in **Attachment A**. Contract 7 starts just west of 106th Avenue Southeast and terminates at a point 13.4-miles east to connect to the Sheyenne River Outfall in the vicinity of North Dakota Highway 22 east of 116th Avenue Southeast. In addition to the 13.4 miles of new pipeline, Contract 7 includes up to 13 trenchless crossings shown in Table 1 and on **Attachment A**.

Approximate Starting Station[1]	Type of Crossing	Approximate Length (ft)[1]	Approximate Depth to Top of Casing (ft)
9184+05	JD Wetland	380	12
9217+49	JD Wetland	90	12
9229+45	JD Wetland	80	14
9306+39	JD Wetland	120	12
9394+24	Paved Road (111th Ave NE)	200	11
9408+60	USFWS Wetland	310	12
9441+46	USFWS Wetland	115	18
9560+87	Paved Road (County Road 19)	150	15
9595+77	JD Wetland	245	12
9602+07	JD Wetland	180	11
9636+44	JD Wetland	85	12
9726+80	JD Wetland	430	12
9790+78	JD Wetland	105	12
Totals			

Notes:
1. Stationing based on 30-percent design level plan/profile drawings. The starting stationing and length of tunnels will likely change as design is finalized. Data shown is approximate and based on the PDR and 30-percent design. Any alignment change (horizontal and/or vertical) would affect locations and lengths of tunnels.
2. Design of additional tunnels not shown above will be Additional Services.
3. Some tunnels may be eliminated based on the outcome of negotiations with county and township officials.

Table 1 – Locations and Length of Trenchless Crossings

Of the 13 trenchless crossings, two are paved road crossings, which may change to open-cut crossings as the design progresses pending approval of county and township authorities. All gravel road crossings are assumed to be crossed with open-cut methods as per the previous RRVWSP designs and construction. The wetland Jurisdictional Determinations (JD) previously

made by the U.S. Army Corp of Engineers (USACE) are also subject to change given the recent May 2023 ruling by the Supreme Court of the U.S. This ruling narrows the definition of a JD wetland, which may change some of the previous wetland classifications to non-JD thus eliminating the need to avoid by tunnelling or routing around.

2. Routing of the pipeline from the Missouri River and the McClusky Canal to the Sheyenne River was developed during preliminary design. The final design of Contract 7 will follow this route, but some adjustments to the route are anticipated as part of the final design process.

3. Preparation of easement agreements and associated exhibits along with easement negotiations and acquisition are included in other task orders (i.e., 7310 and 7410 – the land services authorizations for the past two and current biennia).

4. Geotechnical field work to supplement the original 2009 geotechnical investigation is included in Task Order 5370. These new borings will provide subsurface data where the pipeline alignment deviated from the 2009 alignment for various reasons most often due to wetlands avoidance.

5. This Task Order includes the scope of the remaining geotechnical investigations that may be required to support the final design. Where possible, soil borings conducted as part of the 2010 design efforts were incorporated in the geotechnical analysis where the borings were sufficiently close to the current pipeline alignment. Geotechnical reports will be prepared under this Task Order including incorporation of 2009 geotechnical work where still applicable plus the supplemental work completed under Task Order 5370. These reports include a Geotechnical Report for the open-cut pipeline and a Geotechnical Data Report (GDR) and a Geotechnical Baseline Report (GBR) for the trenchless crossings being designed hereunder. The GDR and GBR will be Contract Documents (CDs). The GDR will include factual information gathered during the project investigation and will be prepared to summarize the subsurface information collected under this Task Order. The GBR establishes a single-source document where contractual statements describing the geotechnical conditions anticipated to be encountered during construction can be found. The GBR will be prepared in this Task Order during the design document preparation since it depends on the design being significantly advanced. The initial GDR will be prepared by Engineer's consultant, Materials Testing Services, LLC, of Minot, North Dakota. Engineer will use this information plus geotechnical data gathered in earlier investigation and complete the final GDR. In addition, the Engineer will prepare a GBR.

6. A preliminary sheet list identifying the drawings to be produced under this task order is included as **Attachment B**.

7. A preliminary specification list, including front-end or Division 0 specifications, identifying specifications to be produced under this task order is included as **Attachment C**.

8. The pipeline will be an approximate 72-inch diameter steel pipeline primarily installed with cut-and-cover methods; however, the final diameter of pipeline may change depending up on the Owner's decision regarding capacity from the James to Sheyenne Rivers. The current design using 72-inch pipe from the James to Sheyenne Rivers results in a capacity of 145 cubic feet per

second (cfs). Portions of this segment would need to be upsized to delivery flows more than 145 cfs. Hydraulic analysis considered flows up to 185 cfs and pipe sizes up to 84 inch.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional design services associated with development of CDs for installation of a multi-county water supply pipeline in east central ND.

3. Construction Procurement. CDs developed by Engineer will be of sufficient detail for the Owner to obtain bids through a conventional bidding process (design-bid-build). CDs will be prepared assuming one construction package – Contract 7.

4. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

5. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided by Engineer, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of service and associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

6. Capital Cost Opinions. All opinions of probable construction cost developed will generally follow the recommendations of the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R regarding methodology and accuracy. The cost opinions' level of accuracy presented by Engineer for the various deliverables will be as noted in subsequent paragraphs of this Task Order.

7. Document Production Standards and Procedures. Engineer will prepare CDs using the 50-division, three-part Construction Specifications Institute (CSI) format for technical specifications; Engineer's drawing standards; and Engineer's design procedures and criteria, AutoCAD drafting standards, and standard construction details.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Task Order Management and Administration
- Task 2 – Special Project and Third-Party Meetings

- Task 3 – Landowner Communication and Easement Modifications
- Task 4 – Field Services
- Task 5 – Final Design Services
- Task 6 – Bidding Assistance
- Task 7 – Energy Recovery Evaluation and Conceptual Design

1. **Task 1 – Task Order Management and Administration**

   This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and on budget.

   A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, and other standard and customary activities required for timely completion of the Work.

   B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

   C. Progress Reports. Prepare for the Owner progress reports that identify the Work that has been performed, upcoming work activities anticipated, and action items required of the Owner. Identify therein variances or potential variances from the Task Order's Basic and Special Services. The reports will be in the Engineer's standard format unless the Owner requires otherwise.

   D. Schedule Updates. Engineer will prepare a baseline Gantt chart schedule at Task Order's inception. The schedule will be updated comparing actual progress by task/subtask to the baseline schedule.

   E. Management of Subconsultants. Engineer will monitor subcontractor progress, review and approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and generally oversee subconsultants' performance.

2. **Task 2 – Special Project and Third-Party Meetings**

   The overall objective of this task is to keep stakeholders apprised of Task Order status and to provide a forum for stakeholder input. Engineer will prepare an agenda. The following meetings are anticipated:

   A. Special Project Meetings

      i. Task Order Initiation Meeting. Engineer will conduct a virtual Task Order Initiation Meeting with the Owner and subconsultants to review the overall approach for final design and bidding assistance. Another objective of this meeting will be to finalize the

approach to securing rights of entry from landowners where Owner does not have signed easements. In addition, courtesy landowner notifications will be necessary for parcels with signed easements. Either right of entry agreements or landowner notifications will be for the purpose of obtaining either survey, geotechnical, or other design data as required to finalize the design.

ii. Post Field Investigation Alignment Update Meeting. A virtual meeting will be held with Owner after supplemental field work has been completed and after initial discussions have been undertaken with local officials and landowners. The impact of field findings and/or negotiations with landowners on the pipeline alignment and appurtenance locations will be discussed. The outcome of the meeting will be to identify any required alignment changes to the previously completed 30-percent design. An updated set of alignment drawings will be prepared before the meeting and finalized during the workshop.

B. Third-Party Meetings

i. Stakeholder Meetings. Engineer will attend and present Project information for meetings with the LAWA Technical Advisory Committee (TAC). One meeting is expected to present the final design.

ii. Design Meetings for Utility Coordination. Engineer will schedule and meet with ND Department of Transportation (NDDOT) area office and/or the local county, railroads, and utilities that own parallel easements or easements that the pipeline will cross. Engineer will provide summary notes of meetings. The following utility coordination meetings are anticipated.

(a) One meeting with NDDOT.

(b) One meeting each will be held with the county commission or designated representative(s) of Griggs County.

(c) One meeting for each impacted township with the elected officials if desired by that township.

(d) One meeting will be held with each of the electric/communications utilities impacted. This scope item assumes there will be three electric/communications crossings.

(e) One meeting will be held each of the pipeline companies impacted. There are expected to be:

(i) Rural Water Providers

(ii) One other Utility

3. **Task 3 – Landowner Communication and Easement Modifications**

A. Right-of-Entry Agreements/Landowner Notification. This segment of pipeline covers approximately 19 individual property owners. Eight tracts do not have an existing easement or option, with those eight tracts owned by four landowners. Engineer will support Garrison Diversion's communications with individual landowners for the purposes of gaining access for the field investigations by developing GIS graphics and other supporting documentation.

B. Landowner Coordination. Provide engineering team support to Owner to meet with landowners as required for the purposes of establishing the final pipeline alignment and for establishing fixed locations of appurtenances for incorporation into the CDs developed during the final design phase.

C. Modifications to Signed Easements. Easements have been, or will be, obtained under a sperate land services Task Order. The purpose of this subtask to account for revisions to these executed easements due to rerouting of the pipeline for design or other reasons. Engineer will:

i. Revise Certificates of Survey. Prepare revised Certificates of Survey to include:

(a) Legal description of the new easement,

(b) Bearings and distances of the new easement tied to the Public Land Survey System (PLSS), and

(c) Resigning and resealing revised Certificates of Survey by a licensed surveyor.

ii. Revised Easement Documentation. Provide revised easement document for Garrison Diversion to file in respective County Recorder's office in compliance with North Dakota Century Code.

iii. GIS Updates. Provide GIS updates to the Owner data for the revised easements.

This scope of work assumes a total of up to six revised Certificates of Survey for this segment.

4. **Task 4 – Field Services**

A. Supplementary Soil Borings. An additional geotechnical investigation will be completed by Engineer's consultant, if necessary, and will include up to approximately 10 soil borings at an average depth of 25 feet. The soil borings, if needed, will support the final design of the open-cut and tunneled portions of Contract 7 due to any significant alignment changes implemented during final design. In addition, various soil resistivity and corrosivity tests will be completed to support the design. Ground surveys will be completed to locate the boring(s) and to confirm the actual location of drilling so that they can accurately be placed on drawings and documented in the geotechnical reports.

B. Limited Topographic Surveying. Where necessary to reduce change order risk by more precisely locating utilities crossing or paralleling the proposed pipeline alignment, provide limited field surveys to establish horizontal coordinates and vertical elevations of utilities and other topographic features impacting pipeline design. For fee development, this task assumes four surveys.

C. Stray Current Field Investigations. Where necessary to mitigate direct current (DC) stray currents from foreign systems or induced alternating current (AC) voltages at proposed high-voltage power lines crossings, provide field investigations to support detailed modeling of soil and crossing appurtenances. Modeling will be used to simulate induced AC potentials and current densities in support of the final design of the Project's pipeline corrosion protection system. Develop and submit a report documenting the findings and conclusions of the field investigation and simulations. For fee development, this task assumes one stray current analysis will be completed.

D. Alignment Site Visits for Contract 7. The design engineers will visit the 13.4-mile alignment before beginning work on the 60-percent deliverable. The purpose of the site visit is to verify and document existing facilities along the alignment, evaluate potential constructability issues, and document potential construction access locations along the alignment. This task will be done current with the Post Field Investigation Alignment Meeting discussed above.

E. Jurisdictional Wetland Review and Consultation. Jurisdictional determinations were completed by USACE for previously delineated wetlands along the RRVWSP transmission main alignment. These determinations were renewed by USACE in 2023 as the original determinations had expired at the end of a 5-year period. As part of this task order, Consultant will work with USACE to review previous determinations considering the May 2023 Supreme Court of the U.S. (SCOTUS) ruling with respect to Waters of the U.S. (WOTUS). Review will consist of coordination with the USACE on previously prepared documents and determining the impact on wetland determinations, if any, previously made by USACE.

5. **Task 5 – Final Design Services**

The purpose of final design is to develop CDs by which the Owner will select Contractor to build the desired facilities. Engineer will provide final design services and CDs for the recommended pipeline alignment identified in the PDR, shown in **Attachment A**, and as adjusted with minor adjustments as the work under this task order progresses. The CDs will be prepared for the purposes of obtaining competitive bids, selection of the lowest and best bid, and construction of the Work. Intermediate deliverables will be prepared and submitted to the Owner upon development of the 60-, 90-, and 100-percent design completion stages. Final CDs will be prepared for bidding purposes.

A. Design Team Conference Calls. Engineer will schedule and lead monthly conference calls with the Owner to review overall progress, exchange ideas and information, and coordinate activities with other task orders. Calls will be scheduled, and content organized, to coincide

with other Task Orders for efficient utilization of staff time. Assuming a 12-month design schedule, up to 12 calls will be held with the Owner.

B. Design Guidance Manual Minor Update. A Design Guidance Manual was previously developed under Task Order 5330 and updated under Task Order 5360; it will be used to guide this design. It will be updated to capture any additional changes to the design approach made by the Owner and its engineering team during this task order and re-issued, if necessary.

C. Geotechnical Baseline Report. Engineer will develop a GBR for the trenchless crossings of this pipeline segment. A draft report will be furnished for review and comment. Upon disposition of Owner comments concerning the draft report, a final report will be furnished. The GBR will be a CD.

D. Geotechnical Design Memorandum/Geotechnical Data Report. Engineer will develop a memorandum for internal use by Engineer that contains design requirements and geotechnical recommendations for open-cut design and the geotechnical data for the trenchless crossings. The geotechnical design memorandum will not be made available to bidders. A Geotechnical Data Report (GDR) developed by Engineer's geotechnical consultant is being developed separately under Task Order 5370 for the trenchless crossings of this segment. If additional borings are needed during final design, these will be added to the GDR. The GDR will be furnished to bidders, and it will be considered a CD.

E. Soils Classifications and Quantities. Engineer using a ND-licensed professional soil classifier will characterize topsoil and subsoil along the alignment. The professional soil classifier will review applicable excavation and trenching, easement restoration, and vegetative technical specifications providing comments to Engineer to incorporate into the CDs. Soil layer thickness will be estimated from ND soil surveys and augmented by Consultant with limited field investigations. Thicknesses will be used to compute stripping and stockpiling Bid Form quantities. Provide a technical memorandum documenting the soil classification work completed and the findings of that effort.

F. Utility Coordination. Engineer will perform utility coordination services, including identifying utility conflicts and facilitating the resolution of utility conflicts. It is expected that the pipeline will be below existing utilities so that the Utility Coordination will consist of identification and coordination but not relocation. Engineer will perform the following activities:

   i. Provide initial notification letters for Owner to send to affected utility companies, owners, and other concerned parties, as applicable.

   ii. Engineer will develop a utility contact list with information such as: (a) owner's name; (b) contact person; (c) telephone numbers; (d) emergency contact number; (e) e-mail addresses; and (f) other pertinent information concerning affected utilities and facilities.

iii. Advise utility companies and owners of the general characteristics of the Work and provide an illustration of the Project footprint for delineation of the utilities/facilities that are in the Project area.

iv. Maintain a utility layout in AutoCAD. This layout will include existing utilities that are to remain in place or be abandoned and adjusted/relocated utilities.

v. Review utilities adjustment proposals if the pipeline cannot be installed under the existing utilities.

G. Subsurface Utility Engineering

i. Provide subsurface utility engineering (SUE), utility designating, and locating surveys along the proposed pipeline alignment in areas where utility marking services are available. The subsurface utility surveys will be a combination of Utility Quality Level A, B, and C, depending on the specific utility, as defined in CI/ASCE 38. Vertical elevations of sewers and drains, as applicable, will be taken at manholes and inlets.

ii. Up to 5 vacuum excavations or potholes no deeper than 10 feet will be excavated at proposed utility crossings and other locations to better define locations of utilities or other potential conflicts where field-discovered conflicts will adversely impact pipeline installation. Potholes/vacuum excavations will mostly be needed in the event of open cutting across roads instead of tunneling. The cost of the potholes/vacuum excavations will be paid to the utility locating contractor directly by the Owner.

H. Utility Relocations Coordination. Few conflicts between the pipeline and water and sewer lines, as well as minor drainage structures and irrigation facilities, are anticipated due to the depth of the pipeline. The scope assumes that the utility owners will design relocations and will then be paid by directly by the Owner. Relocations will be scheduled for completion in advance of pipeline excavation and installation.

i. If relocation designs are prepared by the utility owners, they will be coordinated with the RRVWSP and reviewed by Engineer for compatibility with the work proposed.

ii. If drain tiles need to be relocated or field modified as part of pipeline construction, engineering services will be addressed as Additional Services.

I. Permitting. This subtask encompasses applicable governmental approvals, including North Dakota Department of Transportation (NDDOT), counties, townships, and utility permits and approvals necessary to construct the pipeline. The Task Order assumes that the pipeline will be constructed under a Nationwide No. 12 Permit using the non-notification approach. Thus, the pipeline will comply with overall federal permit requirements, but an actual federal permit will not be required.

i. Engineer will obtain in conjunction with the Owner necessary approvals from the appropriate utilities, city, county, and state agencies having jurisdiction over the Work.

ii. Engineer will prepare a permitting schedule identifying action items, decision points, milestones, reviews, and approvals required to complete permitting. Engineer will communicate status of permits to Owner.

iii. Contractor-Provided Permits. Engineer will provide in the CDs a list of the permits that must be obtained by the Contractor. Based upon preliminary design, it is understood that the following permits, at a minimum, will be the responsibility of the Contractor:

- Erosion and sediment control; land disturbance; stormwater permits
- Dewatering operations discharge

iv. Owner-Provided Permits

(a) Engineer will aid the Owner in obtaining the following permits from government agencies, utilities, pipeline companies, and other entities as noted below:

- NDDOT highway crossing
- County road closing/detours
- Local electric and telecommunications crossings. Scope assumes up to three separate utilities.
- County road crossings
- Township road crossings

(b) Assistance provided by Engineer for the above listed permits will include:

(i) Preparation of applications, exhibits, drawings, and specifications ready for the Owner's execution and transmittal.

(ii) Furnishing additional information about the Project's design, as required by the permitting authority.

J. Pipeline Corrosion Protection System Services. RRVWSP, Technical Memorandum No. 12, Task Order 5 – Pipeline Preliminary Design dated February 12, 2010, and services under Task Order 5360 summarized field data collected from geotechnical investigations conducted during pipeline preliminary design. Evaluation of soil corrosivity and corrosion risks posed to the pipeline from buried pipelines crossing the proposed alignment and overhead high voltage power lines crossing or paralleling the pipeline proposed alignment were completed. Supplemental soil resistivity data was previously collected, and an overall approach for corrosion protection for the pipeline was developed. A multi-pronged approach to pipeline corrosion protection, including pipe coatings and an impressed-current corrosion protection system is being implemented on this project. The following services specifically related to the Contract 7, 13.4- mile segment will be provided.

i. Stray current field investigations for the Project element will be completed as indicated in the Field Services article of this Task Order, if required. Prepare report as indicated in the Field Services article of this Task Order documenting field investigations and simulations at any high voltage power line crossing. A mitigation

design will be developed and incorporated into the corrosion protection system drawings based on the simulations.

ii. Engineer has formulated a detailed approach for the Project's corrosion protection system in the Corrosion Protection Design Guide (CPDG) prepared under Task Order 5310. The corrosion protection system will be based on an impressed current design. Engineer will also develop drawings and specifications for the corrosion protection system incorporating them into the Project's CDs for the element covered by this Task Order. Drawings and specifications will be developed for 60-, 90, and 100-percent design deliverables. The 60-percent deliverable consists of design of the essential components of the corrosion protection system and identification of field investigation locations indicated in the Field Services article of this Task Order. Stray current mitigation design and impacts of detailed pipeline design will be incorporated into the 90-percent deliverable. Final client comments will be incorporated into the 100-percent deliverable. In addition, the Project element's corrosion protection system design will provide stand-alone corrosion protection for idle Project elements while subsequent pipeline segments are constructed.

K. Hydraulic Modeling Refinement. The Project's hydraulic and surge-transient models were originally generated and refined during development of the PDR. Services under Task Order 5360 updated the model to evaluate potential higher flows up to 165 cubic feet per second (CFS) or greater in and an associated increasing the diameter of the Contract 6 and Contract 7 pipelines to deliver more flow to Lake Ashtabula. A memorandum documenting updates to the models and results was developed and previously submitted.

i. Pipeline Diameter Increase. Should GDCD direct, Engineer will update the CDs for both Contract 6 and Contract 7 to reflect a larger pipe diameter to meet any increased pipeline flow rates selected from the hydraulic modeling update. It is anticipated that any changes to pipe diameter for Contract 6 will be made prior to issuing 100-percent complete CDs. For Contract 7, CDs will be updated as required as soon as any decision is made regarding a change in project flow rates and pipe diameter. Updates will include hydraulic profile, pipe pressure classes and wall thickness, review and update of cathodic protection, tunnel diameter, pipe details, and any other changes necessary to reflect an increased pipe diameter.

L. Pipeline Basis of Design Memorandum Update

i. Draft Basis of Design Memorandum (BDM). A BDM was prepared for the Contract 6 pipeline. This BDM will be updated for the design and construction of the Contract 7 pipeline, including pipeline design parameters, a preliminary route map indicating the proposed alignment, pipeline material selection, pipeline design working pressure and test pressure, joint restraint, accessories, and appurtenances. Engineer will review the Draft BDM for accuracy and completeness prior to submitting to the Owner for review and comment.

ii. Review and Finalize BDM. Engineer will confer with Owner's staff to review the Draft Updated BDM and obtain Owner's comments. Engineer will address Owner comments and develop a Final Updated BDM. The Final Updated BDM will be the document followed by the design team to develop CDs for solicitation of bids from general contractors.

M. Front-End Documents Customization

i. Prepare and deliver draft front-end documents using standard documents of the Engineers Joint Contract Document Committee (EJCDC) and Engineer's standard supplements, including general conditions and supplementary conditions. The documents will be based on the Contract Documents for Segment 6.

ii. Conduct a review conference call with Owner to discuss and receive comments on the draft front-end documents.

iii. Revise front-end documents addressing Owner's comments and incorporate modifications, if any, into subsequent CD deliverables.

N. 60-percent CDs (Level 2 Design)

i. Level 2 design will commence after the Owner accepts the preliminary design as modified from the Post Field Investigation Workshop.

ii. The content of Level 2 deliverables is as follows:

- General drawings
- Plan and profile drawings
- A majority of technical specifications
- Underground utility drawings
- Constructability review results
- Opinion of probable construction cost update
- Internal quality control review and refinement
- QA/QC plan and log update
- Task Order schedule update

iii. Provide technical specifications and drawings for Owner review.

iv. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

v. Revise documents as necessary to reflect decisions taken at this level incorporating design modifications into subsequent deliverables.

O. 90-percent CDs (Level 3 Design)

i. Level 3 design will commence after the Owner has accepted Level 2 deliverables. The content of the Level 3 deliverables is as follows:

- Drawings review set
- Technical specifications review set
- Front-end documents review set
- Opinion of probable construction cost update
- Constructability review results
- Internal quality control review and refinement
- QA/QC plan and log update
- Task Order schedule update

ii. Provide specifications and drawings for Owner review.

iii. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

iv. Revise documents according to mutual agreement reflecting decisions taken at this level incorporating design modifications into subsequent deliverables.

P. 100-Percent CDs. Prepare CDs starting from the pipeline Level 3 design. These documents will include comments received from the Owner. Deliverables include the following:

- Drawings
- Technical specifications
- Front-end documents
- GDR for trenchless crossings
- GBR for trenchless crossings
- Updated opinion of probable construction cost

Q. Final Sealed and Signed CDs

i. Preparation of the final CDs will commence after the Owner has accepted 100-percent deliverables.

ii. Provide the Owner a record copy of Final CDs that are sealed, signed, and dated by the Engineer of Record.

R. Opinions of Probable Construction Cost (OPCC, aka Cost Opinions or Cost Estimates). Engineer will update the cost opinion presented in the PDR at the various stages of final design submitting updates for the Owners information and use as follows:

i. After transmittal of the 60-percent deliverable, update cost opinion commensurate with an AACE Class 3 estimate with standard accuracy.

ii. After transmittal of the 90-percent deliverable, update cost opinion commensurate with an AACE Class 2 estimate with standard accuracy.

iii. After transmittal of the 100-percent deliverable, update cost opinion commensurate with an AACE Class 2 estimate with standard accuracy.

iv. After transmittal of final deliverable, update cost opinion commensurate with an AACE Class 1 estimate with standard accuracy.

S. Quality Assurance/Quality Control. Engineer will provide QA/QC services necessary for execution of the Task Order. QA/QC reviews will be provided for each deliverable furnished. Reviews will be completed by Engineer's or Engineer's Subcontractor's independent senior staff. Engineer will log QA/QC reviews and maintain records of said reviews in its files. In addition, Engineer will log comments received from the Owner and provide a log of comments and Engineer responses for the following events:

- 60-percent CDs
- Draft front-end documents
- 90-percent CDs
- 100-percent CDs

Engineer's services under the Final Design Phase will be considered complete on the date when the final design submittals identified in Deliverables are provided.

6. **Task 6 – Bidding Assistance**

A. Advertisement and Bid Letting

i. Finalize Front-End Documents. Finalize front-end documents incorporating information as it relates to the bid letting date, location, time, and other necessary information.

ii. Invitation to Bid. Provide to the Owner the Invitation to Bid, which Owner will have published in Owner-selected publications. Identify potential contractors and suppliers, review with the Owner, and distribute copies of the Invitation to Bid electronically.

iii. Production of Contract Documents. Produce digital copies of CDs, addenda, and geotechnical reports for Owner's use and distribution.

iv. Pre-bid Conference. Conduct, at a date and time selected, a virtual pre-bid conference to:

(a) Confirm the types of information required by the CDs and the format in which bids must be presented.

(b) Review special Task Order requirements and CDs in general.

(c) Receive requests for interpretations for which responses will be issued to plan holders via addendum.

(d) Prepare agenda for pre-bid conference; issue to plan holders and pre-bid conference attendees along with the pre-bid meeting sign-in sheet.

v. Interpretation of Bidding Documents. Interpret bidding documents; prepare and issue up to two addenda to the CDs, as required. More addenda will be provided as Additional Services.

vi. Update cost opinion and furnish Engineer's Opinion of Probable Construction Cost (OPCC) to the Owner for its use at the bid opening.

vii. Bid Opening. Conduct bid opening on behalf of the Owner after bids are received. Make a preliminary tabulation of bids, and review questionnaires, qualifications information, and bids for completeness.

B. Pre-award Services. The level of effort for pre-award services involving a well-qualified bidder and suppliers will be of a limited nature with the level of effort as stipulated in **Attachment B – Engineering Fee Estimate Worksheet(s)**.

i. Questionnaire(s). Examine questionnaire(s) to identify any supplier whose equipment or material may not conform to the CDs. This examination will be based on the knowledge and experience of the Engineer.

ii. Qualifications of Apparent Successful Bidder. Review and evaluate the qualifications of the apparent successful bidder and the proposed major or specialty subcontractors. The review and evaluation will include financial resources, and a check of up to five references from completed projects similar in size and character.

iii. Bid Tabulations. Prepare and distribute formal bid tabulation sheets, evaluate bids, and make a written recommendation to the Owner concerning contract award.

iv. Services include a review of the Contractor's bonds and forwarding to the Owner for approval; furnishing the Contractor unsigned CDs; and transmitting the CDs to the Owner for signature and distribution. Engineer's review is only for the purpose of determining if the Contractor provided the required bonds; it is not a legal review to determine if Contractor is compliant with CD requirements.

C. Post-award Services. Engineer will provide the following services after the Notice of Award has been issued by the Owner.

i. Prepare Issued-for-Construction Contract Documents. Engineer will incorporate drawing, specification, and geotechnical data and baseline report items made by addendum during the bidding phase, as applicable, into the native files (i.e., AutoCAD, Revit, Word, or Excel files, as applicable) before construction begins. Once addenda items have been incorporated, Engineer will produce and transmit Issued-for-

Construction CDs electronically and in hardcopy format, if requested and up to four copies) to Contractor for use during construction. Electronic Issued-for-Construction CD files will be provided by Engineer in bookmarked pdf format.

ii. Schedule and Moderate Preconstruction Conference. Conduct a preconstruction conference at a date and time selected by and at a facility provided by Owner. Engineer will prepare an agenda to include, but not limited to, meeting topics such as:

- Discussion of Contractor's tentative schedule
- Procedures for transmittal and review of Contractor's submittals
- Processing of payment requests and Owner payments
- Critical work sequencing
- Change order requests and change orders
- Field orders / work change directives
- Record drawings
- Contractor's responsibilities for safety and first aid

Engineer will prepare and distribute minutes.

iii. Obtain Drone-Based Video. Prior to issuance of the Contractor's notice to proceed Engineer will video record an aerial view of the alignment document existing pre-construction conditions. Produce aerial drone-based videos of the construction job site using a 12-megapixel minimum resolution camera. Provide a drone and operator with proper certifications and licenses for both federal and local jurisdictions. Drone video will be collected as follows:

(a) Pre-Construction conditions immediately prior to start of construction

(b) Construction documentation will be completed via flights under a future construction phase services task order.

Bidding Assistance will be considered complete upon issuance of a construction notice to proceed, commencement of construction, or upon cessation of negotiations with prospective Contractors.

7. **Task 7 – Energy Recovery Evaluation and Conceptual Design**

A. Energy Recovery Feasibility Study. Excess pressure will be stored in the RRVWSP pipeline during low flow conditions. Engineer will evaluate the feasibility of installing energy recovery systems to harvest some of this excess pressure and convert into electricity.

i. Study and Report. Engineer will evaluate the feasibility of installing energy recovery systems at multiple points along the pipeline to harvest excess pressure during low-flow conditions. Capital costs to implement as well as the potential return on investment will be determined.

ii. Conceptual Design Drawings. Plans will be prepared showing the layout and footprint of the facility. A typical location plan will be prepared showing connections to the RRVWSP pipeline along with power connections back to the electric utility.

V. SPECIAL SERVICES

Not used

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. **Task 1 – Task Order Management and Administration**

- Progress reports (electronic pdf files)
- Baseline schedule and updates (electronic pdf files)

2. **Task 2 – Special Project and Third-Party Meetings**.

- Meeting agenda (typically included with MS Outlook meeting invitations)
- Meeting notes (electronic pdf files)

3. **Task 3 – Landowner Communication and Easement Modifications**

- Landowner GIS exhibits (electronic pdf file for each affected parcel)
- Certificates of survey for modified easements (electronic pdf files and hard copies, as required)

4. **Task 4 – Field Services**

- Updated drawings for supplemental surveys (electronic pdf file)
- Stray current field report (electronic pdf file)
- LIDAR topographic surveys (electronic CAD or GIS files)
- Correspondence related to wetlands' jurisdictional determinations (electronic pdf files)

5. **Task 5 – Final Design Services**

- Meeting/conference call agendas (generally attached to MS Outlook meeting invitations) and notes (electronic pdf files)
- Updated Design Guidance Manual (draft and final single hard copy and electronic pdf files)
- Geotechnical baseline report (electronic pdf file)
- Soils classification and quantities memorandum (electronic pdf files)
- Utility notification letters (electronic pdf file)
- Utility contact list (electronic pdf file)
- SUE drawings (single hard copy and electronic pdf file)
- Permit applications (electronic pdf files for applications identified in the Permitting paragraph)

- Pipeline Basis of Design Memorandum update (electronic pdf file)
- Draft front-end documents (electronic pdf files)
- 60-percent CDs (hard copies and electronic pdf files)
- 60-percent cost opinion (electronic pdf file)
- 60-percent Owner review comments log (electronic pdf file)
- 90-percent CDs (hard copies and electronic pdf files)
- 90-percent cost opinion (electronic pdf file)
- 90-percent Owner review comments log (electronic pdf file)
- 100-percent CDs (hard copies and electronic pdf files)
- 100-percent cost opinion (electronic pdf file)
- 100-percent Owner review comments log (electronic pdf file)
- Final Sealed and Signed CDs (hard copies and electronic pdf files)
- Final cost opinion (electronic pdf file)

6. **Task 6 – Bidding Assistance**

- Invitation to Bid (electronic Word and pdf files)
- Issued-for-Bid CDs, including associated geotechnical reports (electronic pdf files)
- Pre-bid Conference Agenda (electronic pdf file)
- Opinion of Probable Construction Cost (electronic pdf file)
- Bid Tab – Summary and Detail (electronic pdf file)
- Recommendation of Award (electronic pdf file)
- Notice of Award form (electronic Word file)
- Agreement, Performance Bond, and Payment Bond forms (electronic Word files)
- Issued-for-Construction CDs (hard copies and electronic pdf files)
- Pre-construction Conference Agenda/Minutes (electronic pdf files)
- Drone video (electronic files)
- Notice to Proceed form (electronic Word file)

7. **Task 7 – Energy Recovery Evaluation and Conceptual Design**

- Draft and final report (electronic pdf files)

VII. ADDITIONAL SERVICES

The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope an amendment to this Task Order or execution of a separate Task Order with the new scope of services will be necessary.

1. The pipeline alignment was finalized previously under the preliminary design task orders, and survey certificates were prepared for each parcel of Contract 7 under Task Order 7310 – Land Services where options or easements are in place. Limited additional certificates of survey will be necessary over the 13.4-mile length, to reflect the final disposition of certain disputed parcels and to reflect final alignment and easements associated with these to prepare CDs for bidding.

These certificates will be prepared under Task Order 7410 – 2021-23 Biennium Land Services. If the alignment is changed during these Final Design Services, new survey certificates will likely be necessary and those would be considered Additional Services if the effort falls beyond the allowance amount set forth in this Task Order.

2. Addenda. Engineer will prepare up to two addenda under Basic Services. Should additional addenda be required beyond the Engineer's control, they will be prepared by Engineer as Additional Services.

3. Pre-award Services to be Provided as Additional Services. If the apparent successful bidder is not well qualified or if substantive changes to the design are proposed by the Bidder or the Contractor after award, substantial and unpredictable levels of effort by Engineer may be required to resolve issues and answer questions. These services will be provided according to the Owner's request as Additional Services.

4. Design of the relocation of utilities in conflict with the proposed location of RRVWS pipeline as presented in the PDR, except as explicitly identified herein. Relocation design for the following utilities and facilities is considered Additional Services:

    - Overhead and buried telephone lines
    - Fiber optic cable and other communication lines
    - Natural gas pipelines
    - Petroleum pipelines

6. Preparation of traffic control plans, excluding haul routes and detour plans that are included with Basic Services.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Pot Holing and Vacuum Excavation Contractor. Engineer will coordinate with and manage the services provided by a pot holing or vacuum excavation contractor hired by the Owner to uncover potentially conflicting utilities. Owner will contract with and pay directly for the services of the pot holing or vacuum excavation contractor.

2. Advertising Fees. Owner agrees to pay directly to publication(s) the fees of all public advertisements, including those costs assessed by plan rooms, bidding exchanges, and online bid management services.

3. Permit and License Fees. Owner agrees to pay directly to affected utilities, railroads, or other public entities fees assessed to secure crossing permits, licenses, or easements.

4. Easements. Pay directly to landowners real estate costs for all required easements. In addition, retain and pay for legal services necessary to secure easements through negotiation or other means. Several landowners in this 24-mile section have declined to sign voluntary easements so legal intervention will likely be necessary to get the necessary right-of-way. The Owner will manage and oversee legal services provided by others to support easement acquisition.

5. Issued-for-Bid CDs Distribution. Owner agrees to handle all aspects of bid document distribution, including collection of fees for CDs; distributing CDs, geotechnical reports, and addenda to prospective bidders and suppliers; and developing, maintaining, and distributing a plan holders list to recipients of CDs prior to the bid opening.

5. Bid Tabulations. Distribute the formal bid tabulation sheet(s) to plan holders of record or to the online bid management service(s) for distribution to plan holders and/or its membership, as applicable.

6. Meeting Facilities. Provide facilities or lease appropriate space for conducting the pre-bid meeting, if not held virtually, and similarly for the pre-construction conference.

IX. FEE

The total fee for the Basic Services under this Task Order is Two Million Nine Hundred Twenty-six Thousand Dollars ($2,926,000). Worksheet(s) showing the fee estimate and level of effort by task are included as **Attachment D**.

X. PERFORMANCE SCHEDULE

This Task Order will be completed by October 1, 2025. It is assumed that the final CDs will be ready for advertisement by June 30, 2025. Advertisement, bid letting, and construction contracting will take place from July to September 2025. A contractor Notice to Proceed will be issued no later than October 2025. If funding becomes available for earlier construction, construction documents will be completed earlier for the portion of the project that has funding. **Attachment F** shows the execution schedule.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008, is incorporated by reference.
2. Attachment A - Contract 7 Alignment and Trenchless Crossing Locations
3. Attachment B – Preliminary Sheet List
4. Attachment C – Preliminary Specification List
5. Attachment D – Fee Estimate Worksheets
6. Attachment E – Final Design and Bidding Assistance Schedule

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of this Task Order, please print and sign this document. You should retain one copy for your files and return an electronic copy via email to Paul Boersma (BoersmaPM@BV.com) with Black & Veatch Corporation.

