AMENDMENT NUMBER 03
TO CONTRACT FOR *ENGINEERING DESIGN SERVICES FOR C-LINE SANITARY SEWER MODELING EFFORT*
FOR *WWCLH6 – C-LINE SANITARY SEWER*

1. **Parties.** This Amendment is made and entered into this ___ day of ~~July~~ June 2021 by and between the City of Laramie, Wyoming, a Wyoming municipal corporation (hereinafter referred to as "City"), whose address is 406 Ivinson Avenue, Laramie, Wyoming 82070 and Trihydro (hereinafter referred to as "Consultant") whose address is 1252 Commerce Drive, Laramie WY 82070.

2. **Purpose of Amendment**. This Amendment shall constitute Amendment Number 03 to the Agreement between City and Consultant which was duly executed on the 7th day of March 2017 to provide professional services related to the design and bidding for the C-Line Sewer Main Replacement 2nd Street Hancock to Canby and Canby Street 1st to 6th. The purpose of this Amendment is to amend the scope of work to include the modeling of the C-Line Basin, Cleaning and Camera data collection and design the next phase (Phase 2) of the C-Line Sanitary sewer project. Phase 2 includes 6th Street between Canby Street and Ivinson Avenue. The amended scope adds *Three Hundred Ninety Thousand Forty-Seven Dollars* ($390,047.00) to the contract; creating a new revised total contract amount not to exceed *Seven Hundred Fifty-Seven Thousand Three Hundred Eighty-Seven Dollars* ($757,387.00).

3. **Same Terms and Conditions**. With the exception of items explicitly delineated in this Amendment and its attachments, all terms and conditions of the Original Contract and its amendments, shall remain unchanged and in full force and effect.

4. **Entirety of Amendment**. This Amendment, consisting of Seven (7) pages, represents the entire and integrated Amendment between the parties and supersedes all prior negotiations, representation, and agreements, whether written or oral.

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IN WITNESS WHEREOF, the City of Laramie Public Works Department has caused this amendment to be signed and executed in its behalf by the Public Works Director, and duly attested by the Consultant who has signed and executed this Agreement, the day and year first written above.

CITY OF LARAMIE, WYOMING:

By: _____
Paul Weaver, Mayor and President of the
City Council

Attest: _____
Nancy Bartholomew
City Clerk

CONSULTANT:

Trihydro Corporation

By: _____
George E. Mathos, III

Witness _____

1.0 PROPOSED PROJECT SCOPE

We have outlined our proposed approach for each of the primary scope of work tasks in the following sections. We welcome the opportunity to review and discuss our approach with the City during a scoping meeting, so the project approach best meets the City's objectives.

1.1 TASK 1: RESEARCH AND DESIGN

Trihydro will review the available documents the City has related to the sanitary sewer systems within the project area. The purpose of this task is to provide an understanding of the sanitary sewer system conditions and identify potential utility conflicts. The document research will also include review of access agreements and easement documents the City has on file related to the project area. Trihydro will identify property ownership throughout the project corridor and include with the 60% design-level submittal.

Trihydro identified subtasks for the different project phases and they are presented in more detail below.

1.1.1 SUBTASK 1A: PROJECT MANAGEMENT AND PROJECT MEETINGS

Trihydro understands the kick-off meeting with City staff is critical to the project's success. Trihydro will facilitate this meeting to gather input from City staff and project team members concerning potential design issues, design alternatives, and project needs. Lines of communication will be defined during the kick-off meeting that will identify the parties to be included on major correspondence, which include official correspondence, email communication, and project submittals.

Additional project meetings will be conducted throughout, such as meetings with WDEQ and project stakeholders; attendance at City Council Meetings to provide project updates; and design status and review meetings.

