



DR. BUB NYGREN PRESIDENT
RICHELLE MONTOYA VICE PRESIDENT

The Navajo Nation | Yideeskáądi Nitsáhákees

April 5, 2023

MILLER ENGINEERS, INC
SOUDER, MILLER & ASSOCIATES
2904 RODEO PARK DRIVE EAST, BUILDING 100
SANTA FE, NM 87505

ATTENTION: ANDREW ROBERTSON, SENIOR VICE PRESIDENT

REFERENCE: 164 Review 020160 / Modification

Dear Andrew:

Attached please find your copy of the approved Modification 9 (CO10606) with the Navajo Nation Division of Natural Resources. The Modification increases the contract budget by \$4,830,827.00. All other terms and conditions remain unchanged and fully enforced.

The above contract number must be referenced on all invoices, documents, and correspondence as it relates to this contract.

Should you have any questions, please contact Lucinda Davis at 928-729-4127.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eugene Begay".

Eugene Begay, Senior Accountant
DNR – Contract Administration

xc: Lucinda Davis, Navajo Nation DNR
Wynonna Henry, Contract Accounting/Navajo Nation Office of the Controller
Contract Folder: CO10606

Budget for Mod 9, Contract No. C010606
To'hajiilee Chapter/Canoncito Band of Navajos Water System Project

FIRM NAME : Miller Engineers, Inc. DBA Souder, Miller & Associates
 ADDRESS : 5454 Venice Avenue NE, Suite D
 : Albuquerque, NM 87113
 TELEPHONE NO. : 505-299-0942
 EMPLOYER'S TAX ID NO : 85-0336964

FOR THE PERIOD: Beginning: May 8, 2014
 Ending: May 24, 2022

PREVIOUS FUNDING SOURCES:

<u>Items (incl. applicable taxes)</u>	<u>Account Number</u>	<u>Item Total</u>
Original Contract	K133022.6530 (TIF 2012)	\$ 75,000.00
Amendment No. 1	K133041.6530 (TIF 2013)	\$ 75,000.00
Amendment No. 2	K163029.6865 (TIF 2015)	\$ 600,000.00
Amendment No. 3	K163044.6865 (TIF 2016)	\$ 350,000.00
	N01344.6865 (PTF)	\$ 400,000.00
Amendment No. 4	K183024.8545 (TIF 2018)	\$ 220,000.00
Amendment No. 5	K193059.6865 (CO 2019)	\$ 20,000.00
	K193087.6865 (TIF 2019)	\$ 150,000.00
Amendment No. 6	N01344.6865 (PTF)	\$1,100,000.00
Amendment No. 7	415003.6865 (Sihasin 2021)	\$1,822,000.00
Amendment No. 8	415003.6865 (Sihasin 2021)	\$ 574,785.67
<u>CONTRACT AMOUNT PRIOR TO THIS AMENDMENT NO. 9</u>		<u>\$5,386,785.67</u>

AMENDMENT NO. 9

NMIAD – Capital Outlay 2019	K193059	\$ 103,773.58
609-19-D2580	6% Navajo Nation Tax	\$ 6,226.42
Total from Business Unit No. K193059.6865		\$ 110,000.00
Navajo Nation Sihasin	N01525 (Off Reservation)	\$ 1,570,827.00
Total from Business Unit No. N01525.6865		\$ 1,570,827.00
US Treasury-CARES	K211543	\$ 660,377.36
CJY-41-21	6% Navajo Nation Tax	\$ 39,622.64
Total from Business Unit No. K211543.6865		\$ 700,000.00
Fiscal Recovery Funds (FRF)	K211561	\$2,311,320.75
CJN-29-22	6% Navajo Nation Tax	\$ 38,679.25
Total from Business Unit No. K211561.6865		\$2,450,000.00
<u>TOTAL INCREASE FOR AMENDMENT 9</u>		<u>\$4,830,827.00</u>

BUDGET SUMMARY INCLUDING AMENDMENT 9

Total Contract Amount prior to Amendment 9 Including Tax	\$5,386,785.67
Total Contract Increase for Amendment 9 including Tax	<u>\$4,830,827.00</u>
NEW CONTRACT AMOUNT AFTER AMENDMENT NO. 8	\$5,386,785.67