By: _____
Duane DeKrey, General Manager
Garrison Diversion Conservancy District

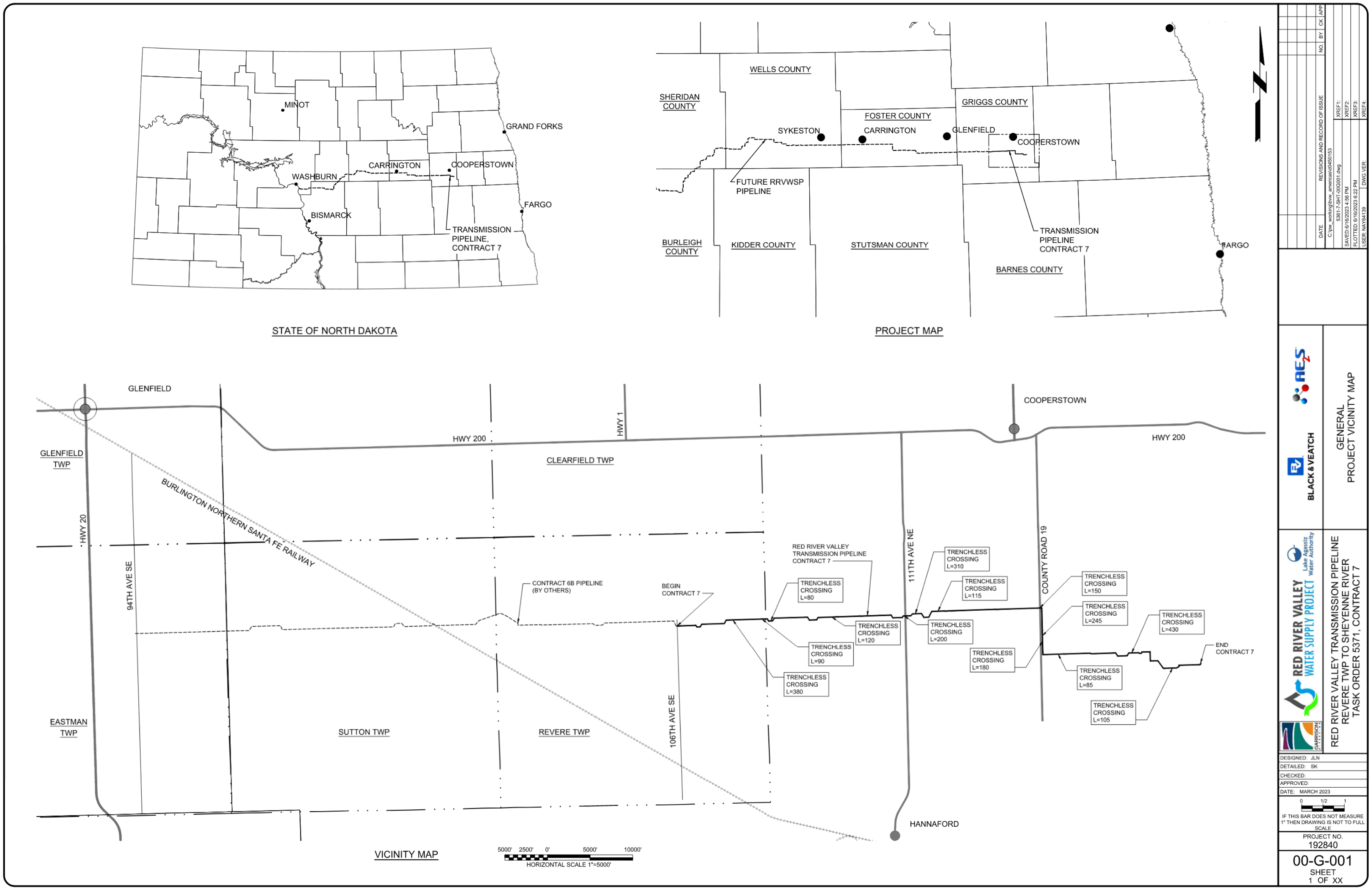
Dated: _____

By: _____
Paul Boersma, Associate Vice President
Black & Veatch Corporation

Dated: _____

ATTACHMENT A

CONTRACT 7 ALIGNMENT AND TRENCHLESS CROSSING LOCATIONS


MINOT
GRAND FORKS
WASHBURN
CARRINGTON
COOPERSTOWN
FARGO
BISMARCK
TRANSMISSION PIPELINE, CONTRACT 7
STATE OF NORTH DAKOTA
WELLS COUNTY
SHERIDAN COUNTY
FOSTER COUNTY
GRIGGS COUNTY
SYKESTON
CARRINGTON
GLENFIELD
COOPERSTOWN
FUTURE RRVWSP PIPELINE
BURLEIGH COUNTY
KIDDER COUNTY
STUTSMAN COUNTY
TRANSMISSION PIPELINE CONTRACT 7
BARNES COUNTY
FARGO
PROJECT MAP
GLENFIELD
GLENFIELD TWP
HWY 200
HWY 1
CLEARFIELD TWP
COOPERSTOWN
HWY 200
HWY 20
BURLINGTON NORTHERN SANTA FE RAILWAY
94TH AVE SE
CONTRACT 6B PIPELINE (BY OTHERS)
BEGIN CONTRACT 7
RED RIVER VALLEY TRANSMISSION PIPELINE CONTRACT 7
111TH AVE NE
COUNTY ROAD 19
TRENCHLESS CROSSING L=80
TRENCHLESS CROSSING L=310
TRENCHLESS CROSSING L=115
TRENCHLESS CROSSING L=150
TRENCHLESS CROSSING L=245
TRENCHLESS CROSSING L=430
TRENCHLESS CROSSING L=120
TRENCHLESS CROSSING L=200
TRENCHLESS CROSSING L=90
TRENCHLESS CROSSING L=180
TRENCHLESS CROSSING L=380
TRENCHLESS CROSSING L=85
TRENCHLESS CROSSING L=105
END CONTRACT 7
EASTMAN TWP
SUTTON TWP
REVERE TWP
106TH AVE SE
HANNAFORD
VICINITY MAP
5000' 2500' 0' 5000' 10000'
HORIZONTAL SCALE 1"=5000'
BLACK & VEATCH
RED RIVER VALLEY WATER SUPPLY PROJECT
Lake Agassiz Water Authority
GARRISON DIVERSION
GENERAL PROJECT VICINITY MAP
RED RIVER VALLEY TRANSMISSION PIPELINE
REVERE TWP TO SHEYENNE RIVER
TASK ORDER 5371, CONTRACT 7
DESIGNED: JLN
DETAILED: SK
CHECKED:
APPROVED:
DATE: MARCH 2023
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
PROJECT NO.
192840
00-G-001
SHEET
1 OF XX

ATTACHMENT B

PRELIMINARY SHEET LIST

Type of Drawing	**59 Sheets Total**
Contract 7 (13.4 miles)	
Cover	1
General	9
Plan & Profile	33
Details	13
Specialty	3

ATTACHMENT C

PRELIMINARY SPECIFICATION LIST

Specification Topic	**67 Sections**
Division 00 – Procurement and Contracting Requirements	23
Division 01 – General Requirements	15
Division 03 – Concrete	1
Division 05 – Metals	1
Division 09 – Finishes	2
Division 13 – Special Construction	1
Division 26 – Electrical	1
Division 31 – Earthwork	7
Division 32 – Exterior Improvements	2
Division 33 – Utilities	7
Division 40 – Process Interconnections	7

ATTACHMENT D

FEE ESTIMATE WORKSHEETS

Garrison Diversion Conservancy District
Task Order 5371 - RRV Transmission Pipeline Contract 7 Final Design Services & Bidding Assistance
BV Project No. 415096
Black & Veatch & Subcontractors

Task	Lead Firm	Task Description	Position	P	PMS	PM	TE	EM	EM	DE2	SE1	DES	DES	SE1	EE	EE	EE	TBD	CADS	CAD1	CAD2	EST1	EST2	GISM	PJC2	PA1	ADM1	ADM2	QC2	Labor Detail	Labor Detail
				Principal	Project Manager Senior	Project Manager	Technical Expert/QC-QC	Engineering Manager (Overall)	Engineering Manager (Team 1)	Design Engineer 2 (Pipeline Team 1)	Staff Engineer 1 (Pipeline Team 1)	Design Engineer Senior (Geotech)	Design Engineer Senior (Geotech/Trenchless)	Staff Engineer 1 (Geotech/Trenchless)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	BIM-3D Technician 2	CAD Technician Senior	CAD Technician 1	CAD Technician 2 (Pipeline Team 1)	Estimator 1	Estimator 2	GIS Technical Manager	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Administrator 2	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost
IV. BASIC SERVICES																															
1	**BV**	**Task Order Management and Administration**		**72**	**260**	**100**	**8**	**130**	**60**	**0**	**0**	**4**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**116**	**72**	**0**	**0**	**926**	**$223,956**
A	BV	Project Mgmt (2 2-dy trp; x2)		24	60	40	8	36	12																					180	$52,004
B	BV	Administration		24	60	40		36	36				16												80	80				372	$81,212
C	BV	Progress Reports			60			12																						72	$21,324
D	BV	Schedule Updates			40			12																			72			124	$24,768
E	BV	Management of Subconsultants		24	40	20		34	12			4	8													36				178	$44,648
2	**BV**	**Special Project and Third-Party Meetings**		**26**	**50**	**0**	**0**	**48**	**44**	**32**	**60**	**20**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**360**	**$81,064**
A	BV	Special Project Meetings																												0	$0
i	BV	TO Initiation Mtg		2	2			8	4			4	4																	24	$6,484
ii	BV	Post Fld Invest Align Update Mtg (1 4-d trp; x 2)		8	16			16	16	32	60										60									208	$38,948
B	AE2S	Third Party Meetings																												0	$0
i	AE2S	Stakeholder Meetings		8	16			12	12			8	8																	64	$17,816
ii	AE2S	Design Meetings for Utility Coordination		8	16			12	12			8	8																	64	$17,816
3	**AE2S**	**Landowner Comm & Easement Modifications**		**0**	**12**	**0**	**0**	**48**	**8**	**0**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100**	**$23,108**
A	AE2S	Landowner Notification			4			20			16																			40	$8,852
B	AE2S	Landowner Coordination			4			8			16																			28	$5,708
C	AE2S	Modifications to Signed Easements			4			20	8																					32	$8,548
4	**BV**	**Field Services**		**9**	**40**	**0**	**0**	**76**	**40**	**28**	**0**	**56**	**16**	**0**	**40**	**60**	**0**	**0**	**8**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**381**	**$95,171**
A	MTS	Supplementary Soil Borings		2	8			16		8		8	8						8	8										66	$15,878
B	AE2S	Limited Topographic Surveying		2	8			8				8	8																	34	$9,382
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)		2	8			16							40	60														126	$29,582
D	BV	Alignment Site Visits for Contract 7 (1 5-d trp; x2)		2	8			16	40			40																		106	$28,342
E	KLJ	Jurisdictional Wetland Review and Consultation		1	8			20		20																				49	$11,987
5	**BV**	**Final Design Services**		**259**	**424**	**0**	**76**	**446**	**603**	**438**	**512**	**182**	**404**	**448**	**28**	**120**	**80**	**358**	**0**	**0**	**1,252**	**60**	**144**	**24**	**0**	**0**	**0**	**220**	**160**	**6,239**	**$1,271,175**
A	BV	Design Team Conference Calls (12)		12	24		4	12	12			4	12	12																92	$24,440
B	BV	Design Guidance Manual Minor Update		1	2			12	8	8		8	8															24		71	$14,437
C	BV	Geotechnical Baseline Report		1	4		12					16	200	200																433	$92,535
D	BV	Geotechnical Design Memorandum/GDR		1	4		12		4			8	40	80														24		173	$33,319
E	PSC	Soils Classifications and Quantities			4			8	8															24						44	$11,068
F	AE2S	Utility Coodination			4				8	8																				20	$4,916
G	AE2S	Subsurface Utility Engineering																												0	$0
i	AE2S	SUE Surveys			8				8	8																				24	$6,128
ii	AE2S	Vacuum Extractions (5)			8				8	8																				24	$6,128
H	AE2S	Utility Relocations Coordination			4				8	8																				20	$4,916
I	AE2S	Permitting		12	24			32	32																					100	$27,676
J	BV	Pipeline Corrosion Protection System Services			8				4						28	120	80				60									300	$62,544
K	BV	Hydraulic Modeling Refinement		4	24		40	24																						92	$26,652
L	BV	Pipeline Basis of Design Memorandum Update		8	8				16	24		8	4	4													24		96	$20,080
M	BV	Front-End Documents Customization		8	40		8	4	4			8	4																	76	$22,208
N	BV	60-Percent CDs (Level 2 Design) (1 2-dy trp; x2)		60	80			121	164	130	186	20	48	64				123			410							32		1,438	$277,134
O	BV	90-Percent CDs (Level 3 Design) (1 2-dy trp; x2)		60	80			136	185	144	210	16	24	40				138			460							32		1,525	$291,057
P	BV	100-Percent CDs (1 2-dy trp; x1)		40	60			67	86	70	70	64	16	16				67			222							60		838	$165,388

Garrison Diversion Conservancy District
Task Order 5371 - RRV Transmission Pipeline Contract 7 Final Design Services & Bidding Assistance
BV Project No. 415096
Black & Veatch & Subcontractors

		Position	P	PMS	PM	TE	EM	EM	DE2	SE1	DES	DES	SE1	EE	EE	EE	TBD	CADS	CAD1	CAD2	EST1	EST2	GISM	PJC2	PA1	ADM1	ADM2	QC2	Labor Detail	Labor Detail
Task	Lead Firm	Task Description	Principal	Project Manager Senior	Project Manager	Technical Expert/QC-QC	Engineering Manager (Overall)	Engineering Manager (Team 1)	Design Engineer 2 (Pipeline Team 1)	Staff Engineer 1 (Pipeline Team 1)	Design Engineer Senior (Geotech)	Design Engineer Senior (Geotech/Trenchless)	Staff Engineer 1 (Geotech/Trenchless)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	BIM-3D Technician 2	CAD Technician Senior	CAD Technician 1	CAD Technician 2 (Pipeline Team 1)	Estimator 1	Estimator 2	GIS Technical Manager	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Administrator 2	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost
Q	BV	Final Sealed and Signed CDs	20	30			30	40	30	30	30	8	8				30			100							24		380	$76,042
R	BV	OPCCs	32	8				8		16		40	24								60	144							332	$68,188
S	BV	Quality Assurance/Quality Control																										160	160	$36,320
6	**BV**	**Bidding Assistance**	**10**	**47**	**0**	**0**	**71**	**0**	**16**	**110**	**16**	**8**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**32**	**16**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**354**	**$73,521**
A	BV	Advertisment and Bid Letting																											0	$0
i	BV	Finalize Front-End Documents	2	8			1																				2		13	$3,494
ii	BV	Invitation to Bid					2																						2	$524
iii	BV	Production of Contract Documents					2			8		8															8		26	$4,660
iv	BV	Pre-bid Conference (virtual)	1	2			2		4	2																			11	$2,537
v	BV	Interpretation of Bidding Documents	2	8			24			40				8						8									90	$18,198
vii	BV	Update Cost Opinion and Furnish OPCC	1	1			4			4	16										16								42	$10,014
viii	AE2S	Bid Opening		1			1																						2	$565
B	BV	Pre-award Services																											0	$0
i	BV	Questionairres		1			4			2																			7	$1,651
ii	BV	Qualifications of Apparent Successful Bidder	2	4			8		12	16																			42	$8,726
iii	BV	Bid Tabulations		1			1			4																			6	$1,165
iv	BV	Review of Contractor's Bonds, Insurance, etc.		1			2			2																			5	$1,127
C	BV	Post-award Services																											0	$0
i	BV	Prepare Issued-for-Construction CDs	1	4			8			16										24							8		61	$9,963
ii	BV	Sched & Mod Preconst Conf (1 2-dy trp; x2)	1	16			8			16																	2		43	$9,849
iii	AE2S	Obtain Drone-Based Video					4																						4	$1,048
7	**BV**	**Energy Recovery Evaluation/Conceptual Design**	**6**	**20**	**0**	**0**	**32**	**0**	**40**	**160**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**80**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**8**	**402**	**$71,414**
A	BV	Energy Recovery Feasibility Study																											0	$0
i	BV	Evaluation and Technical Memorandum	4	16			16		40	120						40											16	8	260	$48,924
ii	BV	Conceptual Design Drawings	2	4			16			40										80									142	$22,490
PROJECT TOTALS			**382**	**853**	**100**	**84**	**851**	**755**	**554**	**874**	**278**	**472**	**448**	**76**	**180**	**120**	**358**	**8**	**8**	**1,424**	**76**	**144**	**24**	**80**	**116**	**72**	**256**	**168**	**8,762**	**$1,839,409**

Garrison Diversion Conservancy District
Task Order 5371 - RRV Transmission Pipelin
BV Project No. 415096
Black & Veatch & Subcontractors

Task	Lead Firm	Task Description	Position	Expense Detail HOBACCA	Expense Detail Misc	Sub Consult AE2S Hrs	Sub Consultant AE2S Fee	Expense Detail AE2S Sub Markup	Sub Consult Subs Hrs	Sub Consultant Subs Fee (MTS,KLJ, PSC, ETC.)	Expense Detail Sub Markup	Expense Detail Travel Expense	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES																	
1	**BV**	**Task Order Management and Administration**		**$7,983**	**$43**	**252**	**$62,467**	**$3,122**	**18**	**$3,000**	**$150**	**$6,000**	**$82,765**	**926**	**$223,956**	**$82,765**	**$306,721**
A	BV	Project Mgmt (2 2-dy trp; x2)		$1,552	$43	116	$25,906	$1,295	6	$1,000	$50	$6,000	$35,846	180	$52,004	$35,846	$87,850
B	BV	Administration		$3,207		72	$18,988	$949	6	$1,000	$50		$24,194	372	$81,212	$24,194	$105,406
C	BV	Progress Reports		$621		32	$8,786	$439	6	$1,000	$50		$10,896	72	$21,324	$10,896	$32,220
D	BV	Schedule Updates		$1,069		32	$8,786	$439	-		$0		$10,294	124	$24,768	$10,294	$35,062
E	BV	Management of Subconsultants		$1,534		-	$0	$0	-		$0		$1,534	178	$44,648	$1,534	$46,182
2	**BV**	**Special Project and Third-Party Meetings**		**$3,104**	**$0**	**544**	**$124,012**	**$6,201**	**-**	**$0**	**$0**	**$4,400**	**$137,717**	**360**	**$81,064**	**$137,717**	**$218,781**
A	BV	Special Project Meetings		$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	TO Initiation Mtg		$207		104	$24,780	$1,239	-		$0		$26,226	24	$6,484	$26,226	$32,710
ii	BV	Post Fld Invest Align Update Mtg (1 4-d trp; x 2)		$1,793		84	$19,719	$986	-		$0	$4,400	$26,898	208	$38,948	$26,898	$65,846
B	AE2S	Third Party Meetings		$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Stakeholder Meetings		$552		128	$30,094	$1,505	-		$0		$32,151	64	$17,816	$32,151	$49,967
ii	AE2S	Design Meetings for Utility Coordination		$552		228	$49,419	$2,471	-		$0		$52,442	64	$17,816	$52,442	$70,258
3	**AE2S**	**Landowner Comm & Easement Modifications**		**$862**	**$0**	**550**	**$112,004**	**$5,600**	**-**	**$0**	**$0**	**$0**	**$118,466**	**100**	**$23,108**	**$118,466**	**$141,574**
A	AE2S	Landowner Notification		$345		152	$26,527	$1,326	-		$0		$28,198	40	$8,852	$28,198	$37,050
B	AE2S	Landowner Coordination		$241		182	$40,425	$2,021	-		$0		$42,687	28	$5,708	$42,687	$48,395
C	AE2S	Modifications to Signed Easements		$276		216	$45,052	$2,253	-		$0		$47,581	32	$8,548	$47,581	$56,129
4	**BV**	**Field Services**		**$3,284**	**$1,000**	**402**	**$91,701**	**$4,586**	**858**	**$150,000**	**$7,500**	**$7,100**	**$265,171**	**381**	**$95,171**	**$265,171**	**$360,342**
A	MTS	Supplementary Soil Borings		$569		100	$25,081	$1,254	286	$50,000	$2,500		$79,404	66	$15,878	$79,404	$95,282
B	AE2S	Limited Topographic Surveying		$293		84	$19,590	$980	-		$0		$20,863	34	$9,382	$20,863	$30,245
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)		$1,086	$1,000	-	$0	$0	-		$0	$1,900	$3,986	126	$29,582	$3,986	$33,568
D	BV	Alignment Site Visits for Contract 7 (1 5-d trp; x2)		$914		105	$23,140	$1,157	286	$50,000	$2,500	$5,200	$82,911	106	$28,342	$82,911	$111,253
E	KLJ	Jurisdictional Wetland Review and Consultation		$422		113	$23,891	$1,195	286	$50,000	$2,500		$78,008	49	$11,987	$78,008	$89,995
5	**BV**	**Final Design Services**		**$53,778**	**$4,000**	**1,314**	**$275,724**	**$13,787**	**429**	**$75,000**	**$3,750**	**$7,500**	**$433,539**	**6,239**	**$1,271,175**	**$433,539**	**$1,704,714**
A	BV	Design Team Conference Calls (12)		$793		108	$25,150	$1,257	-		$0		$27,200	92	$24,440	$27,200	$51,640
B	BV	Design Guidance Manual Minor Update		$612		6	$1,615	$81	-		$0		$2,308	71	$14,437	$2,308	$16,745
C	BV	Geotechnical Baseline Report		$3,732		6	$1,615	$81	-		$0		$5,428	433	$92,535	$5,428	$97,963
D	BV	Geotechnical Design Memorandum/GDR		$1,491		6	$1,615	$81	-		$0		$3,187	173	$33,319	$3,187	$36,506
E	PSC	Soils Classifications and Quantities		$379		62	$12,283	$614	286	$50,000	$2,500		$65,776	44	$11,068	$65,776	$76,844
F	AE2S	Utility Coodination		$172		192	$38,140	$1,907	-		$0		$40,219	20	$4,916	$40,219	$45,135
G	AE2S	Subsurface Utility Engineering		$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	SUE Surveys		$207		126	$28,035	$1,402	-		$0		$29,644	24	$6,128	$29,644	$35,772
ii	AE2S	Vacuum Extractions (5)		$207		110	$26,406	$1,320	143	$25,000	$1,250		$54,183	24	$6,128	$54,183	$60,311
H	AE2S	Utility Relocations Coordination		$172		182	$32,401	$1,620	-		$0		$34,193	20	$4,916	$34,193	$39,109
I	AE2S	Permitting		$862		318	$59,411	$2,971	-		$0		$63,244	100	$27,676	$63,244	$90,920
J	BV	Pipeline Corrosion Protection System Services		$2,586		-	$0	$0	-		$0		$2,586	300	$62,544	$2,586	$65,130
K	BV	Hydraulic Modeling Refinement		$793		22	$5,366	$268	-		$0		$6,427	92	$26,652	$6,427	$33,079
L	BV	Pipeline Basis of Design Memorandum Update		$828		22	$5,366	$268	-		$0		$6,462	96	$20,080	$6,462	$26,542
M	BV	Front-End Documents Customization		$655		22	$5,366	$268	-		$0		$6,289	76	$22,208	$6,289	$28,497
N	BV	60-Percent CDs (Level 2 Design) (1 2-dy trp; x2)		$12,399	$1,000	30	$7,432	$372	-		$0	$3,000	$24,203	1,438	$277,134	$24,203	$301,337
O	BV	90-Percent CDs (Level 3 Design) (1 2-dy trp; x2)		$13,149	$1,000	30	$7,432	$372	-		$0	$3,000	$24,953	1,525	$291,057	$24,953	$316,009
P	BV	100-Percent CDs (1 2-dy trp; x1)		$7,224	$1,000	26	$6,781	$339	-		$0	$1,500	$16,844	838	$165,388	$16,844	$182,232

Garrison Diversion Conservancy District
Task Order 5371 - RRV Transmission Pipelin
BV Project No. 415096
Black & Veatch & Subcontractors

Task	Lead Firm	Task Description	Position	Expense Detail HOBACCA	Expense Detail Misc	Sub Consult AE2S Hrs	Sub Consultant AE2S Fee	Expense Detail AE2S Sub Markup	Sub Consult Subs Hrs	Sub Consultant Subs Fee (MTS,KLJ, PSC, ETC.)	Expense Detail Sub Markup	Expense Detail Travel Expense	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
Q	BV	Final Sealed and Signed CDs		$3,276	$1,000	26	$6,781	$339	-		$0		$11,396	380	$76,042	$11,396	$87,438
R	BV	OPCCs		$2,862		18	$3,950	$198	-		$0		$7,010	332	$68,188	$7,010	$75,198
S	BV	Quality Assurance/Quality Control		$1,379		2	$582	$29	-		$0		$1,990	160	$36,320	$1,990	$38,310
6	**BV**	**Bidding Assistance**		**$3,051**	**$2,000**	**172**	**$35,827**	**$1,790**	**-**	**$0**	**$0**	**$2,800**	**$45,468**	**354**	**$73,521**	**$45,468**	**$118,989**
A	BV	Advertisment and Bid Letting		$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	Finalize Front-End Documents		$112		18	$3,308	$165	-		$0		$3,585	13	$3,494	$3,585	$7,079
ii	BV	Invitation to Bid		$17		7	$974	$49	-		$0		$1,040	2	$524	$1,040	$1,564
iii	BV	Production of Contract Documents		$224	$1,000	7	$974	$49	-		$0		$2,247	26	$4,660	$2,247	$6,907
iv	BV	Pre-bid Conference (virtual)		$95		8	$1,619	$81	-		$0		$1,795	11	$2,537	$1,795	$4,332
v	BV	Interpretation of Bidding Documents		$776		24	$4,666	$233	-		$0		$5,675	90	$18,198	$5,675	$23,873
vii	BV	Update Cost Opinion and Furnish OPCC		$362		2	$517	$26	-		$0		$905	42	$10,014	$905	$10,919
viii	AE2S	Bid Opening		$17		14	$4,181	$209	-		$0		$4,407	2	$565	$4,407	$4,972
B	BV	Pre-award Services		$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	Questionairres		$60		6	$1,168	$58	-		$0		$1,286	7	$1,651	$1,286	$2,937
ii	BV	Qualifications of Apparent Successful Bidder		$362		10	$2,266	$113	-		$0		$2,741	42	$8,726	$2,741	$11,467
iii	BV	Bid Tabulations		$52		6	$1,168	$58	-		$0		$1,278	6	$1,165	$1,278	$2,443
iv	BV	Review of Contractor's Bonds, Insurance, etc.		$43		8	$1,749	$87	-		$0		$1,879	5	$1,127	$1,879	$3,006
C	BV	Post-award Services		$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	Prepare Issued-for-Construction CDs		$526	$1,000	8	$1,684	$84	-		$0		$3,294	61	$9,963	$3,294	$13,257
ii	BV	Sched & Mod Preconst Conf (1 2-dy trp; x2)		$371		38	$8,251	$413	-		$0	$2,800	$11,835	43	$9,849	$11,835	$21,684
iii	AE2S	Obtain Drone-Based Video		$34		16	$3,302	$165	-		$0		$3,501	4	$1,048	$3,501	$4,549
7	**BV**	**Energy Recovery Evaluation/Conceptual Design**		**$3,465**	**$0**	**-**	**$0**	**$0**	**-**	**$0**	**$0**	**$0**	**$3,465**	**402**	**$71,414**	**$3,465**	**$74,879**
A	BV	Energy Recovery Feasibility Study		$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	Evaluation and Technical Memorandum		$2,241		-	$0	$0	-		$0		$2,241	260	$48,924	$2,241	$51,165
ii	BV	Conceptual Design Drawings		$1,224		-	$0	$0	-		$0		$1,224	142	$22,490	$1,224	$23,714
PROJECT TOTALS				**$75,527**	**$7,043**	**3,234**	**$701,735**	**$35,086**	**1,305**	**$228,000**	**$11,400**	**$27,800**	**$1,086,591**	**8,762**	**$1,839,409**	**$1,086,591**	**$2,926,000**

Garrison Diversion Conservancy District

Task Order 5371 - RRV Transmission Pipeline Contract 7 Final Design Services & Bidding Assistance

BV Project No. 415096

AE2S

		Position	ENGVIII	ENGV	ENGII	ET5	PMIII	LSIV	LSA	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Staff Engineer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor Assistant	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																						
1		**Task Order Management and Administration**	**60**	**152**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**252**	**$62,467**	**$0**	**$0**	**$0**	**$0**	**252**	**$62,467**	**$0**	**$62,467**
A	BV	Project Mgmt (2 2-dy trp; x2)	16	60							40		116	$25,906				$0	116	$25,906	$0	$25,906
B	BV	Administration	12	60									72	$18,988				$0	72	$18,988	$0	$18,988
C	BV	Progress Reports	16	16									32	$8,786				$0	32	$8,786	$0	$8,786
D	BV	Schedule Updates	16	16									32	$8,786				$0	32	$8,786	$0	$8,786
E	BV	Management of Subconsultants											0	$0				$0	0	$0	$0	$0
2	**BV**	**Special Project and Third-Party Meetings**	**16**	**224**	**152**	**0**	**18**	**0**	**0**	**104**	**10**	**20**	**544**	**$116,012**	**$8,000**	**$0**	**$0**	**$8,000**	**544**	**$116,012**	**$8,000**	**$124,012**
A	BV	Special Project Meetings											0	$0				$0	0	$0	$0	$0
i	BV	TO Initiation Mtg	4	80								20	104	$23,780	$1,000			$1,000	104	$23,780	$1,000	$24,780
ii	BV	Post Fld Invest Align Update Mtg (1 4-d trp; x 2)	4	24	16		16			24			84	$18,719	$1,000			$1,000	84	$18,719	$1,000	$19,719
B	AE2S	Third Party Meetings											0	$0				$0	0	$0	$0	$0
i	AE2S	Stakeholder Meetings		60	16		2			40	10		128	$28,094	$2,000			$2,000	128	$28,094	$2,000	$30,094
ii	AE2S	Design Meetings for Utility Coordination	8	60	120	0				40			228	$45,419	$4,000			$4,000	228	$45,419	$4,000	$49,419
3		**Landowner Comm & Easement Modifications**	**0**	**84**	**96**	**0**	**88**	**0**	**48**	**136**	**10**	**88**	**550**	**$103,104**	**$6,500**	**$0**	**$2,400**	**$8,900**	**550**	**$103,104**	**$8,900**	**$112,004**
A	AE2S	Landowner Notification		16	40		16			40		40	152	$26,527				$0	152	$26,527	$0	$26,527
B	AE2S	Landowner Coordination		60	16		16			40	10	40	182	$35,425	$5,000			$5,000	182	$35,425	$5,000	$40,425
C	AE2S	Modifications to Signed Easements		8	40		56		48	56		8	216	$41,152	$1,500		$2,400	$3,900	216	$41,152	$3,900	$45,052
4		**Field Services**	**2**	**88**	**48**	**24**	**20**	**100**	**0**	**100**	**0**	**20**	**402**	**$79,701**	**$7,000**	**$0**	**$5,000**	**$12,000**	**402**	**$79,701**	**$12,000**	**$91,701**
A	MTS	Supplementary Soil Borings		4	8	0	12	60	0	16			100	$19,081	$3,000		$3,000	$6,000	100	$19,081	$6,000	$25,081
B	AE2S	Limited Topographic Surveying		4		24	8	40	0	8			84	$15,590	$2,000		$2,000	$4,000	84	$15,590	$4,000	$19,590
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)											0	$0				$0	0	$0	$0	$0
D	BV	Alignment Site Visits for Contract 7 (1 5-d trp; x2)	1	40	40					16		8	105	$21,140	$2,000			$2,000	105	$21,140	$2,000	$23,140
E	KLJ	Jurisdictional Wetland Review and Consultation	1	40						60		12	113	$23,891				$0	113	$23,891	$0	$23,891
5		**Final Design Services**	**48**	**376**	**448**	**116**	**40**	**48**	**0**	**184**	**24**	**30**	**1,314**	**$264,724**	**$5,000**	**$0**	**$6,000**	**$11,000**	**1,314**	**$264,724**	**$11,000**	**$275,724**
A	BV	Design Team Conference Calls (12)	12	48	24		12			12			108	$25,150				$0	108	$25,150	$0	$25,150
B	BV	Design Guidance Manual Minor Update	2	4									6	$1,615				$0	6	$1,615	$0	$1,615
C	BV	Geotechnical Baseline Report	2	4									6	$1,615				$0	6	$1,615	$0	$1,615
D	BV	Geotechnical Design Memorandum/GDR	2	4									6	$1,615				$0	6	$1,615	$0	$1,615
E	PSC	Soils Classifications and Quantities	2	4	16					40			62	$12,283				$0	62	$12,283	$0	$12,283
F	AE2S	Utility Coodination	2	60	80					40		10	192	$38,140				$0	192	$38,140	$0	$38,140
G	AE2S	Subsurface Utility Engineering											0	$0				$0	0	$0	$0	$0
i	AE2S	SUE Surveys	2	12	60	8	8	24		4		8	126	$22,535	$2,500		$3,000	$5,500	126	$22,535	$5,500	$28,035
ii	AE2S	Vacuum Extractions (5)	2	12	40	0	20	24		4		8	110	$20,906	$2,500		$3,000	$5,500	110	$20,906	$5,500	$26,406
H	AE2S	Utility Relocations Coordination	2	16	80	60				24			182	$32,401				$0	182	$32,401	$0	$32,401
I	AE2S	Permitting	2	60	120	48				60	24	4	318	$59,411				$0	318	$59,411	$0	$59,411
J	BV	Pipeline Corrosion Protection System Services											0	$0				$0	0	$0	$0	$0

Garrison Diversion Conservancy District

Task Order 5371 - RRV Transmission Pipeline Contract 7 Final Design Services & Bidding Assistance

BV Project No. 415096

AE2S

		Position	ENGVIII	ENGV	ENGII	ET5	PMIII	LSIV	LSA	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Staff Engineer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor Assistant	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
K	BV	Hydraulic Modeling Refinement	2	16	4								22	$5,366				$0	22	$5,366	$0	$5,366
L	BV	Pipeline Basis of Design Memorandum Update	2	16	4								22	$5,366				$0	22	$5,366	$0	$5,366
M	BV	Front-End Documents Customization	2	16	4								22	$5,366				$0	22	$5,366	$0	$5,366
N	BV	60-Percent CDs (Level 2 Design) (1 2-dy trp; x2)	2	24	4								30	$7,432				$0	30	$7,432	$0	$7,432
O	BV	90-Percent CDs (Level 3 Design) (1 2-dy trp; x2)	2	24	4								30	$7,432				$0	30	$7,432	$0	$7,432
P	BV	100-Percent CDs (1 2-dy trp; x1)	2	24									26	$6,781				$0	26	$6,781	$0	$6,781
Q	BV	Final Sealed and Signed CDs	2	24									26	$6,781				$0	26	$6,781	$0	$6,781
R	BV	OPCCs	2	8	8								18	$3,950				$0	18	$3,950	$0	$3,950
S	BV	Quality Assurance/Quality Control	2										2	$582				$0	2	$582	$0	$582
6		**Bidding Assistance**	**14**	**56**	**56**	**0**	**0**	**12**	**0**	**0**	**16**	**18**	**172**	**$33,827**	**$1,500**	**$500**	**$0**	**$2,000**	**172**	**$33,827**	**$2,000**	**$35,827**
A	BV	Advertisment and Bid Letting											0	$0				$0	0	$0	$0	$0
i	BV	Finalize Front-End Documents	2	4	8							4	18	$3,308				$0	18	$3,308	$0	$3,308
ii	BV	Invitation to Bid		1	2							4	7	$974				$0	7	$974	$0	$974
iii	BV	Production of Contract Documents		1	2							4	7	$974				$0	7	$974	$0	$974
iv	BV	Pre-bid Conference (virtual)	2	2	2							2	8	$1,619				$0	8	$1,619	$0	$1,619
v	BV	Interpretation of Bidding Documents	2	8	10							4	24	$4,666				$0	24	$4,666	$0	$4,666
vii	BV	Update Cost Opinion and Furnish OPCC		2									2	$517				$0	2	$517	$0	$517
viii	AE2S	Bid Opening	2	12									14	$3,681	$500			$500	14	$3,681	$500	$4,181
B	BV	Pre-award Services											0	$0				$0	0	$0	$0	$0
i	BV	Questionairres		2	4								6	$1,168				$0	6	$1,168	$0	$1,168
ii	BV	Qualifications of Apparent Successful Bidder	2	4	4								10	$2,266				$0	10	$2,266	$0	$2,266
iii	BV	Bid Tabulations		2	4								6	$1,168				$0	6	$1,168	$0	$1,168
iv	BV	Review of Contractor's Bonds, Insurance, etc.	2	2	4								8	$1,749				$0	8	$1,749	$0	$1,749
C	BV	Post-award Services											0	$0				$0	0	$0	$0	$0
i	BV	Prepare Issued-for-Construction CDs		4	4								8	$1,684				$0	8	$1,684	$0	$1,684
ii	BV	Sched & Mod Preconst Conf (1 2-dy trp; x2)	2	12	12			12					38	$7,751	$500			$500	38	$7,751	$500	$8,251
iii	AE2S	Obtain Drone-Based Video									16		16	$2,302	$500	$500		$1,000	16	$2,302	$1,000	$3,302
7		**Energy Recovery Evaluation/Conceptual Design**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**$0**	**$0**	**$0**	**$0**	**0**	**$0**	**$0**	**$0**
A	BV	Energy Recovery Feasibility Study											0	$0				$0	0	$0	$0	$0
i	BV	Evaluation and Technical Memorandum											0	$0				$0	0	$0	$0	$0
ii	BV	Conceptual Design Drawings											0	$0				$0	0	$0	$0	$0
PROJECT TOTALS			**140**	**980**	**800**	**140**	**166**	**160**	**48**	**524**	**100**	**176**	**3,234**	**$659,835**	**$28,000**	**$500**	**$13,400**	**$41,900**	**3,234**	**$659,835**	**$41,900**	**$701,735**

ATTACHMENT E

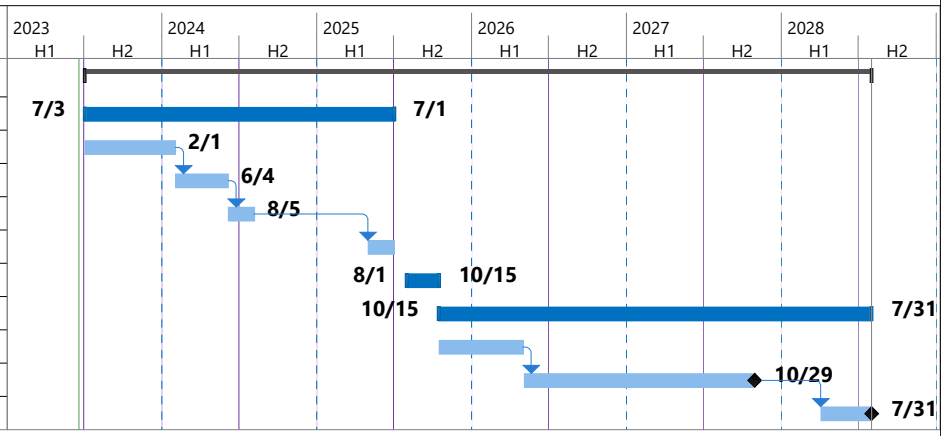
FINAL DESIGN AND BIDDING ASSISTANCE SCHEDULE

RRWSP TO 5371 RTP Ct 7 Fnl Dn & Bid Asst Schedule.mpp

Final Design and Bidding Assistance Schedule
Red River Valley Transmisson Pipeline Contract 7
River Valley Water Supply Project

Tue 6/20/23

ID	Task Name	Duration	Start	Finish
1	**RRV TRANSMISSION PIPELINE, CT 7**	**1326 days**	**Mon 7/3/23**	**Mon 7/31/28**
2	**Final Design**	**522 days**	**Mon 7/3/23**	**Tue 7/1/25**
3	Prepare & Deliver 60% Docs	154 days	Mon 7/3/23	Thu 2/1/24
4	Prepare & Deliver 90% Docs	88 days	Fri 2/2/24	Tue 6/4/24
5	Prepare & Deliver 100% Docs	44 days	Wed 6/5/24	Mon 8/5/24
6	Prepare & Deliver Final Docs	44 days	Thu 5/1/25	Tue 7/1/25
7	**Bidding Assistance & Award**	**54 days**	**Fri 8/1/25**	**Wed 10/15/25**
14	**Construction**	**729 days**	**Wed 10/15/25**	**Mon 7/31/28**
15	Pipe Submittals, Fab, & Delivery	143 days	Wed 10/15/25	Fri 5/1/26
16	Pipe Installation	390 days	Mon 5/4/26	Fri 10/29/27
17	Testing, Final Restoration, & Cleanup	86 days	Mon 4/3/28	Mon 7/31/28



ENDAWS Task Order 5335 – Eastern North Dakota Alternate Water Supply
Transmission Pipeline (ETP) Contract 3
Final Design Services and Bidding Assistance

Task Order Effective Date: July 1, 2023

TASK ORDER EXECUTIVE SUMMARY

REQUEST

A previous preliminary design task order in the amount of $1,239,000 was approved for the 32-mile segment of the Eastern North Dakota Alternate Water Supply (ENDAWS) transmission pipeline. Garrison Diversion would like to have a portion of the ENDAWS segment "shovel ready" should federal funding become available later in 2024. The Task Order advances the preliminary design to a final design for ETP Contract 3, an 11-mile portion of the ENDAWS segment. Services will begin in July 2023 and finish by mid-2025. These professional services are provided on an hourly basis and the fee is an estimate based on the scope and nature of the work and the 20-month schedule.

TASK ORDER SUMMARY

Basic Services: The services to be provided by the engineering team (Black & Veatch, AE2S, and KLJ) are fully described in the attached Task Order. The following table summarizes the fee for each of the major tasks and provides the fee as an estimated percentage of construction for the estimated $76 million project.

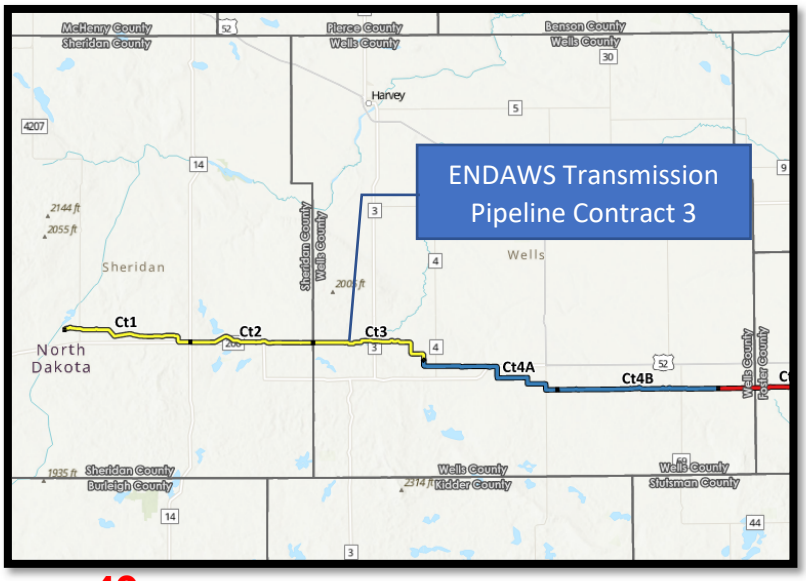
	Fee	% of Const
Task Order Management and Administration	$248,960	
Special Project and Third-Party Meetings	$251,967	
Landowner and Easement Modifications	$77,645	
Field Services	$635,594	
Final Design Services	$1,740,670	
Bidding Assistance	$101,164	
Totals	$3,056,000	4.0%

Special Services: There are no unique or specialized services required under this task order.

