THE SOUTHERN UTE INDIAN TRIBE
GROWTH FUND

SUIT UTILITIES DIVISION

Northridge Sewer Main Improvement Project (Phase 1)

IHS project: AL-22-C41

Contract Documents & Specifications

PROJECT MANUAL

Prepared By:

GOFF ENGINEERING & SURVEYING, INC.
126 Rock Point Drive, Suite A
Durango, CO 81301
(970) 247-1705

June 13th 2025

THE SOUTHERN UTE INDIAN TRIBE GROWTH FUND

SUIT UTILITIES DIVISION
Northridge Sewer Main Improvement Project (Phase 1)
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CONTRACT DOCUMENTS

TECHNICAL SPECIFICATIONS

All construction (materials and workmanship) to be made in accordance with Indian Health Service AAIHS/OEHE Sanitation Facilities Construction Technical Provisions, November 2021 edition as amended unless otherwise specified.

The following specifications are included with the project manual for reference:

CONSTRUCTION DRAWINGS

ADVERTISEMENT FOR BID

Owner: **The Southern Ute Indian Tribe (SUIT)**
Utilities Division
PO Box 1137
16360 Highway 172
Ignacio, CO 81137
(970) 563-5500

Separate sealed BIDS for the construction of the **Northridge Sewer Main Improvement Project (Phase 1)** will be received by the Owner at the offices of the **SUIT Utilities Division,** until **3:00 p.m. (M.D.S.T.), Thursday, July 10th 2025.** The bids shall be reviewed **privately** and all respondents shall be notified of the selected bidder within 10 days.

Description of Work: Project requires rehabilitation of ~11,750 feet of 8-inch sanitary sewer pipeline using both pipe bursting and trenched techniques. Reconnection of approximately 77 user services will be required. Rehabilitation of select manhole structures will be required. Project will require bypass sewage pumping, site stabilization, and all associated work to deliver a complete functional sewer system.

Prospective BIDDERS are REQUIRED to attend the **MANDATORY** pre-bid meeting on **Wednesday June 25th at 2:00 PM at the SUIT Utility office, located at 16360 Highway 172 Ignacio, CO 81137.**

This Project is subject to Prevailing Wage Rates and associated compliance and reporting criteria. Minimum wage rates can be found at: https://sam.gov/, Decision #***CO20250012***

Bidder Prequalification requirements: Contractor must have a minimum of five (5) years' experience with pipeline installation. Bidders shall provide **three** representative projects demonstrating experience using pipe bursting rehabilitation with Bid submittal. Required information shall include Project Name, Brief description, Client reference (Name, phone, email address).

Bid security: A Bid security, in the form of a Bid Bond, Cashiers Check or Certified Check in the amount of 5% of the bid amount, must accompany each Bid.

The Successful Bidder will be required to furnish a Construction Performance and Payment Bonds as security for the faithful performance of the Contract.

Tribal Employment Rights Office

The Southern Ute Indian Tribe Tribal Employment Rights Office (TERO) has established a preference for contracting and subcontracting to certified Indian Owned businesses. A bid preference of 5% will be given to any qualified Native American owned company. To receive this preference, Native American owned companies must be certified by the Southern Ute Indian Tribe's TERO. Any Native American owned business not certified by the due date will not be given a preference. For information on certification, contact the TERO office at 970-563-0117.

The Southern Ute Indian Tribe reserves the right to reject any and all proposals, to waive any informality in the bid process and to accept the bids deemed, in the opinion of the Tribe, to be in the best interest of the Southern Ute Indian Tribe.

THE CONTRACT DOCUMENTS may be examined at the following location:

GOFF ENGINEERING & SURVEYING, INC.
126 Rock Point Drive, Suite A, Durango, Colorado 81301.
(970) 247-1705

The Southern Ute Indian Tribe
Utilities Division
16360 Hwy 172, Ignacio, CO 81137
(970) 563-5500

Deadline for questions is 5:00 PM MDST **July 18th 2025**.

Questions and requests for information are only available be per email request to clamberson@goffengineering.com.

TO BE PUBLISHED:

June 13th in the Southern Ute Drum

June 13th and 15th in the Durango Herald

INFORMATION FOR BIDDERS

BIDS will be received by The Southern Ute Indian Tribe Growth Fund (herein called the “SUIT” or "OWNER"), until **3:00 PM (M.D.S.T.), on Thursday, July 10th, 2025.** The bids shall be reviewed by the Utilities Division and all Contractors shall be notified of the selected bidder. A **mandatory pre-bid meeting** will be held on **Wednesday June 25th 2025 at 2:00 PM at the SUIT Utility office, located at 16360 Highway 172 Ignacio, CO 81137 .**

Each BID must be submitted in a sealed envelope, addressed to SUIT Utilities Division. Each sealed envelope containing a BID must be plainly marked on the outside as **“Northridge Sewer Main Improvement Project (Phase 1)”** and the envelope should bear on the outside the name of the BIDDER, the address, the license number, if applicable, and the date of the BID opening. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to Southern Ute Indian Tribe Utilities Division, P.O. Box 1137, 16360 Hwy 172, Ignacio, CO 81137.

All BIDS must be made on the required BID form. The BID SCHEDULE must be completed entirely and accompany each BID. The BID FORM and SCHEDULE must be completed, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required. Faxed bids will be accepted by prior OWNER approval only.

The OWNER, at its sole discretion, may waive any informalities or defects or reject any and all BIDS for whatever reason. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 30 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and specifications, including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID bond payable to the OWNER for 5% (five percent) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three selected BIDDERS. When the Agreement is executed, the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the PERFORMANCE BOND and PAYMENT BOND has been executed and approved, after

which it will be returned. A certified check, cashiers check, or negotiable letter of credit, may be used in lieu of a BID BOND.

A PERFORMANCE BOND and a PAYMENT BOND, in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract. Attorneys-in-fact who sign PERFORMANCE BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the PERFORMANCE BOND and PAYMENT BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may at his option consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable PERFORMANCE BOND, and AGREEMENT signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period; the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may, at its sole discretion, make such investigations to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER, at its sole discretion, reserves the right to reject any BID for whatever reason.

A conditional or qualified BID will not be accepted. Award will be made at Owner’s sole discretion to the selected BIDDER as set forth herein.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

Any BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when requested to do so by the OWNER at any time.

GOFF
ENGINEERING + SURVEYING INC

BID FORM				
CONTRACT ITEM	***UNIT***	***Q'TY***	***Unit Cost***	***Extension***
MOBILIZATION / DEMOBILIZATION	LS	1	$ -	$ -
HYDRO-EXCAVATION	HR	120	$ -	$ -
TRAFFIC CONTROL	LS	1	$ -	$ -
ASPHALT PATCHING (INCL. REMOVAL, DISPOSAL)	SY	530	$ -	$ -
CONCRETE PATCHING (INCL. REMOVAL, DISPOSAL)	SF	5460	$ -	$ -
FLOWABLE TRENCH BACKFILL	CY	52	$ -	$ -
8" DR-21 HDPE (INCL. TRENCH, BED, BACKFILL)	LF	3010	$ -	$ -
8" DR-21 HDPE (PIPE BURSTING)	LF	7990	$ -	$ -
SAG REHABILITATION (0-10 FEET, INCL. 8" DR-21 HDPE FIRST INSTALLED BY PIPE BURSTING, TRENCH, BED, BACKFILL)	LF	310	$ -	$ -
SAG REHABILITATION (10-20 FEET, INCL. 8" DR-21 HDPE FIRST INSTALLED BY PIPE BURSTING, TRENCH, BED, BACKFILL)	LF	330	$ -	$ -
SAG REHABILITATION (20-30 FEET, INCL. 8" DR-21 HDPE FIRST INSTALLED BY PIPE BURSTING, TRENCH, BED, BACKFILL)	LF	80	$ -	$ -
SALVAGE AND RECONSTRUCT EX. SSMH	EA	28	$ -	$ -
RECONSTRUCT EX. SSMH BASE (AFTER PIPE BURSTING)	EA	38	$ -	$ -
FURNISH AND INSTALL NEW PRECAST SSMH W/ PREFABRICATED BASE	EA	10	$ -	$ -
4" SDR-35 SEWER SERVICE TAP (INCL. TAP & EXCAVATION LABOR)	EA	77	$ -	$ -
4" SDR-35 SEWER SERVICE PVC PIPE	LF	360	$ -	$ -
CONCRETE MANHOLE COLLAR	EA	10	$ -	$ -
SEWER BYPASS PUMPING	LS	1	$ -	$ -
CLEARING AND GRUBBING (INCL. REMOVAL OF TREES, SHRUBS, ETC.)	LS	1	$ -	$ -
HYDROSEEDING (UPLAND SEED MIX) (INCL. HYDRO MULCHING)	AC	0.74	$ -	$ -
SITE RESTORATION	LS	1	$ -	$ -
DEWATERING	LS	1	$ -	$ -
CONSTRUCTION SURVEY	LS	1	$ -	$ -
SWPPP IMPLEMENTATION AND ADMINISTRATION	LS	1	$ -	$ -
QA/QC TESTING	LS	1	$ -	$ -
PRE-POST VIDEO INSPECTION	LS	1	$ -	$ -
			TOTAL CONSTRUCTION COST	$ -
			TERO FEE (4% OF CONSTRUCTION COST)	$ -
			TOTAL BID PRICE	$ -

BID

Proposal of _____(hereinafter called "BIDDER"), organized and existing under the laws of the State of Colorado doing business as _____.*

To the Southern Ute Indian Tribe Growth Fund (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the **Northridge Sewer Main Improvement Project (Phase 1)** in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the price stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within **one hundred twenty (120)** consecutive calendar days thereafter. BIDDER acknowledges receipt of the following ADDENDUM:

Number _____	Date _____
_____	_____
_____	_____

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the prices shown in the attached BID Schedule. Unless otherwise provided, payment will be based on installed quantities.

Contractor _____ Date _____

* Insert “a corporation,” “a partnership” or “an individual” as applicable.

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____as Principal, and _____ as Surety, are hereby held and firmly bound unto _____ as OWNER in the penal sum of _____for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this _____ day of_____, 20__. The Condition of the above obligation is such that, whereas the Principal has submitted to _____a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the _____

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly complete in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of his obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ (L.S.)

Principal

_____

Surety

By: _____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

NOTICE OF AWARD

To:

PROJECT DESCRIPTION: In accordance with provided plans, detailed drawings and specifications, this project scope will include the **Northridge Sewer Main Improvement Project (Phase 1).** This project is located on the Southern Ute Indian Reservation.

The OWNER has considered the BID submitted by you for the above-described WORK. You are hereby notified that your BID has been accepted in the amount of **$**_____

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within ten (10) calendar days from the date of receipt of this Notice.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of receipt of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 20___.

By _____
(Owner)

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged this the _____ day of _____, 20____.

By _____
(Owner)

Title _____

SOUTHERN UTE INDIAN TRIBE UTILITIES DIVISION
CONSTRUCTION AGREEMENT

THIS CONSTRUCTION AGREEMENT ("Agreement") is entered into and is effective this ____ day of _____ , 20__ , by and between THE SOUTHERN UTE INDIAN TRIBE dba THE SOUTHERN UTE INDIAN TRIBE GROWTH FUND ("Growth Fund"), PO Box 367, Ignacio, Colorado 81137, and _____ ("Contractor").

RECITALS

A. The Southern Ute Indian Tribe ("Tribe") is a federally-recognized Indian tribe, organized pursuant to the Indian Reorganization Act of 1934.

B. The Growth Fund was formed by the Tribe's Tribal Council and is authorized to conduct enterprise business of the Tribe.

C. The Southern Ute Utilities Division ("Division") is a division of the Tribe under the control and direction of the Southern Ute Indian Tribe Growth Fund and manages and develops utility projects for the Tribe.

D. The Tribe desires to hire an experienced construction company to provide the necessary work for **Northridge Sewer System Rehabilitation Project** (the "Project").

E. The Contractor is duly organized or licensed to do business in the State of Colorado, primarily doing business in the construction industry and represents that it has the experience and expertise to complete the Project.

F. The Tribe desires to hire the Contractor and the Contractor desires to perform the Project work.

AGREEMENT

In consideration of the foregoing, the parties agree and covenant as follows:

1. Work and Work Schedule

a. The Contractor shall perform the work for the Project in accordance with the Southern Ute Indian Tribe – Utilities Division General Conditions, to the extent such terms are not displaced by the provisions of this Agreement, which incorporated into this Agreement by reference, and shall perform the work as described in the Technical Provisions and Construction Drawings prepared by **GOFF ENGINEERING**, dated **06-13-2025**, and in accordance with the terms of the Project Contract Documents & Specifications prepared by **GOFF ENGINEERING**, dated **06-13-2025**, as necessary to complete the Project (the "Work"). To the extent that any terms contained in the ancillary documents incorporated into this Agreement are inconsistent with the terms of this Agreement, the terms of this Agreement shall control.

b. The Contractor acknowledges that the Project is facilitated through the use of Federal Indian Health Service funds and agrees to cooperate with the Tribe and the Division to comply with all reporting, inspection, and other compliance requirements of such funding. The parties agree that the terms of the Tribal Procurement Addendum dated _____is attached hereto and incorporated here, as well as the Tribal Procurement Addendum.

c. The Contractor shall begin the Work under this Agreement on _____,202___ and acknowledges that time is of the essence for the performance of the Work.

d. The Contractor shall complete or stop Work within **120 DAYS** from the start of Work.

2. Responsibilities of the Division

a. The Division shall serve as the Tribe's representative in monitoring the performance of the Contractor's obligations hereunder.

b. The Division shall furnish the Contractor all specifications for Work to be performed; however, this shall not relieve the Contractor from its duty to rely on its own expertise, reviews and inspections in the performance of the Work.

c. The Division shall inspect the Work and administer the budget for the Project. All Work shall be performed to the satisfaction of the Division.

3. Responsibilities of the Contractor

a. The Contractor shall coordinate its Work with the Division. The Contractor shall follow any other instructions, drawings and/or information supplied by the Division. The Contractor shall report any discrepancies and/or questions or concerns directly to the Division. The Contractor shall perform the Work with the quality expected of a contractor who has the knowledge, training, experience, and skills necessary for skillfully performing the Work, free from defects in material or workmanship, including: (A) performing the Work in a diligent and efficient manner; (B) exercising precaution for the protection of persons and property and for the maintenance of protective facilities, including taking such safety and health measures, whether or not required by applicable law or rules, as may be necessary or appropriate for the protection of persons and property; and (C) cleaning up all refuse, rubbish, scrap, and debris so the work site at all times is safe, neat, and orderly.

b. Except as otherwise specifically stated in writing, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities (of every nature whatsoever) necessary to execute, complete and deliver the Work within the specified time.

c. The Contractor shall procure and maintain during the period this Agreement remains in force, and during the applicable warranty period, insurance coverage in the following amounts:

	TYPE OF INSURANCE	MINIMUM LIMITS
I.	Worker's Compensation requirements,	Statutory
	Employer's Liability	$100,000
II.	Commercial General Liability (Including Products/Completed Operations)	per Occurrence $2,000,000
III.	Automobile Liability (All Owned, Non-Owned and Hired)	Combined Single Limit $2,000,000

Copies of the appropriate certificate of insurance must be furnished to the Division upon execution of this Agreement. Each policy shall be endorsed to provide, in Company's favor, a waiver of subrogation rights, and the Commercial General Liability, Automobile Liability, and Umbrella Liability policies shall be endorsed to name Company as an additional insured with respect to the Work. Contractor shall promptly provide a new certificate of insurance upon the expiration of any previously provided certificate of insurance. Each insurance policy (and each certificate) shall provide that its cancellation shall not be valid with respect to Company's rights against Contractor or the insurer under such policy until Company receives at least thirty (30) days written notice of such cancellation.

d. The Contractor shall provide a bid bond, payment bond and performance bond in the amount of 100 percent of the Contract Price to the Tribe and from a surety company approved by the Tribe.

e. The Contractor shall observe and comply with all applicable federal, state, local and tribal rules and regulations as well as applicable project safety rules and regulations as they pertain to the Project and its Work.

f. The Contractor shall observe and comply with the Southern Ute Indian Tribal Employment Rights Office (TERO) codes and fees. Please contact the Southern Ute Indian Tribe TERO Office with questions: 970-563-0117 – Hilda Burch. Please see the TERO Compliance form and Code attached.

g. The Division shall provide Contractor with a copy of the Tribe's State of Colorado tax exempt certificate and tax exempt number that Contractor may use to apply for a project-specific tax-exempt certificate from the State. If Contractor is unable to

obtain a project-specific tax-exempt certificate, the parties agree that the project will include sales taxes. If the Contractor obtains a project-specific tax-exempt certificate, the project will not include sales taxes. The parties will then prepare a change order to exclude sales taxes from the project's costs. If practicable, the Contractor agrees to coordinate with the Division's representative to directly purchase and deliver necessary project materials on Reservation.

h. Upon conclusion of this project and before final payment, the Contractor shall provide the Division with As-Built Drawings/Sketches of the Work performed unless waived by the Division.

i. Upon conclusion of this Project and before final payment, the Contractor shall provide any Lien Waivers from all subcontractors and suppliers for Work performed and/or supplies furnished on this Project.

j. Contractor is an independent contractor hereunder; neither Contractor nor any of its employees, agents, or subcontractors shall be considered employees of the Tribe or be entitled to any insurance, workers compensation benefits, tax withholding or other benefits provided by the Tribe to its employees. Contractor acknowledges that it is solely responsible for the payment of all taxes on its income.

4. Compensation

a. In consideration of the Work to be performed pursuant to this Agreement, the Growth Fund agrees to pay the contractor a fixed amount equal to **$ _____** ("Contract Price").

5. Changes in Agreement

a. The Division may, any time, by **written order** make changes in, additions to or omissions from the Work to be performed under this Agreement. The Contractor shall promptly proceed with the performance of the Agreement as so changed. Any increases or decreases in the Contract Price resulting from such changes shall be agreed upon in writing by the parties **prior to** the performance of the Work on a form acceptable to the Tribe. Such agreed upon price change shall be determined on a Cost of Work basis. Cost of Work basis shall be the industry standard rate for time and materials plus reasonable and customary markup for overhead and profit. No compensation in addition to the Contract Price shall be paid to the Contractor unless the requirements of this paragraph have been followed.

6. Billings and Payments

a. The Contractor shall submit a monthly pay application for work in progress and/or any approved reimbursable expenses, based on the percentage of the Work completed as verified and approved by the Division, in accordance with the following:

i. Records of any expenses shall be provided to the Division with the Contractor's billings, together with invoices, vouchers, or other back-up documentation.

ii. The Division will authorize payment for work in progress completed. The Division shall review and inspect the percentage of work performed to date. The Division shall thereafter pay the approved application amounts to the Contractor for the percentage of work completed to date within 30 days of the application.

iii. The Division will retain ten (10) percent from each approved payment to the Contractor.

iv. After the Contractor has completed any or all remaining work items, delivered marked-up record drawings (As-Builts), Lien Waivers, and other documents, all as required by the Tribe, and after the Division has indicated that all Work is acceptable, the Contractor may submit an invoice for final payment of retainage.

b. The Division may deduct from amounts due to the Contractor an amount sufficient to protect itself from loss due to, but not exclusive of,

i. Defective workmanship, equipment or materials not remedied or replaced by the Contractor within **fifteen (15) days** of receipt of written notice of the defect from the Division.

ii. Failure to prosecute the work diligently, as directed by the Division, or as agreed upon in the Work schedule.

7. Suspension and Growth Fund Remedies

a. If Contractor fails to commence the Work within the specified time; fails to prosecute its Work continuously with sufficient supervision, workmen and equipment to ensure its completion within the time scheduled for completion; fails to perform the Work in a safe manner; or fails to comply with any provision of this Agreement, the Division may elect to give notice in writing of such default. If Contractor, within a period of five (5) working days after such notice is given to Contractor, shall not cure its default, then the Division shall have full power and authority, without process of law and without violating or terminating this Agreement, to complete the Work with its own forces and/or contract with other parties for its completion.

b. Neither by the taking over of the Work, nor by its completion of the Work, shall the Division forfeit its right to recover damages from the Contractor for failure to complete the Work or for delays in completion of the Work.

c. Upon the taking over of the Work by the Division, no further payment will be made to the Contractor until the Work is completed. Any monies due or that may become due to the Contractor under this Agreement will be withheld and may be applied by the Division to payments of labor, materials, supplies and equipment used in the prosecution of the Work, to payments of rental charges on equipment, to payment of any excess costs to the Growth Fund in completing the Work, to payment to corrective defective work by the Contractor, and to pay the Growth Fund for any damages it incurs as a result of any breach of this Agreement by the Contractor.

8. Warranty

a. The Contractor guarantees and warrants its work against all defects of materials and/or workmanship for a period of **one (1) year** as applicable from the date of acceptance of the work by the Division. If any defect in workmanship, equipment or materials furnished by the Contractor arises within the one-year warranty period, the Contractor shall remedy or otherwise correct such defect, without cost to the Growth Fund, within ten (10) days of receipt of written notice. In the event of failure by the Contractor to correct or remedy as provided herein, the Division may contract or arrange for such repair at the complete expense of the Contractor.

9. Indemnification

a. The Contractor shall indemnify and hold harmless the Tribe, the Tribal Council, and the Tribe's employees, agents, and representatives, and the Growth Fund, the Growth Fund's employees, agents, and representatives and the Division, from any and all claims, damages, losses and expenses of every nature made against the Tribe, the Growth Fund, and/or the Division arising out of the Contractor's work.