BUDGET SUMMARY INCLUDING AMENDMENT NO. 9

Total Contract Amount prior to Amendment No. 9 (incl. tax)	\$ 5,386,785.67
Total Contract Increase for Amendment No. 9 (incl. tax)	<u>\$ 4,830,827.00</u>
NEW CONTRACT AMOUNT AFTER THIS AMENDMENT NO. 9	\$10,217,612.67

FUNDING BREAK DOWN BY SOURCE:

FEDERAL:	30%
NAVAJO NATION	54%
NM STATE FUNDING	<u>16%</u>
	100%

This is **EXHIBIT K**, consisting of 13 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated May 8, 2014 .

AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 9

1. Background Data:

- a. Effective Date of Owner-Engineer Agreement: May 8, 2014
- b. Owner: The Navajo Nation
- c. Engineer: Miller Engineers, Inc. d/b/a Souder, Miller & Associates
- d. Project: To'hajiilee Chapter/Canoncito Band of Navajos Water System Project

2. Description of Modifications:

a. Summary of Additional Engineering Work

Engineering services during the design, construction, and operation phases of the To'Hajiilee Community Water System (CWS), including the To'Hajiilee – Albuquerque Water Supply Project and improvements to the Chapter's distribution system.

The To'Hajiilee CWS improvements project includes replacement of existing distribution pipelines, extension of new waterlines, and construction of new pump stations and chlorinators for the CWS distribution system within chapter boundaries. This CWS is currently operated by To'Hajiilee Chapter.

The To'Hajiilee – Albuquerque Water Supply Project is an approximately 7.5 mile water transmission line originating at the existing 7W Reservoir operated by the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) and terminating near the existing Well No. 5 pump house in To'Hajiilee. The waterline will be operated by ABCWUA up to the point of connection to the To'Hajiilee system; the To'Hajiilee system will be operated by To'Hajiilee Chapter.

Specific tasks are summarized and grouped by funding source below, and described more fully in Section 2.b.

Business Unit No. K193059 (Capital Outlay 2019): Construction-phase engineering services for improvements to existing CWS ("Inside Chapter"), including Tasks 1 through 4.

Business Unit No. N01525 (Sihasin 2022): Pass-through funding for prepayment of New Mexico Water Trust Board (WTB) loan and prepayment of O&M costs to Albuquerque

Bernalillo County Water Utility Authority (ABCWUA) required for the To'Hajiilee – Albuquerque Water Supply Project, including Tasks 5 through 6.

Business Unit No. K211543 (Defunded CARES): Design-phase engineering services for the To'Hajiilee – Albuquerque Water Supply Project, including Tasks 7 through 16.

Business Unit No. K211561 ^{Admin} (Navajo Nation Fiscal Recovery Fund): Design- and operation-phase engineering services for the To'Hajiilee – Albuquerque Water Supply Project and community water system, including Tasks 17 through 23.

b. Detailed Task Descriptions

Tasks 1 through 4 for Construction-phase engineering services for improvements to existing CWS (“Inside Chapter”), to be completed with Business Unit K193059, are as follows:

Task 1: Additional Project Administration

- a. Engineer will conduct a project review meeting with Navajo Nation Water Management Branch (NNWMB), Indian Health Service (IHS), and To'hajiilee Chapter (Chapter), to be held at SMA's Albuquerque office, To'Hajiilee's Chapter House or other location acceptable to the Owner.
- b. Engineer will provide general project administration, invoicing, project funding assistance/reporting, project startup and project closeout.