Details/Assumptions/Approach

Trihydro will coordinate and conduct project meetings with the City related to the plan submittal schedule to gather and discuss City comments. This task includes managing team resources, managing the project budget, conducting project meetings, and scheduling project tasks. Additional tasks include:

- Conduct the project kick-off meeting with the City
- Conduct project field walk-through with the City and Project Team
- Review existing maps, drawings, plans and reports on file with the City related to the proposed work
- Time for kick-off meeting and design review meetings is estimated to be two (2) hours
- Conduct project meetings at the 30%, 60%, 90% and Final Design intervals and as needed during the course of the project
- Review the project budget
- Review project billings and prepare progress reports including documenting problems, if encountered, on the project
- Begin communications with WDEQ and provide a description of purpose and plan

Deliverables

- Prepare meeting materials and agendas
- Compiling meeting minutes from the Kick-off meeting and the subsequent design meetings
- Prepare progress reports

1.1.2 SUBTASK 1B: C-LINE INTERCEPTOR SYSTEM EVALUATION

The C-Line Interceptor line needs to be evaluated to determine existing flow, projected growth, and the line size that will accommodate future growth. This task includes determining population projections, performing flow monitoring, and modeling updates. Initial work includes identifying the contributing basin. The contributing basin will be used to determine existing and future loading projections.

Following the kick-off meeting, the first design phase will be completing the C-Line sanitary sewer modeling to identify deficiencies and proposed improvements. DOWL maintains a calibrated working model for the entire City's sanitary sewer system. Existing loadings in the model were previously assigned based on winter-time water usage records from the City's billing department. Bottlenecks and capacity issues will be identified during modeling activities.

The modeling and design tasks included below will focus on updating the existing model only, not recreating work, as a complete model has already been developed.

CLEANING AND CAMERA EVALUATION

This task includes bypass pumping, cleaning, and camera evaluation of the sanitary sewer lines in 6th Street from Canby Street to Ivinson Street and Ivinson Street from 6th Street to 15th Street. The bypass pumping and video inspection will be used to identify pipe condition deficiencies that may be causing flows to back-up. Additionally, understanding pipe condition will benefit the City when evaluating potential pipe rehabilitation methods. Service line locations may also be identified, allowing for proper planning during the project's design phase.

Details/Assumptions/Approach

- Approximately 10,800 linear feet of pipeline will be evaluated
- Assumes 10 days of work
- Traffic control is included
- Includes up to 25 hours of heavy cleaning
- Asphalt cold patches are included for up to 20 ramps
- Coordinate with contractors and City staff
- Check-in onsite with contractors during field work for one hour each day
- Review video and summary log

Deliverables

- Video of pipeline and summary logs
- Cleaning and Camera Evaluation Technical Memorandum

FLOW MONITORING

Understanding the objective of flow monitoring, the data received, and the use of that data in the project design is important. Flow monitoring can be used to calibrate an existing conditions model, identify existing conditions flow rates, and identify infiltration & inflow (I&I) rates. Installed flow monitors may be used for calibration and billing records may be used to identify existing flow rates; therefore, we believe the primary objective of conducting flow monitoring is to understand the existing loading on the system.

It is our understanding the City would like to evaluate the full basin that contributes to the C-Line Outfall Line, not just the project area. Trihydro and DOWL will review the basin extents and coordinate with the City to confirm the modeling area. Trihydro proposes flow monitoring be conducted in the fall while the University of Wyoming (UW) is in session. Currently, staff and students are not on campus, and flow monitoring may not provide accurate information.

We propose up to three flow monitor locations to supplement existing data. UW plans future construction that will contribute to the system. These demands will contribute to the sanitary sewer line in Ivinson Street that conveys flows to the 6th Street C-Line between Ivinson Street and Canby Street. The flow monitors will be placed where major trunk lines connect to Ivinson Street and 6th Street. A memorandum will be prepared at the conclusion of the Fall flow monitoring event to provide results.