10. Governing Law and Interpretation

a. This Agreement shall be governed by Southern Ute Indian tribal law and federal law. The Contractor agrees that the venue for all disputes, actions, and claims arising from this Agreement shall be proper in the Southern Ute Indian Tribal Court and the Contractor hereby consents to the personal jurisdiction of the Tribal Court by entering into this Agreement with the Tribe. Nothing in this Agreement, however, shall be construed as a waiver of the Tribe's sovereign immunity.

b. The parties agree that the laws applicable to this Agreement shall specifically include the USA PATRIOT Act of 2001, Pub. L. No. 107-56, the Bank Secrecy Act, 31 U.S.C. Section 5311 et. seq., the Trading with the Enemy Act, 50 U.S.C. App. Section 1 et. seq., the International Emergency Economic Powers Act, 50 U.S.C. Section 1701 et. seq., the Money Laundering Control Act of 1986 and the sanction regulations promulgated pursuant thereto by the Office of Foreign Assets Control, Department of the Treasury ("OFAC"), as well as laws relating to prevention and detection of money laundering in 18 U.S.C. Section 1956 and 1957, and all anti-corruption laws of applicable jurisdiction including the U.S. Foreign Corrupt Practices Act, 15 U.S.C. Section 78dd-1,

et seq. Contractor represents that it is not a “foreign person” within the meaning of Section 1445 of the Internal Revenue Code of 1986, as amended, and that, to its knowledge, the transaction contemplated hereunder is not prohibited under United States law, regulation, executive orders and lists published by OFAC.

c. Both parties acknowledge that they have had the opportunity to consult with legal counsel in entering into this Agreement and agree that any ambiguities shall not be construed against the drafter of this Agreement.

11. Miscellaneous

a. Assignment. The Contractor shall not assign this Agreement without the prior written consent of the Division. In addition, the Contractor shall be fully responsible to the Tribe for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by it. Nothing in this Agreement shall create any contractual relationship between any subcontractor and the Tribe, the Growth Fund, or the Division.

b. Construction of Agreement. The section and other headings contained in this Agreement are for reference only. The terms “party” and “parties” refer only the Tribe through its Utilities Division and Contractor. The terms "include," "including," “consistent with the foregoing”, or similar terminology shall be construed as meaning without limitation as to the nature or scope of the referenced matters, whether similar or dissimilar to the items described in the text following such terms. The terms "herein" or "hereof," or similar terminology, shall be construed as referring to this Agreement rather than only the section in which such term appears. References to subsections shall refer to the section or subsection in which they appear, unless otherwise noted.

c. Attorney Fees. In the event this Agreement becomes the subject of litigation, the prevailing party shall be entitled to recover the reasonable attorney fees it incurs from the losing party.

d. Entire Agreement. This Agreement (which includes any amendment or change order executed by the parties or a party as specified herein, and any exhibits or other attachments hereto or thereto) constitute the parties’ sole understanding and agreement with respect to the subject matter hereof and supersedes all prior negotiations, understandings and agreements, written or oral, between the parties.

e. Amendments and Waivers. No amendments, modifications, alterations or waivers of the terms of this Agreement shall be binding unless in writing and executed by the parties.

f. Survival. The parties' warranties, representations, and covenants (including indemnification obligations) that may be applicable following the completion or termination of Work, acceptance of Work, or termination of this Agreement shall survive the completion or termination of Work, acceptance of Work, or termination of this Agreement. Consistent with the foregoing, completion, acceptance, or termination of any

Work or termination of this Agreement shall not relieve either party from any liability or obligation hereunder, whether in the nature of indemnification or otherwise, resulting from acts, omissions, or events occurring prior to such completion, acceptance, or termination.

g. Right of Offset. If the Contractor breaches this Agreement, the Division may offset against any amounts owed to Contractor an amount equal to the damages suffered as a result of such breach. In the event a breach is found not to have existed, then the amount offset shall be promptly paid to the Contractor.

h. Additional Documents. The parties hereto agree to execute and deliver any additional document that may be reasonably required to complete and execute the responsibilities of the parties as set forth herein.

i. Counterparts. This Agreement may be executed in several counterparts, including exhibits, and all documents so executed shall constitute one agreement which shall be binding on all the parties hereto.

The parties agree that this Agreement includes the following documents ATTACHED HERETO AND INCORPORATED HEREIN:

- This Agreement
- The Southern Ute Indian Tribe Utilities Division General Conditions
- [The Southern Ute Indian Tribe Utilities Division Project Specific Conditions provided by the Engineer]
- The Tribal Procurement Addendum
- The TERO Compliance Plan Form
- [The Technical Provisions and Construction Drawings prepared by **Goff Engineering**, dated **06-13-2025**.
- [The Project Contract Documents & Specifications prepared by **Goff Engineering** dated **06-13-2025**.

[Signatures on Following Page]

IN WITNESS WHEREOF, the Growth Fund and the Contractor have caused this Agreement to be executed the day and year first written above.

THE SOUTHERN UTE INDIAN TRIBE
GROWTH FUND

By_____

Print:

Title:

CONTRACTOR:

By_____

Print:

Title:

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that_____

_____

(Name of Contractor)

_____

(Address of Contractor)

a _____, hereinafter called Principal,

(Corporation, Partnership, or Individual)

and _____

(Name of Surety)

_____

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

_____

(Name of Owner)

_____

(Address of Owner)

hereinafter called OWNER, in the penal sum of 100% of the Total Bid Price equal to_____ _____Dollars $ (_____), in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20___, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed hereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration and addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of
(Number)
which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:_____
(Principal)

_____
(Principal Secretary)

(SEAL) BY_____(s)

_____
(Address)

_____

_____
(Witness as to Principal)

_____
(Address)

_____

ATTEST:_____
(Surety)

_____
(Surety Secretary)

(SEAL) BY_____(s)
(Attorney-in-fact)

_____
(Address)

_____

_____
(Witness as to Surety)

_____
(Address)

_____

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must be authorized to transact business in the State where the PROJECT is located.

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

a _____, hereinafter called Principal,
(Corporation Partnership or individual)

and _____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

_____
(Name of Owner)

_____
(Address of Owner)

hereinafter called OWNER, in the penal sum of 100% of the Total Bid Price equal to _____ DOLLARS ($),

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20 ____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each
(Number)
one of which shall be deemed an original, this the _____ day of _____ , 20_____.

ATTEST:_____
(Principal)

_____
(Principal Secretary)

(SEAL) BY_____(s)

_____
(Address)

_____

_____
(Witness as to Principal)

_____
(Address)

_____

ATTEST:_____
(Surety)

_____
(Surety Secretary)

(SEAL) BY_____(s)
(Attorney-in-fact)

_____
(Address)

_____

_____
(Witness as to Surety)

_____
(Address)

_____

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must be authorized to transact business in the State where the PROJECT is located.

NOTICE TO PROCEED

To: . _____ Date: _____

_____

Project: **Northridge Sewer Main Improvement Project (Phase 1).**

You are hereby notified to commence WORK in accordance with the Agreement dated:_____, on or before _____, and you are to complete the WORK within **120 (one hundred twenty)** consecutive calendar days thereafter.

The date of completion of all WORK is therefore _____

Owner The Southern Ute Indian Tribe Growth Fund

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____

this _____ day

of_____, 20___

By _____

Title _____

CHANGE ORDER

Agreement Date:_____ Order No. _____Date:_____

NAME OF PROJECT: **Northridge Sewer Main Improvement Project (Phase 1)**
OWNER: Southern Ute Indian Tribe (Growth Fund)
CONTRACTOR: _____

The following changes are hereby made to the CONTRACT DOCUMENTS:

_____
_____
_____
_____

Justification:

_____
_____
_____
_____

Change to CONTRACT PRICE:

Original CONTRACT PRICE $_____

Current CONTRACT PRICE adjusted by previous CHANGE ORDER $_____

The CONTRACT PRICE due to this CHANGE ORDER will be (increased) (decreased) by: $_____

The new CONTRACT PRICE including this CHANGE ORDER will be: $_____

Change to CONTRACT TIME:

The CONTRACT TIME will be (increased) (decreased) by _____ calendar days.

The date for completion of all work will be _____ (Date).

Recommended by:_____
Engineer

Ordered by:_____
Owner

Accepted by:_____
Contractor

SOUTHERN UTE INDIAN TRIBE

TERO Division, P.O. Box 737, Ignacio, CO 81137
Phone: 970-563-0117 Fax: 970-563-4824

COMPLIANCE PLAN

The Southern Ute Indian Tribal Council approved the Tribal Employment Rights Code (Code) presented in conjunction with this Compliance Plan, which Code was subsequently approved by the Department of Interior on February 13, 2019. This Code establishes an Indian preference policy related to employers conducting business within the exterior boundaries of the reservation on land subject to the jurisdiction of the Southern Ute Indian Tribe (Tribe). The Code requires all employers to extend to members of the Tribe and other American Indians a preference in hiring, training, promotions and lay-offs. The Tribal Council created a Tribal Employments Rights Ordinance Office (TERO) to administer these policies.

This Compliance Plan form serves as notice of the Tribe's employment preference law; provides the Tribe with information about employers and their business operations within the reservation; and secures each employer's acknowledgement of steps he must take to comply with the Code.

Failure to complete this form and to return it to TERO shall create a presumption that an employer is not complying with the Tribe's employment preference policy. Failure to comply with the Tribal Employment Rights Code will subject a Covered Employer to any and all tribal enforcement remedies authorized, including equitable remedies.

GENERAL INFORMATION (To be completed by Employer)

This is an official form of TERO, do not alter, change or retype this form.

1. **Company Name**:_____

2. **Mailing Address:**_____

   City:_____ **State:** _____ **Zip code:**_____

3. **Telephone No.** ( )_____ **Fax number:**( )_____

4. **Total # of employees**:_____ **Annual gross revenue:**_____

5. **Name of authorized contact representative and job title:**

   _____**E-mail address:**_____

6. **Description of business activity or project to be conducted on the Southern Ute Indian Reservation:**

   _____

   _____

7. Anticipated date of when the activity or project will START. _____

A. Anticipated date of when the activity or project will END. _____

Employers are required to notify TERO at the completion of the project.

8. Employer status (please check applicable space and provide related information):

A. _____(Contractor) Please provide a list of subcontractors currently conducting business on your behalf or a list of contracts you have determined to be eligible to perform work on your behalf.

B._____(Sub-contractor) Please provide the name of company for whom you are performing subcontract work:

_____

C. _____(Supplier) List supplier or provider of goods, services or equipment.

D. Other (please explain)

9. Please provide a list of suppliers or providers of services to your business:

_____

_____

_____

10. Specify the number of employees to be used on the proposed project, their job classifications and wage levels by occupation and type of benefits.

_____

_____

_____

11. Please provide, in writing, the necessary qualifications for each position or job classification listed above. (Attach additional sheet if need to)

12. Specify the number of <u>additional employees needed</u> for this project. List job classifications and wage rates for each position. (Attached additional sheet if need to)

13. Describe any training or apprenticeship programs which your company does offers_____

_____

14. Give project cost or contract amount for the purpose of calculating the Employment Rights Fee. _____

See page 5 for Employment Rights fee; Establishment of fee

15. Does this project involve federal or state funding?_____**Are there any funding restrictions required by the funding source?**_____

_____

16. Employers are required to submit employment information reports to TERO. Reports shall be filed on a *Quarterly* basis no later than 10 business days after the end of each calendar quarter.

17. Please provide a *certified payroll* for the initial payroll period of the project. Thereafter, employers shall be required to furnish a list of newly hired employees and terminated employees on a *Weekly* basis.

<u>CERTIFICATION AND ACKNOWLEDGMENT</u>

The undersigned, an authorized representative of _____, has reviewed the foregoing Compliance Plan. Under penalty of perjury, the undersigned states that the information provided on this form and any attachments is accurate and complete. Further, the undersigned agrees to comply with the Southern Ute Indian Tribe Employment Rights Code by taking the actions indicated in the foregoing Compliance Plan.

Signed this _____day of _____, _____.
(month) (year)

Signed:_____
Employer Representative

INDIAN PREFERENCE IN EMPLOYMENT

Every covered employer is required to give preference in accordance with the TERO Code in hiring, promotion, training and layoffs for work performed within exterior boundaries of the reservation on land subject to the jurisdiction of the Southern Ute Indian Tribe. The employment preference shall follow the following priorities:

17-4-106. Priority of Employment Preference. The employment preference provided for in
this Code shall follow these priorities:
(1) First preference shall be given to enrolled members of the Southern Ute Indian Tribe.

(2) Second preference shall be given to Indians who are legally married to enrolled members of the Southern Ute Indian Tribe.

(3) Third preference shall be given to enrolled members of the Ute Mountain Ute and Northern Ute tribes.

(4) Fourth preference shall be given to Local Indians.

(5) Fifth preference shall be given to non-Local Indians.

Proof of enrollment in a federally recognized Indian Tribe are required to obtain preference. To assist Covered Employers in compiling with Tribe's preference policy, TERO has assembled a job skill data bank, which identifies tribal members and local Indians, together with a list of their skills and work experience.

Prior to commencing business on the Southern Ute Indian Reservation, contractors, subcontractors and all Covered Employers shall do the following:

A. Complete this Compliance Plan form and return it to TERO promptly.

B. Schedule a meeting with the TERO Division Head to discuss potential employment positions and to identify tribal members and other Native American eligible for hiring, training or promotion.

C. Develop a plan, in cooperation with TERO, for advertising the availability of employment opportunities.

D. Actively attempt to recruit and hire all qualified members of the Tribe and

other qualified Indian applicants for available employment.

In its Tribal Employment Rights Code, the Tribe has established the following fee structure for the administration and operation of TERO:

EMPLOYMENT RIGHTS FEE:

17-8-101. Establishment of Fee. The Tribe hereby establishes an employment rights fee for the funding, administration and operation of training programs for Southern Ute tribal members, as well as for the operational expenses of TERO.

(1) Every Covered Employer performing a construction, roustabout or maintenance contract in connection with building construction or oil and gas field work, including a contract for services, labor or materials or any combination thereof, for such work, a majority of which will occur on lands subject to the jurisdiction of the Tribe, shall pay a fee of 4% of the cumulative amount of the contract, which shall be calculated on a per-contract basis and paid before final payment is made to the contractor but after any and all change orders that may affect the contract price have been processed.

(2) Every Covered Employer, with twenty or more employees or gross revenues of $500,000 or more, other than the contractors referenced above, shall pay an annual fee of 4% of the annual payroll of those employees of the Covered Employer who perform work principally within the exterior boundaries of the Reservation subject to the jurisdiction of the Tribe. Such fee shall be paid within 30 calendar days of the end of each calendar year.

(3) The Tribe, state and federal governments, including their political subdivisions; and non-profit organizations shall be exempt from payment of TERO fees.

(4) TERO fees shall be deposited in the Tribe's General Fund as a separate line item to be used to fund training for Southern Ute tribal members, enrolled members of the Ute Mountain Ute and Northern Ute Tribes and Local Indians, including apprenticeship programs and on-the job training.

17-12-101. Waiver. After notification and consultation with TERO, the Tribal Council may waive provisions of this Code if such waiver is deemed to be in the best interest of the Tribe. The waiver must be explicitly stated and authorized pursuant to a tribal resolution approved by the Tribal Council.

SOUTHERN UTE INDIAN TRIBE

TERO Division, P.O. Box 737, Ignacio, CO 81137
Fax: 970-563-4824 Phone: 970-563-0117

Weekly Hire/Termination Update

This is an official form of TERO, do not alter, change or retype this form

1. **Name of Employer**_____
2. **Week ending:**_____
3. **Business activity or project:**_____
4. **Please check all that apply:**

   A. _____ No change in employee list previously provided.

   B. _____ Newly hired employees:

   Name **Job classification** **Wage Rate**

   _____

   _____

   _____

   _____

   C._____Terminated employees:

   _____

   _____

   _____

   _____

Signed this _____day of _____, _____
(month) (year)

_____
Employer representative

SOUTHERN UTE INDIAN TRIBE

TERO Division, P.O. Box 737, Ignacio, CO 81137
Fax: 970-563-4824 Phone: 970-563-0117

Quarterly Employment Information Report

This is an official of TERO, do not alter, change or retype this form

1. **Name of Employer:**_____
2. **Quarter ending:**_____
3. **Business activity or project for this quarter:**_____
   Please check applicable space: _____*Casino Construction Project*
   _____*Oil and Gas*
   _____*Other* _____
4. **During the last quarter how many employees were hired for work conducted on the Southern Ute Indian Reservation?**_____

   Of those, how many were Indian?_____**Non-Indian?**_____

   Was TERO notified of all job vacancies?_____
5. **Has a list of employees been furnished to TERO?**_____

   Of those, how many were Indians?_____**Non-Indian?**_____
6. **During the last quarter did you lay-off any employees?**_____

   Of those, how many were Indian?_____**Non-Indian?**_____
7. **During the last quarter did you enroll any employees in training or apprenticeship programs?**_____

   Of those, how many were Indian?_____**Non-Indian?**_____
8. **During the last quarter did your company award any contracts?**_____

   Did an Indian owned business participate in the bidding process?_____

   Was an Indian owned business awarded the contract?_____

   If no, please explain_____

   _____

Signed this _____**day of** _____, _____
(month) (year)

_____

TERO Division

Southern Ute Indian Tribe, Ignacio, CO 81137
Phone # (970) 563-0117 Fax # (970) 563-4824

REQUEST FOR WORKERS

Date _____

Person or Organization *(requesting):*

_____**Phone #:**_____

_____

Location of job:_____

Job Title: (*check one)*:

☐ **Laborers** ☐ **Admin.Assist.** ☐ **Flaggers** ☐ **Other** _____

How many workers needed:_____

Description of job to be done_____

_____

_____

Pay Rate:_____

When to start: _____**When to end**_____

_____

Where to fill out application:_____

Report To_____ **at Work site**

Other instructions/comments:

PART 1 DEFINITIONS

1.01 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.02 ADDENDA - Written or graphic instruments issued prior to the execution of the AGREEMENT which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.

1.03 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.04 BIDDER - Any person, firm or corporation submitting a BID for the WORK.

1.05 BONDS - Performance, Payment and Warranty Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.06 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.07 CONTRACT DOCUMENTS - The contract, including Advertisement For Bids, Information For Bidders, BID, BID BOND, AGREEMENT, PAYMENT BOND, PERFORMANCE BOND, WARRANTY BOND, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS and ADDENDA.

1.08 CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.09 CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.

1.10 CONTRACTOR - The person, firm or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS - The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.

1.12 ENGINEER - The person, firm or corporation named as such in the CONTRACT DOCUMENTS.

1.13 FIELD ORDER - A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE OF AWARD - The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

1.15 NOTICE TO PROCEED - Written communications issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.16 OWNER - A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the WORK is to be performed.

1.17 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.18 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.20 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.21 SUBCONTRACTOR - An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

1.22 SUBSTANTIAL COMPLETION - That date as certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.

1.23 SUPPLEMENTAL GENERAL CONDITIONS - Modifications to General Conditions required by a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS, or such requirements that may be imposed by applicable state laws.

1.24 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.26 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address or delivered in person to said party or his authorized representative on the WORK.

PART 2 ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

2.01 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.02 The additional drawings and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

PART 3 SCHEDULES, REPORTS AND RECORDS

3.01 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required.

3.02 Prior to each partial payment estimate the CONTRACTOR shall submit revised construction progress schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part.

3.03 The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK.

PART 4 DRAWINGS AND SPECIFICATIONS

4.01 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.02 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.

4.03 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

PART 5 SHOP DRAWINGS

5.01 The CONTRACTOR <u>is required</u> to provide shop drawings.

5.02 The ENGINEER'S approval of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially

deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.03 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.04 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

5.05 The ENGINEER's review is for general compliance to the specifications only, and no responsibility is either assumed, nor implied, for correctness of detail or dimension, and this remains the sole responsibility of the CONTRACTOR and supplier.

PART 6 MATERIALS, SERVICES AND FACILITIES

6.01 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

6.02 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.03 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

6.04 Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.

6.05 Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

PART 7 INSPECTION AND TESTING

7.01 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.02 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.03 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.04 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.05 Inspections, tests or approvals by the engineer or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.06 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal, State or County agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.

7.07 If any WORK is covered contrary to the written instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR'S expense.

7.08 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

PART 8 SUBSTITUTIONS

8.01 Whenever a material, article or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and

use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

PART 9 PATENTS

9.01 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, however if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

PART 10 SURVEYS, PERMITS, REGULATIONS

10.01 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. The OWNER will provide elevations with cut/fill notes at all structures. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the OWNER shall develop and make all detail surveys needed for construction such as batter boards, stakes for pile locations and other working points. These detail surveys shall be done by a registered Land Surveyor licensed to practice in Colorado. CONTRACTOR shall provide the OWNER with 2 sets of As-Built drawings showing all major utility components or features. These As-Built items shall be located both horizontally and vertically.

10.02 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their loss or disturbance.

10.03 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER

in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

PART 11 PROTECTION OF WORK, PROPERTY AND PERSONS

11.01 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

11.02 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts he may be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.03 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

11.04 Should cultural resources be inadvertently discovered, stop work and notify the THPO and the NAGPRA Coordinators at (970) 563-2989, (970) 563-2992.

PART 12 SUPERVISION BY CONTRACTOR

12.01 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the

CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

PART 13 CHANGES IN THE WORK

13.01 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by the CHANGE ORDER.

13.02 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or TIME, or both, in which event he shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

PART 14 CHANGES IN CONTRACT PRICE

14.01 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

(a) Unit prices previously approved.

(b) An agreed lump sum.

(c) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services i.e. freight, overtime, etc. necessary to complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the WORK to cover the cost of general overhead and profit. Any CHANGE ORDER done by a Subcontractor shall be allowed only a five (5) percent markup above the actual cost of the WORK.