Task 2: Additional Construction Administration

a. Submittal and Shop Drawing Review:

SMA will review submittals and other data that the Contractor is required to submit for conformance with the information in the contract documents and compatibility with the design concept of the project as a functioning whole. Such reviews will not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto. SMA will verify and document whether Contractor submittals are in accordance with the technical specification. SMA will create and maintain a log of all submittals and shop drawings.

b. Respond to Requests for Information:

SMA will respond to the Contractor's Requests for Information (RFIs) in writing. SMA will create and maintain a log of all RFIs. This may include issuing necessary clarifications and interpretations of the contract documents and technical specifications as appropriate.

c. Field Orders:

SMA may issue field orders authorizing minor variations from the requirements of the contract documents and technical specifications.

d. Site Visits:

SMA will make periodic visits to the site to observe the progress and quality of the various aspects of the Contractor's work. Based on the information obtained, and to the extent possible during such visits and observations, SMA will determine if the work is

proceeding in accordance with the contract documents and technical specifications and will keep the Owner informed of the progress of the work. During such visits, Engineer will recommend to the Owner that the Contractor's work be disapproved and rejected while it is in progress if SMA believes that such work will not produce a completed project that conforms generally to the contract documents and technical specifications or that will prejudice the integrity of the design concept of the completed project as a functioning whole as indicated in the contract documents and technical specifications. The fee is based on making bi-weekly site visits for the 3 month construction project duration and preparing a site visit record for the Owner via email.

e. Progress Meetings:

SMA will establish, coordinate and attend regular project meetings throughout the duration of the project. The fee is based on attending monthly meetings for an additional 3 month construction project duration and preparing agendas and meeting minutes for these meetings.

f. Preparation of Periodic Pay Requests:

SMA will prepare periodic pay requests for the work accomplished during the pay period as verified by the construction observer. Based on the construction observer review of applications for payment and engineer review of accompanying support documentation, SMA will recommend the amounts that the Contractor be paid. Such recommendations of payment will be based on such observations and review that, to the best of SMA's knowledge, the work has progressed to the point indicated, the quality of such work is generally in accordance with the contract documents, and the conditions precedent to the Contractor being entitled to such payment appear to have been fulfilled.

g. Preparation of Contract Change Orders:

SMA will recommend action on any proposed contract changes including review of proposed pricing. SMA will prepare formal change orders required for the project.

h. Complete Acceptance Meeting:

SMA will schedule and arrange acceptance meetings when notified by the Contractor that the project is ready for acceptance. SMA will complete one (1) acceptance meetings, prepare and distribute a "punchlist" outlining items to be addressed, and complete one (1) follow-up meeting after Contractor indicates that the "punchlist" has been completed and make a recommendation to the Owner regarding project acceptance.

i. Preparation of Close-out Documents:

At the completion of the project, SMA will complete forms, provide direction and coordinate completion of the closeout documents listed below:

1. Certification of Substantial Completion
2. Consent of Surety to Final Payment
3. Engineer & Community Acceptance

4. Labor Standards Certification
 5. Record Drawings & O&M Manuals Acceptance
 6. Release of Liens
 7. Assist with reporting and close out requirements for project funding
- j. Maintain Records:
The Consultant will maintain records of all contract documents, change orders, RFIs, pay requests, funding reimbursement requests, financial status reports, certified payroll, and design and construction documents during the entire construction period and will deliver one (1) copy of the complete project records to the Owner at the completion of construction in digital PDF format.
- k. Warranty Meeting:
SMA will schedule and arrange warranty meetings 11 months after the substantial completion date to make recommendations to the Owner regarding corrections covered by the Contractor's warranty that need to be completed. SMA will complete One (1) warranty meeting, prepare and distribute a "punchlist" outlining items to be addressed, and complete One (1) follow-up meeting after Contractor indicates that the "punchlist" has been completed.

Task 3: Additional Construction Observation

- a. Construction Observation:
SMA will provide an on-site Resident Project Representative (RPR) on a full-time basis during progression of construction. The fee for this work was based on providing approximately 40 hours per week, including travel to and from the project site and report preparation, on a construction duration of up to an additional 3 months. Observation work will typically be 4 to 5 days a week and will be coordinated with the Contractor to attempt to occur during periods when the observation will be most beneficial. This work will include coordination of the construction schedule with the Contractor and verification of quality of work for conformance with the Construction Documents.
- b. Preconstruction Conference:
The RPR will participate in the pre-construction conference prior to commencement of work at the site.
- c. Quantity Verification:
The RPR will verify the quantities in applications for payment and accompanying support documentation and advise the engineer regarding the amounts that the Contractor should be paid.
- d. Material Verification:
While on-site, SMA will verify and document that material received is per the submittals, material installed, tested and measured per the technical specifications.