Details/Assumptions/Approach

- Identify flow monitoring locations
- Perform flow monitoring on the existing system in the Fall
- Collect 4 weeks of data at up to three flow monitoring locations
- Prepare one summary report, following flow monitoring in the Fall
- Traffic control for flow monitoring will be coordinated by flow monitoring subconsultant
- Flow monitoring will be completed when Albany County School District and UW are in session

Deliverables

- Flow Monitoring Memorandum

MODEL DEVELOPMENT, EVALUATION AND RECOMMENDED IMPROVEMENTS

Existing demands will be estimated and assigned to the model based on the City's meter and billing records, then future demands will be estimated to design the sanitary sewer line to serve future development. Future demands have previously been estimated by DOWL in preparation of its existing sanitary sewer model; therefore, this task will include verification of existing information and updates reflecting the current data and information available on future development.

The project team will work with the City to gather information from UW. We anticipate UW will be able to provide the following information:

- Water usage meter readings for each building for existing uses for 2019 (pre-COVID)
- Plans for future UW development within the contributing area
- Projected growth of the existing campus and full buildout population or loading of the campus

We will review the City's comprehensive plan during this task and propose a meeting with the City's Planning Division to provide input on future development areas, uses, and priorities. Assumptions made during this task will be made to capture the worst-case development scenario, allowing flexibility if future development does not occur as anticipated. Assumptions and calculations used to estimate future demand will be documented in the design report prepared under Subtask 1D.

As stated previously, the model will evaluate the full basin contributing to the C-Line Outfall Line. Trihydro will direct and coordinate the work completed for this task, working closely with DOWL to perform the modeling. While collecting field data, the physical model inputs will be updated to reflect recent City construction projects, such as the recently completed downstream C-Line sanitary sewer improvements. We will also begin working with the City's billing department to obtain billing records. DOWL's existing sanitary sewer model will then be updated with the current loading values and surveyed manhole invert elevations. Flow monitoring data will be used to determine an I&I rate and calibrate the existing conditions model.

Once the existing conditions model is calibrated, the future growth scenarios will be evaluated based on the demand projections previously completed. The following conceptual design alternatives will be evaluated:

- Using existing slopes and elevations for most stretches to minimize conflicts and be able to connect to existing sewer lines. Sizes to convey the design flow will be determined.
- Designing new consistent slopes for the sanitary sewer.

Details/Assumptions/Approach

- Identify contributing area
- Conduct one (1) meeting with the City Planning Division – estimated to be one (1) hour
- Conduct one (1) meeting with UW – estimated to be one (1) hour
- Prepare meeting agenda and meeting minutes for City Planning Division and UW meetings
- Review approved subdivisions and sewer demand calculations within the Study area
- Review City's Comprehensive Plan and 2015 Laramie Water Master Plan, Level 1
- Gather information from UW
- Identify additional areas expected for future development
- Estimate future sanitary sewer demands for model input
- Document assumptions and calculations in Engineering Design Report
- Update existing physical model inputs to reflect recent City construction projects

- Coordinate with City's billing department to obtain current billing records and update existing flow data input
- Incorporate survey data into existing model
- Provide initial evaluation of Ivinson Avenue capacity once water usage data is updated in model
- Review flow monitoring results conducted with this project, determine I&I rate, and add to model
- Calibrate existing model using flow monitoring results
- Add future demands to the model and evaluate future growth scenarios
- Prepare a preliminary plan and profile design based on modeling recommendations
- Prepare design study report to document the modeling process
- One (1) meeting to review contributing area and growth scenario
- One (1) meeting to review modeling results
- Flow monitoring work completed for the Wastewater Master Plan will be made available

Deliverables

- Technical Memorandum Modeling Report
- Project area model file

ALIGNMENT EVALUATION

Trihydro will conduct an alignment option study for the defined portion of the C-Line. Our engineers will use the system inventory data to evaluate the physical limitations of the existing C-Line segment in question. We will coordinate with the City and DOWL to understand the C-Line capacity limitations. Using the identified limitations, we will determine up to three (3) alignment options.