PART 15 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

15.01 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.02 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood

and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15.03 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.04 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

(a) To any preference, priority or allocation order duly issued by the OWNER.

(b) To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

(c) To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

15.05 Delays caused by weather shall be documented and agreed upon between the ENGINEER and the CONTRACTOR. Delays in weather would only be allowed when conditions prevent the project from proceeding with normal preventative measures taken. Delays due to wind, cold and heat would not normally be allowed.

PART 16 CORRECTION OF WORK

16.01 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACTOR DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.02 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

PART 17 SUBSURFACE CONDITIONS

17.01 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the ENGINEER by WRITTEN NOTICE of:

(a) Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS; or

(b) Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.02 The ENGINEER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

PART 18 SUSPENSION OF WORK, TERMINATION AND DELAY

18.01 The OWNER or ENGINEER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

18.02 If the CONTRACTOR is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS for labor, materials or equipment or if

he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in the CHANGE ORDER.

18.03 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.04 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right of remedy, elect to abandon the PROJECT and terminate the Contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.05 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days written notice to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the cost and delays attributable to the stoppage of the WORK.

18.06 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

PART 19 PAYMENTS TO CONTRACTOR

19.01 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered as suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER'S title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within ten (10) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all work covered by the CONTRACT DOCUMENTS. The OWNER at any time, however, after fifty (50) percent of the WORK has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five (5%) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

19.02 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.

19.03 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.04 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.05 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK. Upon final acceptance the CONTRACTOR shall provide the OWNER with a complete set of final records. These records shall include payroll records, material and subcontractor invoices, indirect costs and equipment rental or other charges.

19.06 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, material, men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR`S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.07 If the OWNER fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the rate of ten percent (10%) commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

PART 20 ACCEPTANCE OF FINAL PAYMENT AS RELEASE

20.01 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release of the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection

with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance BOND and Payment BONDS.

PART 21 INSURANCE

21.01 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

(a) Claims under Worker's Compensation, Disability benefit and other similar Employee Benefit Acts;

(b) Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

(c) Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

(d) Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

(e) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.02 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that if coverages afforded under the policies are canceled before the expiration date, notice of such cancelation will be delivered in accordance with the policy provisions

21.03 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, liability insurance as hereinafter specified;

(a) Commercial General Liability including personal and advertising injury liability:
$2 Million Aggregate

(b) Product and Completed Operations Liability:
$1 Million Occurrence/$1 Million Aggregate

(c) Comprehensive Auto Liability including owned, non-owned and hired autos:
$1 Million Combined Single Limits including bodily injury and property damage

21.04 The OWNER shall be named as additional insured on all policies related to this project.

21.05 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Broad Form Coverage insurance upon the PROJECT to the full replacement value thereof for the benefit of the OWNER, the CONTRACTOR, and

SUBCONTRACTORS as their interest appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.06 State of Colorado or comparable Worker's Compensation Insurance. The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the work is performed, Worker's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the PROJECT and in case any work is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Worker's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site of the PROJECT is not protected under Worker's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

PART 22 CONTRACT SECURITY

22.01 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a Performance Bond and a Payment Bond in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT

22.02 DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared as bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, CONTRACTOR shall within seven (7) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

PART 23 ASSIGNMENTS

23.01 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or

interest therein, or his obligations thereunder, without written consent of the other party.

PART 24 INDEMNIFICATION

24.01 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided that any such claims, damages, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.02 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in anyway by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.03 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

PART 25 SEPARATE CONTRACTS

25.01 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

25.02 The OWNER may perform additional WORK related to the PROJECT himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

25.03 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefore as provided in Sections 14 and 15.

PART 26 SUBCONTRACTING

26.01 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.02 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty (50%) percent of the CONTRACT PRICE, without prior written approval of the OWNER.

26.03 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

26.04 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

26.05 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

PART 27 ENGINEER'S AUTHORITY

27.01 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS. The ENGINEER has the right to reject any work found not to be in accordance with the CONTRACT DOCUMENTS.

27.02 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.03 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.04 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

PART 28 LAND AND RIGHTS-OF-WAY

28.01 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

28.02 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

28.03 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage materials.

PART 29 GUARANTEE

29.01 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the project that the completed project is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

PART 30 ARBITRATION

30.01 The decision of disputes by arbitration shall be voluntary or as mutually agreed to by the parties in writing and no party to this CONTRACT, nor any of their agents, shall be required to enter arbitration against their will.

PART 31 TAXES

31.01 The OWNER will supply the CONTRACTOR with identification to verify that the work is being done under a CONTRACT with the SOUTHERN UTE INDIAN

TRIBE and is not subject to State and County sales taxes. The CONTRACTOR is subject to other taxes required by the law of the place where the work is performed.

PART 32 PREVAILING WAGES

32.01 This Project is subject to Prevailing Wage Rates and associated compliance and reporting criteria. Minimum wage rates can be found at: https://sam.gov/

PART 33 INDIAN HEALTH SERVICE

33.01 There shall be no contractual relationship either implied or express between the IHS and the CONTRACTOR or any SUBCONTRACTOR at any tier.

33.02 IHS representatives shall be afforded access to the site at all times during the construction period to observe the work and determine if the work conforms to the intent of the design.

33.03 IHS representatives shall not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

33.04 IHS representatives do not have authority to obligate the OWNER to changes in the terms of the CONTRACT nor to act as an agent of the OWNER in any manner. Inspections conducted by HIS representatives shall be for the sole benefit of the IHS and the OWNER and shall not relieve the CONTRACTOR of any contract requirements.

SECTION 00500
PROJECT SPECIFIC CONDITIONS

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PART 1 DESCRIPTION OF THE PROJECT:

1.1 Project requires rehabilitation of ~11,750 feet of 8-inch sanitary sewer pipeline using both pipe bursting and trenched techniques. Reconnection of approximately 77 user services will be required. Rehabilitation of select manhole structures will be required. Project will require bypass sewage pumping, site stabilization, and all associated work to deliver a complete functional sewer system.

PART 2 PREVAILING CONDITIONS

2.1 If any conflict exists between the General Conditions and any portion of these Specifications or Plans, the latter will prevail.

PART 3 BIDDER'S FINANCIAL CONDITIONS AND PREVIOUS EXPERIENCE

3.1 The Owner may require any BIDDER to submit the following data prior to approval of any Construction Contract:

3.1.1 Permanent address of place of business.

3.1.2 A list of equipment which the BIDDER proposes to use on the project along with a statement of condition for each piece of equipment.

3.1.3 A financial statement, listing assets and liabilities, dated not more than sixty (60) days prior to Bid Opening date.

3.1.4 A list of similar projects which the BIDDER has constructed.

3.1.5 A list of proposed Subcontractors.

PART 4 RIGHTS-OF-WAY

4.1 Rights-of-way lines, easement boundaries, roads, lanes and property lines are as designated on the drawings. The Contractor shall confine his construction activities to within these boundaries unless special permission is granted by private property owners or public agencies to the Contractor for special purposes such as borrow or construction storage yard. Ingress and egress routes to the job sites will be over lands approved by the Engineer and property owner or public agency involved.

PART 5 LINES AND GRADES

5.1 All work done under this CONTRACT shall be done to the lines, grades and elevations shown on the Plans. The construction stakes establishing lines, slopes, grades, cuts and fills for all construction work shall be established and set by the Engineer. All such staking shall be requested with a 48 hour written notice delivered to the offices of the Engineer.

5.2 Any additional staking required by the Contractor for other style of grading will be at his own expense. The Contractor shall keep the Engineer informed in advance of the times and places at which he wishes to work in order that lines and grades may be furnished and necessary measurements for record and payments may be made. Any work done without having been properly located and staked by the Engineer may be ordered removed and replaced at the Contractor's expense.

PART 6 INSPECTION

6.1 The Engineer and his representatives shall, at all times, have access to the work during its construction, and shall be furnished with every reasonable facility for ascertaining that the stock and materials used and employed, and the workmanship are in accordance with the requirements and intentions of the Specifications.

6.2 All work done and all materials furnished shall be subject to inspection and approval. If any work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination at the Contractor's expense. Re-examination of questioned work may be ordered by the Engineer and if so ordered, the work must be uncovered by the Contractor. If such work be found in accordance with the Contract Documents, the OWNER shall pay the cost of re-examination and replacement. If such work be found not in accordance with the Contract Documents, the Contractor shall pay such cost unless he shall show that the defect in the work was caused by another Contractor; and in that event, the OWNER shall pay such cost.

6.3 The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill his contract as prescribed and defective work shall be made good and unsuitable materials shall be rejected, notwithstanding that such defective work and materials have been previously overlooked and accepted on estimates for payment. All work shall be tested to the satisfaction of the Engineer before acceptance.

PART 7 PRESERVATION OF MONUMENTS

7.1 The Contractor shall carefully preserve all monuments, bench marks, reference points, and stakes and will be charged by the Engineer with the resulting expense of replacement and shall be responsible for any mistakes or loss of time that may be caused by their unnecessary loss or disturbance. In the case of any permanent monuments or bench marks which must be removed or disturbed in the construction or the work the Contractor shall carefully protect and preserve the same until they can be properly referenced for relocation by the Engineer. The Contractor shall furnish such materials and assistance as are necessary for the proper replacement of monuments or bench marks at his own cost.

PART 8 EXISTING FENCES

8.1 For passing men, equipment and materials to and from the job site the Contractor will use existing fence gates and roads as much as possible keeping gates closed behind each passage. When this is not possible or in the construction right-of-way the Contractor may temporarily remove portions of fence to facilitate construction progress. Temporary gates will be constructed which can be closed nightly or at any time the area is vacated if there is grazing stock on either side or at the desire of the property owner. At the completion of construction all such temporary fence openings shall have been repaired to a quality as good as or better than the adjacent fence or permanent gates constructed. Temporary security fencing shall be provided where shown and removed at completion of the project.

PART 9 UTILITIES

9.1 The expense for all electrical power, gas, sanitary facilities, telephone service and other utilities consumed or utilized by the Contractor shall be borne by the

Contractor. Also, all water used, for wetting and compacting or other shall be supplied by the Owner, at a point determined by the Owner.

PART 10 MAINTAINING HIGHWAY TRAFFIC

10.1 All construction within and along federal, state, county, city and private road and highway right-of-way will be carried out with the least possible interruption to normal traffic flow. All applicable safety provisions shall be adhered to, including barricades, flagmen, night flashing warnings, signs and proper detours. At least one way traffic shall be maintained along county and city streets at all times. Passage along private roadways and across driveways will be open every night and morning; also, during the day except as absolutely necessary to complete a crossing. Crawler type tractors will not be allowed directly on paved road surfaces unless provisions are made to protect the driving surfaces. Damaged areas shall be saw cut out and replaced as necessary. All construction zone traffic control measures shall comply with the current edition of the "Manual of Uniform Traffic Control Devices." The Contractor shall erect temporary barriers in the construction areas. Barriers shall be of adequate design to prevent those not employed in the construction from entering the construction areas and to adequately protect all construction of the project. Locate barriers as required and coordinate location of the barriers with the respective public agencies.

PART 11 STORAGE AND USE OF EXPLOSIVES

11.1 The use and handling of explosives during the course of construction shall not be allowed on this Project unless prior approval obtained by the Engineer. The Contractor shall obtain any required licenses or permission prior to commencing blasting. Only persons skilled in the use of explosives shall be employed in the handling and use of such materials.

PART 12 SAFETY AND SANITARY CONVENIENCES

12.1 Safety

12.1.1 All work performed on this project will be subject to the applicable provisions of the Federal Occupational Safety and Health Act of 1970 or latest revision, and the Colorado Occupational Worker Health and Safety.

12.1.2 Safety and Health Act of 1972, or latest revision whichever may govern. All provisions of the Codes will be in force and conformance may be subject to inspection by Federal and/or State Inspectors at any time. Any discrepancies found will be corrected immediately upon notice. The Contractor is responsible to ensure all safety requirements are met and public safety is maintained. Safety engineering is a specialized field and the Project Engineer will assume, nor accept, any responsibility for project safety, as this is not in his field of expertise. Project will be the sole responsibility of the Contractor or his subcontractors, and they shall ensure all safety requirements are met, and project safety is maintained.

12.1.3 Sanitary Conveniences: The Contractor shall provide and maintain at all times suitable sanitary facilities for use of those employed on this project without committing any public nuisance. All toilet facilities shall be subject to the approval of the Colorado Health Department, through the San Juan Basin Health Unit, and as required by the Southern Ute Indian Tribe.

PART 13 CLEANUP

13.1 The Contractor shall employ diligent cleanup practices during the course of the contract. All job site areas shall be maintained clean for safe working conditions including keeping walkways and driveways open and uncluttered. Combustible material may not be burned on the site. Scrap metal and other non-combustible material must be hauled away from the site to an established dump site. If the Contractor neglects cleanup during construction to a point deemed unsafe or undesirable by the Engineer, the Engineer may, in writing, notify the Contractor that further progress in construction will be halted until the site cleaning once again meets the Engineer's approval. No additional compensation will be due to the Contractor for job shutdown under these conditions.

PART 14 RIGHT TO CHANGE LOCATION AND DRAWINGS

14.1 When additional information regarding the geological formations, or other conditions becomes available as a result of excavation, testing or other exploratory work, the Engineer may find it desirable to change alignment, dimensions or design of one or more of the features of the work to conform to the new disclosed conditions.

14.2 Toward this end the OWNER reserves the right to make any such reasonable changes and the Contractor's plans shall be laid out and his operations shall be conducted so as to accommodate reasonable changes, and the Contractor shall be entitled to no additional compensation therefore.

PART 15 SERVICE INTERRUPTION

15.1 If, during the course of construction, it becomes necessary to interrupt any existing water, sewer, gas, power or other utility service facilities, the following procedure shall be adhered to:

15.2 At least two days prior to any service interruption, the Contractor shall submit a request to the Owner stating the nature of the interruption, the reason and length of service interruption and all other pertinent details. Said request must be approved jointly by the utility company, Owner and the Engineer.

PART 16 MEASUREMENT OF WORK

16.1 The number of units for each bid item shown on the BID are estimated quantities. The actual number of units of each item of work may be more or less than the corresponding estimated quantities on Unit Prices on this account. The actual units constructed for each Bid item shall be considered the basis for payment and all lengths will be measured on the centerline of the work whether straight or curved. The Contractor will be paid the contract price for each unit of work done, or each lump sum item in the Bid Schedule; such price to include the cost of all work described in the specifications.

16.2 The contractor will be required to survey the top surface of the bedrock material as encountered during excavation of unclassified materials. The frequency of the data shall be obtained at a 25-foot grid interval. This survey data will be submitted to the client and project engineer for the purpose of quantifying the “Rock Excavation” volume pay item. Measurement of the stockpile material will not be considered sufficient for quantifying “Rock Excavation”

PART 17 EXISTING UNDERGROUND UTILITIES

17.1 The Contractor shall make all arrangements to locate or otherwise ascertain the location of underground utilities. Contractor shall be responsible for any damage to same.

PART 18 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

18.1 CONTRACTOR must agree to commence work on or before a date to be specified in the written Notice to Proceed and to fully complete the project within the following consecutive calendar days thereafter:

ONE HUNDRED TWENTY (120) DAYS

18.2 CONTRACTOR also agrees to pay as liquidated damages the sum of: **Zero dollars ($0.00)** for each consecutive calendar day thereafter as provided.

PART 19 CONSTRUCTION SCHEDULE

19.1 The Contractor shall submit a Construction Schedule which shall be subject to Owner acceptance. This schedule may be in bar chart format. The Project Construction Schedule shall be submitted to the Owner no later than 15 days after execution of the Agreement. The schedule shall provide a detailed job-plan which graphically portrays the time relationships and constraints throughout the entire construction project. Included with the schedule of construction progress shall be identification of "critical" activities, all date targets and milestones critical to actual project completion. The detailed job-plan shall also include material procurement, fabrication, delivery, installation and completion schedule, subcontractor schedules on the job site and items to be provided by the Owner (if any).

PART 20 CLAIMS FOR EXTENSION OF TIME

20.1 Any claim for extension of time shall be made in writing to the Owner not more than seven (7) days after the event which leads to commencement of the delay. In the event of a continuing delay only one claim is necessary. The Contractor shall provide an estimate of the probable effect of such delays on the progress of the Work.

PART 21 STORAGE AREA

21.1. The CONTRACTOR will have a storage area provided at the property, if necessary. Exact location will need to be coordinated with the SUIT Utilities Division. The area is fenced and access through the existing gates will need to be coordinated with the Utilities Division personnel. The Contractor may contact other property owners for storage areas and as stated, The Contractor is responsible for any additional fencing, securing and providing temporary power to this site, along with sanitation facilities. Access shall be maintained to the area for the OWNER during working hours.

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Dear Contractor:

The purpose of this Policy and Procedure is to establish minimum expectations of contractors performing work for the Southern Ute Indian Tribe Growth Fund regarding the environment as well as the safety and health of Growth Fund and contractor personnel.

This document is intended to provide all contractors, including subcontractors and contractor's employees, with the essential Environmental, Health, and Safety (EHS) guidelines required to successfully complete tasks while working on Company job sites. This document highlights some of the key regulatory requirements, as well as noting where the Southern Ute Indian Tribe Growth Fund and its Enterprises (Company) have requirements that are above and beyond the regulatory requirements. **It is not intended to replace or limit EHS requirements imposed by federal, state, or local regulations or to preempt standard industry practice.**

The Company constantly strives to maintain a safe and healthy workplace for employees and contractors. Additionally, the Company is cognizant that our operations may impact the environment and our goal is to minimize any adverse environmental effects. To meet these goals, we need assistance from our contractors. The contractor and their employees shall report any unsafe work condition or environmental condition which has or could have an adverse impact. The contractors' employees have the right to refuse to work if an unsafe condition is not corrected.

EHS practices and procedures evolve from experience gained over many years. While these guidelines are helpful in preventing accidents, good judgment, and common sense also play an important role in accident prevention. It is the contractor and its employees' responsibility to work safely and to insist that others working with them do the same. Before undertaking a task take a moment to think about safety and the consequences of your actions.

Thank you for your commitment to our cooperative Contractor EHS Management Program. Your continued safety is our primary goal!

Sincerely,

Southern Ute Indian Tribe Growth Fund

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1. INTRODUCTION AND GENERAL REQUIREMENTS

The Southern Ute Indian Tribe Growth Fund and the Utilities Group (the Company) is fully dedicated to safety and environmental compliance in all operations. In many of our operations, contractors are an integral part of our workforce. The Utilities Group is committed to maintain a safe and healthful workplace for our employees, as well as, our contractors.

As part of our Contractor Safety Management Program, we have established this standard operating procedure, which outlines and defines our minimum requirements and expectations while working at our facilities.

Contractors are required to comply with all applicable Federal, State and local environmental, health and safety regulations including all Company site-specific and/or enterprise policies and procedures applicable to the scope of work being conducted. All contractors shall have, and adhere to, their own Environmental, Health and Safety Plan. The Growth Fund Contractor EHS Expectations SOP establishes EHS standards for contractors working at Company facilities.

It is essential that these rules and safety responsibilities are acknowledged and understood before starting work on Company property and/or projects. Violating safety requirements could jeopardize the welfare of the contractor and/or Company employees and could result in expulsion from Company property and/or project and deny the contractor the opportunity to be considered for future Company projects.

The Company requires that it's contractors:

- Maintain communication with the Company Representative throughout the duration of the project
- Provide supervision to their employees.
- Commit to worker health and safety and to environmental protection
- Maintain an effective EHS compliance program
- Employ only trained and qualified individuals at the project site
- Ensure all workers are at least 18 years of age.

- Provide employees with appropriate equipment and training to protect workers and eliminate adverse environmental impacts
- Work in a legal and ethical manner to protect the environment and the health and safety of their work force at the project site
- Cease operations immediately if a health, safety, or environmental hazard exists at the project site
- Review each project to identify activities that may create safety hazards or adverse impacts to the environment or the public
- Hold jobsite safety meetings with all affected employees
- Perform EHS site audits to identify and correct substandard EHS conditions and work practices.
- Prohibit illegal drugs, alcohol, and firearms.

Contractor's employees must notify their supervisor of any unsafe conditions observed at the jobsite or work conditions having an adverse impact on the environment or the public. Contractor's employees have the right to refuse to work if an unsafe condition is not eliminated.

Contractors are advised that the Company retains the right to question contractor's employees about the content of this manual, and to stop work if contractor's employees are observed operating with disregard to EHS requirements.

If these standards are not clearly understood, or if safety problems arise which are not covered by these standards, contact the Company EHS Representative before proceeding. The Company EHS Representative and relevant contact information shall be identified at the pre-job meeting.

Additional information on the Contractor Safety Management Program may be accessed online at http:www.sugf.com/EhsCompliance/Default.aspx. Information includes policies, procedures, and forms.

2. DEFINITIONS

Company – the Southern Ute Indian Tribe Growth Fund and its Enterprises.

Company property, jobsite, job, worksite, or construction site – any real property on which contractor will be working under the Contract Documents, whether owned by Company or not, including but not limited to, facilities, stations, roads, parking lots, pipeline right-of-ways, common areas, compressor/pump station, or offices.

Company Representative – One who has been assigned by the Southern Ute Indian Tribe Growth Fund or its enterprises to represent the Company with respect to all work defined in the contract.

Competent Person – One who can identify existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. A Competent Person is also as specifically defined in OSHA regulations such as for Scaffolding and Excavation.

Confined Space- A confined space is defined as:

A space large enough for an employee to enter fully and perform assigned work, that; (1) is not designed for continuous occupancy; and (2) has limited or restricted means of entry or exit.