Task 4: As-Built Record Drawings

a. Preparation of Record Drawings:

SMA will update the construction plans to reflect changes made during construction. Record Drawings will be prepared utilizing the project documentation provided by the Contractor. SMA will submit the original record drawings and three (3) hardcopies and one digital pdf copy to the Owner upon completion.

Tasks 5 through 6 for pass-through funding to the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) for the To'Hajiilee – Albuquerque Water Supply Project, to be completed with Business Unit N01525, are as follows:

Task 5: Pass-Through for New Mexico Water Trust Board Loan Component Pre-Payment

The ABCWUA has secured construction funding on behalf of the Navajo Nation from the New Mexico Water Trust Board (WTB) in the amount of \$7,708,271, consisting of a \$6,937,444 (90%) grant and a \$770,827 (10%) loan, with the understanding that the Navajo Nation will pre-pay the loan component rather than burden the chapter members with monthly loan payments as part of their water bills.

The Engineer will pass-through the entire amount of funds paid out under this task to the ABCWUA to pre-pay the WTB construction loan assumed by the ABCWUA to construct the To'Hajiilee – Albuquerque Water Supply Project. No goods or services will be provided, either by the Engineer or the ABCWUA, as part of this loan pre-payment. The Engineer will not charge any mark-up on these pass-through funds.

Task 6: Pass-Through for ABCWUA O&M Pre-Payment

The Navajo Nation will enter or has entered into a rate agreement with the ABCWUA, which stipulates the rate the Nation must pay the ABCWUA for operation and maintenance (O&M) of the To'Hajiilee – Albuquerque Water Supply Project. The Nation has the option to pre-pay this O&M cost, to alleviate To'Hajiilee Chapter members from rate shock when the system first goes on-line.

The Engineer will pass-through the entire amount of funds paid out under this task to the ABCWUA to cover approximately the first 10 years of O&M costs. The exact duration the O&M funds will last will depend on the quantity of water consumed by To'Hajiilee Chapter. No goods or services will be provided by the Engineer as part of this O&M pre-payment. The Engineer will not charge any mark-up on these pass-through funds

The scope and fee for Tasks 5 and 6 are based upon the following assumptions:

1. Engineer assumes that the Engineer will pass-through the funds to the ABCWUA on the Navajo Nation's behalf, and that the ABCWUA will in turn use these funds to pre-pay the WTB for the loan component of the construction funding package for the Project.
2. No work will be performed on Navajo Nation lands.

Tasks 7 through 16 for Design-phase engineering services for the To'Hajiilee – Albuquerque Water Supply Project, to be completed with Business Unit K211543, are as follows:

Task 7: Geotechnical Investigations

Engineer will subconsult with a licensed geotechnical firm to complete a geotechnical investigation of the project area. The purpose of the investigation will be to gather information relative to the physical properties of the underlying site soils and utilize the information to provide underground utility recommendations and design. Along the approximately 40,000 linear feet project area, the investigation will include up to fifty-five (55) borings of varying depths between 10 and 130 feet, including several that will be performed using seismic velocity testing in areas inaccessible to a truck-mounted drill rig. Field analyses will include standard penetration tests and seismic wave analyses. Standard penetration tests and split spoon or open-end drive sampling will be conducted in the borings at 5 foot intervals. Laboratory tests will include moisture, density, grain size distribution, Atterberg limits, chemical analysis for soil corrosivity, and direct shear and/or unconfined compression tests. Consolidation and/or swell tests may also be performed to evaluate soil compressibility or expansiveness. Resistivity, pH, soluble sulfate and chloride testing will be performed on select samples taken by the geotech engineer, but no specific corrosivity analysis will be included. Geotech will collect sediment samples to be used for subsequent stormwater analyses. An engineering report, sealed by a licensed geotechnical engineer, will be prepared presenting the results of field and laboratory investigations and geotechnical recommendations.