Details/Assumptions/Approach

- Our engineers will incorporate information gathered under previous tasks to provide the City with a feasibility and constructability evaluation memorandum detailing each of the alignment options.
- The alignment evaluation memorandum created under this task will be reviewed and commented on by the City. Trihydro will review the comments and issue a revised evaluation memorandum if significant changes are necessary. Local Trihydro staff enables us to meet with City personnel to discuss comments and changes with minimal expense.
- The primary objective of this task is the analysis of the C-Line Interceptor system.

Deliverables

- C-Line Interceptor System Alignment Evaluation Memorandum

1.1.3 SUBTASK 1C: FIELD INVESTIGATION

Trihydro will complete geotechnical investigation and field survey activities during the research and design phase. This information will provide information for the pipe design, and critical utility information for the sanitary sewer system design.

FIELD SURVEY

A field survey will be completed while potholing activities are taking place. Identification of the utility locations, as well as depth and line size are critical components to incorporate into the design plans. As stated previously, utility conflicts can cause costly construction delays and changes, so identifying that information during the design phase will provide for a smoother construction process. Once surveying and pothole data is compiled, it will be provided to the City and areas of concern will be noted for further discussion. Potholing will be completed as further discussed below.

Supplemental survey data will also be collected to create the model and finalize construction documents. The City's mapping and existing manhole data will be used to the extent possible.

A traffic control plan will be prepared and submitted to the City for the survey, geotechnical, and potholing activities. The work will be coordinated to avoid causing traffic disruptions to the extent possible, although disruptions are expected to be minimal for this area.

Data obtained during this task will be used to complete subsequent tasks. Potholing information and geotechnical information will be provided to the City for review and comment.

Details/Assumptions/Approach

- Conduct supplemental field surveying using State Plane NAD 83 and NAVD88 as necessary and as directed by the City
    - Existing sanitary sewer manhole rim and invert elevations, pipe size, photos, and condition of incoming and outgoing pipes for all manholes in 6th Street and the next upstream manhole on each east-west connecting line
    - Water gate valve locations and depth
    - Storm sewer manhole and inlet location, rim, and invert elevations where crossings exist
- Coordinate project survey control
- Field survey geotechnical boring locations, pothole locations, and utility depths
- Download and process data for us in project design
- Prepare a traffic control plan for surveying and potholing activities
- Final hours and estimates for survey, potholing, and geotechnical bores will be determined based on final alignment
- Survey data collection will take 6 days
- City will provide mapping to be used in preparation of the base map

- Surveying services will require three separate mobilizations due to project schedule; one for utility surveying, one to locate the geotechnical bores, and one to locate the pothole locations
- Construction easements will not be required. Work to be completed within existing right-of-way.

Deliverables

- Provide the City with pothole utility information and supplemental survey

GEOTECHNICAL INVESTIGATION

Our team will conduct field and geotechnical investigation to determine pipe bedding requirements and roadway surfacing thicknesses.

Details/Assumptions/Approach

- Perform utility locates
- Identify bore locations once proposed sanitary sewer outfall line alignment finalized
- Review 2010 City of Laramie Pavement Study bore locations
- Complete five bores to 15-feet deep
- No soil contamination is present
- Provide draft Geotechnical Investigation Report with soil information, pipe bedding, and pavement recommendations
- Provide final Geotechnical Investigation Report once questions/comments have been addressed
- Provide traffic control plan for use during geotechnical boring activities
- Final hours and estimates for survey, potholing, and geotechnical bores will be determined based on the final alignment

Deliverables

- Submit draft Geotechnical Investigation Report
- Submit final Geotechnical Investigation Report

POTHOLING PLAN

Our team will conduct potholing activities to confirm potential utility conflicts. The design will be adjusted to account for the field-verified utility information

Details/Assumptions/Approach

- Evaluate potential utility conflicts and coordinate with City and property owners
- Attend one (1) meeting with utility company representative(s) to discuss utility locations and potential conflicts -Rocky Mountain Power, Black Hills Energy, CenturyLink, Charter Communications