PROJECT OVERVIEW

The adjacent map shows the limits of ENDAWS Contract 3 and is included in the background information of the attached Task Order. Elements of this final design Task Order are:

- Supplemental surveying services to complete the design,
- Coordination with counties, townships, and the ND DOT,
- Soil borings and a completion of geotechnical reports,
- Final design of the open cut portions of pipeline and final design of one trenchless crossing under a state highway,
- Coordination with the U.S. Department of the Interior, Bureau of Reclamation, and
- Bidding assistance.



Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

RRVWSP Task Order 5335 – Eastern North Dakota Alternate Water Supply Transmission Pipeline (ETP) Contract 3 Final Design Services and Bidding Assistance

Effective Date – July 1, 2023

Content of this Task Order is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Project) will provide a supplemental water supply to eastern and central North Dakota (ND) in the event of drought conditions in the Red River watershed. The Project as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will also supply additional water to support industrial development as well as provide an environmental benefit to local rivers during drought conditions by augmenting natural stream flows. The source water will be withdrawn from the Missouri River and conveyed to a new biota water treatment plant (WTP). A multi-county pipeline will then convey flows from the biota WTP east to the Sheyenne River. Lake Ashtabula located downstream will provide storage allowing for controlled releases to the Red River Valley when flow augmentation is needed.

2. Professional services for final design of the Project will be accomplished through the execution of multiple task orders for design and associated activities as well as for engineering services during construction. A Preliminary Design Report (PDR) prepared by Engineer and authorized by Owner under previously executed Task Orders will be the foundation on which Project design

elements will be based. In addition, this pipeline segment will use Eastern North Dakota Area Water Supply EIS as an additional basis for the design.

3. This Task Order is for final design of an approximate 11-mile pipeline segment called ENDAWS Contract 3. The outcome of this Task Order will be a sealed and signed design with Contract Documents (CDs) ready for public advertisement and bidding.

4. The award of a construction contract to a Contractor to build the Engineer-designed pipeline will depend on future project funding. If funding is not available to build the entire ENDAWS Contract 3 transmission main, it may be bid in separate smaller packages. Trenchless crossings will be included within the CDs, including the open-cut portions of the Project.

II. TASK ORDER OBJECTIVES

1. The objective of this task order is to have a ENDAWS segment of the pipeline ready for construction by the fall of 2024. The alignment and limits of the pipeline being designed under this Task Order are shown in **Attachment A**. ENDAWS Contract 3 starts at the west side of 24th Ave NE in Sheridan County (SE1/4 of Section 1 T146N R73W), crosses 24th AVE NE into Wells County, and progresses east approximately 58,000 feet to connect to RRVWSP TPE Ct4a along 33rd Ave NE in Wells County (SW ¼ of Section 15 T146N R72E). In addition to the 11 miles of new pipeline, there is one trenchless crossing, State Highway 3.

2. Routing of the pipeline from the Missouri River and the McClusky Canal to the Sheyenne River was developed during preliminary design and the ENDAWS EIS. The final design of ENDAWS Contract 3 will follow this route, but some adjustments to the route are anticipated as part of the final design process. Preliminary design of this pipeline segment is underway and being done under Task Order 5280. Preliminary design will be completed in the fourth quarter of 2023.

3. Preparation of easement agreements and associated exhibits along with easement negotiations and acquisition are included in Task Order 7420. Easement acquisition is ongoing and will continue through the final design phase.

4. Geotechnical field work to supplement the original 2009 geotechnical investigation is included in this task order. These new borings will provide subsurface data where the pipeline alignment deviated from the 2009 alignment for various reasons most often due to wetlands avoidance.

5. This Task Order includes the scope of the remaining geotechnical investigations that may be required to support the final design. Where possible, soil borings conducted as part of the 2009 design efforts were incorporated in the geotechnical analysis where the borings were sufficiently close to the current pipeline alignment. Geotechnical reports will be prepared under this Task Order including incorporation of 2009 geotechnical work where still applicable plus the supplemental work completed under this task order. These reports will include a Geotechnical Report for the open-cut pipeline and a Geotechnical Data Report (GDR) and a Geotechnical Baseline Report (GBR) for the trenchless crossing being designed hereunder. The GDR and GBR will be Contract Documents (CDs). The GDR will include factual information gathered during the project investigation and will be prepared to summarize the subsurface information collected

under this Task Order. The GBR establishes a single-source document where contractual statements describing the geotechnical conditions anticipated to be encountered during construction can be found. The GBR will be prepared in this Task Order during the design document preparation since it depends on the design being significantly advanced.

6. A preliminary sheet list identifying the drawings to be produced under this task order is included as **Attachment B**.

7. A preliminary specification list, including front-end or Division 0 specifications, identifying specifications to be produced under this task order is included as **Attachment C**. ENDAWS Contract 3 funding will likely include procurement and technical requirements that are different than the State RRVWSP portion of the program. Potential additional requirements are fund agency supplemental provisions, Buy American Build American (BABA) material requirements, WBE/DBE requirements, Davis Bacon Wage Requirements, and environmental clearances of material supply sources.

8. The pipeline will be a 72-inch diameter steel pipeline primarily installed with cut-and-cover methods.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional design services associated with development of CDs for installation of a multi-county water supply pipeline in east central ND.

3. Construction Procurement. CDs developed by Engineer will be of sufficient detail for the Owner to obtain bids through a conventional bidding process (design-bid-build). CDs will be prepared assuming one construction package – Contract 3.

4. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

5. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided by Engineer, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of service and associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

6. Capital Cost Opinions. All opinions of probable construction cost developed will generally follow the recommendations of the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R regarding methodology and accuracy. The cost opinions' level of accuracy presented by Engineer for the various deliverables will be as noted in subsequent paragraphs of this Task Order.

7. Document Production Standards and Procedures. Engineer will prepare CDs using the 50-division, three-part Construction Specifications Institute (CSI) format for technical specifications; Engineer's drawing standards; and Engineer's design procedures and criteria, AutoCAD drafting standards, and standard construction details.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Task Order Management and Administration
- Task 2 – Special Project and Third-Party Meetings
- Task 3 – Landowner Communication and Easement Modifications
- Task 4 – Field Services
- Task 5 – Final Design Services
- Task 6 – Bidding Assistance

1. Task 1 – Task Order Management and Administration

This task includes overall management and development of a Project Management Plan specific to the Work. The overall objective of this task is to keep the Task Order on schedule and on budget.

A. Project Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, and other standard and customary activities required for timely completion of the Work.

B. Administration. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to the Owner.

C. Progress Reports. Prepare for the Owner progress reports that identify the Work that has been performed, upcoming work activities anticipated, and action items required of the Owner. Identify therein variances or potential variances from the Task Order's Basic and Special Services. The reports will be in the Engineer's standard format unless the Owner requires otherwise.

D. Schedule Updates. Engineer will prepare a baseline Gantt chart schedule at Task Order's inception. The schedule will be updated comparing actual progress by task/subtask to the baseline schedule.

E. Management of Subconsultants. Engineer will monitor subcontractor progress, review and approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and generally oversee subconsultants' performance.

2. **Task 2 – Special Project and Third-Party Meetings**

The overall objective of this task is to keep stakeholders apprised of Task Order status and to provide a forum for stakeholder input. Engineer will prepare an agenda. The following meetings are anticipated:

A. Special Project Meetings

i. Task Order Initiation Meeting. Engineer will conduct a virtual Task Order Initiation Meeting with the Owner and subconsultants to review the overall approach for final design and bidding assistance. Another objective of this meeting will be to finalize the approach to securing rights of entry from landowners.

ii. Post Field Investigation Alignment Update Meeting. A virtual meeting will be held with Owner after supplemental field work has been completed and after initial discussions have been undertaken with local officials and landowners. The impact of field findings and/or negotiations with landowners on the pipeline alignment and appurtenance locations will be discussed. The outcome of the meeting will be to identify any required alignment changes to the in progress 30-percent design. An updated set of alignment drawings will be prepared before the meeting and finalized during the workshop.

B. Third-Party Meetings

i. Stakeholder Meetings. Engineer will attend and present Project information for meetings with the LAWA Technical Advisory Committee (TAC). One meeting is expected to present the final design.

ii. Design Meetings for Utility Coordination. Engineer will schedule and meet with ND Department of Transportation (NDDOT) area office and/or the local county, railroads, and utilities that own parallel easements or easements that the pipeline will cross. Engineer will provide summary notes of meetings. The following utility coordination meetings are anticipated.

(a) Four meetings with NDDOT regarding project access and crossing of US/County Highways.

(b) One meeting each will be held with the county commission or designated representative(s) of Well County.

(c) One meeting for each impacted township with the elected officials if desired by that township.

(d) One meeting will be held with each of the electric/communications utilities impacted. This scope item assumes there will be three electric/communications crossings.

(e) One meeting will be held each of the pipeline companies impacted. There are expected to be:

(i) Rural Water Providers

(ii) One other Utility

iii. Funding Agency Meetings. Engineer will coordinate with GDCD staff to hold regular meetings with the Bureau of Reclamation (Reclamation). It is assumed that these Reclamation meetings will, when necessary, include other federal agencies. It is assumed that there will be 10 virtual meetings with the Reclamation or other Federal agencies.

3. **Task 3 – Landowner Communication and Easement Modifications**

A. Landowner Notifications. This segment of pipeline covers approximately 22 individual easements and 10 individual property owners. Engineer will support Garrison Diversion's communications with individual landowners for the purposes of gaining access for the field investigations by developing GIS graphics and other supporting documentation.

B. Landowner Coordination. Provide engineering team support to Owner to meet with landowners as required for the purposes of establishing the final pipeline alignment and for establishing fixed locations of appurtenances for incorporation into the CDs developed during the final design phase.

C. Modifications to Signed Easements. Modifications to easements are included in the scope of work for TO 7420.

4. **Task 4 – Field Services**

A. Soil Borings. An additional geotechnical investigation will be completed by Engineer's consultant, if necessary, and will include up to approximately 15 soil borings at an average depth of 25 feet. The soil borings, if needed, will support the final design of the open-cut and tunneled portions of ENDAWS Contract 3 due to any significant alignment changes implemented during final design. In addition, various soil resistivity and corrosivity tests will be completed to support the design. Ground surveys will be completed to locate the boring(s) and to confirm the actual location of drilling so that they can accurately be placed on drawings and documented in the geotechnical reports.

B. Limited Topographic Surveying. Where necessary to reduce change order risk by more precisely locating utilities crossing or paralleling the proposed pipeline alignment, provide limited field surveys to establish horizontal coordinates and vertical elevations of utilities

and other topographic features impacting pipeline design. For fee development, this task assumes four surveys.

C. Stray Current Field Investigations. Where necessary to mitigate direct current (DC) stray currents from foreign systems or induced alternating current (AC) voltages at proposed high-voltage power lines crossings, provide field investigations to support detailed modeling of soil and crossing appurtenances. Modeling will be used to simulate induced AC potentials and current densities in support of the final design of the Project's pipeline corrosion protection system. Develop and submit a report documenting the findings and conclusions of the field investigation and simulations. For fee development, this task assumes one stray current analysis will be completed.

D. Alignment Site Visits for ENDAWS Contract 3. The design engineers will visit the 11-mile alignment before beginning work on the 60-percent deliverable. The purpose of the site visit is to verify and document existing facilities along the alignment, evaluate potential constructability issues, and document potential construction access locations along the alignment. This task will be done current with the Post Field Investigation Alignment Meeting discussed above.

E. USFWS Permits and/or Licenses. The Engineer will coordinate with the USFWS to obtain the necessary approvals to allow for temporary construction impact to USFWS wetland easements identified in ENDAWS TM302 and subsequent final design activities.

F. Supplemental EIS Memorandum. The Engineer, through their environmental subconsultant, will provide supplemental EIS memorandum or documentation necessary to support minor pipeline alignment reroutes or as requested by the Reclamation. It is assumed that the Engineer will need to make two (2) field visits and generate four (4) supplemental EIS memoranda.

5. **Task 5 – Final Design Services**

The purpose of final design is to develop CDs by which the Owner will select Contractor to build the desired facilities. Engineer will provide final design services and CDs for the recommended pipeline alignment identified in the EIS, shown in **Attachment A**, and as adjusted with minor adjustments as the work under this task order progresses. The CDs will be prepared for the purposes of obtaining competitive bids, selection of the lowest and best bid, and construction of the Work. Intermediate deliverables will be prepared and submitted to the Owner upon development of the 60-, 90-, and 100-percent design completion stages. Final CDs will be prepared for bidding purposes.

A. Design Team Conference Calls. Engineer will schedule and lead bi-weekly conference calls with the Owner to review overall progress, exchange ideas and information, and coordinate activities with other task orders. Calls will be scheduled, and content organized, to coincide with other Task Orders for efficient utilization of staff time. Assuming a 12-month schedule (from completion of preliminary design), up to 24 calls will be held with the Owner.

B. Design Guidance Manual Minor Update. A Design Guidance Manual was previously developed under Task Order 5330 and updated under Task Order 5360; it will be used to guide this design. It will be updated to capture any additional changes to the design approach made by the Owner and its engineering team during this task order and re-issued, if necessary.

C. Geotechnical Baseline Report. Engineer will develop a GBR for the trenchless crossing of this pipeline segment. A draft report will be furnished for review and comment. Upon disposition of Owner comments concerning the draft report, a final report will be furnished. The GBR will be a CD.

D. Geotechnical Design Memorandum/Geotechnical Data Report. Engineer will develop a memorandum for internal use by Engineer that contains design requirements and geotechnical recommendations for open-cut design and the geotechnical data for the trenchless crossing. The geotechnical design memorandum will not be made available to bidders. A Geotechnical Data Report (GDR) will be developed by the Engineer. If additional borings are needed during final design, these will be added to the GDR. The GDR will be furnished to bidders, and it will be considered a CD.

E. Soils Classifications and Quantities. Engineer using a ND-licensed professional soil classifier will characterize topsoil and subsoil along the alignment. The professional soil classifier will review applicable excavation and trenching, easement restoration, and vegetative technical specifications providing comments to Engineer to incorporate into the CDs. Soil layer thickness will be estimated from ND soil surveys and augmented by Consultant with limited field investigations. Thicknesses will be used to compute stripping and stockpiling Bid Form quantities. Provide a technical memorandum documenting the soil classification work completed and the findings of that effort.

F. Utility Coordination. Engineer will perform utility coordination services, including identifying utility conflicts and facilitating the resolution of utility conflicts. It is expected that the pipeline will be below existing utilities so that the Utility Coordination will consist of identification and coordination but not relocation. Engineer will perform the following activities:

   i. Provide initial notification letters for Owner to send to affected utility companies, owners, and other concerned parties, as applicable.

   ii. Engineer will develop a utility contact list with information such as: (a) owner's name; (b) contact person; (c) telephone numbers; (d) emergency contact number; (e) e-mail addresses; and (f) other pertinent information concerning affected utilities and facilities.

   iii. Advise utility companies and owners of the general characteristics of the Work and provide an illustration of the Project footprint for delineation of the utilities/facilities that are in the Project area.

iv. Create and maintain a utility layout in AutoCAD. This layout will include existing utilities that are to remain in place or be abandoned and adjusted/relocated utilities.

v. Review utilities adjustment proposals if the pipeline cannot be installed under the existing utilities.

G. Subsurface Utility Engineering

i. Provide subsurface utility engineering (SUE), utility designating, and locating surveys along the proposed pipeline alignment in areas where utility marking services are available. The subsurface utility surveys will be a combination of Utility Quality Level A, B, and C, depending on the specific utility, as defined in CI/ASCE 38. Vertical elevations of sewers and drains, as applicable, will be taken at manholes and inlets.

ii. Up to 5 vacuum excavations or potholes no deeper than 10 feet will be excavated at proposed utility crossings and other locations to better define locations of utilities or other potential conflicts where field-discovered conflicts will adversely impact pipeline installation. Potholes/vacuum excavations will mostly be needed in the event of open cutting across roads instead of tunneling. The cost of the potholes/vacuum excavations will be paid to the utility locating contractor directly by the Owner.

H. Utility Relocations Coordination. Few conflicts between the pipeline and water and sewer lines, as well as minor drainage structures and irrigation facilities, are anticipated due to the depth of the pipeline. The scope assumes that the utility owners will design relocations and will then be paid by directly by the Owner. Relocations will be scheduled for completion in advance of pipeline excavation and installation.

i. If relocation designs are prepared by the utility owners, they will be coordinated with the RRVWSP and reviewed by Engineer for compatibility with the work proposed.

ii. If drain tiles need to be relocated or field modified as part of pipeline construction, engineering services will be addressed as Additional Services.

I. Permitting. This subtask encompasses applicable governmental approvals, including North Dakota Department of Transportation (NDDOT), counties, townships, and utility permits and approvals necessary to construct the pipeline. The pipeline will comply with overall federal permit requirements. ,

i. Engineer will obtain in conjunction with the Owner necessary approvals from the appropriate utilities, city, county, and state agencies having jurisdiction over the Work.

ii. Engineer will prepare a permitting schedule identifying action items, decision points, milestones, reviews, and approvals required to complete permitting. Engineer will communicate status of permits to Owner.

iii. Contractor-Provided Permits. Engineer will provide in the CDs a list of the permits that must be obtained by the Contractor. Based upon preliminary design, it is understood that the following permits, at a minimum, will be the responsibility of the Contractor:

- Erosion and sediment control; land disturbance; stormwater permits
- Dewatering operations discharge

iv. Owner-Provided Permits

(a) Engineer will aid the Owner in obtaining the following permits from government agencies, utilities, pipeline companies, and other entities as noted below:

- NDDOT highway crossing
- County road closing/detours
- Local electric and telecommunications crossings. Scope assumes up to three separate utilities.
- County road crossings
- Township road crossings

(b) Assistance provided by Engineer for the above listed permits will include:

(i) Preparation of applications, exhibits, drawings, and specifications ready for the Owner's execution and transmittal.

(ii) Furnishing additional information about the Project's design, as required by the permitting authority.

J. Pipeline Corrosion Protection System Services.. A multi-pronged approach to pipeline corrosion protection, including pipe coatings and an impressed- current corrosion protection system is being implemented on this project. The following services specifically related to the ENDAWS Contract 3, 11- mile segment will be provided.

i. Stray current field investigations for the Project element will be completed as indicated in the Field Services article of this Task Order, if required. Prepare report as indicated in the Field Services article of this Task Order documenting field investigations and simulations at any high voltage power line crossing. A mitigation design will be developed and incorporated into the corrosion protection system drawings based on the simulations.

ii. Engineer has formulated a detailed approach for the Project's corrosion protection system in the Corrosion Protection Design Guide (CPDG) prepared under Task Order 5310. The corrosion protection system will be based on an impressed current design. Engineer will also develop drawings and specifications for the corrosion protection system incorporating them into the Project's CDs for the element covered by this Task Order. Drawings and specifications will be developed for 60-, 90, and 100-percent design deliverables. The 60-percent deliverable consists of design of the essential components of the corrosion protection system and identification of field

investigation locations indicated in the Field Services article of this Task Order. Stray current mitigation design and impacts of detailed pipeline design will be incorporated into the 90-percent deliverable. Final client comments will be incorporated into the 100-percent deliverable. In addition, the Project element's corrosion protection system design will provide stand-alone corrosion protection for idle Project elements while subsequent pipeline segments are constructed.

K. Hydraulic Modeling Refinement Outcome. The Project's hydraulic and surge-transient models are being generated and refined during the development of the PDR. The previous work will be updated in consideration of the ENDAWS modifications to the original RRVWSP alignment.

L. Pipeline Basis of Design Memorandum Update

i. Draft Basis of Design Memorandum (BDM). A BDM was prepared for previous pipeline segments. This BDM will be updated for the design and construction of the ENDAWS Contract 3 pipeline, including pipeline design parameters, a preliminary route map indicating the proposed alignment, pipeline material selection, pipeline design working pressure and test pressure, joint restraint, accessories, and appurtenances. Engineer will review the Draft BDM for accuracy and completeness prior to submitting to the Owner for review and comment.

ii. Review and Finalize BDM. Engineer will confer with Owner's staff to review the Draft Updated BDM and obtain Owner's comments. Engineer will address Owner comments and develop a Final Updated BDM. The Final Updated BDM will be the document followed by the design team to develop CDs for solicitation of bids from general contractors.

M. Front-End Documents Customization

i. Prepare and deliver draft front-end documents using standard documents of the Engineers Joint Contract Document Committee (EJCDC) and Engineer's standard supplements, including general conditions and supplementary conditions. The documents will be based on the Contract Documents for Segment 6.

ii. Conduct a review conference call with Owner to discuss and receive comments on the draft front-end documents.

iii. Conduct a review conference call with Owner and Reclamation to and receive comments on the draft front-end documents.

iv. Revise front-end documents addressing Owner's and Reclamation's comments and incorporate modifications, if any, into subsequent CD deliverables.

N. 60-percent CDs (Level 2 Design)

i. Level 2 design will commence after the Owner accepts the preliminary design as modified from the Post Field Investigation Workshop.

ii. The content of Level 2 deliverables is as follows:

- General drawings
- Plan and profile drawings
- A majority of technical specifications
- Underground utility drawings
- Constructability review results
- Opinion of probable construction cost update
- Internal quality control review and refinement
- QA/QC plan and log update
- Task Order schedule update

iii. Provide technical specifications and drawings for Owner review.

iv. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

v. Revise documents as necessary to reflect decisions taken at this level incorporating design modifications into subsequent deliverables.

O. 90-percent CDs (Level 3 Design)

i. Level 3 design will commence after the Owner has accepted Level 2 deliverables. The content of the Level 3 deliverables is as follows:

- Drawings review set
- Technical specifications review set
- Front-end documents review set
- Opinion of probable construction cost update
- Constructability review results
- Internal quality control review and refinement
- QA/QC plan and log update
- Task Order schedule update

ii. Provide specifications and drawings for Owner review.

iii. Attend a meeting with the Owner to receive and discuss the Owner's review comments. Document comments received in a log and distribute to meeting attendees.

iv. Revise documents according to mutual agreement reflecting decisions taken at this level incorporating design modifications into subsequent deliverables.

P. 100-Percent CDs. Prepare CDs starting from the pipeline Level 3 design. These documents will include comments received from the Owner. Deliverables include the following:

- Drawings
- Technical specifications
- Front-end documents
- GDR for trenchless crossings
- GBR for trenchless crossings
- Updated opinion of probable construction cost

Q. Final Sealed and Signed CDs

i. Preparation of the final CDs will commence after the Owner has accepted 100-percent deliverables.

ii. Provide the Owner a record copy of Final CDs that are sealed, signed, and dated by the Engineer of Record.

R. Opinions of Probable Construction Cost (aka Cost Opinions or Cost Estimates). Engineer will update the cost opinion presented in the PDR at the various stages of final design submitting updates for the Owners information and use as follows:

i. After transmittal of the 60-percent deliverable, update cost opinion commensurate with an AACE Class 3 estimate with standard accuracy.

ii. After transmittal of the 90-percent deliverable, update cost opinion commensurate with an AACE Class 2 estimate with standard accuracy.

iii. After transmittal of the 100-percent deliverable, update cost opinion commensurate with an AACE Class 2 estimate with standard accuracy.

iv. After transmittal of final deliverable, update cost opinion commensurate with an AACE Class 1 estimate with standard accuracy.

S. Quality Assurance/Quality Control. Engineer will provide QA/QC services necessary for execution of the Task Order. QA/QC reviews will be provided for each deliverable furnished. Reviews will be completed by Engineer's or Engineer's Subcontractor's independent senior staff. Engineer will log QA/QC reviews and maintain records of said reviews in its files. In addition, Engineer will log comments received from the Owner and provide a log of comments and Engineer responses for the following events:

- 60-percent CDs
- Draft front-end documents
- 90-percent CDs

- 100-percent CDs

Engineer's services under the Final Design Phase will be considered complete on the date when the final design submittals identified in Deliverables are provided.

6. **Task 6 – Bidding Assistance**

A. Advertisement and Bid Letting

i. Finalize Front-End Documents. Finalize front-end documents incorporating information as it relates to the bid letting date, location, time, and other necessary information.

ii. Invitation to Bid. Provide to the Owner the Invitation to Bid, which Owner will have published in Owner-selected publications. Identify potential contractors and suppliers, review with the Owner, and distribute copies of the Invitation to Bid electronically.

iii. Production of Contract Documents. Produce digital copies of CDs, addenda, and geotechnical reports for Owner's use and distribution.

iv. Pre-bid Conference. Conduct, at a date and time selected, a virtual pre-bid conference to:

(a) Confirm the types of information required by the CDs and the format in which bids must be presented.

(b) Review special Task Order requirements and CDs in general.

(c) Receive requests for interpretations for which responses will be issued to plan holders via addendum.

(d) Prepare agenda for pre-bid conference; issue to plan holders and pre-bid conference attendees along with the pre-bid meeting sign-in sheet.

v. Interpretation of Bidding Documents. Interpret bidding documents; prepare and issue up to two addenda to the CDs, as required. More addenda will be provided as Additional Services.

vi. Update cost opinion and furnish Engineer's Opinion of Probable Construction Cost (OPCC) to the Owner for its use at the bid opening.

vii. Bid Opening. Conduct bid opening on behalf of the Owner after bids are received. Make a preliminary tabulation of bids, and review questionnaires, qualifications information, and bids for completeness.

B. Pre-award Services. The level of effort for pre-award services involving a well-qualified bidder and suppliers will be of a limited nature with the level of effort as stipulated in **Attachment B – Engineering Fee Estimate Worksheet(s)**.

i. Questionnaire(s). Examine questionnaire(s) to identify any supplier whose equipment or material may not conform to the CDs. This examination will be based on the knowledge and experience of the Engineer.

ii. Qualifications of Apparent Successful Bidder. Review and evaluate the qualifications of the apparent successful bidder and the proposed major or specialty subcontractors. The review and evaluation will include financial resources, and a check of up to five references from completed projects similar in size and character.

iii. Bid Tabulations. Prepare and distribute formal bid tabulation sheets, evaluate bids, and make a written recommendation to the Owner concerning contract award.

iv. Services include a review of the Contractor's bonds and forwarding to the Owner for approval; furnishing the Contractor unsigned CDs; and transmitting the CDs to the Owner for signature and distribution. Engineer's review is only for the purpose of determining if the Contractor provided the required bonds; it is not a legal review to determine if Contractor is compliant with CD requirements.

C. Post-award Services. Engineer will provide the following services after the Notice of Award has been issued by the Owner.

i. Prepare Issued-for-Construction Contract Documents. Engineer will incorporate drawing, specification, and geotechnical data and baseline report items made by addendum during the bidding phase, as applicable, into the native files (i.e., AutoCAD, Revit, Word, or Excel files, as applicable) before construction begins. Once addenda items have been incorporated, Engineer will produce and transmit Issued-for-Construction CDs electronically and in hardcopy format, if requested and up to eight copies) to Owner and Contractor for use during construction. Electronic Issued-for-Construction CD files will be provided by Engineer in bookmarked pdf format.

ii. Schedule and Moderate Preconstruction Conference. Conduct a preconstruction conference at a date and time selected by and at a facility provided by Owner. Engineer will prepare an agenda to include, but not limited to, meeting topics such as:

- Discussion of Contractor's tentative schedule
- Procedures for transmittal and review of Contractor's submittals
- Processing of payment requests and Owner payments
- Critical work sequencing
- Change order requests and change orders
- Field orders / work change directives
- Record drawings
- Contractor's responsibilities for safety and first aid

Engineer will prepare and distribute minutes.

iii. Obtain Drone-Based Video. Prior to issuance of the Contractor's notice to proceed Engineer will video record an aerial view of the alignment document existing pre-construction conditions. Produce aerial drone-based videos of the construction job site using a 12-megapixel minimum resolution camera. Provide a drone and operator with proper certifications and licenses for both federal and local jurisdictions. Drone video will be collected as follows:

(a) Pre-Construction conditions immediately prior to start of construction.

(b) Construction documentation will be completed via flights under a future construction phase services task order.

Bidding Assistance will be considered complete upon issuance of a construction notice to proceed, commencement of construction, or upon cessation of negotiations with prospective Contractors.

V. SPECIAL SERVICES

Not used

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner.

1. **Task 1 – Task Order Management and Administration**

- Progress reports (electronic pdf files)
- Baseline schedule and updates (electronic pdf files)

2. **Task 2 – Special Project and Third-Party Meetings**.

- Meeting agenda (typically included with MS Outlook meeting invitations)
- Meeting notes (electronic pdf files)

3. **Task 3 – Landowner Communication and Easement Modifications**

- Landowner GIS exhibits (electronic pdf file for each affected parcel)

4. **Task 4 – Field Services**

- Updated drawings for supplemental surveys (electronic pdf file)
- Stray current field report (electronic pdf file)
- Supplemental EIS memorandum (electronic pdf file)

5. **Task 5 – Final Design Services**

- Meeting/conference call agendas (generally attached to MS Outlook meeting invitations) and notes (electronic pdf files)

- Updated Design Guidance Manual (draft and final single hard copy and electronic pdf files)
- Geotechnical baseline report (electronic pdf file)
- Soils classification and quantities memorandum (electronic pdf files)
- Utility notification letters (electronic pdf file)
- Utility contact list (electronic pdf file)
- SUE drawing and summary table (DWG electronic and excel/pdf electronic)
- Permit applications (electronic pdf files for applications identified in the Permitting paragraph)
- Draft front-end documents (electronic pdf files)
- 60-percent CDs (hard copies and electronic pdf files)
- 60-percent cost opinion (electronic pdf file)
- 60-percent Owner review comments log (electronic pdf file)
- 90-percent CDs (hard copies and electronic pdf files)
- 90-percent cost opinion (electronic pdf file)
- 90-percent Owner review comments log (electronic pdf file)
- 100-percent CDs (hard copies and electronic pdf files)
- 100-percent cost opinion (electronic pdf file)
- 100-percent Owner review comments log (electronic pdf file)
- Final Sealed and Signed CDs (hard copies and electronic pdf files)
- Final cost opinion (electronic pdf file)

6. **Task 6 – Bidding Assistance**

- Invitation to Bid (electronic Word and pdf files)
- Issued-for-Bid CDs, including associated geotechnical reports (electronic pdf files)
- Pre-bid Conference Agenda (electronic pdf file)
- Opinion of Probable Construction Cost (electronic pdf file)
- Bid Tab – Summary and Detail (electronic Excel and pdf file)
- Recommendation of Award (electronic pdf file)
- Notice of Award form (electronic Word file)
- Agreement, Performance Bond, and Payment Bond forms (electronic Word files)
- Issued-for-Construction CDs (hard copies and electronic pdf files)
- Pre-construction Conference Agenda/Minutes (electronic pdf files)
- Drone video (electronic files)
- Notice to Proceed form (electronic Word file)

VII. ADDITIONAL SERVICES

The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope an amendment to this Task Order or execution of a separate Task Order with the new scope of services will be necessary.

1. The pipeline alignment was finalized previously under the preliminary design task orders, and survey certificates were prepared for each parcel under other task orders. Limited additional certificates of survey will be necessary over the 11-mile length, to reflect the final disposition of certain disputed parcels and to reflect final alignment and easements associated with these to prepare CDs for bidding. If the alignment is changed during these Final Design Services, new survey certificates will likely be necessary and those would be considered Additional Services if the effort falls beyond the allowance amount set forth in this Task Order.

2. Addenda. Engineer will prepare up to two addenda under Basic Services. Should additional addenda be required beyond the Engineer's control, they will be prepared by Engineer as Additional Services.

3. Pre-award Services to be Provided as Additional Services. If the apparent successful bidder is not well qualified or if substantive changes to the design are proposed by the Bidder or the Contractor after award, substantial and unpredictable levels of effort by Engineer may be required to resolve issues and answer questions. These services will be provided according to the Owner's request as Additional Services.

4. Design of the relocation of utilities in conflict with the proposed location of ETP Contract 3 pipeline as presented in the PDR, except as explicitly identified herein. Relocation design for the following utilities and facilities is considered Additional Services:

    - Overhead and buried telephone lines
    - Fiber optic cable and other communication lines
    - Natural gas pipelines
    - Petroleum pipelines

6. Preparation of traffic control plans, excluding haul routes and detour plans that are included with Basic Services.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Pot Holing and Vacuum Excavation Contractor. Engineer will coordinate with and manage the services provided by a pot holing or vacuum excavation contractor hired by the Owner to uncover potentially conflicting utilities. Owner will contract with and pay directly for the services of the pot holing or vacuum excavation contractor.

2. Advertising Fees. Owner agrees to pay directly to publication(s) the fees of all public advertisements, including those costs assessed by plan rooms, bidding exchanges, and online bid management services.

3. Permit and License Fees. Owner agrees to pay directly to affected utilities, railroads, or other public entities fees assessed to secure crossing permits, licenses, or easements.

4. Easements. Pay directly to landowners real estate costs for all required easements. In addition, retain and pay for legal services necessary to secure easements through negotiation or other means. Several landowners in this 24-mile section have declined to sign voluntary easements so

legal intervention will likely be necessary to get the necessary right-of-way. The Owner will manage and oversee legal services provided by others to support easement acquisition.

5. Issued-for-Bid CDs Distribution. Owner agrees to handle all aspects of bid document distribution, including collection of fees for CDs; distributing CDs, geotechnical reports, and addenda to prospective bidders and suppliers; and developing, maintaining, and distributing a plan holders list to recipients of CDs prior to the bid opening.

5. Bid Tabulations. Distribute the formal bid tabulation sheet(s) to plan holders of record or to the online bid management service(s) for distribution to plan holders and/or its membership, as applicable.

6. Meeting Facilities. Provide facilities or lease appropriate space for conducting the pre-bid meeting, if not held virtually, and similarly for the pre-construction conference.

IX. FEE

The total fee for the Basic Services under this Task Order is Three Million Fifty-six Thousand Dollars ($3,056,000). Worksheet(s) showing the fee estimate and level of effort by task are included as **Attachment D**.

X. PERFORMANCE SCHEDULE

This Task Order will be completed by October 31, 2025. It is assumed that the final CDs will be ready for advertisement by March 30, 2025. Advertisement, bid letting, and construction contracting will take place from April to June 2025. A contractor Notice to Proceed will be issued no later than October 2025. If funding becomes available for earlier construction, construction documents will be completed earlier for the portion of the project that has funding. **Attachment E** shows the execution schedule.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008, is incorporated by reference.
2. Attachment A – ENDAWS Contract 3 Alignment and Trenchless Crossing Locations
3. Attachment B – Preliminary Sheet List
4. Attachment C – Preliminary Specification List
5. Attachment D – Fee Estimate Worksheets
6. Attachment E – Final Design and Bidding Assistance Schedule

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of this Task Order, please print and sign this document. You should retain one copy for your files and return an electronic copy via email to Paul Boersma (BoersmaPM@BV.com) with Black & Veatch Corporation.