These spaces may include underground vaults, diked areas, and other similar areas.

Contractor – A company and its employees who perform work for the Southern Ute Indian Tribe Growth Fund. With respect to this policy, references to "Contractor" shall also include sub-contractors and third-party contractors, third party inspectors, consultants (e.g. customer contract personnel, and other contract personnel that may influence facility safety). Contractor does not include persons making deliveries to facilities or establishments that are exempt from OSHA 300 log recordkeeping.

Environmental, Health, & Safety (EHS) – items pertaining to environmental, health, and / or safety.

Incident – An event resulting in first aid or greater level of care to Company or contractor personnel, fire, property damage, spill or release to the environment.

Permit-Required Confined Space- (1) contains or has the potential to contain a hazardous atmosphere; (2) contains a material with the potential to engulf someone who enters the space; (3) has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section; and/or (4) contains any other recognized serious safety or health hazards.

Qualified Person – An employee designated by the contractor as experienced in the types of work to be performed and having the desired expertise for carrying out statutory and contractual obligations.

Work – collectively, all services and all acts, obligations, duties and responsibilities necessary to the successful completion of the project assigned to or undertaken by contractor under the Contract Documents, including the furnishing of all labor, services, materials, equipment and other incidentals.

3. PRE-JOB REQUIREMENTS

All contractors are required to participate in the Company's Contractor Safety Qualification Program. Contractors may be required to complete the Enterprise Contractor prequalification process. Only contractors who meet this criterion will be approved to work at Company locations.

Contractors required to complete the Enterprise Contractor prequalification process must provide the following information to their Enterprise Representative:

- OSHA 300 Logs
  - Total Recordable Injury Tate (TRIR)
  - Lost Workday Case Rate (LWCR)
  - Days Away/Restricted or Job Transfer (DART)
  - Number of Fatalities
- Experience Modification Rate;
- Certificate of Insurance;
- Safety and Environmental Manual;
- DOT Operator Qualification Program, if applicable;
- CDL/DOT Drug and Alcohol Program, if applicable; and
- Tribal Employment Rights Ordinance, where applicable.

A completed Master Service Agreement will also be required before commencement of work.

NOTE: All competitive bids for work to be performed within the exterior boundaries of the Southern Ute Indian Reservation or within commutable distance from those boundaries should include the following language to be TERO compliant:

Preference in Contracting & Subcontracting – Native American Owned Businesses

The Southern Ute Indian Tribe ("Tribe") Tribal Employment Rights Ordinance ("TERO") Code has established a preference for contracting and subcontracting to certified Indian Owned businesses. A bid preference of 5% will be given to any Native American Owned company. To receive this preference, Native American owned businesses must be certified by the Tribe's TERO. Any Native American owned business not certified by the bid due date will not be given Indian preference. For information about certification, contact the TERO office at 970-563-0117. Indian employment preference is required for all employers on this project in accordance with the Tribe's TERO code. The Tribe reserves the right to reject all bids, to waive any informality in bids and to accept the bid deemed, in the opinion of the Tribe, to be in the best interest of the Tribe.

It is the Company's expectation that the contractor maintains an acceptable rating, as outlined in the Contractor EHS Management Program, prior to commencing work and during the duration of the project. If the contractor fails to meet any applicable requirements outlined above during the project the contractor shall be required to submit an Action Plan outlining the contractor's plan for correcting any deficiencies

and timelines for completion. This Action Plan shall be submitted to the Company Representative for review and approval. If the contractor fails to meet the approved Action Plan and timelines the Company shall have the right to remove the contractor from the project.

The General/Prime contractor shall evaluate all subcontractors prior to being hired to ensure they meet Company requirements. While evaluating subcontractors, the following criteria should be considered and incorporated:

- Pre-qualify the subcontractors by reviewing their safety programs, safety training documents, and safety statistics;
- Utilize subcontractors with acceptable safety metrics;
- Include all subcontractors in pre-job meetings and safety orientations; and
- Include all subcontractors in tailgate meetings, job hazard assessments, on site safety inspections.

The Company shall evaluate the safety performance of the contractor as the job progresses. At a minimum this shall include periodic job site reviews.

The Company reserves the right to request copies of all applicable procedures, plans and documentation specific to training, inspections, permitting and accident/injury reporting.

3.1 Job Safety Orientation

After the project is awarded, the contractors' employees shall participate in the Contractor Employee Safety Orientation consisting of the following elements:

- Pre-job meeting covering the Contractor EHS Expectations, site specific procedures, and existing operating conditions.
- Review of emergency procedures, restricted areas, security, hazards, evacuation routes, assembly areas, emergency systems (e.g. eye wash stations and safety showers), and access and parking requirements.

The Company facility may require contractor's employees to sign in/out each time they enter and leave the job site.

Visitors shall not be granted entry to Company facilities or sites without an escort or prior permission from Company personnel.

4. GENERAL EXPECTATIONS

The Southern Ute Indian Tribe Growth Fund expects that contractual work will be performed in a professional manner. The contractor assumes full responsibility for the quality, quantity, and compliance of work performed by its agents, employees, and subcontractors. The Southern Ute Indian Tribe Growth Fund reserves the right to evaluate each contractor and will respond appropriately to substandard work performances.

The Southern Ute Indian Tribe Growth Fund is fully committed to EHS compliance in all its operations and oftentimes exceeds regulatory performance requirements in implementing best management practices. It is the expectation, that all contractors abide by this commitment and follow the Southern Ute Indian Tribe Growth Fund's Safety and Environmental Policies in conducting all work-related activities.

5. RESPONSIBILITIES

Southern Ute Indian Tribe Growth Fund Responsibilities

The Company shall:

A. Upon request, provide contractors with copies of the Southern Ute Indian Tribe Growth Fund Environmental, Safety, & Health Policies.

B. Upon request, or when directly impacted by specific chemicals within the scope of work contracted, provide contractors with right to know information for chemicals (e.g. Safety Data Sheets (SDS)) used at Southern Ute Indian Tribe Growth Fund Company facilities.
C. Exercise the right to immediately terminate the access of contractors or contractor personnel to the worksite for non-compliance with EHS related laws, regulations, policies or procedures, as well as, inappropriate behavior (i.e., horseplay, discrimination, harassment).
D. Reserve the right to revise requirements on any project to ensure work completion consistent with EHS principles.

Contractor Responsibilities

The Contractor shall:

A. Ensure that their employees are trained on the applicable EHS topics contained herein and in accordance with all applicable laws and regulations. Provide written documentation of employee safety training prior to performing work at Company facilities or sites.
B. Obtain approval from the Company Representative prior to commencing work.
C. Stop the job if they feel it is unsafe to personnel, or damage to the equipment and/or environment could result.
D. Report any EHS-related incidents to the Company Representative.
E. Inform Company site management of hazards to contractor and Company employees related to work to be performed, or changes in working conditions that affect the potential for hazards to exist.
F. Inform Company Representative of any personnel changes or new employees arriving on site.
G. Inform contractor's employees of relevant information communicated by Company Representative(s), including site hazard changes.
H. Properly assess hazards of all work to be performed on site for the project. This may be done by completing a Job Hazard Assessment form.
I. Restrict contractor's employees and vehicles to Company designated gates, access roads, parking areas, work sites, and authorized service facilities.
J. Ensure that workers not fluent in English understand all Company procedures, verbal instructions, and emergency systems and alarms. When personnel are not fluent in English, an interpreter must be present at all times.
K. Ensure that all contractor's employees have been safely transported to and from job sites, if applicable.
L. A supervisor shall be onsite at all times during working hours.
M. If a Media Representative approaches a contractor, immediately contact the Company Representative for further instructions. Do not provide information about the job or the Company.
N. If a regulator or landowner approaches a contractor, politely refer them to the Company Representative. Interaction between the contractor and the landowner/regulator should be kept to a minimum.
O. Contact the Company Representative at least daily to discuss the status of work, any EHS issues and exact locations for work being done.

6. SPECIFIC EXPECTATIONS

6.1 Environmental

6.1.1 Cultural Resource Protection

A. All land altering activities shall be confined to the area surveyed and cleared for any evidence of cultural resources. The Archeological Resources Protection Act (16 U.S.C. 470ee) prohibits the excavation, removal, damage, alteration, or defacement, or attempt to excavate, remove, damage, alter, or deface any archeological resources located on Federal or Indian lands without a valid permit pursuant to 43 CFR 7.5(a). Both criminal and civil penalties may be assessed (16 U.S.C. 470ee and 470 ff).
B. The contractor and all subcontractors must be familiar with, and confine all activities within, designated project boundaries.
C. Contractors and subcontractors performing work within the exterior boundaries of the Southern Ute Indian Reservation must adhere to the Southern Ute Indian Tribe policy to not disturb or damage any archeological sites.
D. If subsurface cultural resources are encountered, all land altering activities shall cease within 50 feet of the discovery and the Company Representative shall be notified immediately.
E. The contractor and all persons associated with the project will be subject to criminal prosecution for knowingly disturbing Native American Indian shrines, historic and prehistoric archeology sites, or for collecting artifacts of any kind, including historic items, and/or arrowheads and pottery fragments from lands on the Southern Ute Indian Reservation.

6.1.2 Environmental Noise

Contractor shall comply with all local noise control and noise level regulations or laws that apply to the work. Internal combustion engines used for the work must be equipped with a muffler as recommended by the manufacturer, or better.

6.1.3 Fugitive Dust

Fugitive dust must be controlled, as required or practicable, by periodic watering in all construction areas.

6.1.4 Housekeeping

Contractor shall keep the site in a neat and presentable condition. The contractor shall dispose of surplus materials, clean out all drainage ditches and structures, and repair any property damaged during the work.

6.1.5 Maintenance of Existing Structures

All fences, gates, culverts, cattle guards and access roads existing prior to construction shall be repaired and rebuilt to the original standard of construction within a reasonable time following completion of construction activities, unless otherwise specified by the contracted scope of work. In general, existing roads shall be maintained in a manner that will allow continued access, as appropriate, throughout the life of the project by local traffic.

6.1.6 Open Burning

Open burning (e.g. burning of leaves, wood, and trash) is prohibited. This includes both burning on the ground or in burn barrels.

6.1.7 Pesticides & Herbicides

A. The use of pesticides and herbicides is prohibited unless approved by the Company Representative.
B. If pesticide or herbicide use is desired, provide information regarding the desired application to the Company including the type of pesticide, location(s) to be applied, concentration, and date(s) of application. The contractor shall provide a copy of their applicator license to the Company(s) for which they are providing services.

6.1.8 Spill Prevention & Response

A. Contractor is responsible for all notifications to local, state, Tribal and federal regulatory agencies in the event of a spill, unless directed otherwise by the Company Representative.

B. The contractor must notify the Company Representative of all spills of oils, petroleum products, chemicals, hazardous substances, hazardous materials, and hazardous wastes, no matter the quantity. Spills that are reportable to regulatory agencies must be reported to the Company within one hour of the spill taking place. More information may be obtained in the Growth Fund Spill Response Standard Operating Procedure.

C. The contractor shall prevent oil or hazardous substances from entering the ground, drainage areas, or Waters of the US.

D. The contractor shall determine if fuel is stored in amounts (>1,320 gallons cumulative) triggering the need for a Spill Prevention, Control and Countermeasures (SPCC) Plan. A copy of the SPCC Plan should be provided to the Company Representative. The contractor should check with the Company Representative to determine any additional requirements.

E. Fuel storage tanks, drums, and buckets shall be stored in secondary containment structures or drum caddies, even if SPCC is not required. The secondary containment structure shall be of sufficient size and strength to contain the contents of the tanks, plus 20% freeboard for precipitation. The Company Representative should be notified if any above ground storage tank or drum with a capacity of 55 gallons or more will be placed on-site.

F. Fuel storage tanks shall be registered with the appropriate government agency (if required). Copies of the tank registration should be provided to the Company Representative.

G. Re-fueling operations shall not take place within 50 feet (or other specified distance) from surface water, drainages, or dry arroyos.

H. All oil and filters from equipment maintenance shall be removed from the location immediately unless special oil storage/disposal containers are in use.

I. Appropriate and adequate spill response materials shall be kept on site and workers should be aware of their location and trained in their use.

6.1.9 Waste Management

A. All applicable Federal regulations regarding hazardous materials shall be followed. Such Federal regulations include: Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Oil Pollution Prevention Act.

B. Safety Data Sheets (SDS) for all hazardous materials including chemicals, paints, and petroleum products utilized in the work activities shall be readily accessible. Approval from the Company for all hazardous materials to be used is required prior to bringing such materials onto the work site.

C. Once the project is completed, all unused chemicals and wastes must be removed from the site and properly disposed of at an approved off-site disposal facility. Areas are to be left clean. Waste disposal off-site must comply with the most stringent local, State, Tribal and Federal requirements.

D. Provide documentation of proper disposal of all wastes, with the exception for solid waste (i.e., garbage and trash), within 45 days to the Company Representative.

E. Asbestos-containing materials, lead, and polychlorinated biphenyls (PCBs) are prohibited from use. If any of these materials are believed to have been encountered during the work, the contractor must immediately notify the Company Representative.

F. Pick up solid wastes and place in covered containers which are regularly emptied. Provide sufficient solid waste containers to handle the solid waste generated. Containers must be kept covered to prevent stormwater from entering the container.

G. Prevent contamination of the site or other areas when handling and disposing of wastes.

H. The Contractor will identify all construction activities which will generate hazardous waste/debris. The contractor must provide a documented waste determination for all resultant hazardous waste streams. Hazardous waste/debris will be identified, labeled, handled, stored, and disposed of in accordance with all Federal, State, and local regulations.

I. A plan must be in place for storage and disposal of wastes generated on-site. A formal written plan is not necessary, but the contractor must ensure that all types of wastes are considered and know how each will be stored and disposed.

J. All non-hazardous solid wastes (i.e., trash, junk, debris, etc.) shall be confined on the project site in an approved container.

K. Trash will not be burned.

L. Portable toilets supplied by the contractor for sanitary wastes, in a number sufficient to service the contractor's personnel on site, shall be present at the project site location during construction. Portable toilets shall be anchored to prevent tipping or falling over.

M. Concrete Waste

   i. Concrete waste will be placed in a temporary concrete washout facility located at least 50 feet (or other specified distance) from drainage ways and inlets;

   ii. The washout facility will have proper signage such as "Concrete Washout;" and

   iii. The location of the concrete washout facility will be determined in consultation with the Company Representative.

6.1.10 Water Quality and Stormwater Management

A. The contractor will comply with the Clean Water Act and any other applicable state or Tribal water quality control regulations, recommendations, and/or permits.

B. The contractor will minimize surface disturbance to the maximum extent practicable within the area of permitted construction.

C. If the project requires a construction stormwater permit or complying with recommendations, the contractor will:

   i. conduct activities in compliance with the requirements of the permit and plan,

   ii. be familiar with the contents of the Stormwater Pollution Prevention Plan (SW3P),

   iii. ensure that employees and/or subcontractors are familiar with the intent of the SW3P, and

   iv. conduct the required maintenance or corrective action identified in the stormwater inspection reports within the time frame specified per the permit or as soon as practicable.

D. If the project does not require a construction stormwater permit, the contractor, in consultation with the Company Representative, will:

   i. implement best management practices for erosion and sediment control and stormwater management,

   ii. implement good housekeeping best management practices,

   iii. implement best management practices for material handling and storage, and

   iv. reclaim disturbed areas, as soon as practical.

E. There will be no discharge of fill or dredged materials to Waters of the U.S. including streams, open water, wetlands, arroyos and irrigation ditches as a result of a contractor's activities, unless such a discharge has been authorized by a Section 404 permit and/or a Section 401 water quality certification. A copy of the Section 404 permit and/or a Section 401 water quality certification will be provided to the contractor upon request.

F. If a Section 404 permit and/or a Section 401 water quality certification has been issued for the project, the contractor shall be familiar with and abide by the requirements of the permit and/or certification.

G. Dewatering Operations
   i. Water from such operations shall not be discharged directly into any waters of the U.S. including wetlands, arroyos, irrigation ditches, or storm sewers unless allowed by a permit; and
   ii. Sediment control measures will be implemented to treat sediment laden water from construction sites.

6.1.11 Weather Considerations

Upon consultation with the Company Representative, a determination may be made that construction activities are halted during wet weather conditions to prevent damage to soils, road beds, and/or other resources.

6.1.12 Wildlife Considerations

For projects requiring a Threatened and Endangered Species (T&E) survey, all ground disturbing activities will be restricted to the area(s) surveyed. The project boundaries must be clearly delineated prior to construction.

6.2 Safety & Health

6.2.1 General

A. Contractors shall inspect their equipment regularly and maintain it in safe working condition.
B. No smoking is allowed within 50 feet of any operational pipeline or process equipment or in other areas designated as non-smoking such as offices, processing plants, etc.
C. Horseplay is prohibited.
D. Firearms, ammunition, and other weapons are prohibited.
E. Contractor's employees are required to attend pre-job briefings. The purpose of these meetings is to ensure that both company and contractor's employees understand hazards, safeguards, and specific procedures for the work to be performed. These meetings will also include a review of Emergency Action Plans.

6.2.2 Abrasive Blasting/High Pressure Blasting

A. The contractor shall minimize, and control dust created from blasting. Operating equipment such as motors, pumps, fans, valves, etc. must be protected at all times during blasting operations.
B. Do not use compressed air to clean area; this will create dust in the air.
C. Clean and decontaminate tarps and other equipment on the worksite.
D. Schedule blasting when the least number of workers are at the site.
E. Avoid blasting in windy conditions to prevent the spread of any hazardous materials.
F. Provide training to abrasive blasters and support personnel on blasting health and safety hazards, how to use controls, personal hygiene practices, safe work practices, and the use of PPE and respirators.
   a. A helmet supplied with forced air from a blower and gloves should be worn by the operator when blasting to prevent injury to eyes, face, and hands.
G. The SDS for the blasting material must be on-hand before conducting abrasive blasting work.
   a. Abrasives containing one percent or greater crystalline silica or other blasting materials that are likely to generate a hazardous waste are discouraged and must be approved by the Company on a case-by-case basis.
H. The contractor will be responsible for cleanup.
I. Abrasive blasting of lead-based paint requires special precautions (see Appendix B).

6.2.3 Asbestos

The potential for Asbestos-Containing Material (ACM) may exist while performing work onsite at locations. The Company will identify areas known to contain ACM, however if the contractor suspects ACM is present at a location which has not been previously identified, the contractor will stop work in that area and notify the Company Representative immediately.

A. The contractor shall contact the Company Representative prior to asbestos abatement.
B. The contractor shall provide a written ACM Management Plan, addressing minimum OSHA requirements; EPA requirements; federal and state requirements.
C. Contractor supervisors and workers shall have received training from approved EPA and state-accredited training programs.
D. Prior to beginning any abatement work, the contractor shall provide all necessary permits granted by state and federal agencies for completion of the work to the Company Representative for review.

6.2.4 Barricades

A. When it is necessary to either warn or protect people from falling into holes, openings, excavations, elevated platforms, or when work is being performed overhead; a competent person shall select and erect the appropriate barricades.

B. Barricade selection shall be appropriate for the hazard and shall comply with sound construction practices, as well as, all regulatory compliance guidelines. Barricades may include ribbon tape, flags, fences, cones, hurdles, stop logs, etc.

6.2.5 Bloodborne Pathogens

A. The contractor shall have a bloodborne pathogen plan in place which reduces or eliminates the hazards of occupational exposure to bloodborne pathogens. These pathogens include, but are not limited to, hepatitis B, hepatitis C, and human immunodeficiency virus.

6.2.6 Chains, Slings, and Cables

A. All defective equipment shall be tagged out of service and removed from work area immediately. This includes, but is not limited to, chains, slings; cables; rope; webbing; shackles; and hooks.
B. Equipment used for material handling shall be inspected prior to each use and as necessary during its use to ensure that it is safe. A competent person shall inspect for damage or defects.
C. All chains, slings, and cables shall have an identification tag attached showing its load rating and limitations.

6.2.7 Chemical Storage

A. Approved safety cans shall be used for storage of flammable liquids. Container shall not have more than 5-gallon capacity and shall have a spring-closing lid; spout cover; and designed to relieve internal pressure when subjected to fire.
B. Fire resistance storage cabinets shall be utilized to store flammable chemicals where required.

6.2.8 Confined Space

A. The contractor who performs work in confined spaces is required to have a written Confined Space Program that encompasses all general requirements, permit system, entry permit, training, duties of authorized entrants, duties of attendants, duties of entry supervisors, as well as, rescue and emergency services.
B. Contractors entering a Permit Required Confined Space shall:
    a. Have training certification for each employee conducting Permit Required Confined Space entry.

b. Provide and maintain monitors for combustible gas, oxygen deficiency, and toxic gas if the work requires entry into confined spaces.

c. Have a trained dedicated Attendant, which performs no duties that might interfere with primary duty to monitor and protect the authorized entrants.

6.2.9 Crane Safety

A. Cranes shall only be operated by trained and designated personnel. Depending on the work location, operators may be required to be licensed.

B. Rigging Equipment

i. Contractors are responsible for the proper care and use of all lifting-related equipment. This equipment shall be used only for its intended purpose. Intentional abuse (e.g., cheater placed on leverage handle to increase lifting capacity) shall not be allowed.

ii. Lifting equipment, devices, and/or accessories shall be visually inspected before use.

iii. Structural members of a building shall not be used to support a lift unless the lift and its rigging approach have been approved by the Southern Ute Indian Tribe Growth Fund Company.

iv. Lifting capacities of hoisting equipment must be labeled on the lifting equipment and shall not be exceeded.

v. Rigging from scaffolds, handrails, or braces is prohibited.