- Attend one (1) meeting with affected business property owners to discuss utility locations
- Coordinate with utility companies to obtain location of utilities prior to design
- Prepare potholing plan for City review/approval
- Coordinate potholing activities
- Final hours and estimates for survey, potholing, and geotechnical bores will be determined based on the final alignment
- Actual number of potholes to be completed will be based on the final potholing plan developed under this task
- Potholes include asphalt cold patch in roadway sections
- No soil or groundwater contamination
- Submit traffic control for City approval

Deliverables

- Potholing Plan

1.1.4 SUBTASK 1D: PRELIMINARY DESIGN

This task includes preparing and submitting preliminary design plans for the City to review at the 30%, 60% and 90% design level. The preliminary plans will include a recommended pipe size. Trihydro will coordinate a design review meeting to discuss comments from the City and design issues/concerns following each submittal. Additional work includes preparing the project manual including specifications, and measurement and payment section in conformance with the current City of Laramie Project Manual. The Project Manual and a detailed engineer's cost estimate will be submitted at the 60% and 90% design levels. Also, a constructability review by our field personnel during the 60% and 90% design levels.

At each design submittal, Trihydro will complete a quality assurance/quality control (QA/QC) review of all documents being submitted to the City for review. Quality control is crucial to any project and Trihydro makes significant efforts to provide the best product possible throughout the project.

Details/Assumptions/Approach

- Review existing maps, drawings, reports, easements, and access agreements on file with the City
- Research land ownership along the project corridor
- Research and identify alternate means and methods for construction
- Research the location of private utilities in the area of the project
- Meet with property owners to discuss utility locations and concerns
- Evaluate if water line adjustments are needed once the sanitary sewer line alignment is finalized
- Evaluate if storm sewer line adjustments are needed once the sanitary sewer line alignment is finalized
- Prepare 30% design plans
- Prepare 60% design plans

- Prepare 90% design plans
- Conduct QA/QC review at the 30%, 60% and 90% design level
- Perform a constructability review at 60% and 90% design level
- Meet with City staff to review comments following the 30%, 60% and 90% design submittal – under Subtask 1A
- Prepare detailed engineer's cost estimate at the 60% and 90% design levels
- Prepare Project Manual at the 60% and 90% design levels
- Assist the City with a Public Meeting at the 60% design level
- Prepare and distribute public notification flyers following 60% design
- Prepare draft WDEQ/WQD design report for review by the City at the 90% design level
- Provide modeling details and data to include in WDEQ/WQD design report
- Submit design plans to private utilities for review at the 90% design level

Deliverables

- 30%, 60%, and 90% design submittal including one (1) set of 11x17 plans, CAD drawings, and a PDF set of the 11x17 plan sets
- Submittal of electronic (PDF) Project Manual at the 60% and 90% design level
- Submittal of three (3) copies of the detailed engineer's cost estimate at the 60% and 90% design level
- Draft WDEQ Design report including three (3) copies of the report along with a PDF for City approval
- Public notification flyers

1.1.5 SUBTASK 1E: FINAL DESIGN

The final design task includes the final submittal of the plan set drawings, cost estimate, and project manual. Trihydro will incorporate preliminary design task comments in the final design and WDEQ design report. During this task and following City approval Trihydro will submit the design report to WDEQ. Additionally, Trihydro's quality control process requires. The constructability review includes a review of the plan set by our field personnel.

Details/Assumptions/Approach

- Incorporate comments from 90% review into final plans
- Prepare final construction plans
- Prepare detailed engineer's cost estimate
- Update and submit the WDEQ design report for City approval
- Submit the WDEQ design report
- Prepare Project Manual

Deliverables

- Final Design submittal including one (1) set of 22x34 plans, one (1) set of 11x17 plans, CAD drawings, and a PDF set of both the 22x34 and 11x17 plan sets
- Submittal of one (1) copy of the Project Manual and a PDF of the Project Manual
- Submittal of the final cost estimate
- WDEQ Design report including three (3) copies of the report along with a PDF for City approval

1.2 TASK 2: BIDDING SERVICES

Trihydro will provide bidding support services, including providing the City with PDF copies of the plan set and project manual for use on Quest CDN, preparing addendums, attending the pre-bid meeting and project walk through, and tabulating and evaluating bids. Trihydro will be available to respond to bidder questions as requested by the City Project Manager.