By: _____
Duane DeKrey, General Manager
Garrison Diversion Conservancy District

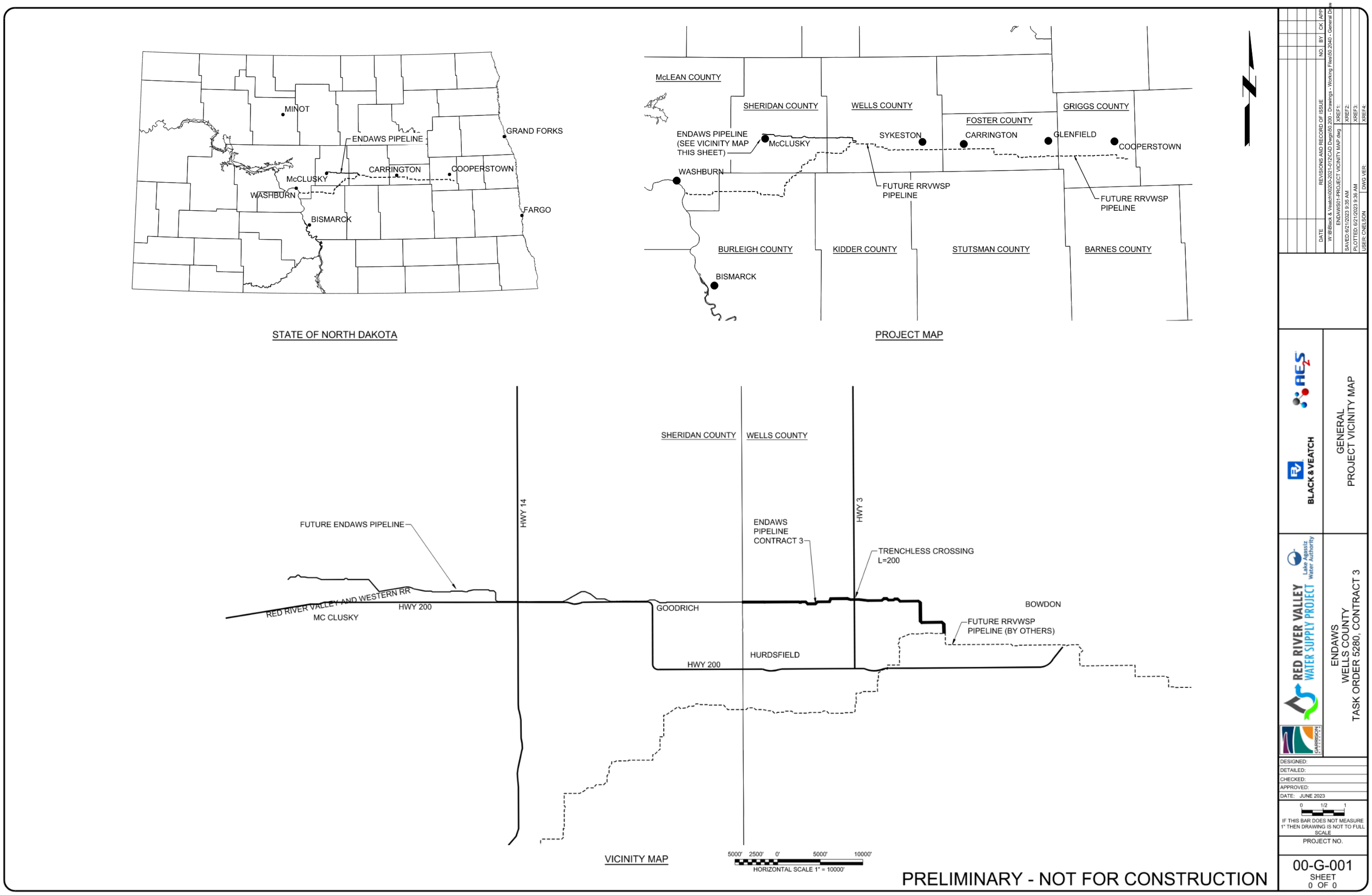
Dated: _____

By: _____
Paul Boersma, Associate Vice President
Black & Veatch Corporation

Dated: _____

ATTACHMENT A

ENDAWS CONTRACT 3 ALIGNMENT AND TRENCHLESS CROSSING LOCATIONS


STATE OF NORTH DAKOTA
MINOT
GRAND FORKS
ENDAWS PIPELINE
CARRINGTON
COOPERSTOWN
McCLUSKY
WASHBURN
BISMARCK
FARGO
PROJECT MAP
McLEAN COUNTY
SHERIDAN COUNTY
WELLS COUNTY
FOSTER COUNTY
GRIGGS COUNTY
ENDAWS PIPELINE (SEE VICINITY MAP THIS SHEET)
SYKESTON
GLENFIELD
FUTURE RRVWSP PIPELINE
BURLEIGH COUNTY
KIDDER COUNTY
STUTSMAN COUNTY
BARNES COUNTY
VICINITY MAP
FUTURE ENDAWS PIPELINE
RED RIVER VALLEY AND WESTERN RR
MC CLUSKY
HWY 200
HWY 14
HWY 3
GOODRICH
HURDSFIELD
ENDAWS PIPELINE CONTRACT 3
TRENCHLESS CROSSING L=200
BOWDON
FUTURE RRVWSP PIPELINE (BY OTHERS)
HORIZONTAL SCALE 1" = 10000'
PRELIMINARY - NOT FOR CONSTRUCTION
BLACK & VEATCH
RED RIVER VALLEY WATER SUPPLY PROJECT
GENERAL
PROJECT VICINITY MAP
ENDAWS
WELLS COUNTY
TASK ORDER 5280, CONTRACT 3
DATE: JUNE 2023
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
PROJECT NO.
00-G-001
SHEET
0 OF 0

ATTACHMENT B

PRELIMINARY SHEET LIST

Type of Drawing	**52 Sheets Total**
Contract 3 (11 miles)	
Cover	1
General	9
Plan & Profile	29
Details	12
Specialty	4

ATTACHMENT C

PRELIMINARY SPECIFICATION LIST

Specification Topic	**70 Sections**
Division 00 – Procurement and Contracting Requirements	26
Division 01 – General Requirements	15
Division 03 – Concrete	1
Division 05 – Metals	1
Division 09 – Finishes	2
Division 13 – Special Construction	1
Division 26 – Electrical	1
Division 31 – Earthwork	7
Division 32 – Exterior Improvements	2
Division 33 – Utilities	7
Division 40 – Process Interconnections	7

ATTACHMENT D

FEE ESTIMATE WORKSHEETS

Garrison Diversion Conservancy District
Task Order 5335 - ENDAWS Transmission Pipeline Contract 3, Final Design & Bidding Assistance
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Task Description	Position	P	PMS	PM	TE	EM	EM	DE2	SE1	DES	DES	SE1	EE	EE	EE	CAD1	CAD2	EST1	EST2	PJC2	PA1	ADM2	Labor Detail	Labor Detail
				Principal	Project Manager Senior	Project Manager	Technical Expert/QC-QC	Engineering Manager (Overall)	Engineering Manager (Team 1)	Design Engineer 2 (Pipeline Team 1)	Staff Engineer 1 (Pipeline Team 1)	Design Engineer Senior (Geotech)	Design Engineer Senior (Geotech/Trenchless)	Staff Engineer 1 (Geotech/Trenchless)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	Electrical Engineer (Corrosion)	CAD Technician 1	CAD Technician 2 (Pipeline Team 1)	Estimator 1	Estimator 2	Project Controls Analyst 2	Project Accountant 1	Administrator 2	BV Level of Effort (hrs)	BV Labor Cost
IV. BASIC SERVICES																										
1	**BV**	**Task Order Management and Administration**		**72**	**210**	**20**	**0**	**0**	**0**	**0**	**0**	**4**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**116**	**0**	**526**	**$123,946**
A	BV	Project Mgmt (1 2-dy trp; x2)		24	60																				84	$25,452
B	BV	Administration		24	60								16									80	80		260	$50,748
C	AE2S	Progress Reports			30																				30	$9,090
D	AE2S	Schedule Updates			20																				20	$6,060
E	BV	Management of Subconsultants		24	40	20						4	8										36		132	$32,596
2	**BV**	**Special Project and Third-Party Meetings**		**4**	**34**	**0**	**0**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**98**	**$27,234**
A	BV	Special Project Meetings																							0	$0
i	BV	TO Initiation Meeting			4			8																	12	$3,308
ii	AE2S	Post Fld Invest Alignment Update Mtg			4			16																	20	$5,404
B	AE2S	Third Party Meetings																							0	$0
i	AE2S	Stakeholder Meetings (LAWA TAC x 1)		4	12																				16	$4,848
ii	AE2S	Design Meetings for Utility Coordination			4			16																	20	$5,404
iii	AE2S	Funding Agency Meetings			10			20																	30	$8,270
3	**AE2S**	**Landowner Comm & Easement Modifications**		**0**	**8**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**$6,616**
A	AE2S	Landowner Notifications			4			8																	12	$3,308
B	AE2S	Landowner Coordination			4			8																	12	$3,308
C	AE2S	Modifications to Signed Easements																							0	$0
4	**BV**	**Field Services**		**24**	**32**	**0**	**0**	**64**	**0**	**0**	**80**	**2**	**2**	**0**	**40**	**60**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**312**	**70,416**
A	MTS	Soil Borings			2			6			80	2	2					8							100	$16,498
B	AE2S	Limited Topographic Surveying			2			6																	8	$2,178
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)			2			16							40	60									118	$27,158
D	AE2S	Alignment Site Visits for Contract 3			2			16																	18	$4,798
E	KLJ	USFWS Permits and/or Licenses		12	12			20																	44	$12,512
F	KLJ	Supplemental EIS Memorandum		12	12																				24	$7,272
5	**BV**	**Final Design Services**		**36**	**168**	**0**	**64**	**164**	**44**	**24**	**16**	**154**	**264**	**272**	**28**	**120**	**80**	**0**	**60**	**60**	**144**	**0**	**0**	**48**	**1,746**	**$395,780**
A	AE2S	Design Team Conference Calls (12)		24	24			12					8												68	$19,816
B	BV	Design Guidance Manual Update			2			40																24	66	$13,510
C	BV	Geotechnical Baseline Report			4		12					16	80	80											192	$42,312
D	BV	Geotechnical Design Memorandum/GDR			4		12		4			8	40	40										24	132	$27,016
E	PSC	Soils Classifications and Quantities			4																				4	$1,212
F	AE2S	Utility Coodination			4																				4	$1,212
G	AE2S	Subsurface Utility Engineering																							0	$0
i	AE2S	SUE Surveys			2				4																6	$1,654
ii	AE2S	Vacuum Extractions (5)			2				4																6	$1,654
H	AE2S	Utility Relocations Coordination			2				4																6	$1,654

Garrison Diversion Conservancy District
Task Order 5335 - ENDAWS Transmission Pipeline Contract 3, Final Design & Bidding Assistance
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Position / Task Description	P Principal	PMS Project Manager Senior	PM Project Manager	TE Technical Expert/QC-QC	EM Engineering Manager (Overall)	EM Engineering Manager (Team 1)	DE2 Design Engineer 2 (Pipeline Team 1)	SE1 Staff Engineer 1 (Pipeline Team 1)	DES Design Engineer Senior (Geotech)	DES Design Engineer Senior (Geotech/Trenchless)	SE1 Staff Engineer 1 (Geotech/Trenchless)	EE Electrical Engineer (Corrosion)	EE Electrical Engineer (Corrosion)	EE Electrical Engineer (Corrosion)	CAD1 CAD Technician 1	CAD2 CAD Technician 2 (Pipeline Team 1)	EST1 Estimator 1	EST2 Estimator 2	PJC2 Project Controls Analyst 2	PA1 Project Accountant 1	ADM2 Administrator 2	Labor Detail BV Level of Effort (hrs)	Labor Detail BV Labor Cost
I	AE2S	Permitting		8			8	0																	16	$4,520
J	BV	Pipeline Corrosion Protection System Services		8				4						28	120	80		60							300	$62,544
K	BV	Hydraulic Modeling Refinement		24		40	24																		88	$25,440
L	BV	Pipeline Basis of Design Memorandum Update		8				16	24																48	$11,440
M	AE2S	Front-End Documents Customization		16			16																		32	$9,040
N	AE2S	60-Percent CDs (Level 2 Design)		12			16				20	48	64												160	$35,516
O	AE2S	90-Percent CDs (Level 3 Design)		12			16				16	24	40												108	$24,468
P	AE2S	100-Percent CDs		12			16				64	16	16												124	$31,508
Q	AE2S	Final Sealed and Signed CDs	12	12			16				30	8	8												86	$22,772
R	BV	OPCCs		8				8		16		40	24							60	144				300	$58,492
S	BV	Quality Assurance/Quality Control																							0	$0
6	**AE2S**	**Bidding Assistance**	**10**	**47**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**61**	**$18,319**
A	AE2S	Advertisment and Bid Letting																							0	$0
i	AE2S	Finalize Front-End Documents	2	8																					10	$3,030
ii	AE2S	Invitation to Bid																							0	$0
iii	AE2S	Production of Contract Documents																							0	$0
iv	AE2S	Pre-bid Conference (virtual)	1	2																					3	$909
v	AE2S	Interpretation of Bidding Documents	2	8																					10	$3,030
vii	BV	Update Cost Opinion and Furnish OPCC	1	1																					2	$606
viii	AE2S	Bid Opening		1																					1	$303
B	AE2S	Pre-award Services																							0	$0
i	AE2S	Questionairres		1																					1	$303
ii	AE2S	Qualifications of Apparent Successful Bidder	2	4																					6	$1,818
iii	AE2S	Bid Tabulations		1																					1	$303
iv	AE2S	Review of Contractor's Bonds, Insurance, etc.		1																					1	$303
C	AE2S	Post-award Services																							0	$0
i	AE2S	Prepare Issued-for-Construction CDs	1	4																					5	$1,515
ii	BV	Sched & Mod Preconst Conf (1 2-dy trp)	1	16																					17	$5,151
iii	AE2S	Obtain Drone-Based Video					4																		4	$1,048
PROJECT TOTALS			**146**	**499**	**20**	**64**	**308**	**44**	**24**	**96**	**160**	**290**	**272**	**68**	**180**	**80**	**8**	**60**	**60**	**144**	**80**	**116**	**48**		**2,767**	**$642,311**

Garrison Diversion Conservency District
Task Order 5335 - ENDAWS Transmission Pip
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Task Description / Position	Expense Detail HOBACCA	Expense Detail Misc	Sub Consult AE2S Hrs	Sub Consultant AE2S Fee	Expense Detail AE2S Sub Markup	Sub Consult Subs Hrs	Sub Consultant Subs Fee (MTS,KLJ, PSC, ETC.)	Expense Detail Sub Markup	Expense Detail Travel Expense	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES																
1	**BV**	**Task Order Management and Administration**	**$4,534**	**$354**	**480**	**$107,596**	**$5,380**	**18**	**$3,000**	**$150**	**$4,000**	**$125,014**	**526**	**$123,946**	**$125,014**	**$248,960**
A	BV	Project Mgmt (1 2-dy trp; x2)	$724	$354	56	$15,986	$799	6	$1,000	$50	$4,000	$22,913	84	$25,452	$22,913	$48,365
B	BV	Administration	$2,241		52	$13,822	$691	6	$1,000	$50		$17,804	260	$50,748	$17,804	$68,552
C	AE2S	Progress Reports	$259		186	$38,894	$1,945	6	$1,000	$50		$42,148	30	$9,090	$42,148	$51,238
D	AE2S	Schedule Updates	$172		186	$38,894	$1,945	-		$0		$41,011	20	$6,060	$41,011	$47,071
E	BV	Management of Subconsultants	$1,138		-	$0	$0	-		$0		$1,138	132	$32,596	$1,138	$33,734
2	**BV**	**Special Project and Third-Party Meetings**	**$844**	**$0**	**1,016**	**$213,228**	**$10,661**	**-**	**$0**	**$0**	**$0**	**$224,733**	**98**	**$27,234**	**$224,733**	**$251,967**
A	BV	Special Project Meetings	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	BV	TO Initiation Meeting	$103		112	$26,701	$1,335	-		$0		$28,139	12	$3,308	$28,139	$31,447
ii	AE2S	Post Fld Invest Alignment Update Mtg	$172		80	$19,720	$986	-		$0		$20,878	20	$5,404	$20,878	$26,282
B	AE2S	Third Party Meetings	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Stakeholder Meetings (LAWA TAC x 1)	$138		26	$5,864	$293	-		$0		$6,295	16	$4,848	$6,295	$11,143
ii	AE2S	Design Meetings for Utility Coordination	$172		526	$107,954	$5,398	-		$0		$113,524	20	$5,404	$113,524	$118,928
iii	AE2S	Funding Agency Meetings	$259		272	$52,989	$2,649	-		$0		$55,897	30	$8,270	$55,897	$64,167
3	**AE2S**	**Landowner Comm & Easement Modifications**	**$206**	**$0**	**316**	**$67,450**	**$3,373**	**-**	**$0**	**$0**	**$0**	**$71,029**	**24**	**$6,616**	**$71,029**	**$77,645**
A	AE2S	Landowner Notifications	$103		176	$31,336	$1,567	-		$0		$33,006	12	$3,308	$33,006	$36,314
B	AE2S	Landowner Coordination	$103		140	$36,114	$1,806	-		$0		$38,023	12	$3,308	$38,023	$41,331
C	AE2S	Modifications to Signed Easements	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
4	**BV**	**Field Services**	**2,689**	**1,000**	**684**	**147,990**	**7,399**	**2,173**	**380,000**	**19,000**	**7,100**	**565,178**	**312**	**70,416**	**565,178**	**635,594**
A	MTS	Soil Borings	$862		122	$26,483	$1,324	1,858	$325,000	$16,250		$369,919	100	$16,498	$369,919	$386,417
B	AE2S	Limited Topographic Surveying	$69		156	$31,951	$1,598	-		$0		$33,618	8	$2,178	$33,618	$35,796
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)	$1,017	$1,000	-	$0	$0	-		$0	$1,900	$3,917	118	$27,158	$3,917	$31,075
D	AE2S	Alignment Site Visits for Contract 3	$155		103	$23,846	$1,192	-		$0	$5,200	$30,393	18	$4,798	$30,393	$35,191
E	KLJ	USFWS Permits and/or Licenses	$379		151	$32,021	$1,601	172	$30,000	$1,500		$65,501	44	$12,512	$65,501	$78,013
F	KLJ	Supplemental EIS Memorandum	$207		152	$33,689	$1,684	143	$25,000	$1,250		$61,830	24	$7,272	$61,830	$69,102
5	**BV**	**Final Design Services**	**$15,051**	**$4,000**	**6,152**	**$1,202,702**	**$60,137**	**343**	**$60,000**	**$3,000**	**$0**	**$1,344,890**	**1,746**	**$395,780**	**$1,344,890**	**$1,740,670**
A	AE2S	Design Team Conference Calls (12)	$586		164	$37,065	$1,853	-		$0		$39,504	68	$19,816	$39,504	$59,320
B	BV	Design Guidance Manual Update	$569		44	$10,196	$510	-		$0		$11,275	66	$13,510	$11,275	$24,785
C	BV	Geotechnical Baseline Report	$1,655		16	$4,301	$215	-		$0		$6,171	192	$42,312	$6,171	$48,483
D	BV	Geotechnical Design Memorandum/GDR	$1,138		16	$4,301	$215	-		$0		$5,654	132	$27,016	$5,654	$32,670
E	PSC	Soils Classifications and Quantities	$34		68	$13,255	$663	200	$35,000	$1,750		$50,702	4	$1,212	$50,702	$51,914
F	AE2S	Utility Coodination	$34		322	$62,759	$3,138	-		$0		$65,931	4	$1,212	$65,931	$67,143
G	AE2S	Subsurface Utility Engineering	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	SUE Surveys	$52		308	$62,331	$3,117	-		$0		$65,500	6	$1,654	$65,500	$67,154
ii	AE2S	Vacuum Extractions (5)	$52		112	$24,177	$1,209	143	$25,000	$1,250		$51,688	6	$1,654	$51,688	$53,342
H	AE2S	Utility Relocations Coordination	$52		140	$25,931	$1,297	-		$0		$27,280	6	$1,654	$27,280	$28,934

Garrison Diversion Conservency District
Task Order 5335 - ENDAWS Transmission Pip
BV Project No. TBD
Black & Veatch & Consultants

Task	Lead Firm	Position / Task Description	Expense Detail HOBACCA	Expense Detail Misc	Sub Consult AE2S Hrs	Sub Consultant AE2S Fee	Expense Detail AE2S Sub Markup	Sub Consult Subs Hrs	Sub Consultant Subs Fee (MTS,KLJ, PSC, ETC.)	Expense Detail Sub Markup	Expense Detail Travel Expense	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
I	AE2S	Permitting	$138		404	$79,741	$3,987	-		$0		$83,866	16	$4,520	$83,866	$88,386
J	BV	Pipeline Corrosion Protection System Services	$2,586		12	$2,335	$117	-		$0		$5,038	300	$62,544	$5,038	$67,582
K	BV	Hydraulic Modeling Refinement	$759		32	$6,812	$341	-		$0		$7,912	88	$25,440	$7,912	$33,352
L	BV	Pipeline Basis of Design Memorandum Update	$414		8	$1,810	$91	-		$0		$2,315	48	$11,440	$2,315	$13,755
M	AE2S	Front-End Documents Customization	$276		224	$51,385	$2,569	-		$0		$54,230	32	$9,040	$54,230	$63,270
N	AE2S	60-Percent CDs (Level 2 Design)	$1,379	$1,000	1,760	$330,609	$16,530	-		$0		$349,518	160	$35,516	$349,518	$385,034
O	AE2S	90-Percent CDs (Level 3 Design)	$931	$1,000	1,290	$246,284	$12,314	-		$0		$260,529	108	$24,468	$260,529	$284,997
P	AE2S	100-Percent CDs	$1,069	$1,000	920	$180,102	$9,005	-		$0		$191,176	124	$31,508	$191,176	$222,684
Q	AE2S	Final Sealed and Signed CDs	$741	$1,000	184	$31,916	$1,596	-		$0		$35,253	86	$22,772	$35,253	$58,025
R	BV	OPCCs	$2,586		128	$27,392	$1,370	-		$0		$31,348	300	$58,492	$31,348	$89,840
S	BV	Quality Assurance/Quality Control	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
6	**AE2S**	**Bidding Assistance**	**$527**	**$4,000**	**368**	**$73,161**	**$3,657**	**-**	**$0**	**$0**	**$1,500**	**$82,845**	**61**	**$18,319**	**$82,845**	**$101,164**
A	AE2S	Advertisment and Bid Letting	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Finalize Front-End Documents	$86		6	$1,028	$51	-		$0		$1,165	10	$3,030	$1,165	$4,195
ii	AE2S	Invitation to Bid	$0		6	$1,028	$51	-		$0		$1,079	0	$0	$1,079	$1,079
iii	AE2S	Production of Contract Documents	$0	$1,000	16	$2,783	$139	-		$0		$3,922	0	$0	$3,922	$3,922
iv	AE2S	Pre-bid Conference (virtual)	$26		8	$1,518	$76	-		$0		$1,620	3	$909	$1,620	$2,529
v	AE2S	Interpretation of Bidding Documents	$86		128	$25,225	$1,261	-		$0		$26,572	10	$3,030	$26,572	$29,602
vii	BV	Update Cost Opinion and Furnish OPCC	$17		6	$1,231	$62	-		$0		$1,310	2	$606	$1,310	$1,916
viii	AE2S	Bid Opening	$9		16	$3,868	$193	-		$0		$4,070	1	$303	$4,070	$4,373
B	AE2S	Pre-award Services	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Questionairres	$9		8	$1,747	$87	-		$0		$1,843	1	$303	$1,843	$2,146
ii	AE2S	Qualifications of Apparent Successful Bidder	$52		42	$8,360	$418	-		$0		$8,830	6	$1,818	$8,830	$10,648
iii	AE2S	Bid Tabulations	$9		10	$1,945	$97	-		$0		$2,051	1	$303	$2,051	$2,354
iv	AE2S	Review of Contractor's Bonds, Insurance, etc.	$9		8	$1,812	$91	-		$0		$1,912	1	$303	$1,912	$2,215
C	AE2S	Post-award Services	$0		-	$0	$0	-		$0		$0	0	$0	$0	$0
i	AE2S	Prepare Issued-for-Construction CDs	$43	$1,000	62	$10,947	$547	-		$0		$12,537	5	$1,515	$12,537	$14,052
ii	BV	Sched & Mod Preconst Conf (1 2-dy trp)	$147	$2,000	32	$7,334	$367	-		$0	$1,500	$11,348	17	$5,151	$11,348	$16,499
iii	AE2S	Obtain Drone-Based Video	$34		20	$4,335	$217	-		$0		$4,586	4	$1,048	$4,586	$5,634
PROJECT TOTALS			**$23,851**	**$9,354**	**9,016**	**$1,812,127**	**$90,607**	**2,534**	**$443,000**	**$22,150**	**$12,600**	**$2,413,689**	**2,767**	**$642,311**	**$2,413,689**	**$3,056,000**

Garrison Diversion Conservancy District

Task Order 5335 - ENDAWS Transmission Pipeline Contract 3, Final Design & Bidding Assistance

BV Project No. TBD

AE2S

		Position	PM6	PM4	PM5	ENGIII	ENGII	SD2	ET5	PMIII	LSIV	LSA	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Design Engineer	Staff Engineer	Senior Designer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor Assistant	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																									
1		**Task Order Management and Administration**	**60**	**240**	**0**	**80**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**60**	**480**	**$106,596**	**$1,000**	**$0**	**$0**	**$1,000**	**480**	**$106,596**	**$1,000**	**$107,596**
A	BV	Project Mgmt (1 2-dy trp; x2)	16	40												56	$14,986	$1,000			$1,000	56	$14,986	$1,000	$15,986
B	BV	Administration	12	40												52	$13,822				$0	52	$13,822	$0	$13,822
C	AE2S	Progress Reports	16	80		40								20	30	186	$38,894				$0	186	$38,894	$0	$38,894
D	AE2S	Schedule Updates	16	80		40								20	30	186	$38,894				$0	186	$38,894	$0	$38,894
E	BV	Management of Subconsultants														0	$0				$0	0	$0	$0	$0
2	**BV**	**Special Project and Third-Party Meetings**	**30**	**208**	**32**	**224**	**224**	**0**	**20**	**28**	**0**	**0**	**118**	**88**	**44**	**1,016**	**$202,228**	**$11,000**	**$0**	**$0**	**$11,000**	**1,016**	**$202,228**	**$11,000**	**$213,228**
A	BV	Special Project Meetings														0	$0				$0	0	$0	$0	$0
i	BV	TO Initiation Meeting	4	24	4	24	24			24					8	112	$23,701	$3,000			$3,000	112	$23,701	$3,000	$26,701
ii	AE2S	Post Fld Invest Alignment Update Mtg	4	16	4	16	16			4			16		4	80	$16,720	$3,000			$3,000	80	$16,720	$3,000	$19,720
B	AE2S	Third Party Meetings														0	$0				$0	0	$0	$0	$0
i	AE2S	Stakeholder Meetings (LAWA TAC x 1)		8		4	4						2	4	4	26	$4,864	$1,000			$1,000	26	$4,864	$1,000	$5,864
ii	AE2S	Design Meetings for Utility Coordination	16	100	24	120	120		10				60	60	16	526	$103,954	$4,000			$4,000	526	$103,954	$4,000	$107,954
iii	AE2S	Funding Agency Meetings	6	60		60	60		10				40	24	12	272	$52,989				$0	272	$52,989	$0	$52,989
3		**Landowner Comm & Easement Modifications**	**0**	**76**	**0**	**12**	**48**	**0**	**0**	**32**	**0**	**0**	**100**	**0**	**48**	**316**	**$62,450**	**$5,000**	**$0**	**$0**	**$5,000**	**316**	**$62,450**	**$5,000**	**$67,450**
A	AE2S	Landowner Notifications		16		4	40			16			60		40	176	$31,336				$0	176	$31,336	$0	$31,336
B	AE2S	Landowner Coordination		60		8	8			16			40	0	8	140	$31,114	$5,000			$5,000	140	$31,114	$5,000	$36,114
C	AE2S	Modifications to Signed Easements		0		0				0	0	0	0			0	$0	$0		$0	$0	0	$0	$0	$0
4		**Field Services**	**10**	**102**	**4**	**72**	**112**	**8**	**24**	**24**	**100**	**100**	**120**	**0**	**8**	**684**	**$130,790**	**$12,200**	**$0**	**$5,000**	**$17,200**	**684**	**$130,790**	**$17,200**	**$147,990**
A	MTS	Soil Borings		10			16			8	40	40	8			122	$21,483	$3,000		$2,000	$5,000	122	$21,483	$5,000	$26,483
B	AE2S	Limited Topographic Surveying		4			8			16	60	60	8			156	$26,951	$2,000		$3,000	$5,000	156	$26,951	$5,000	$31,951
C	BV	Stray Current Fld Investigation (1 3-dy trp; x1)														0	$0				$0	0	$0	$0	$0
D	AE2S	Alignment Site Visits for Contract 3	1	24	2	24	24						24		4	103	$20,846	$3,000			$3,000	103	$20,846	$3,000	$23,846
E	KLJ	USFWS Permits and/or Licenses	1	40	2	8	40		16				40		4	151	$30,321	$1,700			$1,700	151	$30,321	$1,700	$32,021
F	KLJ	Supplemental EIS Memorandum	8	24		40	24	8	8	0	0	0	40			152	$31,189	$2,500			$2,500	152	$31,189	$2,500	$33,689
5		**Final Design Services**	**102**	**618**	**254**	**900**	**1,070**	**1,236**	**1,210**	**76**	**104**	**120**	**320**	**28**	**114**	**6,152**	**$1,190,202**	**$6,500**	**$0**	**$6,000**	**$12,500**	**6,152**	**$1,190,202**	**$12,500**	**$1,202,702**
A	AE2S	Design Team Conference Calls (12)	12	48	12	24	24			24			12	4	4	164	$37,065				$0	164	$37,065	$0	$37,065
B	BV	Design Guidance Manual Update	2	24	2	8	8									44	$10,196				$0	44	$10,196	$0	$10,196
C	BV	Geotechnical Baseline Report		8	8											16	$4,301				$0	16	$4,301	$0	$4,301
D	BV	Geotechnical Design Memorandum/GDR		8	8											16	$4,301				$0	16	$4,301	$0	$4,301
E	PSC	Soils Classifications and Quantities		4		8	16						40			68	$13,255				$0	68	$13,255	$0	$13,255
F	AE2S	Utility Coodination		40	8	40	80	40			24		80		10	322	$62,759				$0	322	$62,759	$0	$62,759
G	AE2S	Subsurface Utility Engineering														0	$0				$0	0	$0	$0	$0
i	AE2S	SUE Surveys		8	4	8	40	40		40	80	80			8	308	$55,331	$4,000		$3,000	$7,000	308	$55,331	$7,000	$62,331
ii	AE2S	Vacuum Extractions (5)		8	4	8	40			4	0	40			8	112	$18,677	$2,500		$3,000	$5,500	112	$18,677	$5,500	$24,177
H	AE2S	Utility Relocations Coordination		8	4	40	80			8						140	$25,931				$0	140	$25,931	$0	$25,931
I	AE2S	Permitting	8	40	8	160	60	40					60	24	4	404	$79,741				$0	404	$79,741	$0	$79,741
J	BV	Pipeline Corrosion Protection System Services		4			8									12	$2,335				$0	12	$2,335	$0	$2,335

Garrison Diversion Conservancy District

Task Order 5335 - ENDAWS Transmission Pipeline Contract 3, Final Design & Bidding Assistance

BV Project No. TBD

AE2S

		Position	PM6	PM4	PM5	ENGIII	ENGII	SD2	ET5	PMIII	LSIV	LSA	GISV	COMIII	ADM III	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
Task	Lead Firm	Task Description	Principal	Project Manager	Technical Expert QA/QC	Design Engineer	Staff Engineer	Senior Designer	CAD Tech	Surveyor Manager	Land Surveyor	Land Surveyor Assistant	GIS	Communications	Admin	AE2S Level of Effort (hrs)	Labor Cost	Travel	Misc	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
K	BV	Hydraulic Modeling Refinement		4	4	24	0									32	$6,812				$0	32	$6,812	$0	$6,812
L	BV	Pipeline Basis of Design Memorandum Update		4	0	4	0									8	$1,810				$0	8	$1,810	$0	$1,810
M	AE2S	Front-End Documents Customization		78	52	78									16	224	$51,385				$0	224	$51,385	$0	$51,385
N	AE2S	60-Percent CDs (Level 2 Design)	24	100	40	140	290	550	560				40		16	1,760	$330,609				$0	1,760	$330,609	$0	$330,609
O	AE2S	90-Percent CDs (Level 3 Design)	24	100	40	170	230	330	340				40		16	1,290	$246,284				$0	1,290	$246,284	$0	$246,284
P	AE2S	100-Percent CDs	24	100	40	120	130	220	230				40		16	920	$180,102				$0	920	$180,102	$0	$180,102
Q	AE2S	Final Sealed and Signed CDs	4	8	4	8	40	16	80				8		16	184	$31,916				$0	184	$31,916	$0	$31,916
R	BV	OPCCs	4	24	16	60	24									128	$27,392				$0	128	$27,392	$0	$27,392
S	BV	Quality Assurance/Quality Control														0	$0				$0	0	$0	$0	$0
6		**Bidding Assistance**	**12**	**68**	**4**	**84**	**108**	**8**	**32**	**0**	**8**	**0**	**0**	**44**	**0**	**368**	**$70,661**	**$2,000**	**$500**	**$0**	**$2,500**	**368**	**$70,661**	**$2,500**	**$73,161**
A	AE2S	Advertisment and Bid Letting														0	$0				$0	0	$0	$0	$0
i	AE2S	Finalize Front-End Documents		1		1								4		6	$1,028				$0	6	$1,028	$0	$1,028
ii	AE2S	Invitation to Bid		1		1								4		6	$1,028				$0	6	$1,028	$0	$1,028
iii	AE2S	Production of Contract Documents		2		2	8							4		16	$2,783				$0	16	$2,783	$0	$2,783
iv	AE2S	Pre-bid Conference (virtual)		2		2	2							2		8	$1,518				$0	8	$1,518	$0	$1,518
v	AE2S	Interpretation of Bidding Documents	4	20	4	40	40	8	8					4		128	$25,225				$0	128	$25,225	$0	$25,225
vii	BV	Update Cost Opinion and Furnish OPCC		2		2	2									6	$1,231				$0	6	$1,231	$0	$1,231
viii	AE2S	Bid Opening		8			8									16	$3,368	$500			$500	16	$3,368	$500	$3,868
B	AE2S	Pre-award Services														0	$0				$0	0	$0	$0	$0
i	AE2S	Questionairres		4		2	2									8	$1,747				$0	8	$1,747	$0	$1,747
ii	AE2S	Qualifications of Apparent Successful Bidder	2	8		16	16									42	$8,360				$0	42	$8,360	$0	$8,360
iii	AE2S	Bid Tabulations		2		4	4									10	$1,945				$0	10	$1,945	$0	$1,945
iv	AE2S	Review of Contractor's Bonds, Insurance, etc.	2	2		2	2									8	$1,812				$0	8	$1,812	$0	$1,812
C	AE2S	Post-award Services														0	$0				$0	0	$0	$0	$0
i	AE2S	Prepare Issued-for-Construction CDs	4	4		4	16		24					10		62	$10,947				$0	62	$10,947	$0	$10,947
ii	BV	Sched & Mod Preconst Conf (1 2-dy trp)		8		8	8				8					32	$6,334	$1,000			$1,000	32	$6,334	$1,000	$7,334
iii	AE2S	Obtain Drone-Based Video		4										16		20	$3,335	$500	$500		$1,000	20	$3,335	$1,000	$4,335
PROJECT TOTALS			**214**	**1,312**	**294**	**1,372**	**1,562**	**1,252**	**1,286**	**160**	**212**	**220**	**658**	**200**	**274**	**9,016**	**$1,762,927**	**$37,700**	**$500**	**$11,000**	**$49,200**	**9,016**	**$1,762,927**	**$49,200**	**$1,812,127**

ATTACHMENT E

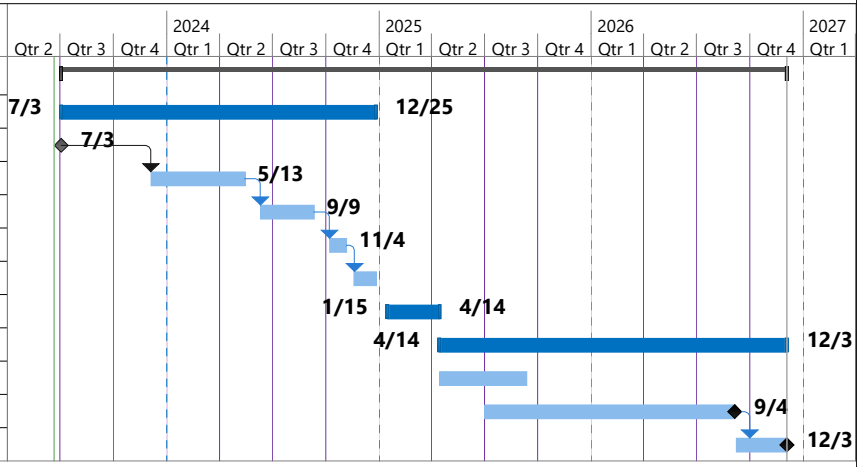
FINAL DESIGN AND BIDDING ASSISTANCE SCHEDULE

ENDAWS TO 5335 ETP Ct 3 Fnl Dn & Bid Asst Schedule.mpp

Final Design and Bidding Assistance Schedule
ENDAWS Transmisson Pipeline Contract 3
Eastern North Dakota Alternate Water Supply

Wed 6/21/23

ID	Task Name	Duration	Start	Finish
1	**ENDAWS TRANSMISSION PIPELINE CT 3**	**894 days**	**Mon 7/3/23**	**Thu 12/3/26**
2	**Final Design**	**388 days**	**Mon 7/3/23**	**Wed 12/25/24**
3	NTP	0 days	Mon 7/3/23	Mon 7/3/23
4	Prepare & Deliver 60% Docs	116 days	Mon 12/4/23	Mon 5/13/24
5	Prepare & Deliver 90% Docs	66 days	Mon 6/10/24	Mon 9/9/24
6	Prepare & Deliver 100% Docs	21 days	Mon 10/7/24	Mon 11/4/24
7	Prepare & Deliver Final Docs	28 days	Mon 11/18/24	Wed 12/25/24
8	**Bidding Assistance & Award**	**64 days**	**Wed 1/15/25**	**Mon 4/14/25**
15	**Construction**	**429 days**	**Mon 4/14/25**	**Thu 12/3/26**
16	Pipe Submittals, Fab, & Delivery	108 days	Mon 4/14/25	Wed 9/10/25
17	Pipe Installation	309 days	Tue 7/1/25	Fri 9/4/26
18	Testing, Final Restoration, & Cleanup	64 days	Mon 9/7/26	Thu 12/3/26



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RRVWSP Task Order 5633 – Transmission Pipeline East (TPE) Contracts 5C and 5D
Red River Valley Transmission Pipeline (RTP) Contract 6A
Construction Phase Services

Task Order Effective Date: July 1, 2023

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Consideration and approval of a construction phase services Task Order in the amount of $16,067,000 associated with Garrison Diversion's third, fourth, and fifth construction project (TPE Contracts 5C and 5D and RTP Contract 6A). The Task Order is for construction observation and engineering support during construction of a 27-mile segment of the RRVWSP transmission pipeline. Services are anticipated to begin in October 2023 and be completed by August 2026. All professional services are provided on an hourly basis. The fee maximum is a labor and expenses estimate based on the scope and nature of the work and an anticipated 14 months of active pipeline installation and 4 months for testing, final easement restoration, and cleanup. No construction activity is expected to be undertaken from December to April of each year so field observation for this time frame is omitted.

The Engineer's opinion of construction costs is about $182 million (mid-point of construction in 1Q25) for the 27 miles of 72-inch pipeline, including trenchless crossings. The projects are slated to advertise in July and August 2023 with bid openings set for August and September 2023. Construction notices to proceed will be issued no later than October 2023.

TASK ORDER SUMMARY

The services to be provided by the engineering and construction observation teams (Black & Veatch, AE2S, Prairie Soil Consulting, Braun Intertec, KLJ, Material Testing Services, American Engineering Testing, Accurate Inspections, and other firms to be determined) are fully described in the attached Task Order. The following summarizes each of the major tasks.

Basic Services: The estimated hourly fees and expenses for standard and customary construction phase services are as follows:

	Fee	% of Construction
Task Order Management and Administration	$743,946	
Special and Third-Party Meetings	$10,532	
Surveying, Field Testing, & Factory Inspection Services	$2,455,892	
Engineering Services during Construction	$1,933,767	
Construction Observation	$10,922,863	
Total	$16,067,000	8.8%

Special Services: There are no unique or special services identified for this Task Order at this time.

PROJECT OVERVIEW

TPE Contract 5C involves 8 miles of steel pipe and will connect to the east end of Contract 5B near Bordulac and continue east ending just east of the James River. Contract 5D involves 10 miles of steel pipe and will connect to the west end of Contract 5A just south of Carrington heading west and ending in the vicinity of Sykeston. Contract 6A involves up to 9 miles of pipe and will connect to Contract 5C on the east end near the James River and head east to an ending point south of Glenfield, ND. The alignment and limits of the pipeline under this Task Order are shown on the figure included in the Task Order document. Key elements of the services are summarized as follows:

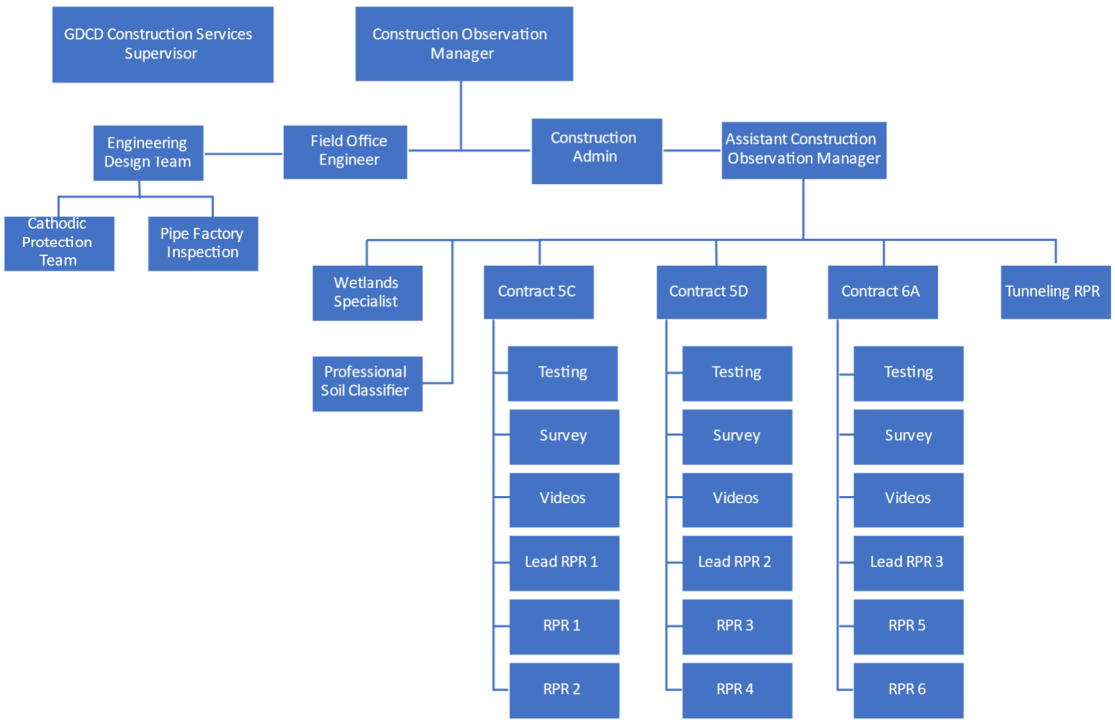
Task 1 – Task Order Management and Administration – This task includes overall project management and administrative services during the construction phase of the project and is consistent with services rendered under previous Task Orders.

Task 2 – Special and Third-Party Meetings – This task covers in-person meetings as needed with stakeholders including the State Engineer, Foster County, Northern Plains Electric, Greater Ramsey Water District, Pembina Cochin Pipeline Company, Alliance Pipeline, WBI Energy, and Dakota Central Telecommunications.

Task 3 – Surveying, Field Testing, and Factory Inspection Services – This task consists of surveying, construction staking, services of a professional soil classifier for restoration, drone video of construction progression, pipe manufacture visits and on-site inspection of the manufacturing process and quality control/quality assurance procedures, corrosion protection system inspection and testing, services of an independent materials testing firm, and services of an independent weld verification firm.

Task 4 – Engineering Services During Construction – Consists of construction administration and engineering tasks during construction, review of shop drawings and submittals, review of progress payments, attendance at progress meetings, field visits by the engineering team, and close-out.

Task 5 – Construction Observation – Consists of 14 of the engineering team's staff providing observation and reporting of the Contractor's work for the anticipated 18 months of construction. Six staff will be from BV and eight staff will be from firms yet to be determined. Four BV people will provide construction observation management, construction administration, and field engineering for the three projects. A lead resident project representative (Lead RPR) and two RPRs will oversee the work of each Project for a total of 9 persons. Finally, a tunnelling RPR will be provided for the installation of the shafts and during the trenchless crossings. RPR staff will generate daily reports for the pipeline and trenchless crossing activities, generate daily photo logs of the work progress, use GPS equipment to collect real-time as-built data, and serve as a liaison between the contractor and the engineering team. See proposed field team organization shown below.