C. Rated load capacities, and recommended operating speeds, special hazard warnings, or instruction shall be conspicuously posted on all equipment. Instruction or warnings shall be visible to the operator while he is at his control station.

D. Hand signals to crane and derrick operators shall be those prescribed by ANSI for the type of crane in use. An illustration of the signals shall be posted at the job site (see Appendix C).

E. Personnel shall stand clear of the swing radius of the counterweights.

F. The contractor shall designate a competent person who shall inspect all machinery and equipment prior to each use, during each use, to make sure it is in safe operating condition. Any deficiencies shall be repaired, or defective parts replaced, before continued use. Crane inspection records shall be maintained on site or at field office location.

G. The contractor shall maintain annual inspection records for each hosting machine and piece of equipment.

H. Wire ropes shall be taken out of service if defects exist.

I. All contractor's employees shall be kept clear of loads about to be lifted and of suspended loads.

J. Tagline(s) and/or push poles shall be used on all lifts as appropriate.

K. Equipment shall not be assembled or used unless ground conditions are firm, drained, and graded sufficiently. The requirement for the ground to be drained does not apply to marshes/wetlands.

L. When assembling or disassembling equipment (or attachments), comply with all applicable procedures and all manufacturer prohibitions.

M. Assembly and disassembly must be directed by a person who meets the criteria for both a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons.

N. Power line safety (up to 350 kilovolts (kV)). Before assembling or disassembling equipment, the contractor must determine if any part of the equipment, load line, or load (including rigging and lifting accessories) could get, in the direction or area of assembly/disassembly, closer than 20 feet to a power line during the assembly/disassembly process. If so, the contractor must meet the requirements of Option 1, Option 2, or Option 3:

Option 1: Deenergize and ground. Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the work site.

Option 2: Twenty-foot clearance. Ensure that no part of the equipment, load line, or load gets closer than 20 feet to the power line.

Option 3: Table A clearance. Determine the line's voltage and the minimum clearance distance.

O. Power line safety (up to 350 kV). Determine if any part of the equipment, load line, or load, if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet to a power line. If so, the contractor must meet the requirements of Option 1, Option 2, or Option 3:

Option 1: Deenergize and ground. Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the work site.

Option 2: Twenty-foot clearance. Ensure that no part of the equipment, load line, or load gets closer than 20 feet to the power line.

Option 3: Table A clearance. Determine the line's voltage and the minimum clearance distance.

Table A- Minimum Clearance Distances

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet)
Up to 50	10
Over 50 to 200	15
Over 200 to 350	20
Over 350 to 500	25
Over 500 to 750	35
Over 750 to 1,000	45
Over 1,000	As established by the Utility or registered professional engineer.
NOTE: The value that follows "to" is up to and includes that value.	

P. Power line safety (over 350 kV). For power lines 350 kV to 1000 kV, the distance of 50 feet shall be used. For power lines above 1000 kV, the minimum clearance distance shall be established by the Utility or registered professional engineer.

Q. Lift Plans and Critical Lift Plans may be required. A lift is considered critical if it meets one or more of the following:

i. A lift that requires the use of two or more cranes;

ii. The load exceeds 75% of the crane's rated capacity within the lift configuration of the crane;

iii. The lift is over operating systems or occupied structure (electrical equipment, pipelines, etc.); and/or

iv. Hoisting of contractor's employees on a suspended work-platform or man basket.

6.2.10 Drug-Free Workplace

A. The use or possession of alcohol or the manufacture, distribution, sale, purchase, possession, transfer or use of illegal drugs on Company property or work sites is prohibited.

B. Contractors are required to maintain Drug-Free Workplace policy and procedures including, at a minimum, pre-employment drug screening and testing after an accident or due to reasonable suspicion. Additionally, a drug and alcohol program is required for commercial drivers and

pipeline operators under Federal Motor Carrier Safety Administration or Pipeline and Hazardous Material Safety Administration. Contractor shall be aware of employees taking legal prescription drugs that may affect their fitness for duty such that they could cause injury to themselves or others.

C. All vehicles and personal belongings that are on Company premises are subject to search by the Company at any time, including, but not limited to, searches for illegal drugs, alcohol, contraband, missing property, or prohibited items.

6.2.11 Electrical Safety

A. The contractor and its employees shall not work in such proximity to any part of an electrical power circuit that the employee could contact the electric power circuit during work, unless the employee is protected against electric shock by de-energizing the circuit and grounding it or by guarding it effectively by insulation or other means.

B. Only qualified and authorized contractors shall conduct work on electrical equipment.

C. Precautions must be taken to protection personnel from arc flash including personal protective equipment and established appropriate barricades when working on equipment. See NFPA 70 E for additional information.

D. Equipment must be appropriately grounded and bonded to provide protection from the hazards of static electricity. See NFPA 77 for additional information.

E. Use ground-fault circuit interrupters (GFCI) on all 120-volt, single-phase, 15- and 20-ampere receptacles is required; alternatively, the contractor may have an assured equipment grounding conductor program (AEGCP).

F. Visually inspect all electrical equipment before use. Remove from service any equipment with frayed cords, missing ground prongs, cracked tool casings, etc. Apply a warning tag to any defective tool and do not use it until the problem has been corrected.

G. Ground all power supply systems, electrical circuits, and electrical equipment.

H. Do not remove ground prongs from cord-and plug-connected equipment or extension cords.

I. Post signage to indicate overhead power lines and/or buried power lines.

J. Contact the utility provider for buried power line locations.

K. Stay at least 10 feet away from overhead power lines.

L. Assume that all overhead lines are energized, until cleared by the utility provider.

M. Use non-conductive wood or fiberglass ladders when working near power lines.

6.2.12 Emergency Procedures

A. The Company shall provide the contractor's employees with the facility Emergency and Evacuation information. The contractor is responsible for reading and complying with the information.

B. The Company may require the contractor to develop a project specific Emergency Evacuation Plan.

C. In the event of an emergency:

i. Turn off equipment, if safe to do so;

ii. Immediately stop work;

iii. Evacuate to a designated assembly location;

iv. Account for all employees; and

v. Remain at assembly location until further directed by the Company.

6.2.13 Excavation, Trenching and Shoring

A. The contractor is required to comply with federal, state, municipal, and Southern Ute Indian Tribe excavation laws and guidelines applicable to the location and the nature of the work prior to excavation. The contractor shall ensure that buried lines have been located prior to commencing excavation.
   i. A One-Call is a mandatory requirement of the Company.
   ii. The contractor is responsible for coordinating the locating of all utilities onsite. This includes: electric, communications-telephone/cable, potable water, sewer/drainage, gas/petroleum line, and reclaimed water.
   iii. The appropriate One-Call system notification shall be conducted at least two full business days prior to the commencement of work (not including the day of notification)[1]
   iv. The contractor shall ensure that buried lines have been located prior to commencing excavation.
   v. All utility lines shall be marked with flagging and/or spray paint.

B. The contractor's competent person shall conduct daily inspections prior to the commencement of work (entrance into excavation). If the inspection determines the excavation area to be unsafe, workers may not enter until the hazard(s) have been addressed.

C. Spoil piles shall be placed minimum of 2 feet from the edge of the evacuation.

D. A stairway, ladder, or ramp shall be located every 25 feet to provide access/egress in trench excavations that are 4 feet or greater in depth.

E. The contractor must provide protective systems for excavations and trenches when the sides are greater than 5 feet in depth (slope, bench, shore, or shield).

F. Excavations over 20 feet shall be designed by a Professional Engineer.

G. Contractors shall properly barricade excavations and trenches. Use high visibility materials.

Table B- Excavation and Trenching Trigger Numbers

Feet	Requirement
2	Required distance for spoil piles from edge of excavation/trench.
3	Length ladder must extend above excavation/trench.
4	Depth at which a ladder or ramp is required for access and egress.
5	Depth at which mandatory shoring, benching, and/or a protection system is required.
6	Depth at which fall protection is required for bridges/walkways across excavations/trenches.
20	Shoring designed by a registered engineer is required.
25	Maximum travel distance to an exit ladder.

6.2.14 Fall Protection

A. Contractors shall implement a Fall Protection Plan when employees are working in an elevated area where the potential for falling exists.
   i. Elevations of 4 feet or greater for General Industry.
   ii. Elevations of 6 feet or greater for Construction Industry unless otherwise specified in the applicable regulations.

B. All employees must be adequately trained prior to using fall arrest equipment.

C. Personal Fall Arrest System includes: a full body harness, a connecting device (e.g. shock-absorbing lanyard or self-retracting lifeline), and an anchor point.

[1] Requirements may vary from state to state.

D. Fall arrest equipment must be inspected by a competent person before each use.
E. A post-fall rescue plan must be in place before fall arrest equipment is used.
F. Construction of a leading edge 6 feet or more above lower levels shall be protected from falling by guardrail system, safety net systems, or personal fall arrest systems.
G. Walking and working surfaces shall be protected from workers falling, stepping, or tripping into holes and openings (including skylights) by covers or guarding.
H. Contractors shall protect workers from falls while on low-slope roofs and steep roofs.
I. To protect against falling objects, toe boards, screens or guardrail systems shall be used.

6.2.15 Fire Protection and Prevention

A. Contactors shall comply with any fire restrictions in place by applicable agencies.
B. Flame or spark producing equipment shall not be operated in a restricted area without a Hot Work Permit.
C. Where alarm or Emergency Shut Down (ESD) systems are available, employees shall be made aware of how to initiate an ESD or alarm and what to do if an alarm should occur.
D. Contractors shall have an effective fire-fighting program. The program shall provide that fire-fighting equipment be available immediately and designed to meet all fire hazards that might occur.
E. Combustible and flammable materials must be stored in designated locations and kept away from the exposure to heat, spark or fire producing equipment.
F. Smoking and the use of electronic cigarettes are allowed in designated areas only.

6.2.16 First Aid / Medical

A. A suitable place with adequate first-aid supplies shall be designated at each job site to render medical or first aid assistance.
B. A detailed emergency plan shall be established to transport those who require medical treatment to a doctor and/or hospital. The plan shall be communicated, and where practical be posted.
C. The contractor shall ensure the ready availability of personnel trained in first aid.
D. Depending on exposure, other first-aid appliances may be necessary. Use of corrosives and acids may require emergency showers and eyewash facilities. The use of emergency respiratory equipment, fire blankets, etc., shall be determined by the nature of the work being performed.

6.2.17 Gas Pipe Tie-ins

A. A Company Representative shall oversee all piping Tie-ins.
    i. Plant and Field Tie-ins
        a. The controlled fire method is the preferred procedure used for cutting and welding on gas piping. This method assures that an uncontrolled fire or explosion cannot occur because the atmosphere within the pipe is too rich to burn.
    ii. Plant Tie-ins
        a. Where structures, other piping, conduit, combustible materials, etc., are present and could be endangered by fire, the controlled fire method may not be feasible. In such situations, total evacuation or inerting of the piping may be required (double block and bleed). The Company Representative and contractor shall come to agreement as to how such situations will be handled.
        b. Only those personnel required for the safe completion of the welding or cutting shall be in the work area. Normally this is one helper for each welder. All other personnel, including supervision; shall be kept a safe distance from the work area. A fire watch is required.

c. All equipment, vehicles, and persons shall be kept where the wind will blow away from them (upwind from the activity). This is particularly important where escaping gas is allowed in a controlled or uncontrolled situation.

6.2.18 Hazard Communication / Right-To-Know

A. If contractor's employees will be working around chemicals under the control of the Southern Ute Indian Tribe Growth Fund, contractors shall provide their employees with right to know information and Safety Data Sheets (SDS) for the chemicals. This right-to-know information will be provided to the contractor by the Southern Ute Indian Tribe Growth Fund by request.

B. Prior to commencement of work, contractors and subcontractors shall provide the Company a list of all hazardous chemicals to be used onsite for Company approval.

   i. Contractor shall provide a copy of all approved SDS's to Company prior to the commencement of work.

C. Contractor shall label all hazardous materials to be brought onsite. The labels shall meet the requirements of the OSHA Hazard Communication Standard (2012).

6.2.19 Hazardous Energy Control/Lockout Tagout

A. All lockout and tagout work shall be coordinated with the Company.

B. Only authorized workers may perform lockout and tagout applications.

C. Unapproved removal of lockout/tagout devices is prohibited.

D. Contractors must provide their own lockout/tagout equipment.

E. Lockout and tagout shall address all potential energy sources e.g. pneumatic, hydraulic, electrical etc.

6.2.20 Hearing Conservation

Where sound levels exceed 85 dBA, actions shall be taken to reduce the noise level where practical. When reduction of noise levels to less than 85 dBA is not practical, use of hearing protection devices (e.g. earplugs) is recommend at 85 dBA and required at 90 dBA.

6.2.21 Hot Work

A. When hot work (welding, cutting, use of non-intrinsically safe devices, etc.) is performed in hazardous locations, a Hot Work Permit shall be in place prior to commencement of hot work.

B. The hot work permit shall be issued by the individual(s) designated by the Company.

C. A fire watch shall be in place where required by the Company.

D. Adequate firefighting equipment must be present during hot work.

6.2.22 Hydrogen Sulfide

All contractors working in facilities with potential exposure to H_2S shall be properly trained

6.2.23 Illumination

Construction areas, ramps, runways, corridors, offices, shops, and storage areas shall be lighted to not less than the minimum illumination intensities listed.

Table B: Minimum Illumination Intensities in Foot Candles

Foot-Candles	Area or Operation
5	General construction area lighting.
3	General construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and field maintenance areas.

5	Indoors: warehouses, corridors, hallways, and exit ways.
5	Tunnels, shafts, and general underground work areas.
10	General construction plant and shops.
30	First aid stations, infirmaries, and offices.

6.2.24 Induced Alternating Current of Pipelines

A. When coated pipelines are constructed under or adjacent to high voltage power lines (100,000 volts and higher), AC voltages of a dangerous magnitude can be induced along the pipeline. The contractor shall determine the magnitude of electrical voltage (if any) on the pipeline prior to beginning work.

B. Maximum voltages occur when long strings of a coated pipe are handled above ground beneath high voltage power lines. It may be necessary to temporarily ground the pipe to ensure that induced AC voltages are kept below 30 volts (rms). For lower voltages, a grounding rod every 1,000 feet of pipe should adequately ground the line. Periodic test readings shall be taken to determine that the voltage is kept at a safe working level.

C. Buried pipelines can also develop relatively high AC voltages, although generally much lower than those imposed upon the aboveground pipe. Where induced AC voltage on a buried pipeline cannot be dissipated by temporary means, the Company shall assist the contractor in providing a method of reducing the voltage to a safe level using galvanic anodes or other devices.

6.2.25 Ionizing Radiation (X-Ray) and Radioactive Material

A. Areas shall conform to guidelines set forth by applicable local, state, and federal governing bodies.

B. Job-site activities will be coordinated and conducted in a manner providing the least exposure to all employees.

C. Radiography shall be performed only by personnel certified by the American Society for Non-Destructive Testing and in accordance with Company specifications.

D. Contractor's employees shall not enter the restricted area without permission from the radiographer in charge of the inspection.

E. The radiographer is responsible for the protection and monitoring of every person working with or near x-rays or radioisotopes. This protection and monitoring shall comply with applicable federal, state, and local safety and health regulations.

F. The radiographer shall notify the contractor, the Company Representative, and all onsite employees immediately, if a radioactive source becomes stuck in the carrier line and cannot be returned to the camera shield. Contractors shall ensure that a licensed radiologist controls radioactive devices and that safe distances are observed while devices are activated.

G. Radiographic inspection must be done in a restricted area.

6.2.26 Job Hazard Assessment (JHA)

A. Contractors must conduct a daily JHA which identifies daily hazards and the equipment, procedures, and/ or proper Personal Protective Equipment (PPE) to lower the risk of the job task. (See Appendix A or alternate Job Hazard Analysis form).

B. If the scope of work changes during the work day, the JHA shall be updated and communicated to all employees who signed the original JHA.

6.2.27 Ladders

A. Ladders must be inspected visually before each use. The use of ladders with broken or missing rungs or steps, broken or split side rails, or with other faulty or defective construction is prohibited. When ladders with such defects are discovered, they shall immediately be removed from service.

B. Prior to being placed into service, a competent person shall assure that ladders used for a task are approved for that task.
C. Ladders shall not be climbed until adequately secured (tied off), where applicable.
    i. Anytime work needs to be performed using a ladder, another person must hold the ladder securely until the ladder can be tied off properly.
    ii. Always face the ladder when climbing or descending.
    iii. Always use three points of contact when climbing or working on ladder.
    iv. Ladder shall extend 3 feet above the upper landing surface.
D. Metal ladders shall not be used for electric welding or near any electrical service.
E. Ladders which are not an integral part of the design of a scaffolding system are not to be used as any part of a scaffold

6.2.28 Lead

A. The company will identify and discus with the contractor areas where lead may be present.
B. Contractors performing work where there is potential for exposure must have a written lead abatement program.

6.2.29 Articulating Boom Aerial Lifts and Scissor Lifts

A. Only personnel trained and authorized to operate aerial lifts and scissor lifts by the contactor may operate said aerial lifts.
C. Design requirements shall comply with the American National Safety Institute (ANSI) Standard for aerial lifts.
D. No freight, packaged goods, pipe, lumber, or construction materials of any kind shall be handled on any manlift.

6.2.30 Operator Qualification (OQ)- DOT Pipeline Safety

Contractors performing OQ covered tasks, as defined by the Company, shall be qualified for each task to be conducted.

6.2.31 Painting and Coatings

A. All paint and paint materials must be approved by the Company prior to use.
B. A SDS shall be provided to the Company for all paint and materials prior to use.
C. Caution should be used when working with flammable paint or painted materials near hot surfaces. Paint should not be sprayed within 50 feet of an open flame, process equipment, or piping which is hot enough to cause ignition.
D. The contractor shall ensure the following surfaces are not painted: valve stems, flange faces, name plates, identification tags, gasket faces, resilient seal materials, gauges, sight glass, orifice plate handles, or other like items.
E. Adequate ventilation is required when applying paint or other protective coatings inside storage tanks or other confined spaces.

6.2.32 Personal Protective Equipment

A. In work locations, the following PPE is required:
    i. Pants- The outer layer of pants must be long or full length to the top of the shoes. Short pants may be worn under coveralls.
    ii. Shirt- Short or long sleeve- NOT sleeveless (short or long sleeve decision at discretion of Company Representative).
    iii. Shoes or Boots- No open toed footwear.

B. In addition to this basic PPE, some specific PPE may be required depending on the hazard or the task being performed. This PPE includes but is not limited to:
   i. Flame Resistant Clothing (FRC)
      a. FRC must be the outermost layer and must cover the upper and lower body including the arms. Options include but are not limited to:
         - FR Long-sleeve Shirt and FR pants
         - FR Coveralls
         - FR Jacket and FR Pants
      b.) FRC used in the oil and gas industry must meet NFPA 2112.
      c.) FRC used for arc flash protection must meet NFPA 70E.
   ii. Eye / Face Protection
      a. Safety Glasses
      b. Impact Goggles
      c. Dust Goggles
      d. Chemical Splash Goggles
      e. Face Shield
   iii. Hearing Protection
      a. Ear Plugs
      b. Ear Muffs
      c. Ear Bands
   iv. Hard Hats
   v. Safety Toe Footwear
   vi. Gloves

C. The Contractor is responsible for providing all required PPE to the contractor's employees.

D. For specific PPE requirements see the Growth Fund or enterprise PPE Matrix.

6.2.33 Regulatory Agency Inspections

Upon notification of regulatory inspection or audit, the contractor shall contact the Company Representative immediately.

6.2.34 Reporting Procedures

A. In the event of any EHS related incident (chemical spill, injury, etc.), the contractor shall contact the Company Representative immediately via telephone to report the incident. If the project manager cannot be reached, contact the Safety and Environmental Compliance Management Group.

B. The contractor shall report all near misses to the Company Representative.

C. All reports (e.g. incident investigation, witness statements, etc.) shall be provided to the Company Representative when available. (See Appendix D).

6.2.35 Respiratory Protection

A. Whenever contactor employees are exposed to substances at or above the applicable Permissible Exposure Limit (PEL) efforts must be made by the contractor to reduce the exposure levels through engineering controls.

B. If engineering controls are not possible, respiratory protection shall be required.

C. The contractor shall have a Respirator Protection Program that meets OSHA requirements.

D. Workers wearing respirators shall:

i. Wear only respirators for which they have passed a respirator fit test in the last 12 months (6 months when performing asbestos or lead abatement work).
ii. Be trained in the purpose, proper use, and limitations of respirator.
iii. Have medical clearance to wear a respirator.
iv. Be free of facial hair which prevents a proper sealing of respiratory equipment while donning a respirator.

6.2.36 Right of Way Roadside Work

A. The contractor shall develop a written Traffic Control Plan. Plan shall include items such as: signs, routes, barricades, and lane closures.
B. All flaggers shall be certified.
C. Contractors shall wear high visibility vests and other high visibility clothing as required by applicable regulations.

6.2.37 Safety Permits

Certain work assignments may require safety permits, such as Confined Space, Hot work, Safe Work etc. Consult with Company Representative to obtain any applicable permit(s).

6.2.38 Scaffolding

A. Contractors must provide a competent person for the erection of all scaffolding and periodic inspection.
B. The scaffold's working platform must be completely planked, equipped with a rigid handrail, mid-rail and toe boards.
C. Where a full handrail system is not practical, each employee shall be provided a full fall arrest system attached to independently secured and tested lifelines.
   i. One lifeline per employee.
   ii. Employees shall ascend and descend scaffolding by ladder (external or integral) only. The climbing of the scaffold frame is strictly prohibited.