The geotechnical subconsultant will make recommendations and provide information to inform decision-making regarding the following issues:

- Locations and depths of geotechnical borings
- Results of laboratory tests
- Excavatability of soils/ rock within the specific areas sampled by test borings only
- Suitability of native material for pipe bedding, backfill, and sub-foundation fill
- Trench compaction recommendations and moisture requirements
- Cut slope recommendations and design properties with respect to excavation and shoring requirements
- Discussion pertaining to installation of pipe in steep areas including the need for an anchoring system
- Foundation design recommendations for Terminal Facility building and estimated settlements of foundations
- Suitability of onsite material for use as general fill or road subgrade as well as placement criteria
- Moisture protection provisions
- Feasibility of HDD on top of mesa and under Rio Puerco

Task 8: Subsurface Utility Investigations

Engineer will submit a design conference ticket and a design locate to the 811 Utility Locating System to attempt to get information regarding utilities that may be impacted by the proposed

project. Engineer will follow-up with utilities that do not respond to the design conference ticket up to two times before proceeding with the design without the utility information.

Engineer shall not be held responsible for costs (typically change order costs) associated with utilities that are not marked despite Engineer's efforts to obtain the existing utility information.

Task 9: Instrumentation, Controls, Electrical and Mechanical (ICE&M)

Engineer will subcontract to a licensed electrical and mechanical engineering firm to provide ICE&M engineering services for the project, including SCADA system design.

ICE&M design elements consist of:

- 7W tank site, including: power and SCADA interface to a new motor operated valve and flow meter to be located in an underground vault;
- New terminal facility to be located near To'Hajiilee Well No. 5, including: new electrical service, SCADA connection, hydraulic control valves, one motor-operated valve, flow meter, billing meter, pressure transducers, chlorine analyzer, other appurtenant instrumentation, HVAC, lighting, and uninterruptible power supply (UPS) for critical sub-systems only; and
- Existing To'Hajiilee Tanks Nos. 4 & 5 Ste, including: new electrical service, SCADA connection, and tank level sensors

ICE&M engineering services will consist of plans, specifications, design engineering report (DAR) analysis, and Opinion of Probable Construction Cost (OPCC).

Engineer assumes electrical systems will be designed in accordance with applicable provisions of the NFPA70, NEC, and NESC. No pneumatic equipment will be included in this project. Modifications to existing PNM systems at the 7W tank site and To'Hajiilee Well No. 5 site are not included. Telephone service is not required for this project. Engineer assumes the standard ABCWUA SCADA RCP is required for this project and will be purchased by the Construction Contractor under cash allowance in the construction contract. I/O associated with the RCP are assumed to follow ABCWUA standards; any revisions to these standards will be the responsibility of the ABCWUA. Engineers scope is limited to the design to connect field I/O to the RCP.

Task 10: Maintenance Road Evaluation

Engineer will perform an engineering evaluation of available alternatives for the maintenance road required by ABCWUA for the proposed pipeline. Such evaluation will consider factors as capital cost, maintenance cost, longevity, and accessibility during varying weather conditions. The evaluation will address such design factors as maximum slope, cross-section, and surfacing.

Task 11: Water Age Study

Engineer will create a computational model of the existing To'Hajiilee distribution water system using data provided by the Owner and/or Indian Health Service. Engineer will run scenarios to model peak summer and low winter demands, and estimate the water age at critical locations in the distribution system. Engineer will incorporate the results of this model with the calculated hydraulic

retention time of the pipeline and age of water in the 7W reservoir to determine design criteria for the chlorine analyzer and potential for chlorine booster facilities at the Terminal Facility.

Task 12: Hydraulic Transients Analysis

Engineer will create a computational model using the Hammer transients module of WaterCAD to predict maximum upsurge and minimum downsurge transient pressures in the pipeline for typical operating and failure scenarios and to recommend surge mitigation measures. Such mitigation measures may include vacuum breaker valves, surge tank, and/or slow-close valves. Conclusions will be used to recommend mitigation measures and provide detailed design criteria for such mitigation measures, such as air valve orifice sizing and locations. Engineer will prepare a transients analysis report summarizing all methods, scenarios, results, conclusions and recommendations for mitigation.

Task 13: Valve Cavitation Analysis

Engineer will perform a cavitation analysis on the flow control valve and pressure relief valve proposed for the terminal facility to determine the need for anti-cavitation trim and to provide design criteria for said trim, if needed.