Proposed Field Team Organizational Chart for Construction Observation

RISK CONSIDERATIONS

The following items in the Project specifications and/or in this Task Order scope of work are intended to mitigate potential risks associated with the installation of the three segments of the water transmission pipeline with total footage of about 27 miles:

- Project specifications limit the amount of right-of-way that can be open at any time during the Project. The contractor will be limited to two miles of open right of way of which only one mile can include active pipeline installation. This limitation will require the Contractor to stabilize and restore the right of way area continuously within the project mitigating the impact to landowners from dust and from a property usability standpoint.
- A two-part geotechnical report approach will be used to mitigate risk and to make sure tunneling bidders are each bidding the same set of assumptions. A geotechnical data report and a geotechnical baseline report will establish the baseline by which tunneling will be undertaken by the contractors. Baseline conditions will be presented by BV concerning ground conditions, groundwater conditions, the number and size of boulders that should be expected, etc. Conditions that exceed the baseline will be justification for the contractor to request an increase in the contract price.
- A professional soil classifier will provide topsoil and subsoil removal and restoration process training to the contractors, RPRs, engineering team, and Garrison Diversion staff. This training and subsequent inspections will be essential to the successful reclamation of the easements. The PSC will also provide periodic quality control of the restoration activities of the contractor.
- RPR staff will provide observation and reporting full time while the contractor is actively working on pipeline installation and the trenchless crossings. Due to the remote location of the work, having RPRs on site during active construction will prevent deviations from the specifications. Deviations noted will be identified and corrected.
- RPRs will be collecting real-time as-built information confirming elevation and location of the pipeline and appurtenances with high accuracy GPS equipment.
- The engineering team's corrosion protection staff will provide field inspection and start-up services for the corrosion protection system. The scope of work also includes a one-year inspection and training session for Garrison Diversion staff.
- Independent construction materials testing for granular materials, concrete, and compaction will be provided by the engineering team through a subconsultant.
- Drone video of the active construction and restored areas will be provided approximately every four weeks. Garrison Diversion has used these videos and photos in educational materials and with landowner outreach. The engineering team uses the drone material to review the construction progress.

Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

RRVWSP Task Order 5633 – Transmission Pipeline East (TPE) Contracts 5C and 5D
Red River Valley Transmission Pipeline (RTP) Contract 6A
Construction Phase Services

Effective Date – July 1, 2023

Content of this Task Order (TO) is as follows:

I. BACKGROUND

1. From 2015 to the present, the Garrison Diversion Conservancy District (GDCD, Garrison Diversion, Owner) authorized Black & Veatch Corporation (Engineer, BV) and its consultants to complete designs for a 167-mile Transmission Pipeline (TPL). Initially, a preliminarily design was completed for the whole transmission pipeline first beginning in the 2015 to 2017 biennium. In the 2017 to 2019 biennium, final design activities began on a 28-mile segment, later referred to as Contract 5, running from roughly a few miles south of Sykeston, ND on the west end to just east of the James River on the east end. Because of funding constraints, Contract 5 was subsequently divided into four separate segments referred as Contracts 5D, 5A, 5B, and 5C (ordered from west to east). The design on the 1-1/4-mile Contract 5A finished first with construction beginning in early 2021 and completing in mid-2022. The design on the next segment, 9-mile Contract 5B, was finished and construction began in early 2022. Construction of Contract 5B is currently forecasted to finish by 2Q24.

2. The design of the last two segments of Contract 5, the 8-mile Contract 5C and the 10-mile Contract 5D, will be completed in June 2023. This work was authorized under Task Order 5333 – Transmission Pipeline East, Contract 5C and 5D, Design Wrap-up Services and Bidding Assistance. Under an authorization for professional services with an effective date of October 1, 2021, Engineer advanced the design of approximate 8- and 10-mile pipeline segments of Contract 5 to biddable plans and specifications. Designs were completed and the projects are slated to advertise in June and July 2023. The bid lettings are scheduled for July and August 2023. Notices to proceed will be issued no later than early October 2023 with construction field activities to begin as early as May 2024. Initial pipe necessary to begin the projects will be fabricated and delivered from October 2023 to April 2024.

3. Design of a new segment, Contract 6, was authorized under Task order 5360 – Red River Valley Transmission Pipeline Contract 6, Final Design and Bidding Assistance with an effective date of November 1, 2021. It was subsequently split into two segments, Contract 6A (9 miles) and 6B (15 miles). Design of these segment is nearing completion with Contract 6A to be finished in June 2023. Due to funding limitations, only Contract 6A will be constructed during the 2023 to 2025 biennium. Design is being completed and the project is slated to advertise in July 2023. The bid letting is scheduled for August 2023. A notice to proceed will be issued no later than early October 2023 with construction field activities to begin as early as May 2024. Initial pipe necessary to begin the projects will be fabricated and delivered from October 2023 to April 2024.

II. TASK ORDER OBJECTIVES

1. The Owner would like to continue construction of the transmission pipeline. This Task Order is for engineering services during construction of TPE Contracts 5C and 5D and RTP Contract 6A. Given the funding allocated by the North Dakota Legislature for the 2023 to 2025 biennium, Garrison Diversion expects to install up to 30 miles of transmission pipeline. The exact length of the pipeline installed will be dependent upon the funding allocated and approved by the State Water Commission (SWC) and the Department of Water Resources along with the actual bids received. It is expected that the construction support resources will be shared across the three construction contracts as the construction contracts will be occurring concurrently and in proximity. Thus, the construction support for three construction contracts is being combined under one task order.

2. The objective of this Task Order is to oversee installation of up to 27 miles of 72-inch steel pipe and accessory items in Foster County just south and east of Carrington (5C), southwest of Carrington (5D), and south of Glenfield (6A). Contract 5D involves 10 miles of steel pipe and will connect to the west end of Contract 5A ending in the vicinity of Sykeston, ND. Contract 5C involves 8 miles of pipe and will connect to the east end of Contract 5B and continue east ending just east of the James River. Contract 6A involves up to 9 miles of pipe and will connect to Contract 5C on the west and head east to an ending point south of Glenfield, ND. The alignment and limits of the pipeline under this Task Order are shown in Figure 1. The pipeline will primarily be installed with cut-and-cover methods. However, there are trenchless portions on all three

sections that will require installation by tunneling: three trenchless crossings are in Contract 5C, two in Contract 5D, and three in Contract 6A.

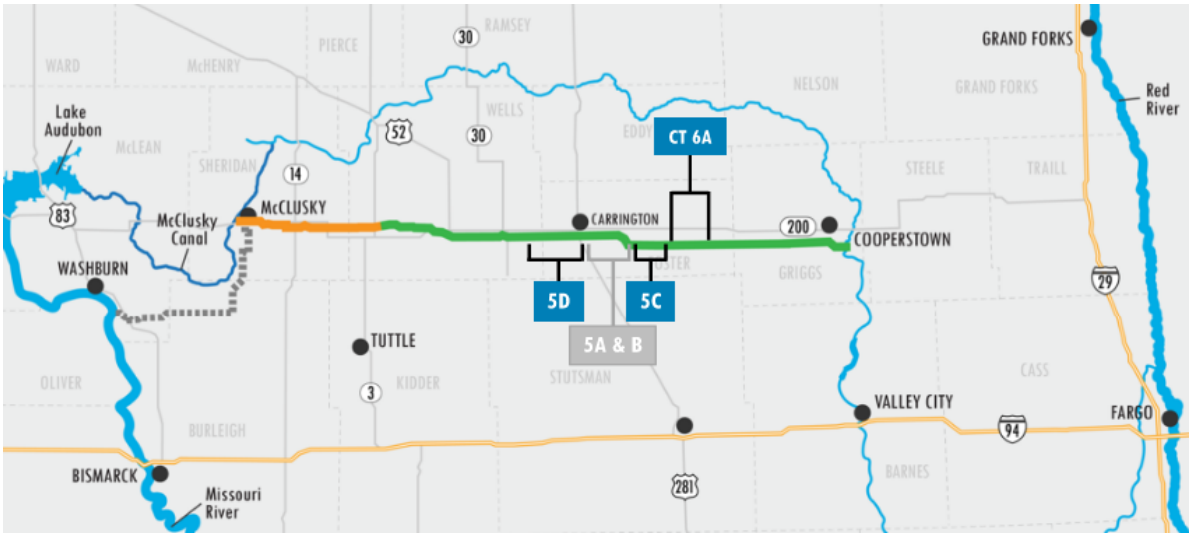


Figure 1 – Map of Transmission Pipeline Contracts

3. It is anticipated that the pipelines designed under Task Orders 5333 and 5360 will be publicly advertised and bid lettings held in July and August 2023. The goal is to have pipe on site and ready to be installed as early as possible in the spring of 2024. Garrison Diversion will hire up to three general contractors – one for each contract – to install the pipe.

4. This Task Order includes field services for landowner interface/communication as the construction project will impact cultivated farm ground. A key focus of field services provided herein will be to monitor the segregation of excavated soil and the restoration of the soil profile to a condition as similar as possible to pre-construction conditions. Engineer will employ a soil scientist to make sure work is progressing according to specification requirements.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Garrison Diversion and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of construction phase services associated with the CDs that were prepared and bid under Task Orders 5333 and 5360.

3. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

4. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided by Engineer, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of service and associated fee estimate. Services exceeding the quantities identified in Basic Services or Special Services are considered Additional Services.

IV. BASIC SERVICES

Basic Services of this Task Order are organized into major tasks as follows:

- Task 1 – Task Order Management and Administration
- Task 2 – Special and Third-Party Meetings
- Task 3 – Surveying, Field Testing, and Factory Inspection Services
- Task 4 – Engineering Services During Construction
- Task 5 – Construction Observation

1. Task 1 – Task Order Management and Administration

This task includes overall project management and administrative services during the construction phase of the project Specific services to be performed by Engineer are as follows:

A. Task Order Setup and Work Plan Development. Engineer will develop a Project work plan that includes the scope, schedule, and budget. Engineer will conduct a virtual overall Project kick-off meeting with the team.

B. Task Order Management. Engineer will provide management services necessary for execution of the Task Order, including efforts required for proper resource allocation, schedule development and monitoring, budget review and control, Owner coordination, and other standard and customary activities required for timely completion of the Work. Engineer will:

i. Administer the Task Order. Perform general administrative duties associated with the Task Order, including general correspondence, day-to-day contact and coordination, administration, and monthly invoicing in a form that is acceptable to Owner.

ii. Manage Subconsultants. Engineer will monitor subcontractor progress, review/ approve invoices, oversee adherence to the approved quality assurance/quality control (QA/QC) plan, monitor adherence to document preparation standards, and generally oversee subconsultants' performance.

iii. Assemble Engineering Progress Reports/Invoices. Prepare monthly engineering invoices to coincide with progress reports.

C. Communication and Coordination. Overall project communications and coordination support during construction will be provided by Engineer. Engineer will utilize Engineer's standard construction management tools to track the status of correspondence, requests for information (RFIs), request for proposals (RFPs), submittals, change orders, potential change orders, claims, field orders, Contractors monthly invoices, permits, etc.

2. **Task 2 – Special and Third-Party Meetings**

Engineer or Engineer's consultant will prepare materials for GDCD and if requested attend and present Project information at in-person third-party meetings and calls with the following stakeholders:

A. One joint meeting with the State Engineer and North Dakota State Water Commission,

B. Three meetings with Foster County Commissioners,

C. Three meetings with Northern Plains Electric Cooperative,

D. Three meetings with Greater Ramsey Water District,

E. One meeting with Pembina Cochin Pipeline Company,

F. One meeting with Alliance Pipeline,

G. One Meeting with WBI Energy, and

H. Three meetings with Dakota Central Telecommunications.

3. **Task 3 – Surveying, Field Testing, and Factory Inspection Services**

The objective of the Field Services task is to perform miscellaneous on-site field activities to support construction and closeout of Contracts 5C, 5D and 6A.

A. Field Surveying. Engineer will provide the following field surveying services during construction.

i. Limited Topographic Surveying. Supplemental field surveying will be completed, on an as-needed basis, to precisely define significant surface and drainage features present at the site. Engineer will provide these field surveys to establish horizontal coordinates and vertical elevations of topographic features impacting pipeline installation. Up to four two-day trips and 80 crew hours are dedicated for this task.

ii. Location Surveys. Engineer will provide field pre-construction layout surveys to establish horizontal coordinates and vertical elevations of structures and utilities. Those services are discussed below – layout and as-built surveying. All other surveying necessary for completion of construction is the responsibility of the Contractors.

(a) Layout Surveying. Engineer will provide layout surveying to:

(i) Define the location and elevation of the top of the pipeline at 100-foot intervals and at horizontal and vertical points of inflection, and

(ii) Locate designated easements at 200-foot intervals.

(b) As-Built Surveying. Engineer will survey constructed and installed facilities to record characteristics (x-y-z coordinates) as built by Contractors. Engineer will provide Contractors a list of data it intends to collect for record documents. Survey information will define the location and elevation of the top of the pipeline at 100-foot intervals, at horizontal and vertical points of inflection, and at valves and other pipeline appurtenances. Top of pipe will be surveyed using a high accuracy mapping-grade global positioning system (GPS) unit prior to trench backfilling.

B. Professional Soil Classification. One of Garrison Diversion's critical success factors for the RRVWSP is landowner relations so an emphasis is placed on restoration of agricultural land impacted by RRVWSP construction. The goal is to restore land affected by construction to as near pre-construction condition as possible. To that end, a North Dakota licensed professional soil classifier was engaged during design to guide the engineering team in development of relevant specifications. A currently registered professional soil classifier in North Dakota will perform this work. The specifications developed in consultation with the professional soil classifier covered construction work from stripping of soil through re-placement of soil back into the trench section and re-establishment of a vegetative cover. To make sure Contractors execute the pipeline installation work satisfactorily as it relates to soil management, the professional soil classifier will:

i. Conduct Soil Identification Training. At project commencement and annually thereafter, plan, organize, and conduct soil identification training for the Project teams. Representatives of the Contractors, Owner, and Engineer will attend so parties understand the requirements of the specifications and Garrison Diversion's expectations for easement restoration. The concept of Topsoil, Subsoil, and Other Soil will be explained. Simple field techniques and tools will be demonstrated. Natural soil and landscape variability and the limitations of large construction equipment will be discussed. Potential problem areas found along the route will be discussed to reduce potential contamination of Topsoil during the segregation process. Garrison Diversion will dig demonstration pits for the professional soil classifier use for training.

ii. Complete Periodic Inspections and Quality Review. Upon initiation of field work, the professional soil classifier will work closely with the Contractors to appropriately apply the concepts of Topsoil, Subsoil and Other Soil to the construction process. This will help ensure quality stripping, excavation, and stockpiling of these materials. After soil replacement, the professional soil classifier will evaluate the soil material replacement process in selected areas and recommend to the Engineer appropriate actions for the Contractors to undertake to correct deficiencies, if any. As construction proceeds, it is expected the professional soil classifier's field input will be reduced and only periodic

inspections will be needed. If the Contractors encounters problematic areas, the professional soil classifier will provide guidance through the Engineer.

C. Drone-Based Video Monitoring. Video the construction job site using drone-based video equipment producing videos using a minimum 12-megapixel resolution camera. Provide a drone and operator with proper certifications and licenses for both federal and local jurisdictions. Drone video will be collected as follows:

- Pre-construction after the Contractors' notice to proceed is issued and no more than one month before field construction activities commence.
- Monthly active construction monitoring consisting of pipeline installation, which is assumed to be 18 months in duration for each segment (not sequential accounting for winter shutdowns). The last collection for this bullet will be at or near substantial completion of the project. (17 videos)
- Post-construction at or near the time of completion of all work when Projects are ready for final payment to document the restoration of disturbed areas.
- Post-Project completion at or near the time of the warranty inspection to document condition of the easement and the effectiveness of Contractors' restoration work.

D. Pipe Manufacturers Site Visits and Inspections. Engineer will visit the pipe fabrication facilities to inspect the pipe, lining, and coating after production.

- Visit the pipe fabrication facilities to inspect pipe manufacturing and the manufacturer's quality assurance / quality control program.
- Inspect and verify coating and lining integrity and thickness prior to shipment.
- Engineering and owner representatives will attend up to three two-day factory inspections of pipe manufactures.

E. Corrosion Protection Systems Inspection and Testing. Engineer will provide a corrosion protection system design engineer to verify the installation of the pipe and trenchless crossings' corrosion protection system. As part of those services, Engineer will:

- Provide inspections of the impressed current corrosion protection system for the pipe and the sacrificial anode cathodic protection system for the tunneled crossing casing pipe(s) during construction and installation.
- Provide a final inspection and commissioning of the corrosion protection system. Verify the installed systems are functioning as designed.
- Prepare a report documenting the results of the corrosion protection system testing results of commissioning activities.
- Train Garrison Diversion staff on design intent, installation and operational requirements, and periodic testing needed to make sure system is functioning properly.
- Participate in the warranty inspection testing and reporting on the system's operation immediately prior to expiration of the Contractors' correction period.

F. Independent Construction Materials Testing. Provide the services of an independent testing laboratory to perform inspections and tests of samples and materials required by the CDs (not including tests required of the Contractor). It is assumed that pipe installation will take approximately 60 weeks. During pipe installation, testing lab(s) will make two to three trips per week for each pipeline contract to provide the specified testing. A total of 175 trips per pipeline contract have been budgeted for the work with each trip requiring a half-day's effort.

- Provide laboratory and field testing of aggregate and backfill material.
- Provide laboratory and field testing of concrete, grout, flowable fill, and other cementitious material.
- Review and provide the Owner findings and reports generated by the independent testing laboratories.

G. Independent Welding Verification. Provide the services of an independent welding inspection firm to randomly inspect and test a minimum of 25 percent of pipe joint welds with non-destructive methods.

H. Field Delineation of Wetlands. Engineer using its consultant will delineate USACE jurisdictional wetlands within the pipeline easement and shown on the CDs for each project. Boundaries of jurisdictional wetlands will be staked by consultant so that Contractors can erect construction fencing or barricades protecting the area as required by the CDs. Engineer will survey and record boundary information corresponding to the fencing erected by the Contractors.

4. **Task 4 – Engineering Services During Construction**

Engineer will perform services during the construction phase of the project. By performing these services, Engineer does not have the authority or responsibility to supervise, direct, or control the Contractors' work or the Contractors' means, methods, techniques, sequences, or procedures of construction.

Engineer and its Consultants will implement Garrison Diversion's project management information system (PMIS), e-Builder, and use this system to administer construction phase services. Contractors hired to install the pipeline will also be required this PMIS system. These requirements are included in the CDs.

Engineer also does not have authority or responsibility for safety precautions and programs incidental to the Contractors' work or for any failure of the Contractors to comply with laws, regulations, rules, ordinances, codes, or orders applicable to the Contractors furnishing or performing the Work.

Engineer will provide services during construction from the Contractors' notice to proceed through final completion, with the Contractors' schedules set as follows:

- Notice to proceed: Sept. 10, Sept 24, and Oct. 8, 2023, for 5C, 5D, & 6A, respectively

- Start of field work: May 1, 2024 (no earlier than)
- Complete pipe installation: October 31, 2025
- Achieve Substantial Completion: May 29, 2026
- Projects Complete and Ready for Final Payment: July 31, 2026

If Contractor's schedules are extended for any reason, Engineer will provide services during the extension as Additional Services upon written approval of Garrison Diversion. Under these circumstances, Engineer's construction services task order will be amended for the additional services necessary to administer and inspect the Contractors' work over the Contractors' extended schedule. Specific engineering services during construction to be performed by Engineer are as follows:

A. Progress Reporting. Engineer will prepare a digital Project progress report each month there is active construction Work underway. The progress report will generally include most, but not all, of the following:

- Executive summary
- Summary of the Contractors' progress
- General condition of the Work
- Critical issues and resolutions/proposed resolutions to such issues
- Cost summary, including project budget status
- Cash flow
- Schedule summary
- Submittals, RFI logs, change request logs, list of potential/accepted scope changes
- A look-ahead schedule for upcoming activities
- Digital progress photographs and videos
- Other issues and concerns

B. Construction Administration Support Services. Engineer and its consultant will administer engineering services during construction, including those activities identified below. Documentation generated during construction will be processed, logged, tracked, reviewed, and posted by Engineer, Owner, and Contractors within a system furnished by Engineer.

i. Engineer's Staffing During Construction. Engineer will submit the following information to Owner soon after commencement of construction.

- Field staffing schedule
- Cash flow projections
- Standard report formats

ii. Contractors' Schedule. Determine if Contractors' schedule is consistent with the CDs with emphasis on milestone dates and construction sequencing, as applicable, during construction. Review to verify correct sequencing is incorporated as to road crossing and make sure proposed scheduled complies with township and county requirements.

Engineer's review does not include an analysis of Contractors' approach, means, or methods of construction to perform the Work specified in the CDs.

(a) Review and comment on the Contractors' initial construction schedule

(b) Review and comment on updated monthly schedules

iii. Contractors' Estimates of Monthly Payments. Review the Contractors' initial and updated schedule of estimated monthly payments and advise Owner as to acceptability.

iv. Contractors' Guarantees, Bonds, Test Reports, and Certificates. Receive guarantees, bonds, and certificates of inspection, tests and approvals, and other documentation that is to be assembled by the Contractors. Review for completeness in accordance with the CDs and transmit to Owner.

v. Submittals Reviews. Review drawings and other data submitted by the Contractors as required by the CDs. Engineer's review will be for general conformity to the CDs and does not relieve the Contractors of any of his contractual responsibilities. Such reviews do not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. For the purposes of fee development, Engineer assumes Contractors will each submit up to 100 submittals, including both submittals and re-submittals, for review and comment by Engineer. Up to 300 submittals will be processed across the three projects.

vi. RFPs. Develop and issue RFPs for Owner-requested changes to the design, for changes or modifications resulting from Contractor-submitted RFIs, or for other reasons where additional work or changes to the Work are requested of the Contractors. For the purposes of fee development, Engineer will develop up to four RFPs for each project for pricing and determination of schedule impacts, if any, by Contractors. A total of 12 RFPs is anticipated.

vii. RFIs, Change Order Requests, and Claims. Engineer will receive and process on behalf of the Owner RFIs, change order requests, and claims submitted by Contractors. Specific services to be provided for each of these types of Contractors' submittals are as follows:

(a) RFIs. Interpret CDs when requested by Owner or Contractor. Requests for clarification or information shall be in writing and copies of Engineer's response will be distributed. For the purposes of fee development, Engineer assumes Contractors will submit up to 20 RFIs for each project for review/response by Engineer. Up to 60 RFIs are anticipated.

(b) Change Order Requests and Change Orders. Review Owner- or Contractor-initiated requests for Project changes. For the purposes of fee development, Engineer assumes Contractors will submit up to 10 change order requests for

each project for Engineer to review and provide responses. Of the change order requests submitted, Engineer will prepare on behalf of the Owner up to five formal change orders for each project assembled from approved change order requests (up to 15 total Change Orders). Change order requests' review and change order processing will generally involve the following:

- Review of documentation against requirements of the CDs,
- Preparation of necessary additional documentation,
- Evaluation of cost and scheduling,
- Review of requests for extensions of Contract Time, if any,
- Owner negotiation assistance for the purpose of obtaining a fair price for the additional Work from Contractors or for obtaining an equitable deduct for work removed from the Contract,
- Submittal of an acceptance/rejection recommendation to Owner, and
- Preparation and processing of the formal change order.

(c) Claims. Act on claims of Owner and the Contractors relating to the acceptability of the Work or the interpretation of the requirements of the CDs. For the purposes of fee development, Engineer assumes Contractors will submit up to two claims for each project for review and response by Engineer for a total of up to six claims.

viii. Field Orders. Prepare Field Orders to incorporate changes to the Work or new work added into the CDs by Owner or Contractor. For the purposes of fee development, Engineer will prepare up to 15 field orders for each project for implementation by Contractor for a total of up to 45 Field Orders.

ix. Contractors Pay Requests. Review and process the Contractors' monthly payment requests (also known as an applications for payment), and forward to Owner, if appropriate. Engineer's review will be for the purpose of making a full independent mathematical check of the Contractors' payment request. Engineer is responsible for verifying the quantities of work completed and the amount of stored material, which are the basis of the Contractors' payment request. For the purposes of fee development, Engineer will process up to 30 pay requests for each project submitted by Contractors for a total of up to 90 pay requests.

x. Funding Agency Submittals. Assist Owner in completing forms for funding agency partial payment requests and for the final payment request.

xi. Lien Releases. Assist Owner in securing lien releases from the Contractors for its subcontractors, suppliers, manufacturers, etc. prior to final payment. Generally, lien release waivers will be required when the value of the services provided, material furnished, equipment manufactured, etc. exceeds 1 percent of the Contract Amount. Owner reserves the right to require other lien releases for its convenience and protection if requested of the Contractor.

xii. Consent of Surety to Final Payment. Assist Owner in applying for Surety's consent to final payment.

xiii. Conformed to Construction Records Drawings. Upon completion of the Project, update Issued for Construction drawings to reflect changes made, if any, to drawing content. Each drawing will be identified by a unique sheet number. The following will be furnished to the Owner:

- Native drawing files in AutoCAD Civil 3D or REVIT format, as applicable,
- Compiled and bookmarked pdf file of the Conformed-to-Construction Records drawing set,
- Hardcopy drawing sets, and
- A hardcopy Mylar set suitable for long-term storage and archiving.

Conformed-to-Bid specifications are excluded from the Conformed-to-Construction Records documentation; they will not be updated from the Issued for Construction edition.

C. Field Support Services. Engineer and its consultant will provide field support services during periods of active construction, including those activities and services identified below.

i. Construction Progress Meetings and Site Visits. Engineer's project manager and/or project engineer will periodically visit the construction site to observe progress of the Work and to consult with the Owner and Contractors during active construction periods. Engineer will observe Work progress and quality advising Owner and Contractors of problems or deficiencies observed, if any. A total of 35 in-person meetings and associated site visits for each project are included. Meetings are assumed to occur on a bi-weekly basis during active pipe installation.

ii. Discipline-Specific Site Visits. Project design team personnel with applicable areas of responsibility will visit the site to observe construction and to confer with Owner and Contractor. Visits to the construction site will be appropriate for Work underway. Up to 6 site visits for each project by Engineer's specialty office staff are anticipated during construction for a total of up to 18 site visits.

iii. Digital Photographic and Video Documentation. Assemble a digital photographic and video record of the Project's construction, including the following:

(a) Pre-construction Photographs. Take digital photographs of the construction site prior to the beginning of Work to assist in defining the original condition of existing physical features. The subject matter of photographs will include, but not be limited to, pavement, trees, ditches, fences, sidewalks, buildings, and structures, as applicable, that are located within and near (within 100 feet property lines or easements) proposed construction.

(b) Monthly Photographs. Engineer will provide digital photographs each month to document construction progress. Photographs will generally show views of construction progress and elements that will be covered by subsequent construction.

(c) Video Documentation. Engineer will record digital videos to document existing conditions and construction progress.

iv. Punch List. Upon Contractors' written request for a certificate of substantial completion, inspect the construction Work and prepare a punch list of those items to be completed or corrected before final completion of the Work. Submit results of the inspection to Owner and Contractors. Engineer will conduct the 8-hour Substantial Completion inspection for each project.

v. Final Inspection. Upon completion or correction of the items of Work on the punch list, conduct a final inspection to determine if the Work is complete. Provide a written recommendation to Owner concerning final payment, including a list of items, if any, that Contractors must complete prior to Owner making such payment. Engineer will conduct the 8-hour Final Completion inspection for each project.

vi. Warranty Inspection. Approximately 11 months after Final Completion during the CDs' correction period complete a warranty inspection of the Work. Provide a written report to Owner of deficient items that Contractors must address in accordance with the warranty provisions of the CDs. Engineer will conduct the 8-hour warranty inspection for each project. Inspect and re-test the cathodic protection system; prepare report documenting the results of the cathodic protection system testing.

5. **Task 5 – Construction Observation**

Engineer will furnish full-time field construction observation management, field engineering, Resident Project Representation (RPRs), and office administration during periods of active pipeline installation and trenchless construction. Full-time staffing will not be provided for easement restoration and final cleanup if these efforts are undertaken after pipe installation is complete.

RPRs will be responsible for observing, inspecting, and documenting construction of each of the projects. RPRs will be present at the Work sites during active construction.

Engineer's construction observation field staff positions and organization are shown in Figure 2 below:

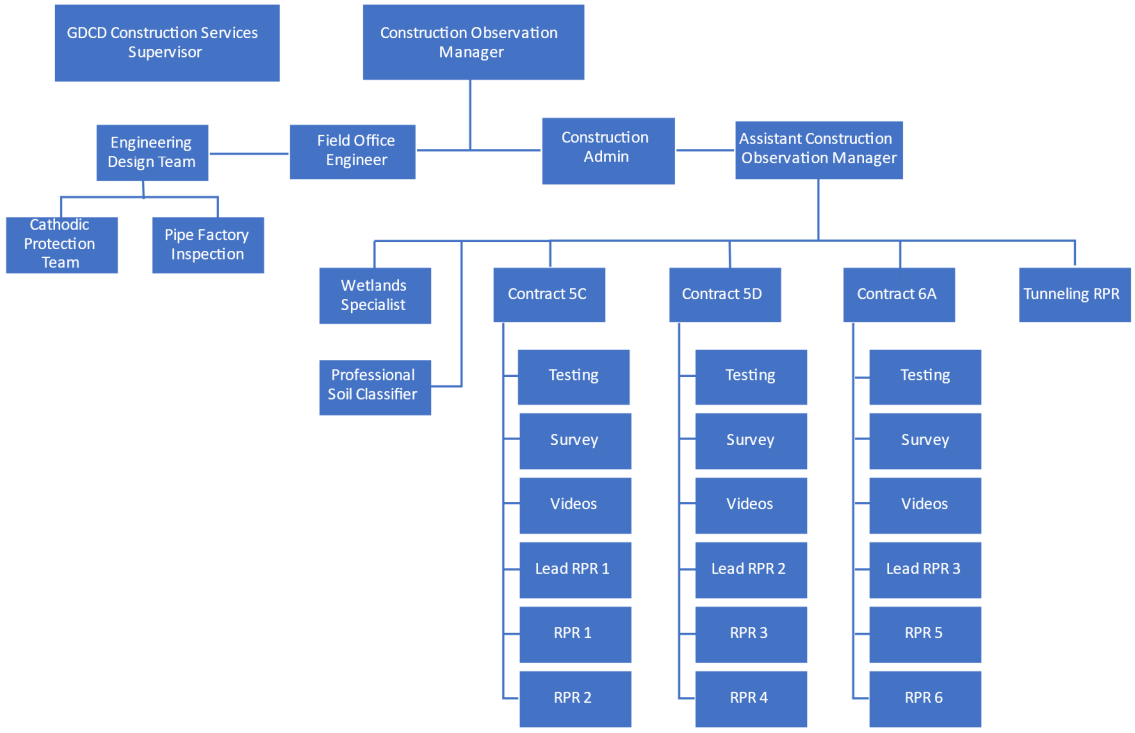


Figure 2 – Construction Observation Field Staffing and Organization

A construction schedule for completion of the work based upon the Contact Times included in the CDs was assumed for the development of Engineer's fee. Based on the anticipated construction schedule, the RPR level of effort assumptions are:

- Pipeline Installation: To cost this scope of work and associated level of effort, it was assumed that up to 27-miles of pipeline across the three contracts will require 60 weeks (14 months) of full-time RPR services for installation of the pipeline and 18 weeks (4 months) of full-time RPR services for achieving Substantial Completion testing and restoration of the easement. It is further assumed that each Contractor will utilize one pipeline crew one construction season and two pipeline crews during a second construction season. A lead RPR and two additional supporting RPRs will be on site 50 hours per week in May, 60 hours per week from June thru October, and again 50 hours per week in November. No work is anticipated from December through April. A reduced staff will provide observation during testing, ancillary systems buildout, easement restoration, and cleanup activities in 2026. These services are estimated to require 50 hours per week.

- Tunnel Shaft Construction: To cost this scope of work and associated level of effort, it is assumed that the construction and removal of tunnel shafts (working and receiving) will require 60 weeks of full-time RPR services. It is assumed that an RPR will be on site six days per week at an average of 10 hours per day for 22 weeks of each season and 50 hours per week for the preceding 4 and subsequent 4 weeks.

- Tunneling Operation: To cost this scope of work and associated level of effort, it is assumed that the tunneling operation will require 10 hours per day six day per week RPR services for 60 weeks of trenchless work. Eight trenchless crossing are included in the three projects with a total length of approximately 2,000 feet.

Specific services performed by the RPRs will be as follows:

A. Site Observations and Liaison with Owner and Contractors. Duties include the following:

i. Conduct on-site observations of the general progress of the Work to assist Engineer in determining if the Work is proceeding in accordance with the CDs.

ii. Serve as Engineer's liaison with the Contractors working principally through the Contractors' superintendent assisting Engineer in providing interpretations of the CDs.

iii. Assist Engineer in serving as Owner's liaison with the Contractors when the Contractors' operations affect Owner's or landowner's on-site operations.

iv. As requested by Engineer, assist in obtaining from Owner additional details or information when required at the jobsite for proper execution of the Work.

v. Report to Engineer giving opinions and suggestions based on the RPR's observations regarding defects or deficiencies in the Contractors' work and relating to compliance with drawings, specifications, and design concepts.

vi. Advise Engineer and the Contractors or its superintendent immediately of the commencement of any work requiring a submittal or sample submission if the submission has not been accepted by Engineer.

vii. Monitor changes of apparent integrity of the site (such as differing subsurface and physical conditions, existing structures, and site related utilities when such utilities are exposed) resulting from construction related activities.

viii. Observe pertinent site conditions when the Contractors maintains that differing subsurface and physical conditions have been encountered, document actual site conditions. Review and analyze Contractors' claims for differing subsurface and physical conditions.

ix. Verify that the Contractors has contacted landowners and utilities in the general construction area and advised them of Contractors' schedule. Assist in coordinating scheduling of utility activities to minimize conflicts with Owner's activities.

x. Establish and furnish the Contractors with necessary baselines and control points, which will be used as datum for the Work.

xi. Visually inspect materials, equipment, and supplies delivered to the worksite. Reject materials, equipment, and supplies that do not conform to the CDs and accepted submittals.

xii. Coordinate on-site materials testing services during construction. Copies of testing results will be forwarded to Owner and Engineer for review and information.

xiii. Observe field tests of equipment, structures, and piping and review the resulting reports commenting to Engineer, as appropriate.

xiv. Outside Liaison. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project. Record the names of the inspectors and the results of the inspections and report to Engineer.

B. Meetings, Reports, and Document Review and Maintenance. Duties include the following:

i. Attend the preconstruction conference, and assist Engineer in explaining administrative procedures, which will be followed during construction.

ii. Schedule and attend monthly progress meetings, and other meetings with Owner and the Contractor, when necessary, to review and discuss construction procedures and progress scheduling, engineering management procedures, and other matters concerning the Project.

iii. Submit to Engineer, with a copy to Owner, daily reports and periodic construction progress reports containing a summary of the Contractors' progress, general condition of the Work, problems, and resolutions or proposed resolutions to problems.

iv. Review the progress schedule, schedule of shop drawings submissions, and schedule of values prepared by the Contractor, and consult with Engineer concerning their acceptability.

v. Report to Engineer regarding Work which is known to be defective, or which fails any required inspection, test, or approval, or has been damaged prior to final payment; advise Engineer whether the Work should be corrected or rejected, should be uncovered for observation, or require special testing, inspection, or approval.

vi. Review Contractors' payment requests with the Contractors for compliance with the established procedure for their submission and forward them with recommendations to Engineer noting particularly their relation to the schedule of values, work completed, and materials and equipment delivered to the site but not incorporated into the Work.

vii. Record date of receipt of approved submittals and samples. Receive samples (when they are received at the site by the Contractor) and notify Engineer of their availability for examination.

viii. During the Work, verify that specified certificates, operation and maintenance (O&M) manuals, and other data required to be assembled and furnished by the Contractors are applicable to the items installed; deliver RPR's field files to Engineer for his review and forward to Owner prior to final acceptance of the Work.

ix. Maintain a marked set of drawings and specifications at the jobsite based on data provided by the Contractor. This information will be combined with information from the record documents maintained by the Contractor, and a master set of documents conforming to construction records will be produced.

x. Review certificates of inspections, tests, and related approvals submitted by the Contractors as required by laws, rules, regulations, ordinances, codes, orders, or the CDs, but only to verify that their content complies with the requirements of, and the results certified indicate compliance with, the CDs. This service is limited to a review of items submitted by the Contractors and does not extend to a determination of whether the Contractors has complied with all legal requirements.

xi. Maintain the following documents:

- Correspondence files
- Reports of jobsite conferences, meetings, and discussions among Engineer, Owner, and Contractor
- Submittals, shop drawings, and samples
- Reproductions of original CDs
- Addenda
- RFIs
- RFPs
- Change order requests
- Change orders
- Field orders
- Additional drawings issued after execution of the CDs
- Progress reports
- Names, addresses, and telephone numbers of contractors, subcontractors, and major suppliers of material and equipment
- A diary or logbook of events observed by the RPR at the jobsite, which will remain the property of Engineer, including the following information:
    - Days the Contractors worked on the jobsite
    - Contractors' and subcontractors' personnel on jobsite
    - Construction equipment on the jobsite
    - Observed delays and causes
    - Weather conditions
    - Data relative to claims for extras or deductions
    - Daily activities
    - Observations pertaining to the progress of the Work
    - Materials received on the jobsite

D. Assistance in Certification of Substantial Completion. Duties include the following:

i. Before Engineer issues a Certificate of Substantial Completion, submit to the Contractors a list of items observed to require completion or correction.

ii. Assist Engineer in conducting a final inspection in the company of Owner and the Contractors and prepare a final list of items to be completed or corrected.

iii. Verify items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

V. SPECIAL SERVICES

There are no special services included as part of this scope.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner. Unless noted otherwise, deliverables will be in the form of electronic pdf files.

1. Task 1 – Task Order Management and Administration

   A. Construction services work plan, including resident project representation

   B. Monthly engineering invoices to go with progress reports

2. Task 2 – Special and Third-Party Meetings

   A. Project information for presentation/handout during stakeholder meetings

3. Task 3 – Field and Factory Services

   A. Webcam video access for facility projects

   B. Aerial videos of site

   C. Soil investigation report

   D. Manufactured pipe inspection report

   E. Cathodic protection inspection report

4. Task 4 – Engineering Services During Construction

   A. Monthly progress reports (digital reports)

   B. Construction Administration Support Services (electronic pdf files unless noted otherwise)

      i. Engineering staffing report
      i. Contractors' initial and monthly schedule update review comments
      ii. Contractors' schedule of payment review comments

iii. Contractors' guarantees, bonds, test reports, and certificates review comments
iv. Submittal review comments
v. Review and process RFPs
vi. Process RFIs and prepare responses
vii. Review and process change order requests; prepare formal change orders
viii. Review and process claims
ix. Review and process field orders
x. Review and process Contractors' pay requests
xi. Assist with funding agency submittal forms
xii. Review and process lien releases
xiii. Assist with securing consent of surety to final payment Prepare
xiv. Conformed to Construction Record Drawings (two hard copies, one Mylar copy, electronic pdf files, native drawing files (AutoCAD Civil 3D or REVIT format))

D. Field Support Services (electronic pdf files unless noted otherwise)

i. Preconstruction meeting agenda (included with MS Outlook meeting invitations) and notes (electronic pdf files), as warranted
ii. Photos of progress and pre-construction (jpeg files provided on USB drive)
iii. Video documentation (mpg files provided on USB drive)
iv. Substantial Completion inspection and punch list
v. Final payment recommendation
vi. Warranty inspection report

5. Task 5 – Resident Project Representative Services

A. Daily reports and periodic summary construction progress reports (electronic pdf files)

VII. ADDITIONAL SERVICES

The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope of work, an amendment to this Task Order or execution of a separate Task Order with the new work will be necessary. The following items are specifically excluded from Basic and Special Services:

1. Construction administration and resident project representation for any period exceeding the construction duration(s) specified in the CDs.