6.2.39 Security Requirements

A. All vehicles and property are subject to search when entering and exiting Company property.
B. All contractors, vendors, and visitors shall sign in upon entry and out upon exiting, at designated locations.

6.2.40 Stop Work

The Company and/or its Representative, as well as, the contractor has an obligation to ensure that the workplace is safe. If an unsafe situation arises, the contractor and Company Representatives each have the responsibility to take the Stop Work Action. See Table 3 below.

Table 3: Stop Work Action

Situation	Action
Obviously Life Threatening	• Obligation to shut the job down until corrective action is taken. • Obligation to notify the Company. • Obligation to document notification.
Potential for Serious Injury	• Obligation to shut the job down until corrective action is taken. • Obligation to notify the Company. • Obligation to document notification.

Situation	Action
Obvious Violation of Federal or State Law	• Obligation to shut the job down until corrective action is taken. • Obligation to notify the Company. • Obligation to document notification.
Possible Violation of Federal or State Law	• Discretion to shut the job down until corrective action is taken. • Obligation to notify the Company. • Obligation to document notification.
Southern Ute Indian Tribe Growth Fund or Contractor Safety Rule Violation	• Obligation to notify the Company. • Discretion to document notification.

6.2.41 Tools

A. Hand Tools
   i. Contractors shall be responsible for the safe condition of all tools and equipment used by employees, including tools and equipment that may be furnished by employees.
   ii. Hand tools shall only be used for their intended use. Cheater bars shall not be used.
   iii. Damaged tools, broken handles, mushroomed striking surfaces, bent or broken tools, shall be taken out of service and repaired or replaced.

B. Power-Tools
   i. Employees must be trained to operate all power tools; some tools (e.g., explosive actuated) require periodic formal documented training.
   ii. Portable electric equipment and tools must be grounded unless they are of the “double insulated” type, and all circuits shall be protected by a GFI system.
   iii. Electric powered tools must be disconnected prior to adjusting the tool.
   iv. Pneumatic tools must have their air supply bled-down prior to disconnecting.
   v. Manufacturer’s guards and shields must be in place on all power tools while they are being operated.
   vi. All power tools shall be inspected daily before use and remove from service those tools found to be damaged.
   vii. The use of non-explosion proof power tools (tools not approved for use in hazardous locations) shall be considered Hot Work in all restricted areas or as designated by the Company Representative and shall require a Hot Work Permit prior to use.

6.2.42 Training

A. All contractor’s employees are required to have applicable safety and environmental training prior to commencement of work.
B. The contractor shall document daily tailgate meetings. The tailgate meetings shall discuss the daily work permit(s) and/or JHA.

6.2.43 Vehicles- Heavy Equipment

A. All equipment left unattended at night in non-secured areas shall have lights or reflectors, or barricades to identify location of equipment.
B. A safety tire rack or cage shall be utilized when inflating, mounting or dismounting tires installed on split rims, or rims equipped with locking rings or similar devices.
C. The parking brake shall be set when equipment is parked.

D. Chock wheels and set parking brake when parking equipment on an incline.

6.2.44 Vehicles- Motor

A. Contractors shall ensure that their personnel travel only on approved roadways or right-of-ways, and park vehicles in designated areas, not encumbering access or work in progress.

B. Contractors vehicles shall be in working order at all times while being operated.

6.2.45 Water/Dock Safety

Contractors working where there is potential risk to fall into water shall don an approved U.S. Coast Guard personal flotation device.

6.2.46 Welding, Cutting, and Heating

A. Hot Work Permits are required in restricted areas as defined by OSHA 1910.146 or as specified by the Company Representative.

B. Welders shall be tested and qualified as specified by the Company Representative. Welders shall be tested by a qualified welding inspector for the specific welding procedure specified by the Company Representative. Only qualified welders may perform welding on Company facilities. Nonstructural, such as fences, field pipe guards, and signage, welding may be performed by non-qualified welders.

C. Only Company approved welding procedures may be used.

D. Proper precautions (isolating welding and cutting, removing fire hazards from the vicinity, providing a fire watch, etc.) for fire prevention shall be utilized in areas where welding or other “hot work” is being done.

7. REVISIONS

Revision Date	Page(s)	Change(s)
01 November 2005	21	• Changed insurance requirements from absolute numbers to a reference to the Miscellaneous Work Agreement
01 June 2007	1	• Added Cover Letter to Contractor to provide further understanding of purpose, intent and goals of document.
01 June 2007	2	• Added Table of Contents and reformatted heading numbering to simplify locating information in the document
01 June 2007	3 and 4	• Added Section 1 Introduction to provide additional general guidance and requirements to Contractors
01 June 2007	4	• Revised definition of contractor
01 June 2007	5-6	• Added Section 3 Pre-Job Requirements to provide the requirements for Contractor prequalification and Job Safety Orientation
01 June 2007	8-9	• Added last sentence to item A and items E through S to Contractor Responsibilities. Added phrase and footnote to the end of Item D.
01 June 2007	11	• Added last sentence to 6.1.8 B. regarding notification of hazardous materials
01 June 2007	11	• For 6.1.8.B, deleted the words “kept on-site” and inserted “readily accessible” at the end of the first sentence.
01 June 2007	14	• For 6.2.1.B, inserted the word “operational” prior to the word “pipeline.”
01 June 2007	14	• Added 6.2.6 B. &C regarding drug and alcohol program and searches of vehicles and belongings
01 June 2007	17	• For 6.2.21.A.i., inserted footnote regarding pants.

01 June 2007	18	• For 6.2.23.A, deleted the words “as soon as possible” and inserted the word “immediately” I the first sentence.
01 June 2007	19	• For 6.2.27.B.v., inserted the word “Manufacturer’s” at beginning of sentence.
01 June 2007	19	• For 6.2.28.B., added last sentence regarding welding non-structural welding.
01 June 2007	Attached at end of document	• Attached various Contractor EHS forms
23 July 2008	17	• A referenced to the Growth Fund PPE Matrix was added to section 6.2.21
10 March 2010	10	• Added statement that pesticide applicator shall provide copy of their applicator license
06 October 2015	All	• Updated all sections of the document. • Appendix B and C added.
24 January 2019	All	• Annual Review
25 February 2020	All	• Annual Review • Updated SharePoint link - footer

8. CERTIFICATION

I have read and understand the Southern Ute Indian Tribe Growth Fund's *Contractor Environmental, Safety, & Health Expectations Policy and Procedure*. I will abide by these instructions at all times.

Name of Independent Contractor or Company: _____

Name of Foreman or Supervisor: _____

Print Name: _____

Signature: **X** _____

Date: _____

Master Service Agreement / Insurance Review
(completed by Company)

(All boxes must be checked prior to the contractor commencing work)

Is a signed Master Service Agreement (MSA) on file? ☐

Is the Certificate of Insurance (COI) current? ☐

Is a copy of any applicable endorsements[2] on file? ☐

Does the COI list all of the policies as specified in the MSA? ☐

Southern Ute Indian Tribe Growth Fund Representative: _____

Signature: **X** _____

Date: _____

[2] Additional Insured and Waiver of Subrogation

9. APPENDICES

Appendix A- Contractor Job Hazard Assessment

Appendix B- OSHA Standards Applicable to Abrasive Blasting Operations

Appendix C- Crane Hand Signals

Appendix D- Contractor Incident Report Form

Appendix A- Contractor Job Hazard Assessment

Southern Ute Indian Tribe Growth Fund **CONTRACTOR JOB HAZARD ASSESSMENT**

Project: Location:

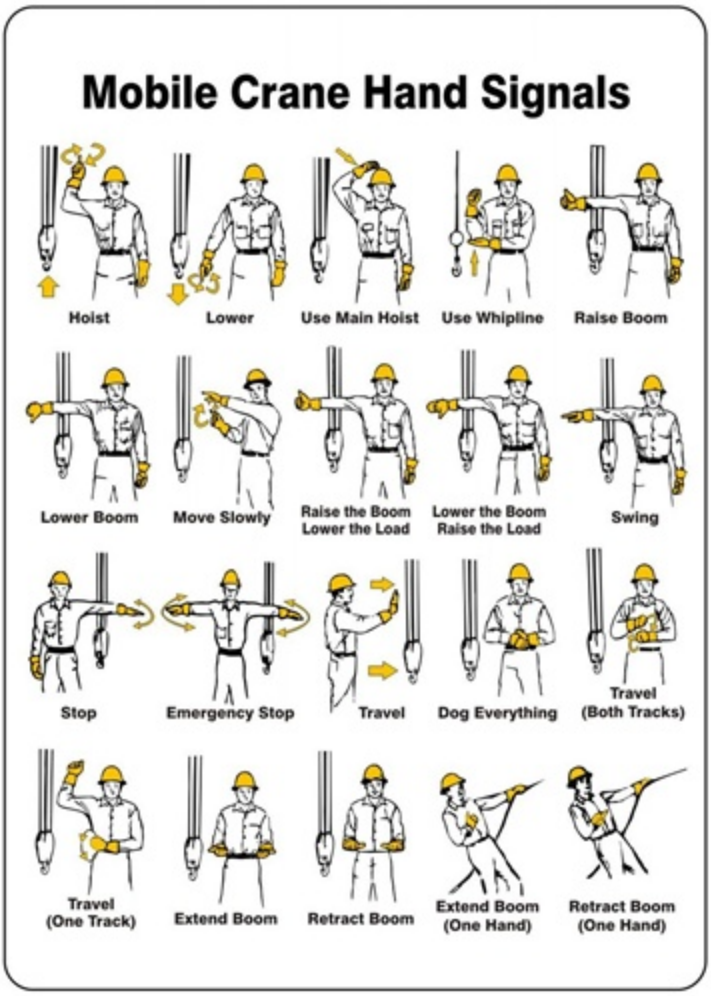
Date:	Daily Job Description:

	Yes	No	N/A		Yes	No	N/A
Are all crew members familiar with:				**Lock out tag out:**			
Location of fire extinguishers	☐	☐	☐	Is Lockout/Tagout required?	☐	☐	☐
Evacuation routes	☐	☐	☐	Effectiveness of LO/TO verified?	☐	☐	☐
Site-specific chemical hazards	☐	☐	☐	Have you tried to activate the start/stop switch on auto equipment?	☐	☐	☐
Site-specific MSDS's	☐	☐	☐				
Emergency contact numbers	☐	☐	☐	Do you have a written procedure?	☐	☐	☐
Other:	☐	☐	☐	Is everyone involved familiar with the procedure?	☐	☐	☐
Do any of the following hazards require safeguarding? If yes, discuss as a group.				**Have the following safeguards been considered for overhead work, pedestrians or traffic?**			
Sharp objects	☐	☐	☐	Barricades/Cones	☐	☐	☐
Access or egress	☐	☐	☐	Signs/Flaggers/Flags	☐	☐	☐
Noise	☐	☐	☐	Hole covers	☐	☐	☐
Lighting	☐	☐	☐	Handrails	☐	☐	☐
Hot or cold surfaces	☐	☐	☐	Other	☐	☐	☐
Ventilation (inhalation of hazard)	☐	☐	☐				
Heavy objects	☐	☐	☐	**Housekeeping:**			
Heat stress	☐	☐	☐	Are all hoses and cords routed to prevent tripping hazards?	☐	☐	☐
Electrical shock	☐	☐	☐				
Airborne contaminates	☐	☐	☐	Are hoses properly secured to pneumatic tools?	☐	☐	☐
Excavation Activities	☐	☐	☐				
Uneven surfaces	☐	☐	☐	Are tool buckets used to prevent tripping hazards?	☐	☐	☐
Other potential for slips, trips or falls	☐	☐	☐				
First opening of equipment	☐	☐	☐	Has the area been checked for slippery surfaces?	☐	☐	☐
Pinch points	☐	☐	☐				
Chemicals (burns/eyes/skin)	☐	☐	☐	**Attitude / Communication:**			
Flammable	☐	☐	☐	Is there something on your mind other then the tasks at hand?	☐	☐	☐
Ingestion	☐	☐	☐				
Skin contamination	☐	☐	☐	Have you shared your ideas on how to perform the task?	☐	☐	☐
Are all tools in good working order?							
Ratchets and sockets	☐	☐	☐	Have you listened to everyone's ideas?	☐	☐	☐
Hammer wrenches	☐	☐	☐				
Lifting straps / belts	☐	☐	☐	Have you encouraged everyone to participate?	☐	☐	☐
Air hoses	☐	☐	☐				
Grinders	☐	☐	☐	Has the task process been explained to you?	☐	☐	☐
Hammers	☐	☐	☐				
Line up clamps	☐	☐	☐	Do you understand how to perform the task?	☐	☐	☐
Electrical Extension cords	☐	☐	☐				
Heavy Equipment	☐	☐	☐	**PPE Required:**			
Excavating equipment	☐	☐	☐	Hardhat	☐	☐	☐
Air compressor	☐	☐	☐	Safety glasses	☐	☐	☐
Access:				Face shield	☐	☐	☐
Has the scaffold been inspected?	☐	☐	☐	Outer clothing (fire retardant clothing, reflective colored vest)	☐	☐	☐
Is the ladder tied off?	☐	☐	☐	Safety toe shoes	☐	☐	☐
Does the job require a man lift?	☐	☐	☐	Gloves	☐	☐	☐
Hot Work Permit required?	☐	☐	☐	**Confined space permit required?**	☐	☐	☐
Any other special provisions?	☐	☐	☐	**One-call to be placed?**	☐	☐	☐
Contractor Signature:							

Appendix B- OSHA Standards Applicable to Abrasive Blasting Operations

General Industry	Construction Industry
1910.94 Ventilation	1926.57 Ventilation
1910.1000 Air Contaminants **Table Z-1 Limits for Air Contaminants** **Table Z-2 Toxic and Hazardous Substances** **Table Z-3 Mineral Dusts**	1926.55 Gases, Vapors, Fumes, Dusts, and Mists Appendix A Threshold Limit Values of Airborne Contaminants for Construction
1910.1025 Lead	1926.62 Lead
1910.1018 Inorganic Arsenic	1926.1118 Inorganic Arsenic
1910.1027 Cadmium	1926.1127 Cadmium
1910.1026 Chromium (VI)	1926.1126 Chromium (VI)
1910.134 Respiratory Protection	1926.103 Respirator Protection
1910.95 Occupational Noise Exposure	1926.52 Occupational Noise Exposure 1926.101 Hearing Protection
1910.1000 Table Z-1 Beryllium	1926.55 Beryllium- Appendix A
1910.1000 Table Z-3 Silica	1926.55 Silica- Appendix A
1910.1200 Hazard Communication	1926.59 Hazard Communication
1910.132 Personal Protective Equipment	1926 Subpart E Personal Protective Equipment
1910.141 Sanitation	1926.51 Sanitation

Appendix C- Crane Hand Signals



Appendix D- Contractor Incident Report Form

CONTRACTOR INCIDENT REPORT

Southern Ute Indian Tribe Growth Fund

Vehicle ☐ **Injury** ☐ **First Aid** ☐ **Property Loss** ☐ **Near Miss** ☐ **Environmental** ☐

Contractor company name: _____

Date of report: _____

1. EMPLOYEE INFORMATION: (Enter all applicable information)

Name of employee: _____ Employee I.D. #: _____

(First) (Middle) (Last)

Employee's home address: _____ Phone #: _____

(No. & Street) (City or Town) (State) (Zip)

2. WORK INFORMATION: (Enter all applicable information)

Date of hire: _____ Work location: _____

Job description: _____

3. INCIDENT DESCRIPTION: (Enter all applicable information)

Exact location of accident: _____

(No. & Street) (City or Town) (County) (State) (Zip)

Date of incident: _____ Time: _____ ☐a.m. ☐p.m. Did accident occur on Company property? ☐ Yes ☐ No

Working shift From: _____ To: _____ ☐a.m. ☐p.m. How many hours had employee been on job? _____

Date injury first reported to employer: _____ Name of person notified: _____

Describe the incident in detail; (if applicable indicate the part of the body and the side of the body affected)

_____

What was the employee doing or what type of work was being conducted when the incident occurred?

_____

How did the incident occur? (Describe all activity leading up to the accident. Tell what material, or tools were involved. Tell what happened just before, at the time of, and just after the accident.)

_____

What machine tool, substance or object was most closely connected with the accident?

_____

Intoxication ☐ Yes ☐ No Failure to use safety devices ☐ Yes ☐ No

Did accident occur because of:

Failure to obey rules ☐ Yes ☐ No

Unsafe act by injured or others ☐ Yes ☐ No

Unsafe condition ☐ Yes ☐ No

Unsafe personal factors (attitude, etc.) ☐ Yes ☐ No

Was weather a factor? ☐ Yes ☐ No

If Yes, how? _____

What personal protective equipment is required for the job? _____

Was it used? ☐ Yes ☐ No

What safety measures could the employer have taken to prevent the accident?

Names and addresses of witnesses:

_____ (Name)

_____ (No. & Street) _____ (City or Town) _____ (State) _____ (Zip)

4. MEDICAL TREATMENT INFORMATION: (If applicable)

Did employee receive medical attention? ☐ Yes ☐ No Date of first medical care: _____

Doctor's office ☐ Yes ☐ No Emergency room / clinic ☐ Yes ☐ No Admitted to hospital? ☐ Yes ☐ No

Treatment provided: Medication: ☐ Yes ☐ No Stitches: ☐ Yes ☐ No Other: ☐ Yes ☐ No

If yes, please explain: _____

Names and addresses of medical provider:

_____ (Name)

_____ (No. & Street) _____ (City or Town) _____ (State) _____ (Zip)

Last date worked: _____ Has employee returned to work? ☐ Yes ☐ No Date: _____

If No, estimate number of days lost: _____ Did injury / illness result in death? ☐ Yes ☐ No Date: _____

If death occurred, give name, age, relationship and address of known dependent:

_____ (Name)

_____ (Age) Relationship _____ (No. & Street) _____ (City or Town) _____ (State) _____ (Zip)

5. CONTRACTOR – SUPERVISOR'S INVESTIGATION: (Must be completed prior to submitting for Inspection)

What will you do to prevent recurrence of this type of accident? _____

What has been done to prevent recurrence? _____

What were contributing causes of the accident?

When did you visit the accident site?

Name: _____ **Title:** _____ **Date:** _____
(Supervisor or Foreman)

6. COMPANY ONSITE INSPECTOR REVIEW: (Must be completed prior to submitting to Company Safety Staff)

Do you agree with the results of this investigation? ☐ Yes ☐ No

If No, please explain:

What should be done to prevent recurrence?

What will you do to prevent recurrence?

When will action be completed?

Name of Project Manager:

Name: _____ **Title:** _____ **Date Submitted:** _____
(Company Representative)

7. COMPANY SAFETY REVIEW:

Do you agree with the results of this investigation? ☐ Yes ☐ No

If No, is a Root Cause Investigation required? ☐ Yes ☐ No

When will Investigation be completed?

Investigation Facilitator:

Name: _____ **Title:** _____ **Date:** _____
(Company Safety Rep.)

Southern Ute Indian Tribe Growth Fund

CONTRACTOR AND SUB-CONTRACTOR PREQUALIFICATION FORM (PQF)

This template will be used by the Southern Ute Indian Tribe Growth Fund or its Enterprises (Company) to evaluate contractors or by General/Prime contractors to evaluate their sub-contractors to assist in ensuring that they meet Company requirements prior to being hired. The General/Prime contractor is solely responsible for determining and verifying that its sub-contractor has all applicable programs in place and meets all Company requirements at all times.

A. GENERAL INFORMATION

1. **Business Name:** _____

P.O Box: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: _____ Fax: _____ E-mail: _____

Owner(s) or Partner(s) Names: _____

Contact Person: _____ Title: _____

Date Business Founded or Incorporated: _____ Where: _____

2. **Does your company have branches offices located in other areas?** ☐ Yes ■ No

If yes, please list address with contact names and phone numbers for these locations (or attach complete list).

Branch Location: *Point of Contact:*

3. **Work classifications of Sub-Contractor or Contractor:**

☐ Welding	☐ Earth Work	☐ Concrete
☐ Pile Driving	☐ Radiographic Inspection	☐ Insulation
☐ Painting	☐ Electrical	☐ Clearing
☐ Buildings	☐ Instrumentation	☐ Fabrication
☐ Ditching	☐ Directional Drill	☐ Hydro-Vac
☐ Engineering	☐ Environmental	☐ Inspection

☐ Other (Explain) _____

4. **Preferred Geographic Work Location(s):**

_____

_____

_____

5. **Client References:** (Name three or more with address and contact information)

_____

_____

_____

_____

_____

6. **Is your company a Native American Owned Business that has been certified by the Southern Ute Indian Tribe's Tribal Employment Rights Ordinance (TERO) office**[1]? ☐ Yes ☐ No

B. SAFETY & ENVIRONMENTAL INFORMATION

General contractor shall review and determine if sub-contractor has all applicable programs in place.

1. **Does your company have a Safety Program?**

   If yes, please provide a copy of the Table of Contents from the Safety Manual or list of Safety SOPs ☐ Yes ☐ No

2. **Does your company have Environmental Programs?**

   If yes, please provide a copy of the Table of Contents from the Environmental Manual or list of Environmental SOPS ☐ Yes ☐ No

3. **Does your company have an Employee Policy Manual?**

   If yes, please provide a copy of the Table of Contents ☐ Yes ☐ No

4. **Incident Information:** *Number of OSHA Recordable Incidents for previous 2 years and year to date*

A	Year	20__	20__	Year to Date _____
B	Exposure or Employee Hours			
C	Number of OSHA Recordable Cases[2]			
D	Incident Rate of OSHA Recordable Cases[2]			
E	No. of DART Cases			
F	Severity Rate of DART Cases			
G	Experience Modification Rate (EMR)			
H	No. of Fatalities			
I	Average No. of Employees			
J	EHS Citations, NOVs or Reportable Spills			

GUIDANCE IN FILLING OUT THE TABLE ABOVE:

(A) YEAR: List the three most recent full calendar years. If less than a year please specify months.