Details/Assumptions/Approach

- Provide PDF copies of the plan set and project manual to the City for uploading to Quest CDN
- Answer questions from bidder's as requested by the City Project Manager
- Prepare addendums as necessary and submit to the City or upload to Quest CDN
- Attend and assist City staff with the pre-bid meeting and walk through
- Prepare pre-bid meeting minutes for distribution
- Assist the City during bid opening
- Evaluate bids for accuracy and determine the acceptability of the apparent successful bidder
- Prepare and distribute bid tabulation sheets
- Provide contract award recommendation to the City
- Issue Notice of Award along with additional required materials after receiving direction from the City to do so
- Prepare and distribute construction plans and project manual to the Contractor
- Provide a final set of documents to the City including one (1) set of 22x34 plans, one (1) set of 11x17 plans
- Submit CAD drawings and a PDF set of 22x34 and 11x17 plan sets
- Provide three (3) copies of the project manual along with a PDF copy

TABLE 1. FEE PROPOSAL
CITY OF LARAMIE C-LINE REPLACEMENT PHASE 2 - 6TH STREET CANBY TO IVINSON
LARAMIE, WYOMING

		Trihydro Corporation									Expenses Direct Reimbursables						
		Professional Level 9	Professional Level 8	Professional Level 6	Professional Level 5	Professional Level 4	Professional Level 3	Technical Level 4	Administrative 3	**Labor Subtotal**		Subcontracts (Labor, Equipment and Services)	Shipping (i.e. Documents, Equipment, Supplies)	Company Field Equipment (See Equip tab)	Company Vehicles (Daily)	**Expenses Subtotal**	**Task Total**
TASK	**DESCRIPTION**	MS $161	KG/PK/DK $146	JG/JP $117	KH $104	LF $94	FZ/TB $84	PC $82	$72			Cost + 10%	Cost	Cost	$86.00 /day		
Phase I	**Professional Design Services**																
Task 1	Research and Design																
Subtask 1A	Project Management and Meetings	60		60		30	4		2	$19,980						$0	**$19,980**
Subtask 1B	C-Line Interceptor System Evaluation																
	6th Street - Ivinson to Canby; Ivinson - 6th Street to 15th Street Cleaning/Camera Evaluation	2		80		24	4		2	$12,418		$105,000				$105,000	**$117,418**
	Flow Monitoring	2		8		6	6			$2,326		$20,000				$20,000	**$22,326**
	Model Development, Evaluation and Recommended Improvements	14		68		52	14			$16,274		$37,000				$37,000	**$53,274**
	Alignment Evaluation	8		24		50	10			$9,636						$0	**$9,636**
Subtask 1C	Field Investigation																
	Field Survey		4	2	40	8	20	4		$7,738				$1,260	10	$2,120	**$9,858**
	Geotechnical Investigation	1		8	8	8				$2,681		$7,850				$7,850	**$10,531**
	Potholing Activities	1		6	16	4	24			$4,919		$35,000				$35,000	**$39,919**
Subtask 1D	Preliminary Design	40	24	80		180	220	80	24	$62,992			$200			$200	**$63,192**
Subtask 1E	Final Design	16	12	30		60	40	40	8	$20,694						$0	**$20,694**
Task 2	Bidding Services	2		12			12			$2,734						$0	**$2,734**
	Phase I Subtotal (hours)	**146**	**40**	**378**	**64**	**422**	**354**	**124**	**36**	**1,564**	**Cost**	**$204,850**	**$200**	**$1,260**	**$860**	**$207,170**	- -
	Phase I Subtotal ($)	**$23,506**	**$5,840**	**$44,226**	**$6,656**	**$39,668**	**$29,736**	**$10,168**	**$2,592**	**$162,392**	**Subtotal**	**$225,335**	**$200**	**$1,260**	**$860**	**$227,655**	**$390,047**
	Total (hours)	**146**	**40**	**378**	**64**	**422**	**354**	**124**	**36**	**1564**	**Cost**	**$204,850**	**$200**	**$1,260**	**$860**	**$207,170**	--
	Total ($)	**$23,506**	**$5,840**	**$44,226**	**$6,656**	**$39,668**	**$29,736**	**$10,168**	**$2,592**	**$162,392**	**Total**	**$225,335**	**$200**	**$1,260**	**$860**	**$227,655**	**$390,047**