2. Observation of Contractors' efforts by the RPR undertaken on Sundays or client-observed holidays.

3. Extended overtime work schedules (efforts that exceed the budget assumptions made in this task order) as originally scheduled by Contractors at commencement of construction or subsequently implemented by Contractors with Owner concurrence to regain schedule.

4. There are no known hazardous materials or hazardous environmental site conditions along the pipeline alignment. If any hazardous conditions are encountered during pipeline installation, professional services necessary are considered additional services.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Lead landowner communication and coordination efforts with assistance provided by Engineer, as requested.

2. Coordinate with and inform regulatory and permitting agencies, as applicable, of construction initiation and progress.

3. Dig demonstration pits for professional soil classifier as noted earlier in this Task Order.

IX. FEE

The total fee for Basic Services provided under this Task Order is Sixteen Million Sixty-seven Thousand Dollars ($16,067,000). A worksheet showing the fee estimate and level of effort by task is included in Attachment A.

X. PERFORMANCE SCHEDULE

Basic and Special Services of this Task Order will be completed by July 31, 2026, coinciding with the completion dates of each project, provided a notice to proceed is issued to the Contractors no later than October 6, 2023. Warranty services must be completed prior to expiration of the Contractors' 1-year correction period.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Garrison Diversion and Engineer for Professional Services dated January 17, 2008, is incorporated by reference.

2. Attachment A – Fee Estimate Worksheets

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of our Task Order agreement, please print and sign this document. You should retain one copy for your files and return an electronic copy via email to Paul Boersma (BoersmaPM@BV.com) with Black & Veatch Corporation.

By: _____	By: _____
Duane DeKrey, General Manager Garrison Diversion Conservancy District	Paul Boersma, Associate Vice President Black & Veatch Corporation
Dated: _____	Dated: _____

ATTACHMENT A

Fee Estimate Worksheets

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 5633 - TPE Cts 5C & 5D RTP Ct 6A CPS
BV Project No. 415094
Black & Veatch and Consultants

Task	Lead Firm	Position	P	PMS	PM	EM	TE	DE1	DE3	SE1	CAD1	CAD2	CMS	CM2	CM3	RPR2	RPR3	COS1	COS2	PJC2	PA1	ADM1	SE	QC2	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail
		Task Description	Principal	Project Manager Senior	Project Manager	Engineering Manager	Technical Expert	Design Engineer 1	Design Engineer 3	Staff Engineer 1	CAD Technician 1	CAD Technician 2	Construction Manager Senior	Construction Manager 2	Construction Manager 3	Resident Project Rep 2	Resident Project Rep 3	Construction Office Support 1	Construction Office Support 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Safety Engineer	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost	Hobacca	Misc	Copies
IV. BASIC SERVICES																													
1		Task Order Management and Administration	198	648	120	240	0	0	0	0	0	0	0	0	0	0	0	0	0	236	472	224	216	90	2,444	$542,918	$12,049	$506	$0
		CONTRACT 5C																							0	$0	$0		
A	BV	Task Order Setup and Work Plan	20	80	40	40														20	40	8	8	30	286	$70,142	$1,410	$506	
B	BV	Task Order Management																							0	$0	$0		
i	BV	Administer the Task Order																		72	72		64		208	$32,336	$1,025		
ii	BV	Manage Subconsultants	12	60		40																72			184	$42,168	$907		
iii	BV	Assemble Engineering Progress Reports/Invoices	18	36																	72				126	$25,020	$621		
C	BV	Communication and Coordination	16	40																					56	$17,136	$276		
		CONTRACT 5D																							0	$0	$0		
A	BV	Task Order Setup and Work Plan	20	80	40	40																	8	30	218	$61,398	$1,075		
B	BV	Task Order Management																							0	$0	$0		
i	BV	Administer the Task Order																		72	72				144	$19,152	$710		
ii	BV	Manage Subconsultants	12	60		40																72	64		248	$55,352	$1,223		
iii	BV	Assemble Engineering Progress Reports/Invoices	18	36																	72				126	$25,020	$621		
C	BV	Communication and Coordination	16	40																					56	$17,136	$276		
		CONTRACT 6A																							0	$0	$0		
A	BV	Task Order Setup and Work Plan	20	80	40	40																	8	30	218	$61,398	$1,075		
B	BV	Task Order Management																							0	$0	$0		
i	BV	Administer the Task Order																		72	72				144	$19,152	$710		
ii	BV	Manage Subconsultants	12	60		40																72	64		248	$55,352	$1,223		
iii	BV	Assemble Engineering Progress Reports/Invoices	18	36																	72				126	$25,020	$621		
C	BV	Communication and Coordination	16	40																					56	$17,136	$276		
2		Special and Third-Party Meetings	0	8	0	16	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	$10,296	$236	$0	$0
A	BV	State Engineer and ND State Water Commission (1)		1		1				2															4	$872	$20		
B	BV	Foster County Commissioners (3)		1		3				4															8	$1,702	$39		
C	BV	Nothern Plains Electric Cooperative (3)		1		3				4															8	$1,702	$39		
D	BV	Greater Ramsey Water District (3)		1		3				4															8	$1,702	$39		
E	BV	Pembina Cohin Pipeline Company (1)		1		1				2															4	$872	$20		
F	BV	Alliance Pipeline (1)		1		1				2															4	$872	$20		
G	BV	WBI Energy (1)		1		1				2															4	$872	$20		
H	BV	Dakota Central Telecom Communications (3)		1		3				4															8	$1,702	$39		
3		Surveying, Field Testing, & Factory Insp Services	0	88	0	224	104	516	0	512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,444	$308,508	$7,119	$10,000	$0
A	AE2S	Field Surveying																							0	$0	$0		
i	AE2S	Limited Topographic Surveying		2		8																			10	$2,724	$49		
ii	AE2S	Location Surveys																							0	$0	$0		

Task	Lead Firm	Position	P	PMS	PM	EM	TE	DE1	DE3	SE1	CAD1	CAD2	CMS	CM2	CM3	RPR2	RPR3	COS1	COS2	PJC2	PA1	ADM1	SE	QC2	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail
		Task Description	Principal	Project Manager Senior	Project Manager	Engineering Manager	Technical Expert	Design Engineer 1	Design Engineer 3	Staff Engineer 1	CAD Technician 1	CAD Technician 2	Construction Manager Senior	Construction Manager 2	Construction Manager 3	Resident Project Rep 2	Resident Project Rep 3	Construction Office Support 1	Construction Office Support 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Safety Engineer	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost	Hobacca	Misc	Copies
(a)	AE2S	Layout Surveying (60 weeks of pipeline construction)		2		8		16																	26	$6,260	$128		
(b)	AE2S	As-Built Surveying		4		8		32																	44	$10,408	$217		
B	PSC	Professional Soil Classification																							0	$0	$0		
i	PSC	Conduct Soil Identification Training (6 sessions)		8		8		4																	20	$5,444	$99		
ii	PSC	Complete Periodic Inspections and Quality Review (monthly)		8		40																			48	$13,008	$237		
C	BV	Drone-Based Video Monitoring (2 units)																							0	$0	$0	$10,000	
D	Accurate	Pipe Manuf Site Visits and Inspections (3 trips @ 2 days)		32		24	24	32		32															144	$35,208	$710		
E	BV	Corrosion Protection Systems Inspection and Testing		8		40		320		80															448	$95,808	$2,209		
F	AET	Independent Construction Materials Testing		16		32		80		240															368	$67,264	$1,814		
G	Braun	Independent Welding Verification		4		16	80	32		120															252	$54,560	$1,242		
H	KLJ	Field Delineation of Wetlands and Consultation		4		40				40															84	$17,824	$414		
4		**Engineering Services During Construction**	**375**	**1,329**	**0**	**2,034**	**0**	**1,308**	**0**	**1,800**	**72**	**360**	**24**	**0**	**0**	**0**	**120**	**0**	**0**	**528**	**0**	**0**	**0**	**0**	**7,950**	**$1,785,372**	**$39,195**	**$0**	**$3,000**
		CONTRACT 5C																							0	$0	$0		
A	BV	Monthly Progress Reports (18)	9	18		18											40								85	$20,254	$419		
B	BV	Construction Administration Support Services																							0	$0	$0		
i	BV	Engineer's Staffing During Construction		16									8												24	$7,344	$118		
ii	BV	Contractor's Schedule																							0	$0	$0		
(a)	BV	Initial Construction Schedule Review		4		8		8												40					60	$11,024	$296		
(b)	BV	Monthly Construction Schedule Reviews (17)		18		36														136					190	$35,140	$937		
iii	BV	Contractor's Estimate of Monthly Payments		4		16																			20	$5,448	$99		
iv	BV	Contractor's Guar, Bonds, Test Reports, and Certs				8		8																	16	$3,880	$79		
v	BV	Submittal Reviews (100)		20		60		120		600															800	$139,080	$3,944		
vi	BV	RFPs (4)		8		16																			24	$6,672	$118		
vii	BV	RFIs, Change Order Requests, and Claims																							0	$0	$0		
(a)	BV	RFIs (20)		10		40																			50	$13,620	$247		
(b)	BV	Change Order Requests & Change Orders (10/5)	20	40		80																			140	$39,480	$690		
(c)	BV	Claims (2)	80	160		80																			320	$94,560	$1,578		
viii	BV	Field Orders (15)		8		30		60																	98	$23,628	$483		
ix	BV	Contractor Pay Requests (30)		15		60																			75	$20,430	$370		
x	BV	Funding Agency Submittals		8																					8	$2,448	$39		
xi	BV	Lien Releases				8																			8	$2,112	$39		
xii	BV	Consent Of Surety to Final Payment		2		8																			10	$2,724	$49		
xiii	BV	Conformed to Construction Records Drawings		4		16					24	120													164	$25,080	$809		$1,000
C	BV	Field Support Services																							0	$0	$0		
i	BV	Construction Progress Meetings and Site Visits (35)	16	96		120																			232	$65,952	$1,144		
ii	BV	Discipline-Specific Site Visits (6)		6		24		240																	270	$61,212	$1,331		
iii	BV	Digital Photographic and Video Documentation																							0	$0	$0		
(a)	BV	Pre-Construction Photographs				4																			4	$1,056	$20		
(b)	BV	Monthly Photographs				18																			18	$4,752	$89		
(c)	BV	Video Documentation				4																			4	$1,056	$20		
iv	BV	Punch List		2		8																			10	$2,724	$49		
v	BV	Final Inspection		2		8																			10	$2,724	$49		
vi	BV	Warranty Inspection		2		8																			10	$2,724	$49		

Task	Lead Firm	Position	P	PMS	PM	EM	TE	DE1	DE3	SE1	CAD1	CAD2	CMS	CM2	CM3	RPR2	RPR3	COS1	COS2	PJC2	PA1	ADM1	SE	QC2	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail
		Task Description	Principal	Project Manager Senior	Project Manager	Engineering Manager	Technical Expert	Design Engineer 1	Design Engineer 3	Staff Engineer 1	CAD Technician 1	CAD Technician 2	Construction Manager Senior	Construction Manager 2	Construction Manager 3	Resident Project Rep 2	Resident Project Rep 3	Construction Office Support 1	Construction Office Support 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Safety Engineer	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost	Hobacca	Misc	Copies
		CONTRACT 5D																							0	$0	$0		
A	BV	Monthly Progress Reports (18)	9	18		18											40								85	$20,254	$419		
B	BV	Construction Administration Support Services																							0	$0	$0		
i	BV	Engineer's Staffing During Construction		16									8												24	$7,344	$118		
ii	BV	Contractor's Schedule																							0	$0	$0		
(a)	BV	Initial Construction Schedule Review		4		8		8												40					60	$11,024	$296		
(b)	BV	Monthly Construction Schedule Reviews (17)		18		36														136					190	$35,140	$937		
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v	BV	Submittal Reviews (100)		20		60		120		600															800	$139,080	$3,944		
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viii	BV	Field Orders (15)		8		30		60																	98	$23,628	$483		
ix	BV	Contractor Pay Requests (30)		15		60																			75	$20,430	$370		
x	BV	Funding Agency Submittals		8																					8	$2,448	$39		
xi	BV	Lien Releases				8																			8	$2,112	$39		
xii	BV	Consent Of Surety to Final Payment		2		8																			10	$2,724	$49		
xiii	BV	Conformed to Construction Records Drawings		4		16					24	120													164	$25,080	$809		$1,000
C	BV	Field Support Services																							0	$0	$0		
i	BV	Construction Progress Meetings and Site Visits (35)	16	96		120																			232	$65,952	$1,144		
ii	BV	Discipline-Specific Site Visits (6)		6		24		240																	270	$61,212	$1,331		
iii	BV	Digital Photographic and Video Documentation																							0	$0	$0		
(a)	BV	Pre-Construction Photographs				4																			4	$1,056	$20		
(b)	BV	Monthly Photographs				18																			18	$4,752	$89		
(c)	BV	Video Documentation				4																			4	$1,056	$20		
iv	BV	Punch List		2		8																			10	$2,724	$49		
v	BV	Final Inspection		2		8																			10	$2,724	$49		
vi	BV	Warranty Inspection		2		8																			10	$2,724	$49		
		CONTRACT 6A																							0	$0	$0		
A	BV	Monthly Progress Reports (18)	9	18		18											40								85	$20,254	$419		
B	BV	Construction Administration Support Services																							0	$0	$0		
i	BV	Engineer's Staffing During Construction		16									8												24	$7,344	$118		
ii	BV	Contractor's Schedule																							0	$0	$0		
(a)	BV	Initial Construction Schedule Review		4		8		8												40					60	$11,024	$296		
(b)	BV	Monthly Construction Schedule Reviews (17)		18		36														136					190	$35,140	$937		
iii	BV	Contractor's Estimate of Monthly Payments		4		16																			20	$5,448	$99		
iv	BV	Contractor's Guar, Bonds, Test Reports, and Certs				8		8																	16	$3,880	$79		
v	BV	Submittal Reviews (100)		20		60		120		600															800	$139,080	$3,944		
vi	BV	RFPs (4)		8		16																			24	$6,672	$118		
vii	BV	RFIs, Change Order Requests, and Claims																							0	$0	$0		

Task	Lead Firm	Position	P	PMS	PM	EM	TE	DE1	DE3	SE1	CAD1	CAD2	CMS	CM2	CM3	RPR2	RPR3	COS1	COS2	PJC2	PA1	ADM1	SE	QC2	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail
		Task Description	Principal	Project Manager Senior	Project Manager	Engineering Manager	Technical Expert	Design Engineer 1	Design Engineer 3	Staff Engineer 1	CAD Technician 1	CAD Technician 2	Construction Manager Senior	Construction Manager 2	Construction Manager 3	Resident Project Rep 2	Resident Project Rep 3	Construction Office Support 1	Construction Office Support 2	Project Controls Analyst 2	Project Accountant 1	Administrator 1	Safety Engineer	QA/QC Manager 2	BV Level of Effort (hrs)	BV Labor Cost	Hobacca	Misc	Copies
(a)	BV	RFIs (20)		10		40																			50	$13,620	$247		
(b)	BV	Change Order Requests & Change Orders (10/5)	20	40		80																			140	$39,480	$690		
(c)	BV	Claims (2)	80	160		80																			320	$94,560	$1,578		
viii	BV	Field Orders (15)		8		30		60																	98	$23,628	$483		
ix	BV	Contractor Pay Requests (30)		15		60																			75	$20,430	$370		
x	BV	Funding Agency Submittals		8																					8	$2,448	$39		
xi	BV	Lien Releases				8																			8	$2,112	$39		
xii	BV	Consent Of Surety to Final Payment		2		8																			10	$2,724	$49		
xiii	BV	Conformed to Construction Records Drawings		4		16					24	120													164	$25,080	$809		$1,000
C	BV	Field Support Services																							0	$0	$0		
i	BV	Construction Progress Meetings and Site Visits (35)	16	96		120																			232	$65,952	$1,144		
ii	BV	Discipline-Specific Site Visits (6)		6		24		240																	270	$61,212	$1,331		
iii	BV	Digital Photographic and Video Documentation																							0	$0	$0		
(a)	BV	Pre-Construction Photographs				4																			4	$1,056	$20		
(b)	BV	Monthly Photographs				18																			18	$4,752	$89		
(c)	BV	Video Documentation				4																			4	$1,056	$20		
iv	BV	Punch List		2		8																			10	$2,724	$49		
v	BV	Final Inspection		2		8																			10	$2,724	$49		
vi	BV	Warranty Inspection		2		8																			10	$2,724	$49		
5		**Construction Observation**	**0**	**0**	**0**	**0**	**0**	**0**	**4,400**	**0**	**0**	**0**	**410**	**4,400**	**4,400**	**8,000**	**0**	**1,600**	**1,600**	**0**	**0**	**0**	**0**	**0**	**24,810**	**$4,881,060**	**$122,313**	**$25,000**	**$0**
		OVERALL																							0	$0	$0		
A	BV	Construction Field Staff							4,400				410	4,400	4,400			1,600	1,600						16,810	$3,233,060	$82,873	$10,000	
		CONTRACT 5C																							0	$0	$0		
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)														4,400									4,400	$906,400	$21,692	$5,000	
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)														1,800									1,800	$370,800	$8,874		
C	BV	Meetings, Rts, & Doc Review and Maintenance																							0	$0	$0		
D	BV	Assistance in Certification of Substantial Completion																							0	$0	$0		
		CONTRACT 5D																							0	$0	$0		
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)																							0	$0	$0		
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)														900									900	$185,400	$4,437	$5,000	
C	BV	Meetings, Rts, & Doc Review and Maintenance																							0	$0	$0		
D	BV	Assistance in Certification of Substantial Completion																							0	$0	$0		
		CONTRACT 6A																							0	$0	$0		
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)																							0	$0	$0		
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)														900									900	$185,400	$4,437	$5,000	
C	BV	Meetings, Rts, & Doc Review and Maintenance																							0	$0	$0		
D	BV	Assistance in Certification of Substantial Completion																							0	$0	$0		
		PROJECT TOTALS	**573**	**2,073**	**120**	**2,514**	**104**	**1,824**	**4,400**	**2,336**	**72**	**360**	**434**	**4,400**	**4,400**	**8,000**	**120**	**1,600**	**1,600**	**764**	**472**	**224**	**216**	**90**	**36,696**	**$7,528,154**	**$180,912**	**$35,506**	**$3,000**

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 5633 - TPE Cts 5C & 5D RTP Ct 6
BV Project No. 415094
Black & Veatch and Consultants

Task	Lead Firm	Position / Task Description	Subcon AE2S Hours	Subcon AE2S Sub Costs	Expense Detail AE2S Sub Markup	Subcon TBD Hours	Subcon TBD Costs	Expense Detail TBD Markup	Sub Consult Sub Hours	Subcon Sub Costs	Subcon Sub Markup	Expense Detail Travel Expense	Expense Detail Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES																	
1		**Task Order Management and Administration**	**648**	**$168,643**	**$8,430**	**0**	**$0**	**$0**	**0**	**$0**	**$0**	**$11,400**	**$201,028**	**2,444**	**$542,918**	**$201,028**	**$743,946**
		CONTRACT 5C	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Task Order Setup and Work Plan	36	$7,065	$353	0	$0	$0		$0	$0		$9,334	286	$70,142	$9,334	$79,476
B	BV	Task Order Management	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Administer the Task Order	0	$0	$0	0	$0	$0		$0	$0	$3,800	$4,825	208	$32,336	$4,825	$37,161
ii	BV	Manage Subconsultants	0	$0	$0	0	$0	$0		$0	$0		$907	184	$42,168	$907	$43,075
iii	BV	Assemble Engineering Progress Reports/Invoices	0	$0	$0	0	$0	$0		$0	$0		$621	126	$25,020	$621	$25,641
C	BV	Communication and Coordination	180	$49,149	$2,457	0	$0	$0		$0	$0		$51,882	56	$17,136	$51,882	$69,018
		CONTRACT 5D	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Task Order Setup and Work Plan	36	$7,065	$353	0	$0	$0		$0	$0		$8,493	218	$61,398	$8,493	$69,891
B	BV	Task Order Management	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Administer the Task Order	0	$0	$0	0	$0	$0		$0	$0	$3,800	$4,510	144	$19,152	$4,510	$23,662
ii	BV	Manage Subconsultants	0	$0	$0	0	$0	$0		$0	$0		$1,223	248	$55,352	$1,223	$56,575
iii	BV	Assemble Engineering Progress Reports/Invoices	0	$0	$0	0	$0	$0		$0	$0		$621	126	$25,020	$621	$25,641
C	BV	Communication and Coordination	180	$49,149	$2,457	0	$0	$0		$0	$0		$51,882	56	$17,136	$51,882	$69,018
		CONTRACT 6A	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Task Order Setup and Work Plan	36	$7,065	$353	0	$0	$0		$0	$0		$8,493	218	$61,398	$8,493	$69,891
B	BV	Task Order Management	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Administer the Task Order	0	$0	$0	0	$0	$0		$0	$0	$3,800	$4,510	144	$19,152	$4,510	$23,662
ii	BV	Manage Subconsultants	0	$0	$0	0	$0	$0		$0	$0		$1,223	248	$55,352	$1,223	$56,575
iii	BV	Assemble Engineering Progress Reports/Invoices	0	$0	$0	0	$0	$0		$0	$0		$621	126	$25,020	$621	$25,641
C	BV	Communication and Coordination	180	$49,149	$2,457	0	$0	$0		$0	$0		$51,882	56	$17,136	$51,882	$69,018
2		**Special and Third-Party Meetings**	**0**	**$0**	**$0**	**0**	**$0**	**$0**	**0**	**$0**	**$0**	**$0**	**$236**	**48**	**$10,296**	**$236**	**$10,532**
A	BV	State Engineer and ND State Water Commission (1)	0	$0	$0	0	$0	$0		$0	$0		$20	4	$872	$20	$892
B	BV	Foster County Commissioners (3)	0	$0	$0	0	$0	$0		$0	$0		$39	8	$1,702	$39	$1,741
C	BV	Nothern Plains Electric Cooperative (3)	0	$0	$0	0	$0	$0		$0	$0		$39	8	$1,702	$39	$1,741
D	BV	Greater Ramsey Water District (3)	0	$0	$0	0	$0	$0		$0	$0		$39	8	$1,702	$39	$1,741
E	BV	Pembina Cohin Pipeline Company (1)	0	$0	$0	0	$0	$0		$0	$0		$20	4	$872	$20	$892
F	BV	Alliance Pipeline (1)	0	$0	$0	0	$0	$0		$0	$0		$20	4	$872	$20	$892
G	BV	WBI Energy (1)	0	$0	$0	0	$0	$0		$0	$0		$20	4	$872	$20	$892
H	BV	Dakota Central Telecom Communications (3)	0	$0	$0	0	$0	$0		$0	$0		$39	8	$1,702	$39	$1,741
3		**Surveying, Field Testing, & Factory Insp Services**	**3,580**	**$753,109**	**$37,656**	**0**	**$0**	**$0**	**8,097**	**$1,250,000**	**$62,500**	**$27,000**	**$2,147,384**	**$1,444**	**$308,508**	**$2,147,384**	**$2,455,892**
A	AE2S	Field Surveying	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	AE2S	Limited Topographic Surveying	192	$48,935	$2,447	0	$0	$0		$0	$0		$51,431	10	$2,724	$51,431	$54,155
ii	AE2S	Location Surveys	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0

Task	Lead Firm	Position / Task Description	Subcon AE2S Hours	Subcon AE2S Sub Costs	Expense Detail AE2S Sub Markup	Subcon TBD Hours	Subcon TBD Costs	Expense Detail TBD Markup	Sub Consult Sub Hours	Subcon Sub Costs	Subcon Sub Markup	Expense Detail Travel Expense	Expense Detail Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
(a)	AE2S	Layout Surveying (60 weeks of pipeline construction)	2,980	$614,897	$30,745	0	$0	$0		$0	$0		$645,770	26	$6,260	$645,770	$652,030
(b)	AE2S	As-Built Surveying	408	$89,276	$4,464	0	$0	$0		$0	$0		$93,957	44	$10,408	$93,957	$104,365
B	PSC	Professional Soil Classification	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	PSC	Conduct Soil Identification Training (6 sessions)	0	$0	$0	0	$0	$0	343	$60,000	$3,000		$63,099	20	$5,444	$63,099	$68,543
ii	PSC	Complete Periodic Inspections and Quality Review (monthly)	0	$0	$0	0	$0	$0	858	$150,000	$7,500		$157,737	48	$13,008	$157,737	$170,745
C	BV	Drone-Based Video Monitoring (2 units)	0	$0	$0	0	$0	$0		$0	$0		$10,000	0	$0	$10,000	$10,000
D	Accurate	Pipe Manuf Site Visits and Inspections (3 trips @ 2 days)	0	$0	$0	0	$0	$0	1,867	$280,000	$14,000	$11,400	$306,110	144	$35,208	$306,110	$341,318
E	BV	Corrosion Protection Systems Inspection and Testing	0	$0	$0	0	$0	$0		$0	$0	$15,600	$17,809	448	$95,808	$17,809	$113,617
F	AET	Independent Construction Materials Testing	0	$0	$0	0	$0	$0	3,600	$540,000	$27,000		$568,814	368	$67,264	$568,814	$636,078
G	Braun	Independent Welding Verification	0	$0	$0	0	$0	$0	1,200	$180,000	$9,000		$190,242	252	$54,560	$190,242	$244,802
H	KLJ	Field Delineation of Wetlands and Consultation	0	$0	$0	0	$0	$0	229	$40,000	$2,000		$42,414	84	$17,824	$42,414	$60,238
4		**Engineering Services During Construction**	**0**	**$0**	**$0**	**0**	**$0**	**$0**	**0**	**$0**	**$0**	**$106,200**	**$148,395**	**7,950**	**$1,785,372**	**$148,395**	**$1,933,767**
		CONTRACT 5C	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Monthly Progress Reports (18)	0	$0	$0	0	$0	$0		$0	$0		$419	85	$20,254	$419	$20,673
B	BV	Construction Administration Support Services	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Engineer's Staffing During Construction	0	$0	$0	0	$0	$0		$0	$0		$118	24	$7,344	$118	$7,462
ii	BV	Contractor's Schedule	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	Initial Construction Schedule Review	0	$0	$0	0	$0	$0		$0	$0		$296	60	$11,024	$296	$11,320
(b)	BV	Monthly Construction Schedule Reviews (17)	0	$0	$0	0	$0	$0		$0	$0		$937	190	$35,140	$937	$36,077
iii	BV	Contractor's Estimate of Monthly Payments	0	$0	$0	0	$0	$0		$0	$0		$99	20	$5,448	$99	$5,547
iv	BV	Contractor's Guar, Bonds, Test Reports, and Certs	0	$0	$0	0	$0	$0		$0	$0		$79	16	$3,880	$79	$3,959
v	BV	Submittal Reviews (100)	0	$0	$0	0	$0	$0		$0	$0		$3,944	800	$139,080	$3,944	$143,024
vi	BV	RFPs (4)	0	$0	$0	0	$0	$0		$0	$0		$118	24	$6,672	$118	$6,790
vii	BV	RFIs, Change Order Requests, and Claims	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	RFIs (20)	0	$0	$0	0	$0	$0		$0	$0		$247	50	$13,620	$247	$13,867
(b)	BV	Change Order Requests & Change Orders (10/5)	0	$0	$0	0	$0	$0		$0	$0		$690	140	$39,480	$690	$40,170
(c)	BV	Claims (2)	0	$0	$0	0	$0	$0		$0	$0		$1,578	320	$94,560	$1,578	$96,138
viii	BV	Field Orders (15)	0	$0	$0	0	$0	$0		$0	$0		$483	98	$23,628	$483	$24,111
ix	BV	Contractor Pay Requests (30)	0	$0	$0	0	$0	$0		$0	$0		$370	75	$20,430	$370	$20,800
x	BV	Funding Agency Submittals	0	$0	$0	0	$0	$0		$0	$0		$39	8	$2,448	$39	$2,487
xi	BV	Lien Releases	0	$0	$0	0	$0	$0		$0	$0		$39	8	$2,112	$39	$2,151
xii	BV	Consent Of Surety to Final Payment	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
xiii	BV	Conformed to Construction Records Drawings	0	$0	$0	0	$0	$0		$0	$0		$1,809	164	$25,080	$1,809	$26,889
C	BV	Field Support Services	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Construction Progress Meetings and Site Visits (35)	0	$0	$0	0	$0	$0		$0	$0	$19,800	$20,944	232	$65,952	$20,944	$86,896
ii	BV	Discipline-Specific Site Visits (6)	0	$0	$0	0	$0	$0		$0	$0	$15,600	$16,931	270	$61,212	$16,931	$78,143
iii	BV	Digital Photographic and Video Documentation	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	Pre-Construction Photographs	0	$0	$0	0	$0	$0		$0	$0		$20	4	$1,056	$20	$1,076
(b)	BV	Monthly Photographs	0	$0	$0	0	$0	$0		$0	$0		$89	18	$4,752	$89	$4,841
(c)	BV	Video Documentation	0	$0	$0	0	$0	$0		$0	$0		$20	4	$1,056	$20	$1,076
iv	BV	Punch List	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
v	BV	Final Inspection	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
vi	BV	Warranty Inspection	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773

Task	Lead Firm	Position / Task Description	Subcon AE2S Hours	Subcon AE2S Sub Costs	Expense Detail AE2S Sub Markup	Subcon TBD Hours	Subcon TBD Costs	Expense Detail TBD Markup	Sub Consult Sub Hours	Subcon Sub Costs	Subcon Sub Markup	Expense Detail Travel Expense	Expense Detail Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
		CONTRACT 5D	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Monthly Progress Reports (18)	0	$0	$0	0	$0	$0		$0	$0		$419	85	$20,254	$419	$20,673
B	BV	Construction Administration Support Services	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Engineer's Staffing During Construction	0	$0	$0	0	$0	$0		$0	$0		$118	24	$7,344	$118	$7,462
ii	BV	Contractor's Schedule	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	Initial Construction Schedule Review	0	$0	$0	0	$0	$0		$0	$0		$296	60	$11,024	$296	$11,320
(b)	BV	Monthly Construction Schedule Reviews (17)	0	$0	$0	0	$0	$0		$0	$0		$937	190	$35,140	$937	$36,077
iii	BV	Contractor's Estimate of Monthly Payments	0	$0	$0	0	$0	$0		$0	$0		$99	20	$5,448	$99	$5,547
iv	BV	Contractor's Guar, Bonds, Test Reports, and Certs	0	$0	$0	0	$0	$0		$0	$0		$79	16	$3,880	$79	$3,959
v	BV	Submittal Reviews (100)	0	$0	$0	0	$0	$0		$0	$0		$3,944	800	$139,080	$3,944	$143,024
vi	BV	RFPs (4)	0	$0	$0	0	$0	$0		$0	$0		$118	24	$6,672	$118	$6,790
vii	BV	RFIs, Change Order Requests, and Claims	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	RFIs (20)	0	$0	$0	0	$0	$0		$0	$0		$247	50	$13,620	$247	$13,867
(b)	BV	Change Order Requests & Change Orders (10/5)	0	$0	$0	0	$0	$0		$0	$0		$690	140	$39,480	$690	$40,170
(c)	BV	Claims (2)	0	$0	$0	0	$0	$0		$0	$0		$1,578	320	$94,560	$1,578	$96,138
viii	BV	Field Orders (15)	0	$0	$0	0	$0	$0		$0	$0		$483	98	$23,628	$483	$24,111
ix	BV	Contractor Pay Requests (30)	0	$0	$0	0	$0	$0		$0	$0		$370	75	$20,430	$370	$20,800
x	BV	Funding Agency Submittals	0	$0	$0	0	$0	$0		$0	$0		$39	8	$2,448	$39	$2,487
xi	BV	Lien Releases	0	$0	$0	0	$0	$0		$0	$0		$39	8	$2,112	$39	$2,151
xii	BV	Consent Of Surety to Final Payment	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
xiii	BV	Conformed to Construction Records Drawings	0	$0	$0	0	$0	$0		$0	$0		$1,809	164	$25,080	$1,809	$26,889
C	BV	Field Support Services	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Construction Progress Meetings and Site Visits (35)	0	$0	$0	0	$0	$0		$0	$0	$19,800	$20,944	232	$65,952	$20,944	$86,896
ii	BV	Discipline-Specific Site Visits (6)	0	$0	$0	0	$0	$0		$0	$0	$15,600	$16,931	270	$61,212	$16,931	$78,143
iii	BV	Digital Photographic and Video Documentation	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	Pre-Construction Photographs	0	$0	$0	0	$0	$0		$0	$0		$20	4	$1,056	$20	$1,076
(b)	BV	Monthly Photographs	0	$0	$0	0	$0	$0		$0	$0		$89	18	$4,752	$89	$4,841
(c)	BV	Video Documentation	0	$0	$0	0	$0	$0		$0	$0		$20	4	$1,056	$20	$1,076
iv	BV	Punch List	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
v	BV	Final Inspection	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
vi	BV	Warranty Inspection	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
		CONTRACT 6A	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Monthly Progress Reports (18)	0	$0	$0	0	$0	$0		$0	$0		$419	85	$20,254	$419	$20,673
B	BV	Construction Administration Support Services	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Engineer's Staffing During Construction	0	$0	$0	0	$0	$0		$0	$0		$118	24	$7,344	$118	$7,462
ii	BV	Contractor's Schedule	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	Initial Construction Schedule Review	0	$0	$0	0	$0	$0		$0	$0		$296	60	$11,024	$296	$11,320
(b)	BV	Monthly Construction Schedule Reviews (17)	0	$0	$0	0	$0	$0		$0	$0		$937	190	$35,140	$937	$36,077
iii	BV	Contractor's Estimate of Monthly Payments	0	$0	$0	0	$0	$0		$0	$0		$99	20	$5,448	$99	$5,547
iv	BV	Contractor's Guar, Bonds, Test Reports, and Certs	0	$0	$0	0	$0	$0		$0	$0		$79	16	$3,880	$79	$3,959
v	BV	Submittal Reviews (100)	0	$0	$0	0	$0	$0		$0	$0		$3,944	800	$139,080	$3,944	$143,024
vi	BV	RFPs (4)	0	$0	$0	0	$0	$0		$0	$0		$118	24	$6,672	$118	$6,790
vii	BV	RFIs, Change Order Requests, and Claims	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0

Task	Lead Firm	Position / Task Description	Subcon AE2S Hours	Subcon AE2S Sub Costs	Expense Detail AE2S Sub Markup	Subcon TBD Hours	Subcon TBD Costs	Expense Detail TBD Markup	Sub Consult Sub Hours	Subcon Sub Costs	Subcon Sub Markup	Expense Detail Travel Expense	Expense Detail Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
(a)	BV	RFIs (20)	0	$0	$0	0	$0	$0		$0	$0		$247	50	$13,620	$247	$13,867
(b)	BV	Change Order Requests & Change Orders (10/5)	0	$0	$0	0	$0	$0		$0	$0		$690	140	$39,480	$690	$40,170
(c)	BV	Claims (2)	0	$0	$0	0	$0	$0		$0	$0		$1,578	320	$94,560	$1,578	$96,138
viii	BV	Field Orders (15)	0	$0	$0	0	$0	$0		$0	$0		$483	98	$23,628	$483	$24,111
ix	BV	Contractor Pay Requests (30)	0	$0	$0	0	$0	$0		$0	$0		$370	75	$20,430	$370	$20,800
x	BV	Funding Agency Submittals	0	$0	$0	0	$0	$0		$0	$0		$39	8	$2,448	$39	$2,487
xi	BV	Lien Releases	0	$0	$0	0	$0	$0		$0	$0		$39	8	$2,112	$39	$2,151
xii	BV	Consent Of Surety to Final Payment	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
xiii	BV	Conformed to Construction Records Drawings	0	$0	$0	0	$0	$0		$0	$0		$1,809	164	$25,080	$1,809	$26,889
C	BV	Field Support Services	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
i	BV	Construction Progress Meetings and Site Visits (35)	0	$0	$0	0	$0	$0		$0	$0	$19,800	$20,944	232	$65,952	$20,944	$86,896
ii	BV	Discipline-Specific Site Visits (6)	0	$0	$0	0	$0	$0		$0	$0	$15,600	$16,931	270	$61,212	$16,931	$78,143
iii	BV	Digital Photographic and Video Documentation	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
(a)	BV	Pre-Construction Photographs	0	$0	$0	0	$0	$0		$0	$0		$20	4	$1,056	$20	$1,076
(b)	BV	Monthly Photographs	0	$0	$0	0	$0	$0		$0	$0		$89	18	$4,752	$89	$4,841
(c)	BV	Video Documentation	0	$0	$0	0	$0	$0		$0	$0		$20	4	$1,056	$20	$1,076
iv	BV	Punch List	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
v	BV	Final Inspection	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
vi	BV	Warranty Inspection	0	$0	$0	0	$0	$0		$0	$0		$49	10	$2,724	$49	$2,773
5		**Construction Observation**	**0**	**$0**	**$0**	**29,800**	**$5,613,800**	**$280,690**	**0**	**$0**	**$0**	**$0**	**$6,041,803**	**24,810**	**$4,881,060**	**$6,041,803**	**$10,922,863**
		OVERALL	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Construction Field Staff	0	$0	$0	0	$0	$0		$0	$0		$92,873	16,810	$3,233,060	$92,873	$3,325,933
		CONTRACT 5C	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)	0	$0	$0	7,000	$1,267,000	$63,350		$0	$0		$1,357,042	4,400	$906,400	$1,357,042	$2,263,442
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)	0	$0	$0	0	$0	$0		$0	$0		$8,874	1,800	$370,800	$8,874	$379,674
C	BV	Meetings, Rts, & Doc Review and Maintenance	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
D	BV	Assistance in Certification of Substantial Completion	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
		CONTRACT 5D	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)	0	$0	$0	11,400	$2,173,400	$108,670		$0	$0		$2,282,070	0	$0	$2,282,070	$2,282,070
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)	0	$0	$0	0	$0	$0		$0	$0		$9,437	900	$185,400	$9,437	$194,837
C	BV	Meetings, Rts, & Doc Review and Maintenance	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
D	BV	Assistance in Certification of Substantial Completion	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
		CONTRACT 6A	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)	0	$0	$0	11,400	$2,173,400	$108,670		$0	$0		$2,282,070	0	$0	$2,282,070	$2,282,070
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)	0	$0	$0	0	$0	$0		$0	$0		$9,437	900	$185,400	$9,437	$194,837
C	BV	Meetings, Rts, & Doc Review and Maintenance	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
D	BV	Assistance in Certification of Substantial Completion	0	$0	$0	0	$0	$0		$0	$0		$0	0	$0	$0	$0
		PROJECT TOTALS	**4,228**	**$921,752**	**$46,086**	**29,800**	**$5,613,800**	**$280,690**	**8,097**	**$1,250,000**	**$62,500**	**$144,600**	**$8,538,846**	**36,696**	**$7,528,154**	**$8,538,846**	**$16,067,000**

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 5633 - TPE Cts 5C & 5D RTP Ct 6A CPS
BV Project No. 415094
AE2S