(B) Exposure or Employee Hours: List the total number of hours worked during the year by all employees, including those in operating, production, maintenance, transportation, clerical, administrative, sales and all other activities.

(C) Number of OSHA Recordable Cases: List the total number of OSHA Recordable cases that occurred in that year. Recordable cases are any work-related injury case requiring more than first-aid and all occupational illnesses. Recordable cases include all occupational illnesses, and all occupational injuries resulting in days away from work, restricted work activity, temporary or permanent transfer, medical treatment other than first aid, loss of consciousness, significant injury or illness diagnosed by a physician or other health care professional, or

(D) Incidence Rate of OSHA Recordable Cases: $\frac{\textit{Number of Recordable Cases X 200,000}}{\textit{Exposure or Employee Hours}}$

---

[1] *Preference in Contracting & Subcontracting – Native American Owned Businesses*

For the Southern Ute Indian Reservation and commuting area, the Southern Ute Indian Tribe ("Tribe") Tribal Employment Rights Ordinance ("TERO") Code has established a preference for contracting and subcontracting to certified Indian Owned businesses. A bid preference of 5% will be given to any Native American Owned company. To receive this preference, Native American owned businesses must be certified by the Tribe's TERO. Any Native American owned business not certified by the bid due date will not be given Indian preference. For information about certification, contact the TERO office at 970-563-0117. Indian employment preference is required for all employers on this project in accordance with the Tribe's TERO code. The Tribe reserves the right to reject any and all bids, to waive any informality in bids and to accept the bid deemed, in the opinion of the Tribe, to be in the best interest of the Tribe.

[2] If applicable, also include number and incident rates for MSHA reportable (7000-1) cases and Commercial Motor Vehicle accidents.

(E) Number of DART Day Cases: List the total number of days away from work, restricted duty or job transfer (DART) cases that occurred during the year. A day away from work case will be defined as any Recordable case that results in one or more days away from work, restricted duty, or job transfer.
You may cap the number of DART days for a recordable case to 180 days, such as in the case of a death.

(F) Severity Rate of (DART) Cases: $\frac{\textit{Number of DART Days X 200,000}}{\textit{Exposure or Employee hours}}$

(G) EMR- Workers' Compensation Experience Modification Rate: We require verification for the EMR and discount rate. A letter from your insurance agent, insurance carrier, or state fund (on their letterhead), verifying the EMR or discount rate listed above.

(H) Number of Fatalities: List the total number of fatalities that result from occupational injuries or illnesses. Deaths that occur in the workplace but are not the result of occupational injuries should not be included.

(I) Average # of Employees: List the average # of employees who worked during the year. An employee shall be defined as any person engaged in activities for an employer from whom direct payment for services is received. Include working owners and officers.

(J) EHS Citations, NOVs or Reportable Spills: List the total number of safety and environmental citations, notice of violations and reportable spills that occurred each year.

Additional Information: Additional information concerning injury and illness record keeping can be found in 29 CFR 1904 and OSHA'S "Recordkeeping Guidelines for Occupational Injuries and Illness" booklet.

C. EMPLOYEE TRAINING PROGRAMS

Company shall review and determine if contractor has all applicable programs in place.
General contractor shall review and determine if sub-contractor has all applicable training programs in place.

7. **Does your company have required Safety Training for your employees?** ☐ Yes ☐ No
   If yes, please provide an outline of your companies training requirements
8. **Does your company have required Environmental Training for your employees?** ☐ Yes ☐ No
   If yes, please provide an outline of your companies training requirements
9. **Does your company have required Equipment Operator Training for your employees?** ☐ Yes ☐ No
   If yes, please provide an outline of your companies training requirements

D. CONTROL OF ALCOHOL, ILLEGAL DRUGS

Company shall review and determine if contractor has all applicable programs in place.
General contractor shall review and determine if sub-contractor has all applicable programs in place.

1. **Does your company maintain a compliant DOT Anti-drug and Alcohol Program?** ☐ Yes ☐ No
   If yes, please provide a copy of the Table of Contents.
2. **Does your company maintain an acceptable[3] Non-DOT Anti-drug and Alcohol Program?** ☐ Yes ☐ No
   If yes, please provide a copy of the Table of Contents.

E. OPERATOR QUALIFICATION (OQ) for Oil and Gas Pipeline Activities

Company shall review and determine if contractor has all applicable programs in place.
General contractor shall review and determine if sub-contractor has all applicable training programs in place.

1. ***Does your company maintain an acceptable DOT Operator Qualification Program?*** ☐ *Yes* ☐ *No* ☐ *N/A*

   If yes, has your OQ action plan been reviewed and approved by the Company's Operator Qualification Administrator? ☐ *Yes* ☐ *No* ☐ *N/A*

[3] An acceptable non-DOT anti-drug and alcohol program shall have at a minimum pre-employment drug screening, and testing for reasonable suspicion and post-accident.

HAVE YOU INCLUDED THE FOLLOWING ATTACHMENTS WITH YOUR PACKAGE?

1. *Insurance Certificate* ☐
2. *Address list of various branch locations (if applicable)* ☐
3. *Safety Program Table of contents* ☐
4. *Environmental Program Table of contents* ☐
5. *Employee Policy Manual Table of contents* ☐
6. *Letter from your insurance agent verifying EMR* ☐
7. *Outline of your safety training requirements* ☐
8. *Outline of your environmental training requirements* ☐
9. *Outline of your equipment operator requirements* ☐
10. *Table of contents of your Drug-Alcohol plan* ☐

F. CONTRACTOR/SUB-CONTRACTOR PREQUALIFICATION COMPLETED BY:

By signing below, the undersigned certifies:

- *That he or she is authorized to execute this questionnaire and provide the foregoing information.*
- *That he or she has reviewed the information provided above and that the information is true and accurate as of the date indicated below.*

Name: _____ ***Signature:*** _____

Title: _____ ***Date:*** _____

For a <u>Subcontractor</u>, the General/Prime Contractor completes below:

G. GENERAL/PRIME CONTRACTOR APPROVAL:
(To be completed by General/Prime contractor for their Sub-contractors)

***Approved**:* ☐ *Yes* ☒ *No*

Please explain: _____

_____

_____ _____

Signature
General/Prime Contractor's Representative

Date

_____ _____

Name (type or print)
General/Prime Contractor's Representative

Title

For a Contractor, the Company representative completes below:

H. APPROVAL:
(To be completed by Company representative for Company Contractors)

***Approved**:* ☐ *Yes* ☒ *No*

Please explain: _____

_____

_____ _____

Signature
Company Representative

Date

_____ _____

Name (type or print)
Company Representative

Title

Technical Specifications

TECHNICAL PROVISIONS

TECHNICAL PROVISIONS

SECTION 01 - TRENCH EXCAVATION & BACKFILL FOR PIPELINES AND APPURTENANT STRUCTURES

TP-101 SCOPE:

Excavation, as used in these specifications refers to all construction activities necessary to install subsurface utilities in accordance with the plans and specifications. Such activities include, but are not limited to:

All necessary clearing, grubbing and site preparation; removal of all materials that may interfere with construction activities (except existing pipe work, conduits, utility structures or other items to be left in place) to the lines and grades indicated on the plans and otherwise described herein. The Contractor shall remove all construction trash from the site and transport to a legal disposal site.

Removal and/or storage of subsurface materials from trench and construction excavation areas to allow installation of designated utilities or structures. All suitable material removed from excavations shall be used, insofar as practicable, in the formation of embankments, fills and backfilling.

Preparation of sub-grades and backfilling of trench and construction areas upon completion of utility or structure construction.

All necessary bracing, shoring and protection (but not including tight sheeting in trenches and structure excavation ordered left in place by the Owner or Ownerôs Representative).

Final grading, dressing and cleanup of the construction site.

TP-102 SAFETY:

All trench excavation shall be coordinated in strict accordance with current OSHA requirements found in the Occupational Safety and Health Standards - Construction Standards for Excavations (29 CFR 1926, Subpart P).

Trenches shall be properly sheeted, shored, or sloped in accordance with the current OSHA standards. Trench excavation shall not proceed more than 500 feet in advance of pipeline work without the Owner or Ownerôs Representative's approval. All trenches shall be completely backfilled at the end of each working day, unless otherwise approved by the Owner or Ownerôs Representative. No excavation shall be left open without proper barricades and warning lights. Such devices shall conform to the Manual of Uniform Traffic Control Devices (ANSI D6.1) or such permits as are appended to these specifications.

The contractor shall be responsible for safety on the job site and shall designate a trained ñcompetent personò knowledgeable in trench safety to supervise the work.

TP-103 SHORING AND SHEETING SYSTEMS:

Protection of employees in excavations shall conform to applicable OSHA Standards. Any trench protection and modification to trenching safety plans shall be submitted to the Owner or Ownerôs Representative in writing to be maintained as part of the record.

The Contractor shall install all shoring and sheeting systems required to prevent cave-ins and protect his employees and adjacent property and structures in accordance with current OSHA standards. No extra payment will be made for these items, the cost thereof being merged with and considered a part of the cost for the related excavation.

Before sheeting is withdrawn, or trench boxes moved forward, they shall be raised, in place, just above the pipe crown to safely allow the Contractor to completely fill any voids left in the pipe zone.

TP-104 ROAD, RAILROAD AND SPECIAL UTILITY CROSSINGS (IF REQUIRED):

The Contractor shall be responsible for compliance with all requirements of special crossing permits applicable to this project. Copies of such permits shall be included in the Appendix of these specifications. If no special crossing permits are appended, and such crossings are indicated on the plans, crossings will comply with all applicable provisions of Section 11 of the Technical Provisions in addition to those indicated under other provisions of this Section. At least two days notice shall be given to the Owner or Ownerôs Representative before work is done on any crossing.

TP-105 WORK WITHIN RIGHT-OF-WAYS & TRAFFIC CONTROL

When performing any work within the right-of-way of roads or railroads, the Contractor shall comply with the right-of-way permit for the installation including all of the requirements for traffic control and compaction. All work within the right-of-way of roads shall be performed in accordance with the ñStandard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-03 U.S. Customary Units ï Section 614.ò All work within the right-of-way of roads shall be performed in accordance with the latest edition of the Manual on Uniformed Traffic Control Devices (MUTCD).ò In addition, the Contractor shall submit a traffic control plan to the project engineer for review and approval prior to any work within the right-of-way of any roads or railroads.

TP-106 DRAINAGE:

The Contractor shall control the grading in the vicinity of the excavation so that the ground surface is properly sloped to prevent water from running into the excavated areas. Water that has accumulated in the excavation from rainfall and/or surface runoff, or from any other cause which might have been prevented by proper care and foresight, shall be removed and the subgrade restored to its proper bearing capacity, all at the Contractor's expense.

TP-107 EXCAVATION:

A. General: All excavation, other than by drilling and blasting, undertaken with the excavation equipment commonly used in the industry for this type of excavated material shall be classified as common excavation.

All excavation shall be made by open cut method except as approved or specified. During excavation, materials suitable for backfill shall be neatly piled no closer than 24-inches from the edge of the excavation. All materials not required or not suitable for backfill shall be removed and wasted at locations designated by the Owner or Ownerôs Representative.

1. Width: The sides of all trenches for the installation of utility piping systems shall be as nearly vertical as soil conditions will permit from ground level to the pipe. Except for the trenching of 1-inch water service lines, the width of the trench shall not be less than 16-inches nor more than 24-inches wider than the outside diameter of the pipe barrel. Trench excavation shall be centered on pipe alignment such that a minimum clear space of 8-inches is provided on each side of the pipe. Trench width above the level of the top of the pipe may be as wide as necessary for shoring or sheathing and for proper installation of the work.

2. Depth: The trench shall be excavated to the depth that permits pipe to be laid at the elevations shown on the engineering drawings or with the required depth of cover specified by the Owner or Ownerôs Representative. Depth of cover shall be measured from the finished grade or the surface of the permanent improvement to the top of the pipe barrel.

3. Preparation: The bottom of the trenches shall be accurately shaped to line and grade and shall provide uniform bearing and support for each section of the pipe on specifically placed bedding material at every point along its entire length. Bell holes and depressions for joints shall be dug after the trench bottom has been graded and shall be only of such length, depth and width as required for properly making the particular type joint. Care shall be taken not to excavate below the depths indicated. Unauthorized over depths shall be backfilled with suitable bedding material at the Contractor's expense.

4. Previous Excavation: If the trench passes over a sewer or other previous excavation, the trench bottom shall (1) be compacted to provide support equal to that of the undisturbed native soil or (2) conform to the specific regulatory requirements that preclude damage to the existing installed facility.

5. Unstable Subgrade: Where soft, spongy or otherwise unsuitable material is encountered, which will not provide a firm foundation for pipe, the Owner will direct the extent to which removal and replacement shall be made with suitable material. Special pipe foundation material is NOT anticipated. However, if required, a price shall be negotiated between the Owner and Contractor for special pipe foundation material.

6. Underground Obstructions: The Contractor shall preserve intact any underground pipes, culverts or other utilities encountered during construction (except as hereinafter permitted) provided their location is such that they do not interfere with new pipelines or structures being installed. The Contractor shall notify all appropriate utility authorities of his construction schedule so they may be at the site to locate and protect their property. If any utilities or structures are accidentally broken or disturbed, they shall be replaced immediately to a condition at least equal to that in which they were found, all at the Contractor's expense. Couplings used to repair water service lines shall be brass compression couplings and couplings used to repair sewer service lines shall be solid sleeve couplings that provide a rigid connection between pipes. The repair work shall be done in a manner acceptable to the Owner or Ownerôs Representative and the utility company. Any existing water or sewer services that will intersect or interfere with the new pipelines or structures shall be rerouted by the Contractor in the manner indicated by the Owner or Ownerôs Representative. Existing water or sewer services from the mains to private property that interfere with trenching operations may be cut and replaced at the Contractor's option and expense, provided that users of such services are notified at least 2 hours in advance and that the use of such service shall in no case be interrupted for more than 4 hours and/or beyond the workday, unless specifically permitted in writing by the owner. Materials and construction for these items shall be as provided in other sections of these specifications. All new and existing water and sewer mains and water and sewer services shall be protected from freezing at all times during construction.

B. Rock: The inclusion of a bid item and estimated quantity for rock excavation in the bid schedule indicates that rock excavation is probable. However, the exclusion of this item from the bid schedule does not preclude the possibility that rock will be encountered; it merely indicates that it is not anticipated. If unanticipated rock is encountered, the Owner or Ownerôs Representative will negotiate a price for rock excavation with the contractor. The following paragraphs define solid rock and loose rock excavation.

Solid rock shall be defined as large masses of igneous, metamorphic, or sedimentary rock that, in the opinion of the Owner or Ownerôs Representative, cannot be

excavated without drilling, blasting, or the use of rippers or other specialized equipment. Any material excavated without the use of blasting or specialized ripping equipment shall not be considered rock.

Solid rock excavation shall be measured in cubic yards from the top of the rock to a point 4-inches below the invert of the installed pipe and an assumed 24-inches trench width, regardless of the actual trench width and depth excavated. For structures, the rock shall be profiled 12-inches outside the perimeter of the structure and computed based on a product of the profile of the rock and an assumed 24-inches outside the structure's perimeter and 6-inches below the structure's footing. The rock volume will be computed as the product of the profiled rock area, as measured by the Owner or Ownerôs Representative. The measurements shall be within the nearest 0.1-feet from the surface and no less than every 10-feet by one of the following methods:

1. Excavating and exposing the rock profile for measurement. This shall be the responsibility of the contractor and no additional payment shall be made for this excavation.

2. Rock profile determined by drilling without excavating and measurements taken prior to any blasting.

3. Rock profile measured after blasting and excavation. A 20% deduction shall be made in rock determination when this method is used to allow for expansion in ledge due to blasting.

Loose rock shall be defined as boulders and other detached stones each having a volume of 1 cubic yard or more. Loose rock shall be removed from the excavation in such a way that a clear distance of at least 4-inches exists between the rock and the bottom of the pipe and 6-inches exist between the rock and the bottom structure. Loose rock shall not be used for backfill. Loose rock excavation shall be measured in cubic yards, including the total volume of only those rocks or boulders that are individually over 1 cubic yard in volume.

Trench in which rock is encountered shall be excavated at least 4-inches deeper than the pipe invert and refilled to the required elevation with sand , gravel, or crushed rock passing a 3/4-inch mesh screen. Bedding material shall extend upward at least 12-inches above the pipe. Payment for this fill material shall be considered incidental to the rock excavation and no additional payment shall be made.

Should rock excavation be encountered, it shall be the responsibility of the Contractor to have an experienced powderman handle all blasting and be able to furnish proof of his/her credentials. The Contractor shall also inform all residents in the vicinity of proposed blasting activities and shall be responsible for any damage to persons or property as covered in the General Provisions.

C. Removal of Water: The contractor shall remove and dispose of all water entering the trenches and shall keep the trenches water free until the facilities are in

place and sealed against the entrance of water. Use of a trash pump for removal of nuisance water shall be at no extra cost and shall not be considered dewatering. In no case shall water, earth, or any foreign materials be allowed to enter the water main or sewer lines.

The removal of nuisance water is determined by pumping the water out of the trench with a heavy-duty 4ò construction trash pump with a strainer for a minimum of 1 hour. The strainer shall be placed in a bed of pea gravel or a slotted PVC pipe in order to screen the debris.

All water removed from trenches shall be conveyed to natural drainage channels, storm sewers, or proper reservoirs as approved by Owner or Ownerôs Representative. Such removal of water shall be in a manner that prevents property damage, erosion, or sedimentation.

The inclusion of a bid item and estimated quantity for dewatering in the bid schedule indicates that dewatering is probable. However, the exclusion of this item from the bid schedule does not preclude the possibility that water will not be encountered, it merely indicates that it is not anticipated.

If continuous pumping with well points is required to maintain a satisfactory trench, and the contractor is so directed by the Owner or Ownerôs Representative, this work shall be considered as dewatering. Well points shall be set separately for each trench being dewatered. Dewatering shall be based on the actual number of lineal feet of trench dewatered and paid for at the negotiated price between the contractor and Owner or Ownerôs Representative.

D. Structural Excavation: Excavation for structures shall extend a sufficient distance from walls and footings to provide for forming, except where concrete for walls or footings is authorized to be deposited directly against excavated surfaces. Care shall be taken to avoid excavating below the depths indicated in the plans. Over-excavation shall be restored to proper elevation by filling with suitable granular bedding material at the Contractor's expense.

TP-108 BACKFILLING:

A. General: Trenches shall not be backfilled until the Owner or Ownerôs Representative has inspected and approved the pipe installation and jointing as being in compliance with the requirements of plans and specifications.

Bedding and backfill materials to a depth of 12-inches above the pipe shall be carefully deposited in layers not more than 6-inches thick, loose measurements, wetted to optimum moisture content and hand or mechanically compacted to at least 95% of the reference density for this material as described in the specification titled ñCompaction Requirements, Methods and Testing. From 12 inches above the pipe to

ground surface, the excavation material shall be placed in layers not to exceed 12-inches, mounded and left in a uniform, neat condition.

Wherever trenches have not been properly filled, or if settlement occurs, they shall be reopened to the depth required for proper compaction and refilled and re-compacted as specified above and approved by the Owner or Ownerôs Representative.

Compaction methods and equipment may utilize hand and mechanical tampers and rollers. The equipment and procedures proposed by the Contractor shall be subject to the approval of the Owner or Ownerôs Representative.

B. Materials: All backfill material shall be approved in advance of installation by the Owner or Ownerôs Representative. Materials shall be obtained from areas approved by the Owner or Ownerôs Representative.

Backfill material will not be paid for separately, but shall be considered as subsidiary to and a part of the cost for the applicable contract bid item.

1. Embedment: Embedment is that material from the bottom of the trench to twelve inches above the pipe, and includes the pipe bedding material (upon which pipe is layed), haunching material (extending from pipe bottom to pipe centerline), and initial backfill material (extending from pipe centerline to 12 inches above pipe). Native soil used for embedment must be free from clods of earth or stones larger than 1 inch in any dimension, organic refuse, debris, frozen soil, and other objectionable material. If the native soil does not meet these criteria, the Contractor shall screen it (as applicable) or import special bedding material.

2. Imported Special Bedding Material: If required, special bedding material shall consist of sand, sandy gravel, or other suitable granular material having a maximum plasticity index of 6, with 100% of the bedding material smaller than 3/4-inches, and no more than 5% passing a No. 200 sieve.

3. Stabilization: Granular stabilization material shall be used to replace soft, spongy, or other unsuitable material, including rock encountered in excavation, to the depths necessary to support the pipe or structure. Stabilization materials shall be underlay bedding material (as applicable) and shall consist of suitable hard, durable granular material having a maximum size of 6-inches, graded so that a maximum of 20% passes a No. 4 sieve. Granular stabilization is not anticipated. If required, a price for granular stabilization shall be negotiated between the Contractor and the Owner.

4. Final Backfill: In general, final backfill will be that material originally excavated from the trench and will extend from 12 inches above the pipe to surface grade. Final backfill material shall be the same as that around the pipe except that the inclusion of a limited amount of stones up to 6-inches in diameter will be permitted.