TRIHYDRO STANDARD SCHEDULE OF CHARGES

JANUARY 1, 2020 - DECEMBER 31, 2021 [2, 3, 4]

PERSONNEL	UNIT RATE[1, 7]
Senior Principal	234.00/hour
Principal	212.00/hour
Project Principal	191.00/hour
Technical Specialist 4	254.00/hour
Technical Specialist 3	233.00/hour
Technical Specialist 2	216.00/hour
Technical Specialist 1	201.00/hour
Professional Level 12	204.00/hour
Professional Level 11	192.00/hour
Professional Level 10	176.00/hour
Professional Level 9	161.00/hour
Professional Level 8	146.00/hour
Professional Level 7	131.00/hour
Professional Level 6	117.00/hour
Professional Level 5	104.00/hour
Professional Level 4	94.00/hour
Professional Level 3	84.00/hour
Professional Level 2	73.00/hour
Professional Level 1	62.00/hour
Technician Level 8	121.00/hour
Technician Level 7	111.00/hour
Technician Level 6	101.00/hour
Technician Level 5	93.00/hour
Technician Level 4	82.00/hour
Technician Level 3	72.00/hour
Technician Level 2	62.00/hour
Technician Level 1	50.00/hour
Administrative 4	76.00/hour
Administrative 3	72.00/hour
Administrative 2	62.00/hour
Administrative 1	50.00/hour

EXPENSES	
Subcontracts (Labor, Equipment and Services)	Cost + 10%
Shipping (i.e. Documents, Equipment, Supplies)	Cost

TRAVEL EXPENSES	
Meal Per Diem [6]	$45/day/person
Airline Tickets	Cost
Hotel/Motel	Cost
Rental Vehicle	Cost

FIELD EXPENSES AND EQUIPMENT	
Consumable Field Supplies	Cost + 10%
Rental Equipment	Cost + 10%
Purchased Equipment	Cost + 10%
Company Field Instruments, Equipment, Vehicles, etc.	See Field Charge Sheet
Consumable Field Supplies and PPE	See Field Charge Sheet
Company Vehicles (daily) [5]	$86/day min or 56.0 cents/mile
Company Vehicles (monthly)	Cost + fuel cost

1. The above charges include fringe benefits, overhead and profit. No multiplier is used for billing.
2. An annual escalation rate less than or equal to 5% will be applied to these rates for multi-year projects and contracts.
3. Payment of invoices shall be due within thirty days; delinquent amounts due shall accrue a late charge of 1 1/2% per month from date of invoice.
4. The rates in this Schedule of Charges are subject to change on December 31, 2021.
5. Minimum charge of $86/day. Daily mileage exceeding 153 miles is charged at the current IRS rate per mile. Mileage rates are subject to change throughout the year.
6. Any International travel meal per diem will be at cost.
7. Expert testimony services, including but not limited to review and preparation of documents, preparation for and time spent in depositions, and preparation for and time spent during arbitration or trial testimony, as well as related research and evaluation, shall be charged at 1.5 times the individual's billing level.