Task	Lead Firm	Position	ENGVIII	Sr PMI	ENGII	GISII	PMIII	S4	LSA	COMIII	ADMIII	Labor Detail	Labor Detail	Expense Detail	Expense Detail	Expense Detail		TOTAL	TOTAL	TOTAL	TOTAL
		Task Description	PIC	Project Manager	Engineer II	GISIII	Senior Surveyor	Surveyor 4	Surveyor 2	Comm Spec	Administrative	AE2S Level of Effort (hrs)	Labor Cost	Travel	Lodging & Per Diem	Survey Equip	Total Expense	AE2S Level of Effort (hrs)	AE2S Labor Cost	Direct Expense	Fee
IV. BASIC SERVICES																					
1		**Task Order Management and Administration**	**240**	**300**	**0**	**0**	**0**	**0**	**0**	**60**	**48**	**648**	**$168,643**	**$0**	**$0**	**$0**	**$0**	**648**	**$168,643**	**$0**	**$168,643**
		CONTRACT 5C										0	$0				$0	0	$0	$0	$0
A	BV	Task Order Setup and Work Plan		20							16	36	$7,065				$0	36	$7,065	$0	$7,065
B	BV	Task Order Management										0	$0				$0	0	$0	$0	$0
i	BV	Administer the Task Order										0	$0				$0	0	$0	$0	$0
ii	BV	Manage Subconsultants										0	$0				$0	0	$0	$0	$0
iii	BV	Assemble Engineering Progress Reports/Invoices										0	$0				$0	0	$0	$0	$0
C	BV	Communication and Coordination	80	80						20		180	$49,149				$0	180	$49,149	$0	$49,149
		CONTRACT 5D										0	$0				$0	0	$0	$0	$0
A	BV	Task Order Setup and Work Plan		20							16	36	$7,065				$0	36	$7,065	$0	$7,065
B	BV	Task Order Management										0	$0				$0	0	$0	$0	$0
i	BV	Administer the Task Order										0	$0				$0	0	$0	$0	$0
ii	BV	Manage Subconsultants										0	$0				$0	0	$0	$0	$0
iii	BV	Assemble Engineering Progress Reports/Invoices										0	$0				$0	0	$0	$0	$0
C	BV	Communication and Coordination	80	80						20		180	$49,149				$0	180	$49,149	$0	$49,149
		CONTRACT 6A										0	$0				$0	0	$0	$0	$0
A	BV	Task Order Setup and Work Plan		20							16	36	$7,065				$0	36	$7,065	$0	$7,065
B	BV	Task Order Management										0	$0				$0	0	$0	$0	$0
i	BV	Administer the Task Order										0	$0				$0	0	$0	$0	$0
ii	BV	Manage Subconsultants										0	$0				$0	0	$0	$0	$0
iii	BV	Assemble Engineering Progress Reports/Invoices										0	$0				$0	0	$0	$0	$0
C	BV	Communication and Coordination	80	80						20		180	$49,149				$0	180	$49,149	$0	$49,149
3		**Surveying, Field Testing, & Factory Insp Services**	**0**	**100**	**240**	**360**	**300**	**120**	**2,400**	**0**	**60**	**3,580**	**$607,389**	**$26,100**	**$30,339**	**$89,280**	**$145,719**	**3,580**	**$607,389**	**$145,719**	**$753,109**
A	AE2S	Field Surveying										0	$0				$0	0	$0	$0	$0
i	AE2S	Limited Topographic Surveying		36			36	120				192	$41,238	$3,600	$1,217	$2,880	$7,697	192	$41,238	$7,697	$48,935
ii	AE2S	Location Surveys										0	$0				$0	0	$0	$0	$0
(a)	AE2S	Layout Surveying (60 weeks of pipeline construction)		40	240		240		2,400		60	2,980	$476,875	$22,500	$29,122	$86,400	$138,022	2,980	$476,875	$138,022	$614,897
(b)	AE2S	As-Built Surveying		24		360	24		0		0	408	$89,276	$0	$0	$0	$0	408	$89,276	$0	$89,276
B	PSC	Professional Soil Classification										0	$0				$0	0	$0	$0	$0
i	PSC	Conduct Soil Identification Training (6 sessions)										0	$0				$0	0	$0	$0	$0
ii	PSC	Complete Periodic Inspections and Quality Review (monthly)										0	$0				$0	0	$0	$0	$0
C	BV	Drone-Based Video Monitoring (2 units)										0	$0				$0	0	$0	$0	$0
D	Accurate	Pipe Manuf Site Visits and Inspections (3 trips @ 2 days)										0	$0				$0	0	$0	$0	$0
E	BV	Corrosion Protection Systems Inspection and Testing										0	$0				$0	0	$0	$0	$0
F	AET	Independent Construction Materials Testing										0	$0				$0	0	$0	$0	$0
G	Braun	Independent Welding Verification										0	$0				$0	0	$0	$0	$0
H	KLJ	Field Delineation of Wetlands and Consultation										0	$0				$0	0	$0	$0	$0
		PROJECT TOTALS	**240**	**400**	**240**	**360**	**300**	**120**	**2,400**	**60**	**108**	**4,228**	**$776,032**	**$26,100**	**$30,339**	**$89,280**	**$145,719**	**4,228**	**$776,032**	**$145,719**	**$921,752**

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 5633 - TPE Cts 5C & 5D RTP Ct 6A CPS
BV Project No. 415094
To Be Determined

Task	Lead Firm	Position / Task Description	RPR2 Resident Project Rep 2	RPR3 Resident Project Rep 3	Labor Detail Level of Effort (hrs)	Labor Detail Labor Cost	TOTAL Level of Effort (hrs)	TOTAL Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES										
5		**Construction Observation**	**8,800**	**21,000**	**29,800**	**$5,613,800**	**29,800**	**$5,613,800**	**$0**	**$5,613,800**
		OVERALL			0	$0	0	$0	$0	$0
A	BV	Construction Field Staff			0	$0	0	$0	$0	$0
		CONTRACT 5C			0	$0	0	$0	$0	$0
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)		7,000	7,000	$1,267,000	7,000	$1,267,000	$0	$1,267,000
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)			0	$0	0	$0	$0	$0
C	BV	Meetings, Rts, & Doc Review and Maintenance			0	$0	0	$0	$0	$0
D	BV	Assistance in Certification of Substantial Completion			0	$0	0	$0	$0	$0
		CONTRACT 5D			0	$0	0	$0	$0	$0
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)	4,400	7,000	11,400	$2,173,400	11,400	$2,173,400	$0	$2,173,400
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)			0	$0	0	$0	$0	$0
C	BV	Meetings, Rts, & Doc Review and Maintenance			0	$0	0	$0	$0	$0
D	BV	Assistance in Certification of Substantial Completion			0	$0	0	$0	$0	$0
		CONTRACT 6A			0	$0	0	$0	$0	$0
A	BV	Site Obs & Liaison with Owner & Contractor (Pipeline)	4,400	7,000	11,400	$2,173,400	11,400	$2,173,400	$0	$2,173,400
B	BV	Site Obs & Liaison with Owner & Contractor (Tunneling)			0	$0	0	$0	$0	$0
C	BV	Meetings, Rts, & Doc Review and Maintenance			0	$0	0	$0	$0	$0
D	BV	Assistance in Certification of Substantial Completion			0	$0	0	$0	$0	$0
		PROJECT TOTALS	**8,800**	**21,000**	**29,800**	**$5,613,800**	**29,800**	**$5,613,800**	**$0**	**$5,613,800**

RRVWSP Task Order 9510 – 2023-2025 Biennium User Outreach and Pipeline Extensions

Task Order Effective Date: July 1, 2023

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Several previous task orders have been authorized and expended related to engaging potential Users to commit to the RRVWSP. To date, Fargo and Grand Forks have made the firmest commitment and a draft Project Participation Agreement has been completed with them. However, there are still approximately 24 potential Users in various stages of negotiation and commitment to the RRVWSP. The objective of this task order is to complete as many successful negotiations with these Users as possible by the end of this biennium and so maximize the number of Users and nominations for the RRVWSP.

TASK ORDER SUMMARY

Basic Services: The following services are to be provided by the team of Black & Veatch, Burian & Associates, and AE2S:

Task	Fee
Task Order Management and Administration	$293,923
Re-establish User Communications and Interest	$281,961
Refine Potential User Nominations	$598,208
Pipeline Extension Concept Planning	$258,449
Final Project Participation Agreement Reconciliation	$174,741
Project Coordination	$85,719
Totals	$1,693,000

Special Services: There are no unique or specialized services required under this task order.

PROJECT OVERVIEW

A listing of potential Users is shown on the table on the following page. Except for Grand Forks and Fargo, there have been relatively few discussions with potential Users in the past few years regarding their overall nominations, how they will connect to the pipeline, and the overall long-term capital and O&M costs for participation. A team will be formed to conduct negotiations with each potential User. The team will be led by Garrison Diversion and supported by a member of the engineering team. The goal of this task order is to:

- Re-establish potential User contacts,
- Summarize for each of the 24 potential Users what has been previously discussed in terms of nominations and point(s) of connections,
- Update the nomination and point of connection information for all 24 Users,
- Update the overall cost of participation for all 24 Users, and
- Complete a Memorandum of Commitment that outlines the commitment for all potential Users.

The Memorandum of Commitment will then lead to the more formal Project Participation Agreement. The task order provides for multiple meetings with each potential User as experience with other Users has shown is needed.

The task order provides an average fee of $67,000 per potential User to support each over the 2 years.

RRVWSP Task Order 9510 – 2023-2025 Biennium User Outreach and Pipeline Extensions

Task Order Effective Date: July 1, 2023

TASK ORDER EXECUTIVE SUMMARY

Current Potential Users

Users[1]	Nominations (cfs)			Peaked Nomination (cfs)[2]			Withdrawal Location(s)
	Domestic	Industrial	Total	Domestic	Industrial	Total	
Direct Pipeline Users (DPUs)							
McLean-Sheridan	0.00	0.42	0.42	0.00	0.42	0.42	Transmission Pipeline
South Central	0.00	0.50	0.50	0.00	0.50	0.50	Transmission Pipeline
Carrington	0.00	2.50	2.50	0.00	2.50	2.50	Transmission Pipeline
Stutsman Rural/ Jamestown	0.00	15.00	15.00	0.00	15.00	15.00	Transmission Pipeline
Hannaford	0.00	0.05	0.05	0.00	0.05	0.05	Transmission Pipeline
Dakota Rural	0.00	0.70	0.70	0.00	0.70	0.70	Transmission Pipeline
Cooperstown	0.00	0.20	0.20	0.00	0.20	0.20	Transmission Pipeline
McVille[3]	0.00	0.10	0.10	0.00	0.10	0.10	Transmission Pipeline
Devils Lake	0.00	1.00	1.00	0.00	1.00	1.00	Transmission Pipeline
Northeast with Langdon	0.00	3.20	3.20	0.00	3.20	3.20	Transmission Pipeline
DPU Total	0.00	23.67	23.67	0.00	23.67	23.67	
Direct River Users							
Valley City	1.00	0.50	1.50	2.00	0.50	2.50	Valley City Intake
Lisbon	0.00	0.33	0.33	0.00	0.33	0.33	Future Lisbon Intake
Southeast	0.50	2.00	2.50	1.25	2.00	3.25	Future Lisbon Intake
Richland County JDA	0.00	2.00	2.00	0.00	2.00	2.00	Future Lisbon Intake
Fargo	66.30	17.40	83.70	132.60	17.40	150.00	Fargo Intake
Grand Forks	13.80	14.30	28.10	27.60	14.30	41.90	Grand Forks Intake
East Central	1.00	3.40	4.40	2.50	3.40	5.90	Grand Forks Intake
Hillsboro	0.00	0.50	0.50	0.00	0.50	0.50	Grand Forks Intake
Mayville	0.00	0.50	0.50	0.00	0.50	0.50	Grand Forks Intake
Agassiz	0.50	0.50	1.00	1.25	0.50	1.75	Grand Forks Intake
Tri-County[3]	0.50	0.50	1.00	1.25	0.50	1.75	Grand Forks Intake
Grafton	0.90	1.10	2.00	1.80	1.10	2.90	Grafton Intake
Walsh Rural	0.00	1.00	1.00	0.00	1.00	1.00	Grafton Intake
Park River	0.00	0.40	0.40	0.00	0.40	0.40	Grafton Intake
River Users Total	84.50	44.43	128.93	170.25	44.43	214.68	
Total	84.50	68.10	152.60	170.25	68.10	238.35	

1) Users that have opted out of the RRVWSP or have cut off communications are not included.

2) Peaked nominations from *User Demand Analysis for Distribution Extensions* (AE2S, March 31, 2017)

3) A portion of Tri-County's water demands may be served through McVille

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Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

RRVWSP Task Order 9510 – 2023-2025 Biennium User Outreach and Pipeline Extensions

Effective Date – July 1, 2023

Content of this Task Order (TO) is as follows:

I. PROJECT AND TASK ORDER BACKGROUND

1. During the summer and fall of 2016, significant user outreach efforts by Garrison Diversion, including over 100 meetings with appropriate representatives from potential municipalities and rural water systems, led to RRVWSP water nominations from users within central and eastern North Dakota (and western Minnesota).

2. The GDCD then secured Development Agreements on behalf of the Lake Agassiz Water Authority (LAWA) for domestic and/or industrial water supplies from 35 municipalities and rural water systems for a total nominated capacity of approximately 159 cubic feet per second (cfs). These nominations became the design basis for the RRVWSP. The locations of those nominations are shown on Figure 1.

3. In March of 2017, GDCD approved Task Order 5240, which included development of two Technical Memoranda. The Technical Memoranda included an analysis of users' demands noted in the Development Agreements, defined each user's expected point of connection for project water, and grouped regional users for future branch pipelines. Additionally, the work performed under that Task Order served as the basis of design for the conceptual design of the RRVWSP pipeline extensions. The Technical Memoranda were titled as follows:

Figure 1 – Original RRVWSP Nominations

- Technical Memorandum No. 1 User Demand Analysis for Distribution Extensions
- Technical Memorandum No. 2 Development and Evaluation of Pipeline Extension Concepts

In April of 2018, GDCD approved Task Order 9310, Stakeholder Engagement Round 2, for the purposes of further validating user commitments. That task order has continued to fund various user outreach efforts through end of the current biennium for AE2S. There will be about $75,000 left in this task order at the start of the 2023-2025 biennium.

4. In 2021, another round of user outreach efforts was performed to check interest and commitment to the Project. User outreach meetings were held with nearly all the potential users that signed Development Agreements in 2016. In the intervening five years since 2016, some users regionalized, and some users notified of their withdrawal from the Project. Table 1 from

Table 1 – Existing Communities with a Development Agreement

Users[1]	Nominations (cfs)			Peaked Nomination (cfs)[2]			Withdrawal Location(s)
	Domestic	Industrial	Total	Domestic	Industrial	Total	
Direct Pipeline Users (DPUs)							
McLean-Sheridan	0.00	0.42	0.42	0.00	0.42	0.42	Transmission Pipeline
South Central	0.00	0.50	0.50	0.00	0.50	0.50	Transmission Pipeline
Carrington	0.00	2.50	2.50	0.00	2.50	2.50	Transmission Pipeline
Stutsman Rural/ Jamestown	0.00	15.00	15.00	0.00	15.00	15.00	Transmission Pipeline
Hannaford	0.00	0.05	0.05	0.00	0.05	0.05	Transmission Pipeline
Dakota Rural	0.00	0.70	0.70	0.00	0.70	0.70	Transmission Pipeline
Cooperstown	0.00	0.20	0.20	0.00	0.20	0.20	Transmission Pipeline
McVille[3]	0.00	0.10	0.10	0.00	0.10	0.10	Transmission Pipeline
Devils Lake	0.00	1.00	1.00	0.00	1.00	1.00	Transmission Pipeline
Northeast with Langdon	0.00	3.20	3.20	0.00	3.20	3.20	Transmission Pipeline
DPU Total	0.00	23.67	23.67	0.00	23.67	23.67	
Direct River Users							
Valley City	1.00	0.50	1.50	2.00	0.50	2.50	Valley City Intake
Lisbon	0.00	0.33	0.33	0.00	0.33	0.33	Future Lisbon Intake
Southeast	0.50	2.00	2.50	1.25	2.00	3.25	Future Lisbon Intake
Richland County JDA	0.00	2.00	2.00	0.00	2.00	2.00	Future Lisbon Intake
Fargo	66.30	17.40	83.70	132.60	17.40	150.00	Fargo Intake
Grand Forks	13.80	14.30	28.10	27.60	14.30	41.90	Grand Forks Intake
East Central	1.00	3.40	4.40	2.50	3.40	5.90	Grand Forks Intake
Hillsboro	0.00	0.50	0.50	0.00	0.50	0.50	Grand Forks Intake
Mayville	0.00	0.50	0.50	0.00	0.50	0.50	Grand Forks Intake
Agassiz	0.50	0.50	1.00	1.25	0.50	1.75	Grand Forks Intake
Tri-County[3]	0.50	0.50	1.00	1.25	0.50	1.75	Grand Forks Intake
Grafton	0.90	1.10	2.00	1.80	1.10	2.90	Grafton Intake
Walsh Rural	0.00	1.00	1.00	0.00	1.00	1.00	Grafton Intake
Park River	0.00	0.40	0.40	0.00	0.40	0.40	Grafton Intake
River Users Total	84.50	44.43	128.93	170.25	44.43	214.68	
Total	84.50	68.10	152.60	170.25	68.10	238.35	

1) Users that have opted out of the RRVWSP or have cut off communications are not included.
2) Peaked nominations from *User Demand Analysis for Distribution Extensions* (AE2S, March 31, 2017)
3) A portion of Tri-County's water demands may be served through McVille

Exhibit B of the Project Participation Agreement presents a summary of the current potential participants in the RRVWSP Project and their estimated nominations. Table 1 also shows what potential Users are direct pipeline users versus direct river users. In addition to these Users, Washburn and Rainbow Energy (through Mclean-Sheridan) have become prospective Users and they are not shown in Table 1.

5. Due to changes that occurred since the execution of the Development Agreements in 2016, including regionalization, withdrawal from the Project, changing user demands, changing service locations and changing user expectations, it was evident that the previous RRVWSP pipeline extension work completed under Task Order 5240 needed to be updated. A letter was sent on behalf of GDCD and LAWA to prospective Users in late September 2021 to obtain information from each potential User. The letter requested information including updated domestic and industrial nomination amounts, peak day demand, desired point(s) of connection, desired route(s) of service, and desired water quality. There were few replies to this letter.

6. In 2022, Task Order 5270 – Pipeline Extensions Conceptual Design Phase 1 was developed to follow up with the Users. The task order included effort for User outreach and to update the pipeline conceptual designs developed under Task Order 5240. Significant progress was made with Fargo and Grand Forks and a draft Project Participation Agreement has been completed. But limited progress has been made with the other users. The budget for the pipeline extension conceptual design has not been spent and about $100,000 remains at the start of the 2023-2025 biennium. Most of the remaining money was allocated for Black & Veatch to update the pipeline extensions conceptual designs but Users have not provided additional information for the conceptual design updates to proceed.

7. The purpose of this Task Order is to work with the potential Users shown in the table above, including Washburn and Rainbow Energy, to finalize their future demands, develop conceptual pipeline extension designs and costs, develop Project financial participation projections, and work with them to understand and ultimately sign the draft PPA.

II. TASK ORDER OBJECTIVES

1. The overall task order objective is to secure signed PPAs from the prospective Users by the end of the 2023-2025 biennium. There are several secondary objectives considered essential for this, which are:

   A. Provide a summary of each users projected financial commitment to the project based on revised pipeline extension analyses, nomination changes, and system user base characteristics This will set the context for the rest of the potential User activities covered under this document.

   B. Obtain User feedback regarding updated domestic nominations, industrial nominations, projected peak day flow rates, and point(s) of service. Reach a definitive agreement for each User as to their nominations. Some of these items will be completed iteratively with item C below.

   C. Update the conceptual design of extension pipelines and estimated costs to support an updated plan for how each User will access project water. Reach a definitive agreement for each User as to how they will be served by the RRVWSP and the cost of any pipeline extension.

   D. Help each User understand and ultimately sign the draft PPA.

E. Provide ongoing support of project leadership meetings, project strategy meetings, project participation agreement development, and continued User outreach.

F. Regularly communicate to LAWA the progress of User meetings.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional services associated with user interface, development of a technical memorandum to document User's updated water nominations, peak day demands, desired point(s) of connection, and desired route(s) of service, scoping for pipeline extension concept design, project financial participation projections, Project Participation Agreement (PPA) support, and various project coordination activities.

3. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper separate authorization such as an amendment to this Task Order or a new separate Task Order.

4. Explicit Responsibilities. Basic Services and Special Services explicitly set forth the Work Engineer will perform and do not implicitly put any additional responsibilities or duties upon Engineer. Deliverables to be provided are explicitly identified in this Task Order.

5. Explicitly Identified Quantities. Engineer in development of this Task Order estimates the level of effort required to provide the services discussed. Where specific information is listed as to the quantity of service to be provided by Engineer, those quantities listed are considered Basic Services or Special Services and are, therefore, included in this Task Order scope of service and associated fee estimate. Services exceeding the written quantities shown below in Basic Services or Special Services are considered Additional Services.

IV. BASIC SERVICES

The Basic Services of this Task Order are provided below in the following tasks:

- Task 1 – Task Order Management and Administration
- Task 2 – Reestablish User Nomination Communications and Determine Current Interest
- Task 3 - Refine and Finalize Potential User's Nominations
- Task 4 – Pipeline Extension Concept Planning
- Task 5 – Final PPA Reconciliation/Coordination
- Task 6 – Project Coordination

1. **Task 1 – Task Order Management and Administration**
   The overall objective of this task is to set up the project and keep the Task Order on schedule for its estimated 24- month duration (July 1, 2023 – June 30, 2025). Engineer will provide the following services to the Owner:

   A. Provide general project management and administration tasks including communications with the Owner, coordination, and supervision of the Engineer's project team, monitoring the project schedule, monitoring the project budget, and invoicing for 24 months.

   B. Host monthly (24 total) User update meetings so that Garrison Diversion can provide ongoing guidance on User activity meetings.

2. **Task 2 – Reestablish User Nomination Communications and Determine Current Interest**
   There have been many organizational changes in the various User organizations. Also, potential User project commitments will depend on their anticipated need for water, the base cost of participating in the project based on the Tier they are assigned as described in the PPA, the terms of the PPA, and the cost of a pipeline extension (if a pipeline extension is needed).

   The following activities are anticipated for re-engagement with the Users.

   A. Re-establish and maintain a list of User contacts and summarize the managerial and board leadership for each User. We expect to develop a User database to document meetings, deliverables, and status of discussions with Users during the coming biennium. This database is not expected to be GIS based but will serve a function like the landowner WMX database, which documents all discussions with landowners.

   B. Prepare for each potential User a packet of information that includes:

      i. Past nominations and the basis upon which they were developed.

      ii. The previously developed pipeline extension option(s) if applicable.

      iii. Previously developed estimated project participation costs that were communicated to each User in 2021

      iv. A draft PPA.

      v. A high-level summary of updated cost of each potential User's participation based on what is currently known about the project in terms of cost, the ENDAWS Record of Decision, state legislative certainty and financing, and legislative commitment to the project through its legislative intent.

      A total of 24 summaries will be prepared. These summaries are intended to be a factual summary of factors related to each individual User. Summaries are not needed for Fargo, Grand Forks, and Washburn as these have been completed separately.

   C. It is assumed that a team will be assigned to each potential User that includes a representative from Garrison Diversion, the consulting team, and LAWA if they desire. The

Team Leaders will have all responsibility for communication and negotiation with each User. The Team Leaders will also direct revisions required for User nominations (Task 3) and pipeline extensions (Task 4).

Follow up meetings (24) will be held with each User shown on Table 1 to explain the information and benchmark each User's current interest in the project The meeting will also explain the subsequent process GDCD will go through to help potential Users finalize their commitment. The outcome of the meetings and the overall task is to categorize each User as certain participant, potential participant or not a participant. For those declining to participate or undecided, a list of barriers will be developed for future reference with the State legislator.

3. **Task 3 – Refine and Finalize Potential User's Nominations**

A. Conduct Reengagement Survey. For Users considered certain and uncertain, a User Reengagement Survey will be completed to support revised nomination and financial analyses. At a minimum, this survey will solicit renewed information regarding system user characteristics including future growth projections, user counts, water usage (wholesale and retail), and user rates and charges. This information will be required to update and finalize the financial models and assess if revisions are needed to the financial models.

B. First Follow Up Meeting/Draft Memorandum of Commitment. A first follow up meeting (24 total) will be held with each certain and potential User identified in Task 2. Before the meeting, future nominations (domestic nominations, peak flows, industrial nominations) will be estimated from the information received in Task 3A. The consultant team will work with the Users to refine their nominations. Ideas and feedback will also be requested regarding the initial concepts for pipeline extensions where needed.

The meeting purpose will be to present drafts of updated nominations, updated pipeline extension concepts, and an estimated updated financial commitment. This information will be summarized in a Draft Memorandum of Commitment. The final financial commitment will depend on the final number of project participants and total nominations. Thus, a range of financial commitments will be presented that reflects the known uncertainty estimated at that time.

Additional discussion is also expected on the PPAs. The PPA discussion is intended to be high level and not to replace needed and subsequent legal discussions of the PPA.

C. The second follow up meeting (24 total) will be held to determine final nominations, final concepts for pipeline extensions and final project participation costs. A Final Memorandum of Commitment will be presented at this meeting which documents the nominations, pipeline extension costs and project participation costs.

4. **Task 4 – Pipeline Extension Concept Planning**

Determining the type, feasibility and cost of any required pipeline extension will be important for potential Users to commit to the project as described in Task 3. Thus Task 4 is expected to be done in parallel with Task 3. While Task 3 covers the effort associated with meetings, demand projections, communication of the PPA and communication of cost shares, Task 4 focuses on the engineering support each User will need to evaluate and estimate the capital cost of a pipeline extension, annual operating costs, and a summary of how the supplemental water supply from the RRVWSP will integrate with the potential Users existing system. (Note that not all potential Users will require pipeline extension evaluations.) The Engineer will provide the following services to the potential User:

A. Prepare a summary of the previous versions of pipeline extensions and costs to present to the potential Users at the first meeting.

B. For Users who continue to show significant interest in the project, develop an updated pipeline extension showing the preferred Project water service location(s) and route(s) and estimated capital and O&M costs.

C. Review the revised extension concepts and capital/O&M costs with the Owner.

D. Develop a final technical memorandum documenting the conceptual design, design basis, and costs for the pipeline extension. 12 hours per User

5. **Task 5 – Final PPA Reconciliation/Coordination**

The goal for this task order is signed PPAs for each potential User. The scope and fee covered in this Task is to support Garrison Diversion and its legal team in finalizing the PPAs.

A. Following completion of the Final Memorandum of Commitment, a detailed presentation will be made to explain the PPA

B. It is expected that Garrison Diversion and its legal team will need some technical assistance in negotiating the final PPAs for each User.

C. After all the User commitments have been finalized, a final update to all PPA exhibits will be completed. This update will include finalization of all cost models and associated tables within the PPA. This work is to be provided under Task 3 of the 2023-2025 Financial Planning Support Services Task Order.

6. **Task 6 – Project Coordination**

Engineer's Consultant will provide the services listed below to the Owner. Meeting participation includes both virtual and face-to-face meetings, which will be coordinated with/communicated with the Owner generally following past practices. Engineer's participation will most often be virtual whereas Engineer's consultant will attend either in person or virtually with the division being roughly half and half.

A. LAWA Interface Support:

i. Participate in LAWA Board pre-meetings (8).

ii. Attend LAWA Board meetings (8).

B. GDCD Interface Support

i. Participate in GDCD Board Meetings (4)

V. SPECIAL SERVICES

There are no Special Services anticipated within this Task Order.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner. Unless noted otherwise, deliverables will be in the form of electronic pdf files.

1. **Task 1 – Task Order Management and Administration**

A. Monthly invoices and project reports.

2. **Task 2 – Reestablish User Nomination Communications and Determine Current Interest**

A. User Outreach Customer Relationship Management (CRM) tracking database to document ongoing user discussions and action items.

B. Initial package for each potential User (24) showing their past nominations, past pipeline extension concepts, past project participation cost, estimated current project participation costs, and draft PPA

C. Documentation of 24 User meetings through updates in the CRM database, categorization of each user, and list of issues identified by those not currently willing to participate.

3. **Task 3 - Refine and Finalize Potential User's Nominations**

A. User Engagement Survey to request pertinent data and information from each user. Information collected will be utilized to support renewed user nomination and financial participation analyses.

B. Development of a Draft Project Commitment Memorandum (24) with updated nominations, pipeline extension concepts, and updated project participation costs.

C. Presentation for each potential User (24) and documentation of each meeting.

D. Development of Final Project Participation Memorandum.

E. Presentation for each potential User (24) and documentation of the meeting.

4. **Task 4 – Pipeline Extension Concept Update**

   A. For each potential User, updated conceptual design layout of the pipeline extension including pipe sizes, where pump stations would be required, conceptual sizing of pump stations based on hydraulic analysis of the pipeline, updated capital and O&M estimates for the branch pipeline, and identifying if there is a need for modifications of the local water treatment system. The previously technical memorandum will serve as the basis for the conceptual design. In addition, time is budgeted to support Rainbow Energy on its potential pipeline from the intake to their plant.

5. **Task 5 – Final PPA**

   A. Final adjustments will be made to each Users PPA based on the final participation level of each User.

6. **Task 6 – Project Coordination**

   A. LAWA Presentations (8)

   B. GDCD Board Presentations (4)

VII. ADDITIONAL SERVICES

1. The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope of work, an amendment to this Task Order or execution of a separate Task Order with the new work will be necessary. The following items are specifically excluded from Basic and Special Services:

   A. Attending additional meetings beyond what is identified in this Task Order.

   B. Work performed beyond the 24-month Task Order schedule.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Interim Deliverable Review Requirements. The Owner commits to review periods for interim deliverables of no more than 30 calendar days after receipt of deliverables from Engineer.

2. Review comments will be provided by the Owner either electronically in the native Word file in Track Changes Mode or they will be summarized in an MS Excel worksheet or MS Word document.

IX. FEE

The total fee for Basic Services and Special Services provided under this Task Order is estimated to be One Million Six Hundred Ninety-three Thousand Dollars ($1,693,000). A worksheet showing the fee estimate and level of effort by task is included in Attachment A.

X. PERFORMANCE SCHEDULE

Basic and Special Services of this Task Order will be completed by June 30, 2025.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Garrison Diversion and Engineer for Professional Services dated January 17, 2008, is incorporated by reference.

2. Attachment A – Fee Estimate Worksheets

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of our Task Order agreement, please print and sign this document. You should retain one copy for your files and return an electronic copy via email to Paul Boersma (BoersmaPM@BV.com) with Black & Veatch Corporation.

By: _____	By: _____
Duane DeKrey, General Manager Garrison Diversion Conservancy District	Paul Boersma, Associate Vice President Black & Veatch Corporation
Dated: _____	Dated: _____

ATTACHMENT A

Fee Estimate Worksheets

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 9510 - 2023-2025 Biennium User Outreach and Pipeline Extensions
BV Project No. TBD
Black & Veatch and Consultants

Task	Lead Firm	Position / Task Description	P / Principal	PMS / Project Manager Senior	DE1 / Design Engineer 1	DE3 / Design Engineer 3	SE1 / Staff Engineer 1	PJC2 / Project Controls Ana 2	Labor Detail / BV Labor Cost	Expense Detail / Hobacca	Sub Consulta / AE2S Hours	Sub Consult / AE2S Sub Costs	Expense Detail / AE2S Sub Markup	Sub Consulta / Burian Hours	Sub Consult / Burian Sub Costs	Expense Detail / Burian Sub Markup	Expense Detail / Travel Expense	Total Direct Expense	TOTAL / BV Level of Effort (hrs)	TOTAL / BV Labor Cost	TOTAL / Direct Expense	TOTAL / Fee
IV. BASIC SERVICES																						
1		**Task Order Management and Administration**	**264**	**48**	**0**	**192**	**0**	**96**	**$163,608**	**$6,414**	**264**	**$62,387**	**$3,120**	**222**	**$51,410**	**$2,571**	**$4,413**	**$130,315**	**744**	**$163,608**	**$130,315**	**$293,923**
A	BV	General Project Management (24 months)	192	48		192		96	$141,792	$5,793	192	$42,636	$2,132	84	$20,720	$1,036	$4,413	$76,730	672	$141,792	$76,730	$218,522
B	BV	Host Monthly User Engagement Conference Calls	72						$21,816	$621	72	$19,751	$988	138	$30,690	$1,535		$53,585	72	$21,816	$53,585	$75,401
2		**Reestablish User Nomination Communications and Determine Current Interest**	**76**	**0**	**76**	**0**	**0**	**0**	**$43,680**	**$1,518**	**396**	**$79,718**	**$3,986**	**898**	**$145,770**	**$7,289**	**$0**	**$238,281**	**176**	**$43,680**	**$238,281**	**$281,961**
A	BA	Develop Updated User Contact Database and Maintain	24		24				$12,528	$414	48	$10,616	$531	376	$64,220	$3,211		$78,992	48	$12,528	$78,992	$91,520
B	BA	Develop and Send User Initial Information Package (24)	36		36				$20,128	$690	228	$46,701	$2,335	432	$61,800	$3,090		$114,616	80	$20,128	$114,616	$134,744
C	All	Followup User Meeting	16		16				$11,024	$414	120	$22,402	$1,120	90	$19,750	$988		$44,674	48	$11,024	$44,674	$55,698
3		**Refine and Finalize Potential User's Nominations**	**160**	**0**	**160**	**0**	**0**	**0**	**$96,880**	**$3,448**	**1,096**	**$241,634**	**$12,081**	**1,182**	**$223,490**	**$11,175**	**$9,500**	**$501,328**	**400**	**$96,880**	**$501,328**	**$598,208**
A	AE**S/All**	Conduct User Reengagement Survey (24)	16		16				$11,024	$414	296	$62,981	$3,149	62	$13,990	$700		$81,234	48	$11,024	$81,234	$92,258
B	AIII	Followup Meeting/Draft Mem. Of Commitment	72		72				$42,928	$1,517	400	$84,326	$4,216	580	$103,800	$5,190		$199,049	176	$42,928	$199,049	$241,977
C	All	Meet with Users to Dscuss Final (24)	72		72				$42,928	$1,517	400	$94,326	$4,716	540	$105,700	$5,285	$9,500	$221,044	176	$42,928	$221,044	$263,972
4		**Pipeline Extension Concept Planning**	**88**	**0**	**282**	**0**	**282**	**0**	**$130,722**	**$5,620**	**248**	**$51,233**	**$2,561**	**276**	**$65,060**	**$3,253**	**$0**	**$127,727**	**652**	**$130,722**	**$127,727**	**$258,449**
A	BV	Prepare Summary of the Previous Pipeline Extensions	24		72		72		$33,840	$1,448	84	$16,664	$833	84	$19,380	$969		$39,294	168	$33,840	$39,294	$73,134
B	BV	Preare Updated Pipeline Extension Concept and Cost (14)	28		140		140		$60,144	$2,655	88	$17,761	$888	88	$20,460	$1,023		$42,787	308	$60,144	$42,787	$102,931
C	BV	Review Updatred Pipeline Extension with User (14)	8						$2,424	$69	20	$4,423	$221	48	$11,640	$582		$16,935	8	$2,424	$16,935	$19,359
D	BV	Prepare Final Pipeline Extension Concept and Lifecyle Costs	28		70		70		$34,314	$1,448	56	$12,385	$619	56	$13,580	$679		$28,711	168	$34,314	$28,711	$63,025
5		**Final PPA Reconcilliation/Coordination**	**96**	**0**	**0**	**0**	**0**	**0**	**$29,088**	**$828**	**240**	**$58,078**	**$2,904**	**390**	**$79,850**	**$3,993**	**$0**	**$145,653**	**96**	**$29,088**	**$145,653**	**$174,741**
A	All	Detailed PPA Presentation (24)	48						$14,544	$414	120	$31,539	$1,577	110	$30,350	$1,518		$65,398	48	$14,544	$65,398	$79,942
B	All	PPA Technical Assistance (24)	48						$14,544	$414	120	$26,539	$1,327	140	$29,100	$1,455		$58,835	48	$14,544	$58,835	$73,379
C	Burian	Final Update to all PPA Exhibits							$0	$0	0	$0	$0	140	$20,400	$1,020		$21,420	0	$0	$21,420	$21,420
6		**Project Coordination**	**80**	**0**	**0**	**0**	**0**	**0**	**$24,240**	**$690**	**80**	**$26,946**	**$1,347**	**76**	**$25,520**	**$1,276**	**$5,700**	**$61,479**	**80**	**$24,240**	**$61,479**	**$85,719**
A	All	LAWA Meetings (16)	64						$19,392	$552	64	$20,056	$1,003	60	$18,700	$935	$3,800	$45,046	64	$19,392	$45,046	$64,438
B	All	GDCD Meetings (4)	16						$4,848	$138	16	$6,889	$344	16	$6,820	$341	$1,900	$16,432	16	$4,848	$16,432	$21,280
		PROJECT TOTALS	**764**	**48**	**518**	**192**	**282**	**96**	**$488,218**	**$18,518**	**2,324**	**$519,995**	**$25,999**	**3,044**	**$591,100**	**$29,557**	**$19,613**	**$1,204,782**	**2,148**	**$488,218**	**$1,204,782**	**$1,693,000**

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 9510 - 2023-2025 Biennium User Outreach and Pipeline Extensions
BV Project No. TBD
AE2S

Task	Lead Firm	Position / Task Description	ENG8 Senior Project Manager 2	ENG3 Support Engineer	ADM3 Administrative	Labor Detail: AE2S Level of Effort (hrs)	Labor Detail: Labor Cost	Expense Detail: Travel	Total Expense	TOTAL: AE2S Level of Effort (hrs)	TOTAL: AE2S Labor Cost	TOTAL: Direct Expense	TOTAL: Fee
IV. BASIC SERVICES													
1		**Task Order Management and Administration**	**168**	**0**	**96**	**264**	**$57,387**	**$5,000**	**$5,000**	**264**	**$57,387**	**$5,000**	**$62,387**
A	BV	General Project Management (24 months)	96		96	192	$37,636	$5,000	$5,000	192	$37,636	$5,000	$42,636
B	BV	Host Monthly User Engagement Conference Calls	72			72	$19,751		$0	72	$19,751	$0	$19,751
2		**Reestablish User Nomination Communications and Dete**	**160**	**160**	**76**	**396**	**$79,718**	**$0**	**$0**	**396**	**$79,718**	**$0**	**$79,718**
A	BA	Develop Updated User Contact Database and Maintain	24	24		48	$10,616		$0	48	$10,616	$0	$10,616
B	BA	Develop and Send User Initial Information Package (24)	96	96	36	228	$46,701		$0	228	$46,701	$0	$46,701
C	All	Followup User Meeting	40	40	40	120	$22,402		$0	120	$22,402	$0	$22,402
3		**Refine and Finalize Potential User's Nominations**	**496**	**496**	**104**	**1,096**	**$231,634**	**$10,000**	**$10,000**	**1,096**	**$231,634**	**$10,000**	**$241,634**
A	AES/All	Conduct User Reengagement Survey (24)	136	136	24	296	$62,981		$0	296	$62,981	$0	$62,981
B	Alll	Followup Meeting/Draft Mem. Of Commitment	180	180	40	400	$84,326		$0	400	$84,326	$0	$84,326
C	All	Meet with Users to Dscuss Final (24)	180	180	40	400	$84,326	$10,000	$10,000	400	$84,326	$10,000	$94,326
4		**Pipeline Extension Concept Planning**	**90**	**158**	**0**	**248**	**$51,233**	**$0**	**$0**	**248**	**$51,233**	**$0**	**$51,233**
A	BV	Prepare Summary of the Previous Pipeline Extensions	24	60		84	$16,664		$0	84	$16,664	$0	$16,664
B	BV	Preare Updated Pipeline Extension Concept and Cost (14)	28	60		88	$17,761		$0	88	$17,761	$0	$17,761
C	BV	Review Updatred Pipeline Extension with User (14)	10	10		20	$4,423		$0	20	$4,423	$0	$4,423
D	BV	Prepare Final Pipeline Extension Concept and Lifecyle Costs	28	28		56	$12,385		$0	56	$12,385	$0	$12,385
5		**Final PPA Reconcilliation/Coordination**	**120**	**120**	**0**	**240**	**$53,078**	**$5,000**	**$5,000**	**240**	**$53,078**	**$5,000**	**$58,078**
A	All	Detailed PPA Presentation (24)	60	60		120	$26,539	$5,000	$5,000	120	$26,539	$5,000	$31,539
B	All	PPA Technical Assistance (24)	60	60		120	$26,539		$0	120	$26,539	$0	$26,539
C	Burian	Final Update to all PPA Exhibits				0	$0		$0	0	$0	$0	$0
6		**Project Coordination**	**80**	**0**	**0**	**80**	**$21,946**	**$5,000**	**$5,000**	**80**	**$21,946**	**$5,000**	**$26,946**
A	All	LAWA Meetings (16)	64			64	$17,556	$2,500	$2,500	64	$17,556	$2,500	$20,056
B	All	GDCD Meetings (4)	16			16	$4,389	$2,500	$2,500	16	$4,389	$2,500	$6,889
		PROJECT TOTALS	**1,114**	**934**	**276**	**2,324**	**$494,995**	**$25,000**	**$25,000**	**2,324**	**$494,995**	**$25,000**	**$519,995**

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 9510 - 2023-2025 Biennium User Outreach and Pipeline Extensions
BV Project No. TBD
Burian & Associates

Task	Lead Firm	Position / Task Description	Burian	Sesseman	Prelip	Saaver	Kelly	Labor Detail: Burian Level of Effort (hrs)	Labor Detail: Labor Cost	Expense Detail: Travel	Total Expense	TOTAL: Burian Level of Effort (hrs)	TOTAL: Burian Labor Cost	TOTAL: Direct Expense	TOTAL: Fee
IV. BASIC SERVICES															
1		**Task Order Management and Administration**	**84**	**72**	**0**	**0**	**66**	**222**	**$46,410**	**$5,000**	**$5,000**	**222**	**$46,410**	**$5,000**	**$51,410**
A	BV	General Project Management (24 months)	36				48	84	$15,720	$5,000	$5,000	84	$15,720	$5,000	$20,720
B	BV	Host Monthly User Engagement Conference Calls	48	72			18	138	$30,690		$0	138	$30,690	$0	$30,690
2		**Reestablish User Nomination Communications and Dete**	**88**	**156**	**112**	**474**	**68**	**898**	**$145,770**	**$0**	**$0**	**898**	**$145,770**	**$0**	**$145,770**
A	BA	Develop Updated User Contact Database and Maintain	24	78	112	162	0	376	$64,220		$0	376	$64,220	$0	$64,220
B	BA	Develop and Send User Initial Information Package (24)	24	48		312	48	432	$61,800		$0	432	$61,800	$0	$61,800
C	All	Followup User Meeting	40	30		0	20	90	$19,750		$0	90	$19,750	$0	$19,750
3		**Refine and Finalize Potential User's Nominations**	**232**	**330**	**40**	**450**	**130**	**1,182**	**$213,490**	**$10,000**	**$10,000**	**1,182**	**$213,490**	**$10,000**	**$223,490**
A	AES/All	Conduct User Reengagement Survey (24)	12	50		0	0	62	$13,990		$0	62	$13,990	$0	$13,990
B	Alll	Followup Meeting/Draft Mem. Of Commitment	100	160	40	240	40	580	$103,800		$0	580	$103,800	$0	$103,800
C	All	Meet with Users to Dscuss Final (24)	120	120		210	90	540	$95,700	$10,000	$10,000	540	$95,700	$10,000	$105,700
4		**Pipeline Extension Concept Planning**	**104**	**172**	**0**	**0**	**0**	**276**	**$65,060**	**$0**	**$0**	**276**	**$65,060**	**$0**	**$65,060**
A	BV	Prepare Summary of the Previous Pipeline Extensions	24	60				84	$19,380		$0	84	$19,380	$0	$19,380
B	BV	Preare Updated Pipeline Extension Concept and Cost (14)	28	60				88	$20,460		$0	88	$20,460	$0	$20,460
C	BV	Review Updatred Pipeline Extension with User (14)	24	24				48	$11,640		$0	48	$11,640	$0	$11,640
D	BV	Prepare Final Pipeline Extension Concept and Lifecyle Costs	28	28				56	$13,580		$0	56	$13,580	$0	$13,580
5		**Final PPA Reconcilliation/Coordination**	**180**	**0**	**0**	**210**	**0**	**390**	**$74,850**	**$5,000**	**$5,000**	**390**	**$74,850**	**$5,000**	**$79,850**
A	All	Detailed PPA Presentation (24)	80			30		110	$25,350	$5,000	$5,000	110	$25,350	$5,000	$30,350
B	All	PPA Technical Assistance (24)	80			60		140	$29,100		$0	140	$29,100	$0	$29,100
C	Burian	Final Update to all PPA Exhibits	20			120		140	$20,400		$0	140	$20,400	$0	$20,400
6		**Project Coordination**	**76**	**0**	**0**	**0**	**0**	**76**	**$20,520**	**$5,000**	**$5,000**	**76**	**$20,520**	**$5,000**	**$25,520**
A	All	LAWA Meetings (16)	60					60	$16,200	$2,500	$2,500	60	$16,200	$2,500	$18,700
B	All	GDCD Meetings (4)	16					16	$4,320	$2,500	$2,500	16	$4,320	$2,500	$6,820
		PROJECT TOTALS	**764**	**730**	**152**	**1,134**	**264**	**3,044**	**$566,100**	**$25,000**	**$25,000**	**3,044**	**$566,100**	**$25,000**	**$591,100**

RRVWSP Task Order 1510 – 2023-2025 Biennium Program Management Support

Task Order Effective Date: July 1, 2023

TASK ORDER EXECUTIVE SUMMARY

REQUEST

Garrison Diversion will need to successfully manage $240 million in spending over the next two years (approximately $1M per month). The purpose of this task order is to enable the consulting team to help Garrison Diversion maintain the programmatic budgets, biennium budgets, schedules, and risk management tools to enable them to responsibly manage this budget. Realizing that many unanticipated items require completion during the biennium, the task order also provides for an Owner contingency, to be used only with Garrison Diversion approval.