Task 14: Pipe Creep Analysis

Engineer will analyze the risk of longitudinal in-situ pipe movement (creep) on steep slopes at the escarpment and Sunset Canyon areas of the project, and provide recommendations for mitigation measures at those locations, as needed.

Task 15: SCADA Radio Field Testing

Engineer, acting through sub-consultant, will perform radio field tests to verify transmissivity and signal strength of radios for SCADA connections at each proposed SCADA site within the project.

Task 16: Stormwater Analyses – Hydrologic & Drainage Analysis & Sediment Transport Analysis

Engineer will perform hydrologic analysis and drainage report on the Rio Puerco and five unnamed tributaries traversed by the project. Engineer will identify the 100-year floodplain tributaries and contributing watershed basins based on FEMA FIRM maps and USGS contour data of the drainage areas. The Rio Puerco contributing area will not be investigated. Engineer will obtain rainfall data from NOAA Atlas 14 and soil data from the USGS Web Soil Survey. Engineer will use latest available aerial imagery for land use and vegetation data. Engineer will use HEC-HMS Version 4.8 and SCS Unit Hydrograph Method to model the 100-year storm event for 24-, 6-, and 3-hour storm durations to determine most appropriate design flow for sediment transport analysis. Engineer will provide draft and final hydrologic and drainage reports, and make recommendations for subsequent sediment transport analysis.

Engineer will perform a Sediment Transport Analysis and Report, which will be based on the geotechnical report and sediment sampling. Engineer will create hydraulic models approximately one mile in length for each of the previously mentioned tributaries and the Rio Puerco using HEC-RAS 6.0 and GeoHEC-RAS 1D. Engineer will cut cross sections approximate every 50 ft in the vicinity of the waterline crossings and approximately every 200 ft upstream and downstream of the crossings. Engineer will input parameters such as vegetation and Mannings roughness coefficient based on available aerial imagery. Because base flood elevation have not been determined in this

area, Engineer will set boundary conditions as normal depth calculations. Engineer will perform sediment transport analyses for the 100-yr storm event for 24-, 6-, and 3-hour hydrographs to determine highest scour potential. Engineer will compare model results with computational scour equations. The scour equations typically produce significantly higher depths of potential scour than the model. Engineer will produce draft and final reports, and make recommendations for proposed waterline depths or encasement.

Engineer will prepare plan and profile drawings for each tributary and Rio Puerco crossing with recommended depths or encasement options, for a total of 2 to 5 drawing sheets.

Tasks 17 through 23 for Design- and operation-phase engineering services for the To'Hajiilee – Albuquerque Water Supply Project and community water system, to be completed with Business Unit 16211561 *W*, are as follows:

Task 17: Design Analysis Report Supplement

Engineer will prepare a supplement to the Design Analysis Report (DAR) in accordance with ABCWUA requirements, to address guidance and requested design modifications from the ABCWUA. Such modifications include addition of an underground surge tank facility, redesigned air valves, fiber optic-based communications link to the surge tank vault, power supply, and addition of a recirculation pumping system at the terminal facility. The DAR supplement will also include supplemental hydraulic transients analyses (in addition to those covered under Task 12) to address enhanced mitigation measures requested by the ABCWUA, such as the surge tank, and supplemental design criteria such as surge tank location, volume, and pre-charge pressure. Engineer will submit the supplemental DAR work to the ABCWUA for review and approval.

Task 18: Supplemental Preliminary Design

Engineer will supplement the original preliminary design with additional facilities requested by the ABCWUA, including reconfigured valve vaults, revised air valve selections, multi-story underground surge tank vault with plumbing, structural, and electrical components, and additional SCADA facilities. Engineer will further supplement the original preliminary design scope with responses to multiple iterations of comments from multiple reviewers with the ABCWUA. Preliminary design submittal will consist of Design Drawings and Technical Specifications.

Task 19: Final Design

Engineer will provide final design for the project, including final design calculations and analyses, final field data reports, final design drawings, and final technical specifications. The final design will include hydraulic, structural, electrical, mechanical, and control elements. The final design drawings technical specifications will be sealed by professional engineers licensed in the State of New Mexico; each design element will be sealed by the professional engineer responsible for that field of expertise. Engineer will perform internal QAQC on the final design as well as respond to external comments from the ABCWUA and NMED prior to finalizing the design for construction.