As context, in the 2017-2019 biennium, the Owner requested, and the Engineer developed several Program Management tools and processes. These tools included a master program schedule, a master program budget and cash flow, a program risk register, a program organization chart, and more detailed program schedules and budgets for the next biennium. In the 2019-2021 biennium, the Owner desired that the Engineer continue to implement the previously developed tools, and that work was accomplished under Task Order 1330. There was not a program management support task order in the 2021-2023 biennium, but program support services were completed under other various design-related task orders.

TASK ORDER SUMMARY

Basic Services: There are no basic services in the task order.

Special Services: The services to be provided by the engineering team (Black & Veatch, AE2S) are fully described in the attached Task Order. The following summarizes each of the major tasks:

	Fee
Task 1S – Program Communication and Coordination	$161,473
Task 2S – Monthly Program Risk and Trend Reporting	$82,961
Task 3S – Biennium and Programmatic Budget Development and Updates	$144,098
Task 4S – Planning and Schedule Management	$100,496
Task 5S – Organizational Planning	$99,491
Task 6S – Sub-Consultant Request for Qualifications	$65,105
Totals	$654,000

PROJECT OVERVIEW

The key deliverables for this task order will be routine updates of the programmatic scope and budget, the program cash flow, the program risk register and action lists, and development of the 2025-2027 biennium budget and schedule. These tools are each used to support discussions with the ND DWR, the ND legislature, the Garrison Board, and LAWA.

The task order is based on the BV project manager, the BV assistant project manager, and the AE2S lead each spending about 10 to 12 percent of their time on programmatic activities over the next two years.

Black & Veatch Corporation
Professional Services for the Red River Valley Water Supply Project
Under General Agreement dated January 17, 2008

RRVWSP Task Order 1510 – 2023-2025 Biennium Program Management Support Services

Effective Date – July 1, 2023

Content of this Task Order (TO) is as follows:

I. PROJECT BACKGROUND

1. The Red River Valley Water Supply Project (RRVWSP, the Program) being undertaken by the State of North Dakota (ND) will provide a supplemental water supply to eastern and central ND in the event of drought conditions in the Red River watershed. The Program as envisioned by the Garrison Diversion Conservancy District (Garrison Diversion, the Owner) will withdraw water from the Missouri River and convey it eastward through a multi-county pipeline to the Sheyenne River, a tributary of the Red River, for flow augmentation.

2. Professional services for final design of the Program will be accomplished through the execution of multiple task orders for items such as program and task order management, planning and studies, design and associated activities, engineering services during construction, and other professional services. A Preliminary Design Report (PDR) prepared by Engineer and authorized by the Owner under previously executed task orders is the foundation on which design of key elements of the Program will be based.

3. In the 2017-2019 biennium, the Owner requested, and the Engineer developed several Program Management tools and processes. These tools included a master program schedule, a master program budget and cash flow, a program risk register, a program organization chart, and more

detailed program schedules and budgets for the next biennium. The funding for the use of those tools and processes was only through that biennium. In the 2019-2021 biennium, the Owner desired that the Engineer continue to implement the previously developed tools, and that work was accomplished under Task Order 1330. There was not a program management support task order in the 2021-2023 biennium, but program support services were completed under other various design-related task orders.

II. TASK ORDER OBJECTIVES

1. There are three overall objectives of this Program Management Support Services Task Order:

   A. Facilitate a variety of ongoing calls and meetings and support program related communication and coordination between Garrison Diversion leadership and external stakeholders.

   B. Assist Garrison Diversion staff in guiding the Program through the ongoing use and updating of previously developed budget, schedule, and risk management tools. With the expected increase in project spending to $244 million in this biennium, these tools will provide Garrison Diversion updated cost and schedule reports each month helping with program reporting and transparency.

   C. Provide contingency funding, which can only be spent upon Garrison Diversion direction, to cover unforeseen program related tasks. In the past biennium, examples of work that were requested which were outside existing task orders included work with Washburn as a potential User, work with Rainbow Energy as a potential User, soliciting interest from other consulting firms, and work supporting the USACE Snake Creek Embankment Environmental Assessment (EA) review. The work covered under this task order is specifically for programmatic support work like those items described above.

2. The following Task Orders relate to program support but are separate from it.

   A. Task Order GF 1.44 – 2022 Strategic Project Development and Communications Services. Provided general project communications such as news releases, web sites, a project conference, and social media support.

   B. Task Order GF 1.45 – 2023 Strategic Communications Services. Provides general project communications such as news releases, web sites, and social media support as well as support during the legislative session. It is expected there will be an additional general fund (GF) Task Order for additional communications services in the coming biennium.

   C. Task Order GF 1.46 - Project Coordination and Funding Support. Provided specific support and coordination during the 2023 legislative session.

   D. Task Order 8410 – 2021-2023 Financial Planning Support. Provides for general support to users through updates to the existing financial models. Planned Task Order 8510 will provide for financial planning support during the 2023-2025 biennium.

E. Task Order 9510 – 2023-2025 Biennium User Outreach and Support. Provides for reaching out to potential Users with the objective of achieving a signed PPA.

III. GENERAL REQUIREMENTS

1. Under this Task Order, Engineer will provide services in accordance with the Standard Form of Agreement between Owner and Engineer for Professional Services dated January 17, 2008 (Agreement).

2. General Description of Activities. The Basic Services to be performed by Engineer consist of professional services associated with Program support for the RRVWSP.

3. Work outside Basic and Special Services. Engineer agrees to provide the Basic Services and Special Services identified herein. Work not specifically discussed herein as part of Basic Services or Special Services is considered Additional Services. Additional Services will only be performed with proper and separate task order authorization.

4. Explicit Responsibilities. Basic Services and Special Services explicitly set forth the Work Engineer will perform and do not implicitly put any additional responsibilities or duties upon Engineer. Deliverables to be provided are explicitly identified in this Task Order.

IV. BASIC SERVICES

Not used in this Task Order.

V. SPECIAL SERVICES

The Special Services of this Task Order are organized into major tasks as follows:

- Task 1S – Program Communication and Coordination
- Task 2S – Monthly Program Risk and Trend Reporting
- Task 3S – Biennium and Programmatic Budget Development and Updates
- Task 4S – Planning and Schedule Management
- Task 5S – Organizational Planning
- Task 5S – Sub-Consultant Solicitation

1. **Task 1S – Program Communication and Coordination**
   Engineer will assist Garrison Diversion with an array of Program communication and coordination activities that fall outside the scope of work of individual planning, engineering, or construction related task orders. Those Program communication and coordination services are identified below.

   A. Garrison Diversion Leadership Team Calls (24 calls). Participate in monthly conference calls with Garrison Diversion leadership to:

      i. Review overall status of the Program scope, schedule, budget for the current biennium and planning for the next biennium. These calls are expected to include Garrison

Diversion leadership, the BV project manager and one person from Engineer's consultant, AE2S. More of these calls typically occur in the second year of the biennium as planning is occurring for the next biennium. Included in these subtasks are time for Consultant's communication staff to assist in preparing meeting materials including presentations, handouts, and other materials not covered by a separate task order.

ii. Communicate general issues and concerns potentially affecting the Program, and

iii. Advise the leadership team of upcoming activities during the succeeding month.

B. Project Stakeholder Meetings (16 total). Support Garrison Diversion Leadership in meetings with the Garrison Diversion Board, the Lake Agassiz Water Authority (LAWA) Board, and the various committees of those boards for the purposes of discussing programmatic schedules and budgets. (Note that preparation and presentation at TAC and RRV committees is covered under individual task orders.) Support will include agenda topics and MS PowerPoint slide deck development along with attendance at meetings as requested by Garrison Diversion.

C. Monthly Garrison Diversion Board Member and LAWA Member Call (24). Participate in regular calls to brief Garrison Diversion Board members and LAWA members on the status of the Program.

2. **Task 2S – Monthly Program Risk and Trend Reporting**

A variety of Program management tools have been developed. The use of these tools was suspended during the current biennium given the relatively low funding. It is expected that the trend register, the issue and decision log, and the risk register will be updated at the start of the biennium in preparation for a larger spend in the 2023-2025 biennium. A "Trend" is defined herein as any item that departs from or has the potential to depart from the current RRVWSP program plan or an approach, design, methodology, etc. included in the Preliminary Design Report. Examples of items that would be added to the risk register include the potential for more wetlands to be considered jurisdictional, added money for road crossings, and added money for dewatering during pipe installation. The update will be prepared by the Engineer and then presented to and reviewed with Garrison Diversion and other stakeholders during a half-day virtual meeting. Monthly updates to the trend register, the issues and decision log, and the risk register will be completed and submitted with monthly invoices.

A. Initial Update of trend register, issue and decision log, action item log, and risk register and placement of these on a Teams site for collaboration with Garrison Diversion.

B. Monthly Updates of trend register, issue and decision log, and risk register. These updates will be presented during the monthly calls scheduled under Task 1S.A and included in Power BI summaries.

3. **Task 3S – Biennium and Programmatic Budget Development**

Engineer will assist Garrison Diversion with establishment of an updated Program budget and the individual biennia budgets. The 2023-2025 biennium budget has been established and it will be updated throughout the biennium to show actual costs as they are incurred. Engineer will support Garrison Diversion relative to establishment of the coming 2025-2027 biennium budget and updating the overall Program budget through the biennium. Specific responsibilities are discussed below.

A. Biennium Budget. Engineer will assist Garrison Diversion in development of the 2025-2027 biennium budget and help with prioritization of projects based upon legislative funding allocations and other considerations as determined by Garrison Diversion. The biennium budget will be structured such that it will address time sensitive items and will drive progress in areas where there are outside constraints such as expiration of permits, regulatory considerations, or other factors. The biennium budget will take into consideration State and user funding constraints, limitations, and concerns. The biennium budget update will include both the base RRVWSP and Eastern North Dakota Alternate Water Supply (ENDAWS). Once adopted by Garrison Diversion and LAWA, Engineer will make periodic budget updates to adapt to changing Program priorities and other factors. It is expected that most of this effort will be in the last year of the biennium to support Garrison Diversion in preparation for and during the legislative session. A monthly biennium cash flow will also be developed from the biennium budget.

B. Program Budget. A Program budget was developed, and a baseline established, at the preliminary design stage during the 2017-2019 biennium. It has been periodically updated since that time. The Program budget was last updated in 2022. Engineer will annually update the Program budget using information from the Trend Register Tool, the bidding results, anticipated change in construction costs, and changes in the program scope. Current costs will be indexed to the Engineering News Record Construction Cost Index to account for inflation. Escalation impacts will be provided by Garrison Diversion's Finance Team, which Engineer's consultant is a member, to arrive at a total CAPEX at Completion. Escalation will be computed from current day to the anticipated Program finish date.

4. **Task 4S – Schedule Planning and Schedule Management**

Engineer previously prepared a Program Master Schedule identifying key Program milestones and constraints. The Program finish date at that time was estimated to be 2030. Since development of that initial schedule, several major changes have been implemented. These changes have not been incorporated into the Program schedule nor has the new 2032 project finish date been reflected. Schedules need to be updated based upon current information to be relevant and useful to Garrison Diversion and the Program management team.

A. Master Program Schedule and Cash Flow. Update the overall Project schedule showing relationships between projects and requirements of the State legislature. Define the critical path, and periodically update schedules adapting to Garrison Diversion priorities. Provide

an estimate of actual progress versus planned progress. Also, an overall annual program cash flow estimate will be developed using the output of Tasks 3S and 4S.

B. Simplified Biennium Schedule and Updates. A simplified schedule will be updated and maintained to serve as a communication tool with the Garrison Diversion and LAWA Boards of Directors and various committees of the two organizations.

5. **Task 5S – Organizational Planning**

In the past biennium, significant progress was made developing a more detailed operation and maintenance (O&M) budget. From that budget, an initial organizational chart for Garrison Diversion was developed to show the number of staff needed to operate and maintain the Project. An organizational chart was also developed showing how the consulting team would be structured to support Garrison Diversion in the coming biennium. It is expected that more organizational planning will need to occur during the next biennium, both for Garrison Diversion staff and consulting staff.

A. GDCD RRVWSP Operation Staffing. In the past biennium, a draft RRVWSP operations plan was developed. It is expected that more formal job descriptions will be developed in this biennium to help Garrison Diversion with organizational planning and to potentially hire some these identified staff.

B. RRVWSP Consultant Team Staffing. Ongoing updates or organization charts for consulting team and Garrison Diversion to plan for adequate staffing of teams.

6. **Task 6S – Sub-Consultant Solicitation and Maintenance**

An initial Request for Statement of Interest was developed and sent to more than 50 engineering firms. Sixteen Statements of Interest were received. It is expected that more formal Requests for Qualifications will be sent to the firms who responded to the Request for Statement of Interest. The scope assumes four follow up Requests for Qualifications – one in 2023 and one in 2024 and the evaluation of those qualifications.

VI. DELIVERABLES

The following deliverables will be furnished under this Task Order. Documents or deliverables not included in the list below will be provided as Additional Services as authorized by the Owner. Unless noted otherwise, deliverables will be in the form of electronic pdf files.

1. Task 1S – Program Communication and Coordination

A. Program Meetings and Conference Calls

i. Outlook meeting invitations with MS Teams links and telephone numbers

ii. Meeting agenda

B. Board and Committee Meeting Support Services

i. Pre-planning team meeting agenda topics and MS Teams links/telephone numbers

ii. Presentation slide decks (draft and final versions)

2. Task 2S – Monthly Program Risk and Trend Reporting

A. Initial Updates of Trend Register, Action Item Lists, Issue and Decision Log, Risk Register

B. Monthly Updates of Trend Register, Issue and Decision Log, Risk Register

3. Task 3S – Financial Planning

A. Biennium Budget - Development of the 2025-2027 Biennium Budget

B. Program Budget – Annual updates of the program budget

4. Task 4S – Planning and Schedule Management

A. Major program Gantt Chart schedule update

B. Periodic simplified biennium schedule Gant chart updates (4)

5. Task 5S – Organizational Planning

A. Updated organizational chart for the Garrison Diversion staff expected to be required to manage, operate, and maintain the project and draft job descriptions for each person.

B. Updated organizational chart for the RRVWSP Program staff/consultants expected to be required to complete the implementation of the program.

6. Task 6S - Sub-Consultant Selection

A. Four separate Requests for Qualifications and two separate recommendations for hire based on those qualifications.

VII. ADDITIONAL SERVICES

1. The professional services listed below are not included in the scope of this Task Order nor does the fee shown in Article IX include any labor and direct expenses for items identified as Additional Services. Should Owner want to include services listed under Additional Services in Engineer's scope of work, an amendment to this Task Order or execution of a separate Task Order with the new work will be necessary. The following items are specifically excluded from Basic and Special Services:

A. Meeting support for project stakeholders beyond what is identified in this Task Order.

VIII. SPECIAL RESPONSIBILITIES OF OWNER

1. Interim Deliverable Review Requirements. Garrison Diversion commits to review periods for interim deliverables of no more than 30 calendar days after receipt of deliverables from Engineer.

2. Review comments will be provided by Garrison Diversion either electronically in the native Word file in Track Changes Mode or they will be summarized in an MS Excel worksheet or MS Word document.

IX. FEE

The total fee for Basic Services provided under this Task Order is Six Hundred Fifty-four Thousand ($654,000). A worksheet showing the fee estimate and level of effort by task is included in Attachment A.

X. PERFORMANCE SCHEDULE

Basic and Special Services of this Task Order will be completed by June 30, 2025.

XI. DOCUMENTS INCORPORATED BY REFERENCE AND ATTACHMENTS

1. Standard Form of Agreement between Garrison Diversion and Engineer for Professional Services dated January 17, 2008, is incorporated by reference.

2. Attachment A – Fee Estimate Worksheets

XII. ACCEPTANCE

If this satisfactorily sets forth your understanding of our Task Order agreement, please print and sign this document. You should retain one copy for your files and return an electronic copy via email to Paul Boersma (BoersmaPM@BV.com) with Black & Veatch Corporation.

By: _____	By: _____
Duane DeKrey, General Manager Garrison Diversion Conservancy District	Paul Boersma, Associate Vice President Black & Veatch Corporation
Dated: _____	Dated: _____

ATTACHMENT A

Fee Estimate Worksheets

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 1510 - 2023-2025 Biennium Program Management Support Services
BV Project No. TBD
Black & Veatch and Subconsultants

Task	Lead Firm	Position / Task Description	P Principal	PMS Project Manager Senior	PM Design Engineer 3	EM Project Manager	TE Technical Expert	ADM1 Administrator 1	ADM2 Administrator 2	Labor Detail BV Level of Effort (hrs)	Labor Detail BV Labor Cost	Expense Detail Hobacca	Expense Detail Misc	Sub Consulta AE2S Hours	Sub Consult AE2S Sub Costs	Expense Detail AE2S Sub Markup	Total Direct Expense	TOTAL BV Level of Effort (hrs)	TOTAL BV Labor Cost	TOTAL Direct Expense	TOTAL Fee
IV. BASIC SERVICES																					
1S		**Program Communication and Coordination**	92	68	0	1	0	96	0	257	$61,442	$2,216	$377	476	$93,157	$4,658	$100,408	257	$61,442	$100,408	$161,850
A	BV	Garrison Diversion Leadership Team Calls (24)	36	36		1		32		105	$26,330	$905	$377	166	$32,218	$1,611	$35,111	105	$26,330	$35,111	$61,441
B	BV	Project Stakeholder Meetings (16)	32	32				32		96	$23,616	$828		144	$28,721	$1,436	$30,985	96	$23,616	$30,985	$54,601
C	BV	Monthly Garrison Board and LAWA Board Calls (24)	24					32		56	$11,496	$483		166	$32,218	$1,611	$34,312	56	$11,496	$34,312	$45,808
2S		**Monthly Program Risk and Trend Reporting**	36	84	84	0	0	0	0	204	$51,312	$1,758	$0	112	$28,468	$1,423	$31,649	204	$51,312	$31,649	$82,961
A	BV	Initial Update of Trend Register, issue-decision log, action item log and risk register	12	36	36					84	$20,952	$724		44	$10,829	$541	$12,094	84	$20,952	$12,094	$33,046
B	BV	Monthly Updates of Reports (24)	24	48	48					120	$30,360	$1,034		68	$17,640	$882	$19,556	120	$30,360	$19,556	$49,916
3S		**Biennium and Programmatic Budgets**	48	200	200	0	0	0	0	448	$110,744	$3,862	$0	112	$28,088	$1,404	$33,354	448	$110,744	$33,354	$144,098
A	BV	Biennium Budget	24	80	80					184	$45,752	$1,586		56	$14,044	$702	$16,332	184	$45,752	$16,332	$62,084
B	BV	Program Budget (annual updates)	24	120	120					264	$64,992	$2,276		56	$14,044	$702	$17,022	264	$64,992	$17,022	$82,014
4S		**Planning and Schedule Management**	32	120	120	0	0	0	0	272	$67,416	$2,345	$0	152	$29,270	$1,464	$33,079	272	$67,416	$33,079	$100,495
A	BV	Master Program Schedule and Cash Flow	16	80	80					176	$43,328	$1,517		76	$14,635	$732	$16,884	176	$43,328	$16,884	$60,212
B	BV	Simplied Biennium Schedule and Update	16	40	40					96	$24,088	$828		76	$14,635	$732	$16,195	96	$24,088	$16,195	$40,283
5S		**Organizational Planning**	32	32	0	0	20	0	0	84	$25,332	$724	$0	280	$69,938	$3,497	$74,159	84	$25,332	$74,159	$99,491
A	AE2S	GDCD RRVWSP Operational Staffing	20	20			20			60	$18,060	$517		170	$42,407	$2,120	$45,044	60	$18,060	$45,044	$63,104
B	BV	RRVWSP Program Implementation Staffing	12	12						24	$7,272	$207		110	$27,531	$1,377	$29,115	24	$7,272	$29,115	$36,387
6S		**Sub-Consultant Request for Qualifications**	32	60	160	0	0	0	60	312	$62,416	$2,689	$0	0	$0	$0	$2,689	312	$62,416	$2,689	$65,105
A	BV	Development and Evaluations of 4 SOQs	32	60	160				60	312	$62,416	$2,689		0	$0	$0	$2,689	312	$62,416	$2,689	$65,105
		PROJECT TOTALS	272	564	564	1	20	96	60	1,577	$378,662	$13,594	$377	1,132	$248,921	$12,446	$275,338	1,577	$378,662	$275,338	$654,000

Garrison Diversion Conservancy District
Red River Valley Water Supply Project
RRVWSP TO 1510 - 2023-2025 Biennium Program Management Support Services
BV Project No. TBD
AE2S

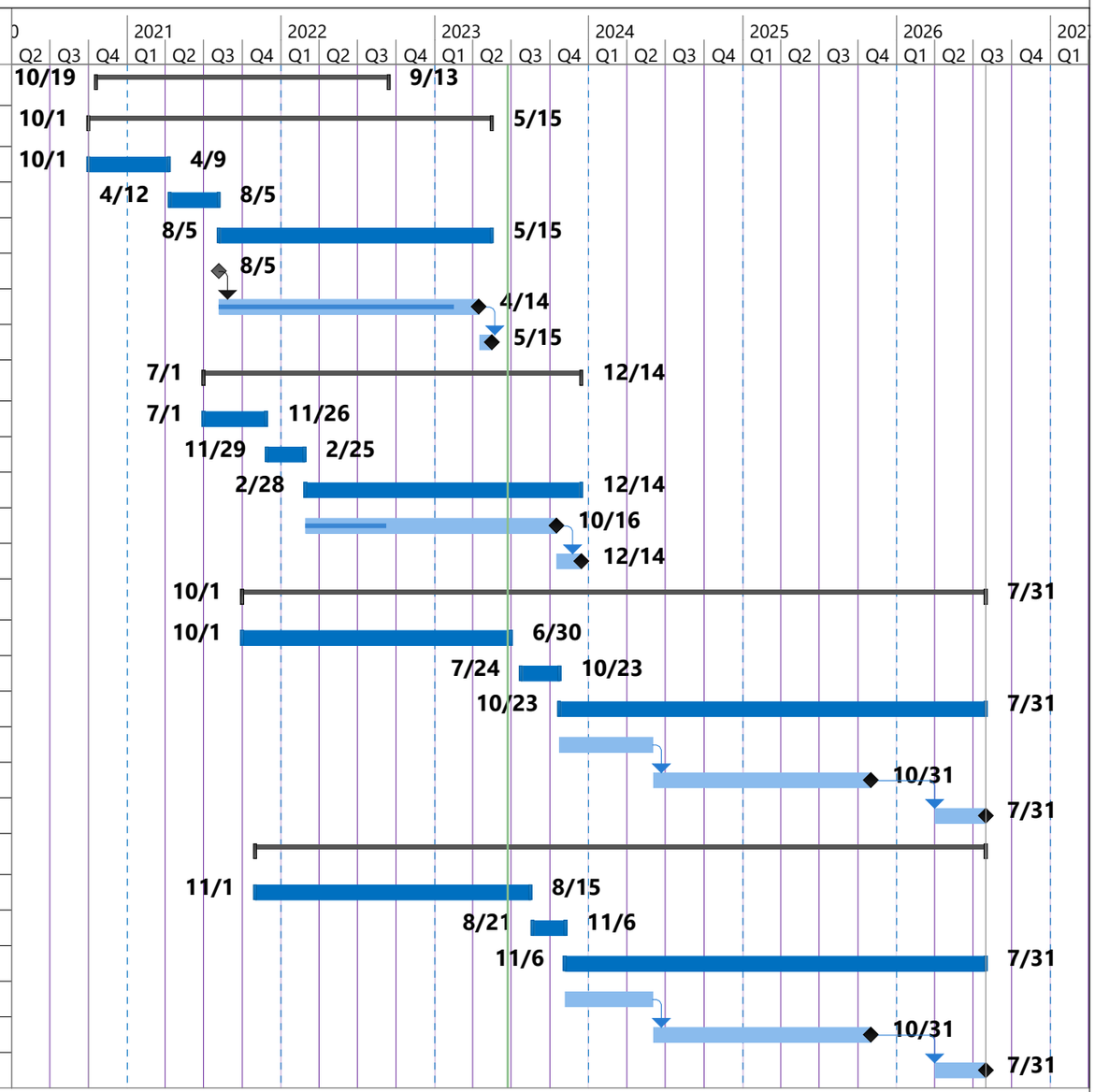
Task	Lead Firm	Position / Task Description	PM6 Principal	PM4 Project Manager	ENG5 Project Engineer	COM3 Communications	ADM3 Administrative	Labor Detail: AE2S Level of Effort (hrs)	Labor Detail: Labor Cost	TOTAL: AE2S Level of Effort (hrs)	TOTAL: AE2S Labor Cost	TOTAL: Direct Expense	TOTAL: Fee
IV. BASIC SERVICES													
1S		**Program Communication and Coordination**	**80**	**96**	**0**	**276**	**24**	**476**	**$93,157**	**476**	**$93,157**	**$0**	**$93,157**
A	BV	Garrison Diversion Leadership Team Calls (24)	24	36		98	8	166	$32,218	166	$32,218	$0	$32,218
B	BV	Project Stakeholder Meetings (16)	32	24		80	8	144	$28,721	144	$28,721	$0	$28,721
C	BV	Monthly Garrison Board and LAWA Board Calls (24)	24	36		98	8	166	$32,218	166	$32,218	$0	$32,218
2S		**Monthly Program Risk and Trend Reporting**	**36**	**60**	**0**	**0**	**16**	**112**	**$28,468**	**112**	**$28,468**	**$0**	**$28,468**
A	BV	Initial Update of Trend Register, issue-decision log, action item log a	12	24		0	8	44	$10,829	44	$10,829	$0	$10,829
B	BV	Monthly Updates of Reports (24)	24	36		0	8	68	$17,640	68	$17,640	$0	$17,640
3S		**Biennium and Programmatic Budgets**	**24**	**72**	**0**	**0**	**16**	**112**	**$28,088**	**112**	**$28,088**	**$0**	**$28,088**
A	BV	Biennium Budget	12	36	0	0	8	56	$14,044	56	$14,044	$0	$14,044
B	BV	Program Budget (annual updates)	12	36	0	0	8	56	$14,044	56	$14,044	$0	$14,044
4S		**Planning and Schedule Management**	**24**	**32**	**0**	**80**	**16**	**152**	**$29,270**	**152**	**$29,270**	**$0**	**$29,270**
A	BV	Master Program Schedule and Cash Flow	12	16	0	40	8	76	$14,635	76	$14,635	$0	$14,635
B	BV	Simplied Biennium Schedule and Update	12	16	0	40	8	76	$14,635	76	$14,635	$0	$14,635
5S		**Organizational Planning**	**40**	**140**	**60**	**32**	**8**	**280**	**$69,938**	**280**	**$69,938**	**$0**	**$69,938**
A	AE2S	GDCD RRVWSP Operational Staffing	20	70	60	16	4	170	$42,407	170	$42,407	$0	$42,407
B	BV	RRVWSP Program Implementation Staffing	20	70	0	16	4	110	$27,531	110	$27,531	$0	$27,531
6S		**Sub-Consultant Request for Qualifications**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**0**	**$0**	**$0**	**$0**
A	BV	Development and Evaluations of 4 SOQs						0	$0	0	$0	$0	$0
		Total for Basic Services	**204**	**400**	**60**	**388**	**80**	**1,132**	**$248,921**	**1,132**	**$248,921**	**$0**	**$248,921**

2020-2026 Schedule
Red River Valley Water Supply Project

23-6 GDCD RRVWSP 2020-26 Schedule.mpp

Fri 6/23/23

ID	Task Name	Duration	Start	Finish
1	**EARLY-OUT PROJECTS**	**497 days**	**Mon 10/19/20**	**Tue 9/13/22**
32	**MRI, SCREEN STRUCTURE & TUNNEL, CT 2**	**683 days**	**Thu 10/1/20**	**Mon 5/15/23**
33	**Design**	**137 days**	**Thu 10/1/20**	**Fri 4/9/21**
38	**Bidding Assistance & Award**	**84 days**	**Mon 4/12/21**	**Thu 8/5/21**
44	**Construction**	**462 days**	**Thu 8/5/21**	**Mon 5/15/23**
45	Pre-con Meeting & Notice to Proceed	0 days	Thu 8/5/21	Thu 8/5/21
46	Substantial Completion	441 days	Fri 8/6/21	Fri 4/14/23
47	Final Completion	21 days	Mon 4/17/23	Mon 5/15/23
48	**TRANSMISSION PIPELINE EAST, CT 5B**	**641 days**	**Thu 7/1/21**	**Thu 12/14/23**
49	**Final Design Wrap-up**	**107 days**	**Thu 7/1/21**	**Fri 11/26/21**
52	**Bidding Assistance & Award**	**65 days**	**Mon 11/29/21**	**Fri 2/25/22**
59	**Construction**	**469 days**	**Mon 2/28/22**	**Thu 12/14/23**
60	Substantial Completion	426 days	Mon 2/28/22	Mon 10/16/23
61	Final Completion	43 days	Tue 10/17/23	Thu 12/14/23
62	**TRANSMISSION PIPELINE EAST, CTS 5C&D**	**1261 days**	**Fri 10/1/21**	**Fri 7/31/26**
63	**Final Design Wrap-up**	**456 days**	**Fri 10/1/21**	**Fri 6/30/23**
67	**Bidding Assistance & Award**	**66 days**	**Mon 7/24/23**	**Mon 10/23/23**
74	**Construction**	**725 days**	**Mon 10/23/23**	**Fri 7/31/26**
75	Pipe Submittals, Fab, & Delivery	160 days	Mon 10/23/23	Fri 5/31/24
76	Pipe Installattion	370 days	Mon 6/3/24	Fri 10/31/25
77	Testing, Final Restoration, & Cleanup	88 days	Wed 4/1/26	Fri 7/31/26
78	**RRV TRANSMISSION PIPELINE, CTS 6A**	**1240 days**	**Mon 11/1/21**	**Fri 7/31/26**
79	**Final Design**	**467 days**	**Mon 11/1/21**	**Tue 8/15/23**
84	**Bidding Assistance & Award**	**56 days**	**Mon 8/21/23**	**Mon 11/6/23**
91	**Construction**	**715 days**	**Mon 11/6/23**	**Fri 7/31/26**
92	Pipe Submittals, Fab, & Delivery	150 days	Mon 11/6/23	Fri 5/31/24
93	Pipe Installation	370 days	Mon 6/3/24	Fri 10/31/25
94	Testing, Final Restoration, & Cleanup	88 days	Wed 4/1/26	Fri 7/31/26



Red River Valley Water Supply Project
Planning Level Budget

May 31, 2023	Percent Complete	Current Estimate	Actual Expenses	Outstanding Expenses
Conceptual Design Subtotal		**$ 5,302,130**	**$ 5,302,130**	**$ -**
Preliminary Design Subtotal		**$ 10,217,606**	**$ 10,217,606**	**$ -**
Final Design Completed Subtotal		**$ 10,198,949**	**$ 10,198,949**	**$ -**
Financial, Administration, Legal, Completed		**$ 1,397,474**	**$ 1,397,474**	**$ -**
Land Acquistion Completed		**$ 1,593,004**	**$ 1,593,004**	**$ -**
Subtotal Completed		**$ 28,709,162**	**$ 28,709,162**	**$ -**
Financial Modeling/Cost Allocation	90%	$ 1,521,047	$ 1,370,623	$ 150,424
Program Management Information System	92%	$ 113,100	$ 103,580	$ 9,520
Stakeholder Support	74%	$ 398,830	$ 296,702	$ 102,128
Subtotal	**87%**	**$ 2,032,977**	**$ 1,770,906**	**$ 262,071**
Engineering/Land Acquistions				
Missouri River Intake - Screen Structure Design	99%	$ 1,444,000	$ 1,435,441	$ 8,559
Land Acquisition 2019/2021	73%	$ 650,000	$ 476,204	$ 173,796
2019 to 2021 Biennium Program Management Services	100%	$ 166,191	$ 166,191	$ (0)
Project Planning, Finance, Admin, etc.	49%	$ 433,809	$ 214,586	$ 219,223
Final Design Transmission Pipeline - 5b	100%	$ 545,000	$ 545,000	$ (0)
Final Design Transmission Pipeline - 5c & 5d	84%	$ 970,000	$ 819,650	$ 150,350
Final Design Tranmission Pipeline - 6	66%	$ 4,000,000	$ 2,640,823	$ 1,359,177
Geotech Transmission Pipeline - 7	11%	$ 397,000	$ 43,372	$ 353,628
Acquire Easements	15%	$ 2,919,000	$ 442,164	$ 2,476,836
Admin/Finance/Legal	49%	$ 2,739,677	$ 1,328,972	$ 1,410,705
Financial Modeling/Cost Allocation	92%	$ 528,000	$ 485,199	$ 42,801
Pipeline Extensions	64%	$ 436,000	$ 277,411	$ 158,589
Financial/Legal/Stakeholder	0%	$ 583,093		$ 583,093
Operational Plan Phase 1	99%	$ 106,000	$ 105,323	$ 677
Operational Plan Phase 2	52%	$ 430,584	$ 226,041	$ 204,543
PMIS Procurement & Implementation	42%	$ 498,000	$ 211,106	$ 286,894
Contractor Qualifications	15%	$ 158,000	$ 23,892	$ 134,108
ENDAWS Land Services	10%	$ 181,750	$ 17,361	$ 164,389
ENDAWS-Local Portion	81%	$ 136,250	$ 109,755	$ 26,495
Engineering & Land Acquisition Subtotal		**$ 14,582,677**	**$ 8,239,520**	**$ 6,343,157**
Construction				
Pipeline 5A & Trenchless	**93%**	**$ 10,155,978**	**$ 9,418,286**	***$ 737,692***
Construction Contract	100%	$ 8,393,396	$ 8,393,396	*$ (0)*
Bidding Services	100%	$ 75,621	$ 75,621	$ 0
Construction Phase Services	109%	$ 868,145	$ 949,268	$ (81,123)
Contingency	*if needed*	*$ 818,816*	$ -	*$ 818,816*
Discharge Structure	**72%**	**$ 2,436,800**	**$ 1,744,022**	**$ 692,778**
Construction Contract	100%	$ 1,521,884	$ 1,521,884	$ 0
Bidding Services	100%	$ 40,736	$ 40,736	$ 0
Construction Phase Services	94%	$ 193,000	$ 181,402	$ 11,598
Contingency	*if needed*	$ 681,180	$ -	$ 681,180
Missouri River Intake Wetwell	**93%**	**$ 5,690,495**	**$ 5,304,492**	**$ 386,003**
Construction Contract	95%	$ 4,950,907	$ 4,721,446	$ 229,461
Bidding Services	100%	$ 36,662	$ 36,662	$ (0)
Construction Phase Services	89%	$ 612,000	$ 546,384	$ 65,616
Contingency	*If needed*	*$ 90,926*	$ -	*$ 90,926*
Missouri River Intake Screen Structure & Tunnel	**76%**	**$ 23,495,616**	**$ 17,943,929**	**$ 5,551,687**
Construction Contract	74%	$ 20,910,616	$ 15,414,218	$ 5,496,398
Construction Phase Services	98%	$ 2,585,000	$ 2,529,711	$ 55,289
Contingency	*If needed*	$ -	$ -	$ -
Pipeline 5B	26%	***$ 51,600,000***	***$ 13,465,516***	***$ 38,134,484***
Construction Contract	27%	$ 44,644,077	*$ 12,028,526*	$ 32,615,551
Construction Phase Services	32%	$ 4,486,000	*$ 1,436,990*	$ 3,049,010
Contingency	*If needed*	$ 2,469,923	$ -	$ 2,469,923
Construction Subtotal	**51%**	**$ 93,378,889**	**$ 47,876,245**	**$ 45,502,644**
Total Program Budget	**62%**	**$ 138,703,705**	**$ 86,595,833**	**$ 52,107,872**