Task 20: ABCWUA Coordination

Engineer will coordinate with the ABCWUA to ensure forward progress of the project. Specific tasks include providing documents to satisfy funding agency requirements, assistance with rate agreement and other agreements, facilitating discussions with Bernalillo County for supplemental

funding and permits, facilitation of technical comments from ABCWUA staff, and related topics. Engineer assumes there will be no more than three (3) rounds of comments resulting from major submittals of DAR and preliminary/ final design.

Task 21: Project Management

Engineer will provide project management for all of the aforementioned tasks, including monthly invoicing and accounting, management of sub-consultants, coordination with Owner, internal schedule and budget management, meetings, and correspondence.

Task 22: Technical Support for Operation of Chapter Water System

Engineer will support the Chapter with the Chapter's operation of the To'Hajiilee Community Water System (CWS). In no way shall the Engineer assume responsibility for the CWS's operation or compliance with applicable regulations, nor shall the Engineer assume any liability for any health or safety concerns associated with CWS operation. Emergency operational tasks shall include providing technical support to the Chapter for well operations, booster pump operation, chlorination, valve operation, checking meters, tank level monitoring, sampling, minor repairs, and other normal operations tasks performed by the Chapter. The Period of work for this task shall extend from February 2022 to December 2022. Technical support for maintenance and repair tasks, such as leak repair, pump repair, or tasks that require extensive excavation are not included. Sampling and compliance, other than routine bacteriological sampling, are not included. Chapter will provide backhoe, either with or without operator, as needed; Engineer is not responsible for providing any heavy equipment.

Task 23: Emergency Responses and Emergency Technical Support

Engineer will provide responses to water emergencies and technical support to chapter water system maintenance staff on an as-needed basis for a period of January 2021 to December 2022. Services include emergency assistance with replacement of chlorination equipment, emergency distribution of bottled water to chapter members, public education and assistance organizing volunteers, outreach to the ABCWUA and Bernalillo County to provide water tanker on emergency basis, rapid response to replace failed well pump, and similar emergency situations resulting in water service outages or non-potable water during the service period.

c. For the Additional Services set forth above, Owner shall pay Engineer the following additional compensation:

For Business Unit K213077 (On-Reservation Work), a Lump Sum amount of \$110,000.00, including 6% Navajo Nation Tax (\$103,773.58 + \$6,226.42 tax).

For Business Unit N01525, no work will be performed on Navajo Nation lands; therefore, the Navajo Nation tax will not apply. The funds conveyed under these tasks are strictly a pass-through to the ABCWUA and no good or services will be provided; therefore, the State of New Mexico tax will not apply. Total pass-through amount for this Business Unit is \$1,570,827.00.

For Business Unit K211543 (On-Reservation Work), a Lump Sum amount of \$700,000.00, including 6% Navajo Nation Tax (\$660,377.36 + \$39,622.64 tax).

For Business Unit K211561 ^{edwin} (On-Reservation Work), a Lump Sum amount of \$2,450,000.00, including 6% Navajo Nation Tax (\$2,311,320.75 + \$138,679.25 tax).

The total compensation under this Amendment is \$4,830,827.00, including Navajo Nation Tax. This lump sum is broken out as described in the following table:

Task	Phase	Description	Pre-Tax Sub-Total	Navajo Nation Tax (6%)	Total w/ Tax
Task 1 - Task 3: Business Unit No. K193059 (2019 NM Capital Outlay)					
1	Inside Chapter Construction	Additional Project Administration	\$4,716.98	\$283.02	\$5,000.00
2	Inside Chapter Construction	Additional Construction Administration	\$28,301.89	\$1,698.11	\$30,000.00
3	Inside Chapter Construction	Additional Construction Observation	\$66,037.74	\$3,962.26	\$70,000.00
4	Inside Chapter Construction	As-Built Record Drawings	\$4,716.98	\$283.02	\$5,000.00
K193059 Sub-Total			\$103,773.59	\$6,226.41	\$110,000.00
Task 4 - Task 5: Business Unit No. N01525 (2022 Sihasin)					
5	ABCWUA Pass-Through	Water Trust Board Loan Component Pre-payment	\$770,827.00	N/A	\$770,827.00
6	ABCWUA Pass-Through	ABCWUA O&M 10-yr Pre-payment	\$800,000.00	N/A	\$800,000.00
N01525 Sub-Total			\$1,570,827.00	N/A	\$1,570,827.00
Task 6 - Task 15: Business Unit No. K211543 (Defunded CARES)					
7	Toha-ABQ Pipeline Design	Geotechnical Investigations	\$80,188.68	\$4,811.32	\$85,000.00
8	Toha-ABQ Pipeline Design	Sub-Surface Utility Investigations	\$14,150.94	\$849.06	\$15,000.00
9	Toha-ABQ Pipeline Design	Instrumentation, Controls, Electrical & Mechanical	\$273,584.91	\$16,415.09	\$290,000.00
10	Toha-ABQ Pipeline Design	Maintenance Road Evaluation	\$28,301.89	\$1,698.11	\$30,000.00
11	Toha-ABQ Pipeline Design	Water Age Study	\$56,603.77	\$3,396.23	\$60,000.00
12	Toha-ABQ Pipeline Design	Hydraulic Transients Analysis	\$84,905.66	\$5,094.34	\$90,000.00
13	Toha-ABQ Pipeline Design	Valve Cavitation Analysis	\$23,584.91	\$1,415.09	\$25,000.00
14	Toha-ABQ Pipeline Design	Pipe Creep Analysis	\$23,584.91	\$1,415.09	\$25,000.00
15	Toha-ABQ Pipeline Design	SCADA Radio Field Testing	\$18,867.92	\$1,132.08	\$20,000.00
16	Toha-ABQ Pipeline Design	Hydrology & Sediment Transport Analysis	\$56,603.77	\$3,396.23	\$60,000.00
K211543 Sub-Total			\$660,377.36	\$39,622.64	\$700,000.00
<i>06/25/21 123</i>					
Task 17 - Task 23: Business Unit No. K211561 (Navajo Nation Fiscal Recovery Fund (FRF))					
17	Toha-ABQ Pipeline Design	Design Analysis Report Supplement	\$334,905.66	\$20,094.34	\$355,000.00
18	Toha-ABQ Pipeline Design	Supplemental Preliminary Design	\$561,320.75	\$33,679.25	\$595,000.00
19	Toha-ABQ Pipeline Design	Final Design	\$820,754.72	\$49,245.28	\$870,000.00
20	Toha-ABQ Pipeline Design	ABCWUA Coordination	\$179,245.28	\$10,754.72	\$190,000.00
21	Toha-ABQ Pipeline Design	Project Management	\$165,094.34	\$9,905.66	\$175,000.00
22	Emergency Response & Ops	Emergency Operations of Chapter Water System	\$136,792.45	\$8,207.55	\$145,000.00
23	Emergency Response & Ops	Emergency Responses and Technical Support	\$113,207.55	\$6,792.45	\$120,000.00
Sub-Total			\$2,311,320.75	\$138,679.25	\$2,450,000.00
AMENDMENT NO. 9 TOTAL			\$4,646,298.70	\$184,528.30	\$4,830,827.00

The budgets for the tasks shown will be billed on a lump sum basis; therefore, the invoices will not include an itemized breakdown of charges. Invoices will be issued on a monthly basis reflecting the percentage of each task completed to date.

Total Contract Amount prior to Amendment No. 9 (incl. tax): \$ 5,386,785.67
Total Contract Increase for this Amendment No. 9 (incl. tax): \$ 4,830,827.00

NEW CONTRACT AMOUNT AFTER AMENDMENT NO 9: \$10,217,612.67


- a. **The expiration date for this Contract is hereby changed to December 31, 2026.**


The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is _____.

OWNER: The Navajo Nation

ENGINEER: Souder, Miller & Associates

By: 


By: Andrew Robertson

Title: _____

Title: Senior Vice President

Date Signed: MAR 15 2023

Date Signed: 12/19/22