C. Placement:

1. Embedment: Embedment shall be placed in 6-inch loose lifts and compacted as described herein. If over-excavation is required, bedding material is to be compacted to 95% of the maximum dry density as determined by the Standard Proctor density test (ASTM D-698). Haunching material shall be placed by hand and worked under the pipe haunch to provide adequate side support for the pipe. Haunching and initial backfill material shall be compacted to 95% of the maximum dry density as determined by the Standard Proctor density test (ASTM D-698).

2. Final Backfill: Final backfill shall not be placed until the embedment material is placed and compacted, and the Owner or Owners Representative have inspected and approved the installation. Final backfill shall be placed in lifts not to exceed 12-inches unless otherwise approved by the Owner or Owners Representative. Compaction shall be as defined in the Compaction Requirements, Methods, and Testing section.

3. Backfill for Road Subgrade: Under existing and proposed roadways, to a distance of 10-feet on either side of the road, bedding and backfill materials shall be carefully deposited in layers not more than 6-inches thick, loose measurements, wetted to optimum moisture content and mechanically compacted as described in the Compaction Requirements, Methods, and Testing section.

4. In areas where pavement is to be replaced, or in roads that are to be paved, no rocks or stones that will interfere with subgrade preparation shall be included in the backfill within 12-inches of the finished subgrade elevation. The upper 12-inch layer, forming the subgrade for pavements, shall be compacted to a density of at least 95% (ASTM D-698 - Modified Proctor Test). See Section 11 of the Technical Provisions where this is required.

5. Cement slurry can be substituted for compacted native backfill and subgrade if approved by Owner or Ownerôs Representative. The cement slurry shall consist of one sack of cement to one cubic yard of concrete sand and shall be placed from the concrete truck at a slump of 6 to 8 inches. Steel plates 5/8ò thick are to be placed over the trench with at least 6 inches overlap on each side and edged with asphalt to prevent traffic movement. The backfill shall be allowed to set for a minimum of 12 hours before completing the asphalt patch. Slurry can typically be installed from the trench bottom to ground surface and no intermediary subgrade material is required for placement of asphalt patch.

6. Where trenches cross roads, streets, or driveways, backfilling shall be completed immediately following excavation and inspection. No trenches across roads shall remain open overnight. All crossings shall be backfilled, compacted and open to traffic at the end of each day's work. Major road crossings shall be excavated and backfilled in half widths of the traveled way so that at least one-half of the roadway is open to controlled traffic at all times during the work.

7. Backfill Around Structures: Backfill around structures shall conform to the same requirements as those for backfill around piping in unpaved areas, unless more stringent requirements are indicated in other sections of these specifications.

TP-109 COMPACTION REQUIREMENTS, METHODS, AND TESTING:

A. Minimum Density: Unless otherwise specified by applicable permits initial and final backfill and gravel resurfacing shall be compacted to the following minimum requirements. The minimum acceptable percent of compaction is the in place dry density divided by the reference density times 100. Compacted soil shall also be at plus or minus 2% of optimum moisture content.

TYPE	LOCATION	REQUIRED COMPACTION
I	Under any existing or proposed pavement, curb Gutter, sidewalk, roadway, shoulder, alley, slab, Footing, canal embankment, or when within 2 feet of above.	95%
II	Within any gas, electric, or telephone utility easement, Or within any street or road right-of-way outside the limits defined above as Type I.	90%
III	All other locations not defined above as Type I or Type II.	80% (or 100% of adjacent natural ground)

B. Reference Densities/Baseline Testing: The Contractor, at his expense, shall provide the reference densities for the various bedding and backfill materials used. All tests shall be performed by a certified soils testing laboratory approved by the Owner or Ownerôs Representative. If reference to natural ground is used, a nuclear gauge may be used to measure the density of the natural ground. The reference densities for compaction tests shall be established in accordance with ASTM D-698, Modified Proctor Test. The Contractor shall submit for approval a testing plan identifying proposed testing locations prior to the start of any excavation work.

Contractor shall provide copies of the Modified Proctor Tests with 5 point minimum moisture vs. density curves.

The contractor shall coordinate the collection of soil samples for proctor testing with the IHS construction inspector such that both parties are on-site during the collection of soil samples. This will ensure that enough samples are collected to provide for accurate density testing during construction by providing reference density for differing soil conditions within the project area.

C. Methods: Mechanical compaction is permitted. Water jetting methods are not permitted. The backfill shall be uniformly moistened to plus or minus 2% of optimum moisture content, placed in sufficiently thin layers to obtain the specified results, and compacted with hand and/or pneumatic tamp, roller, hydrohammer, or other device which will obtain the specified density without injury to the pipe or related structures.

D. Density Tests: Backfill density tests shall be performed in accordance with the latest versions of ASTM D-1556 (Sand Cone Method), ASTM D-2167 (Rubber Balloon Method), ASTM D-2216 (Moisture Content), ASTM D-2922 (Nuclear Density), and ASTM D-3017 (Nuclear Moisture Content). The Contractor will perform initial field density tests for each location listed in the next paragraph at the expense of the Contractor. Any additional tests due to failure of initial tests shall be at the expense of the Contractor.

The Contractor will perform at least one (1) compaction test every other lift at each two hundred and fifty (250) linear feet of Type I location. One compaction test will be performed every other lift on each five hundred (500) linear feet of trench at Type II or III locations. A minimum of one (1) compaction test shall be performed under each lift station base and a minimum of four (4) compaction tests shall be performed on each lift of material under proposed foundations or tanks. The exact test locations shall be specified by the Owner or Ownerôs Representative. The Owner may perform additional tests. If the results of any of the compaction tests indicate insufficient compaction, the area in question shall be reopened to a depth required for proper compacting, then refilled, compacted and retested, at the expense of the Contractor, until the compaction tests indicate that the necessary compaction requirements have been met. Two copies of the test results of any retesting performed by the Contractor shall be provided to the Owner, for approval, prior to any permanent surfacing. Any improperly placed backfill, or locations where settlement occurs, shall be reopened to the depth required for proper compaction, then refilled and compacted at the expense of the Contractor. The surface shall be restored and resurfaced, if necessary to the required grade.

TP-110 DISPOSAL OF EXCESS MATERIAL:

Excess material, including rock, broken concrete, bituminous materials, debris or other materials not suitable for backfill, shall be removed from the site and wasted in the disposal areas selected by the Contractor and approved by the Owner or Ownerôs Representative.

The disposal of such excess materials will not be paid for separately, but shall be considered as incidental to and a part of the cost for the applicable contract bid item.

TP-111 CLEANUP:

Upon completion of the work, the entire site shall be cleared of all debris, and ground surfaces shall be finished to smooth, uniform slopes and shall present neat and workmanlike appearance. All slopes shall be trimmed and dressed, and all surfaces graded such that effective drainage is assured.

Unpaved streets shall be graded smooth to the satisfaction of the Owner or Ownerôs Representative.

TP-112 TRENCH MAINTENANCE:

The Contractor shall, for a period of one year after completion and final acceptance of the work, maintain and repair any trench settlement that may occur and shall make suitable repairs to any pipe, pavement, or other structures that may become damaged as a result of backfill settlement.

TP-113 STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

The Contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the latest requirements of the Environmental Protection Agencyôs (EPA) National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Large and Small Construction Activities. The SWPPP must be prepared in accordance with good engineering practices and must 1) Identify all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site; 2) Describe practices to be used to reduce pollutants in storm water discharges from construction site; 3) Assure compliance with the terms and conditions of the NPDES General Permit.

If the Contractor is not experienced in the preparation of SWPPP, the contractor shall retain the services of an environmental firm regularly engaged in the preparation of

SWPPP to perform said service. The completed SWPPP must be approved by the Owner or Ownerôs Representative at least 14 calendar days before the start of construction so that a Notice of Intent can be sent to EPA.

The Contractor shall fully implement the SWPPP from the commencement of construction until final stabilization, as defined in the NPDES General Permit is achieved.

The Contractor shall maintain and update the SWPPP, as required in the NPDES General Permit, for the life of the project. Updates shall include amendments required as a result of the ineffective controls discovered through the course of inspections or investigations conducted by the Owner or Ownerôs Representative, site staff, or by local, state, tribal or federal officials. The Contractor shall submit a Notice of Intent to EPA to obtain permit coverage, modify the coverage as necessary, and terminate permit coverage once final stabilization is achieved.

TP-114 LINES AND GRADES:

The Engineer will give all lines, grades and building locations on the plans and will supply the contractor with the AutoCAD drawing to stake out the facilities to be installed. The CONTRACTOR shall be responsible for staking out pipeline centerlines with a lath every 200 feet or line-of-sight whichever is less. Bends, intersections, manholes, lift station centers and fence corners shall be staked by the CONTRACTOR and provided with two offsets for alignment. Elevation references will be provided as shown on the plans, at lift station and for sewer manholes. The Contractor shall be responsible for the preservation of the location and line and grade stakes when set, and if disturbed, shall have such stakes replaced.

TP-115 CLEARING & GRUBBING:

It is the contractorôs responsibility to clear and grub the site prior to or during construction. The contractor shall remove all trees along the water and sewer main alignments. Trees may either be chipped with a woodchipper and placed over the trench for erosion control or disposed of at the Contractorôs expense. Clearing and grubbing shall be done at the contractorôs expense.

TP-116 SEEDING:

All disturbed areas shall be returned to their pre-construction vegetative state. The contractor shall submit a seed mix that is equivalent to the native vegetation in the

area of construction. The contractor shall protect the seed after it is placed with hay mulch, straw mulch, wood cellulose mulch, or as approved by the project engineer. A minimum of 20 pounds of seed per acre shall be placed. Seed shall be placed by either drill seeding at a depth of approximately 1 inch or broadcast seeding. If broadcast seeding is utilized, the contractor shall apply twice the minimum seeding rate (40 pounds of seed per acre). The contractor shall perform maintenance as needed to ensure that adequate vegetative growth and stabilization has taken place to minimize erosion after construction is completed.

TP-117 FROST PROTECTION:

A. Materials: The insulation shall be rigid extruded polystyrene insulation board, having a minimum compressive strength of 25 psi. The width shall be 2 feet for mains, service lines and effluent discharge lines less than 6-inches (nominal diameter). The thickness shall be 2-inches.

B. Placement: When indicated on the drawings and in the bid schedule, insulation shall be placed in areas where water lines, sewer lines, or effluent discharge lines are susceptible to freezing. The insulation shall be centered over the main with no more than 6 inches of compacted fill between the pipe and insulation. The Contractor shall grade fill so insulation lays flat and maintain a straight alignment of insulation. The Contractor shall lap insulation by 6 inches or stagger by 6 inches if composed or two layers. The thickness for the first lift of backfill over the insulation shall be a minimum of 8 inches. The Contractor shall not operate construction equipment directly on insulation and not compact the first lift with the backhoe-mounted compactor, or any other large compaction equipment. The remaining backfill shall be compacted using normal construction practices.

TP-118 REPAIRS TO DAMAGED UTILITIES

The contractor is responsible for repairing any utilities that they damage during construction at no cost to the Owner. Repairs shall be made in accordance with the requirements of each utility. Below are the requirements for making repairs to damaged water and sewer utilities.

Water Mains: If the damage is small a small crack or hole in the water main, the contractor shall install a stainless steel repair coupling equal to a Romac SS1, SS2, SS3 or Ford Style F1. If the damage is too large to repair with a repair coupling, the Contractor shall install new water main to replace the damaged water main. The repair must result in a watertight water main that does not leak. The new water main shall be DR-18, Class 235, C900 PVC water main per TP-4. The new water main shall be connected to the existing water main using restrained joint solid sleeve

couplings equal to Romac Alpha series restrained couplings.
Water Service Lines: If the damage is small a small crack or hole in the water service line, the contractor shall install a stainless steel repair coupling equal to a Ford Small Repair Clamp with Full Wrap Gasket FSC. If the damage is too large to repair with a repair coupling, the Contractor shall install new water service line to replace the damaged water service line. The repair must result in a watertight water service line that does not leak. The new water service line shall be 200 psi rated polyethylene water service line meeting TP-5 requirements. The new water service line shall be connected to the existing water service line using stab joint, compression joint, or pack joint brass fittings as specified in TP-5.
Sewer Mains & Service Lines: If the damage is small a small crack or hole in the sewer main or service line, the contractor shall install a stainless steel repair coupling equal to a Romac LSS1, LSS2, or LSS3. If the damage is too large to repair with a repair coupling, the Contractor shall install new sewer main or service line to replace the damaged sewer main. The repair must result in a watertight sewer main or service line that does not leak. The new sewer main shall be SDR-35 PVC sewer main meeting TP-6 requirements and the new sewer service line shall be SDR-35 PVC sewer service line meet TP-7 requirements. The new sewer main or service line shall be connected to the existing sewer main using solid sleeve couplings equal to Romac 501 sewer couplings.

TP-119 AS-BUILT DRAWINGS:

A. General: The as-constructed drawings shall be a record of the construction as installed and completed by the Contractor. They shall include all the information shown on the Contractor's set of drawings and a record of all deviations, modifications or changes from those drawings, however minor, which were incorporated in the work, all additional work not appearing on the contract drawings and all changes which are made after final inspection of the contract work.

B. As-Built Drawings: The Contractor shall mark up one set of paper prints to show the As-Built Drawing information. These Asbuilt Drawing prints shall be kept current and available on the job site at all times. All changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. No construction work shall be concealed until the necessary record data has been recorded. The Asbuilt Drawing marked prints will be jointly inspected for accuracy and completeness by the Owner and a responsible representative of the construction Contractor prior to submission of each partial payment, as evidenced by the issuance of a receipt by the Owner indicating the adequacy of the information. Failure to keep the as-constructed marked prints on a

current basis shall be sufficient justification to withhold approval of request for payment or suspend pay estimates. The drawings shall show the following information, but not limited thereto.

1. The location and description of any utility lines or other installations of any kind or description known to exist within the construction area. The location includes dimensions to permanent features.
2. The location and dimensions of any changes from the contract drawings.
3. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabrication, erection, installation plans, and placing details, pipe sized, insulation materials, dimensions of equipment foundations, etc.
4. All changes or modifications which result from the final inspection.
5. All information as required in the technical provisions.

C. Electronic/Surveyed As-built Drawings: The contractor shall obtain the services of a surveyor licensed in the State of New Mexico to survey in the locations of all sanitation facilities installed by the project being constructed. The number and location of surveyed points must be sufficient to provide enough detail to accurately identify the location of the installed sanitation facilities. Points to be surveyed shall include, but not be limited to:

Water Mains & Services: gate valves, fire hydrants, flush hydrants, water meters, air/vacuum release valves, water/sewer crossings, water main bends, water service line connection, water main intersections, casing pipe, water main reducers, and other water main components installed under this project.

Other Water Facilities: wells, booster pumps, valve vaults, building corners, fence corners, water tanks (including base and overflow elevations), and other water main components installed under this project.

Sewer Mains & Services: manholes (including rim elevation, invert in elevation, and invert out elevation), terminal sewer main cleanout rim and invert, sewer service cleanout, new sewer service line connection, and other sewer components installed under this project.

Other Sewer Facilities: lift stations (including base elevation, rim elevation, invert in elevation, lead/lag pump on elevation, all pump off elevation, and high/low alarm elevation), valve vaults, gate or plug valves, air/vacuum valves, building corners, fence corners, treatment tanks (including rim elevations, invert in elevations, and

invert out elevations), treatment units, lagoons (including floor elevation, top of berm elevation, and invert elevations of all piping in transfer structures), and other sewer components installed under this project.

The contractor shall furnish the Owner with electronic asbuilts of the facilities installed on this project in ACAD format (dwg file). The project engineer will furnish the contractor with an electronic copy of the contract drawings in ACAD format and will provide control points for use by the contractor to draft the electronic asbuilt drawings. The labeling, linework, and format of the electronic asbuilts shall be similar to that of the contract drawings.

D. Review and Approval: One set of the preliminary As-built Drawings marked prints shall be delivered to the Owner before final inspection for his review and approval. The review by the Owner will be expedited; however, the Owner cannot guarantee to review more than one complex mechanical or electrical Record drawing sheet per working day. Upon disapproval of the As-built Drawings one set of marked prints will be returned to the Contractor for further work and resubmitted to the Owner.

E. Other: All costs incurred by the Contractor in the preparation and furnishing As-built Drawings shall be included in the contract price and no separate payment will be made for this work.

TP-119 MEASUREMENT AND PAYMENT:

A. General: Except for the following items, the cost of all work done by the Contractor as required under Section 01 of the Technical Provisions shall be merged with the pay items defined within the Measurement and Payment portions of other Sections of this contract.

B. Rock Excavation: Payment for rock excavation shall be at the unit price listed in the Bid Schedule based on the computed number of cubic yards removed. No differentiation payment will be made between solid or loose rock excavations.

C. Dewatering: Dewatering shall be based on the actual number of lineal feet completed. Payment for dewatering shall be at the contract unit price shown in the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for a complete dewatering installation.

D. Mobilization/Demobilization: Payment for mobilization/demobilization shall be at the unit price listed in the bid schedule. 60% of this line item may be requested upon complete mobilization to the job site and the remainder may be requested upon demobilization from the job site.

E. Storm Water Pollution Prevention Plan: Payment for the preparation and implementation of the SWPPP shall be paid on a lump sum basis as shown on the Bid Schedule. Payment shall be full compensation for plan preparation including required revisions for Ownerôs acceptance, updates to the SWPPP for the life of the project, permit application, inspections, installation and maintenance of controls, modification of controls as determined by inspections, removal of pollutants due to failed controls, and permit termination.

F. Seeding: Seeding shall be paid for on a lump sum basis to seed the site in accordance with these specifications. Payment for seeding shall be at the contract unit price shown in the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for complete installation.

G. Exploratory Time: Exploratory time shall be measured on an hourly basis for an actual period spent on locating the existing utility line exceeding two hours. Contractor shall follow these steps:

1. Call the representative from the operating Utility and make every effort to locate the existing utility line prior to excavation.

2. Locate the existing utility line for two hours at the Contractorôs expense.

3. If the Contractor is unable to locate the existing utility line within two hours, the Contractor shall notify the Owner or Ownerôs Representative and both agree upon a start time. The start time shall be recorded. When the Contractor locates the existing utility line, the end time shall be recorded.

If the Contractor fails to notify the Owner or Ownerôs Representative when the Contractor will start locating the existing utility line, the Contractor will not be compensated. Payment for exploratory time shall be at the contract unit price shown in the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for locating the existing utility line.

H. Frost Protection: Payment for frost protection shall be based on the actual number of lineal feet completed. Payment for frost protection shall be at the contract unit price shown in the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for a complete installation.

TP-120 APPROVALS:

A. Stabilization material, if required

B. Bedding material, if required

C. Rock excavation method, if required

D. Dewatering procedures, if required

E. Baseline Proctor density test results (5 point moisture density curves)

F. Baseline testing location plan

G. Soil Testing Lab Certification

H. Stormwater Pollution Prevention Plan, if required

I. Blasting contractor and credentials, if required

J. Seed Mix

K. Insulation, if required

L. Traffic control plan, if required

TECHNICAL PROVISIONS

SECTION 02 - CONCRETE

TP-201 SCOPE

Furnish all labor, materials, equipment, and incidentals as required, and perform all operations in connection with the placement of concrete in accordance with the applicable drawings and these specifications.

TP-202 MATERIAL:

A. Cement: Portland cement shall conform to ASTM C150 Cement, Portland Type I, Type IA, Type II, Type IIA, Type III, or Type IIIA.

B. Aggregate: Aggregate shall be composed of clean, hard, durable, uncoated grains and crushed stone, free from detrimental amounts of clay, dust, soft or flaky particles, loam, shale, schist, slate, alkali, disintergrated stone, organic matter or other deleterious matter.

C. Water: All water used for concrete shall be of potable quality.

TP-203 CONCRETE REQUIREMENTS

Property		Minimum	Maximum
Cement Factor	(sacks per cu. Yd.)	6.0	---
Water-Cement Ratio	(gal. Per sack)	---	6.0
Entrained Air	(percent)	2.0	6.0
Slump	(inches)	1.0	4.0
Compressive Strength			
7 day	(psi)	1,800	
28 day	(psi)	3,000	

Concrete shall be uniformly plastic, cohesive and workable, i.e., can be placed without honeycomb and without voids in the surface. Workability shall be obtained without producing a separation of ingredients such that free water appears on the surface. In general, minimum amount of water required to produce a workable mixture shall be used.

TP-204 FREEZING WEATHER:

No concrete work shall be done if the air temperature is below 40 degrees ^{0}F, except with the approval of the Owner or Ownerôs Representative. If approval is given to work, the water and aggregate shall be heated to at least 80 degrees ^{0}F, before mixing.

In all cases where the air temperature is predicted to be below 40 degrees ^{0}F, the concrete shall be insulated for at least 72 hours by straw, blankets or other approved methods. No concrete shall be poured against frozen ground.

The use of salt or other compounds to prevent concrete from freezing shall not be permitted. Any work that has been injured by freezing shall be removed and replaced at the Contractorôs expense.

TP-205 CURING:

Fresh concrete shall be adequately protected from heavy rains and mechanical injury. Concrete surfaces shall be kept moist by spraying with liquid membrane coating. Foundations and thrust blocks may be cured by covering with water saturated soil or backfill. All concrete shall be cured at least three days prior to stripping forms or structural loading.

TP-206 TRANSIT MIXED CONCRETE:

Ready-mixed concrete from a central batching plant and mixed in transit will be permitted with the Owner or Ownerôs Representativeôs approval. A plant batch certification sheet shall be provided by the concrete supplier listing the batch components for approval by the Owner or Representative.

TP-207 FIELD TESTING:

Four cylinders shall be taken for each 50 cubic yards of concrete placed or portion thereof. If the Owner or his/her representative suspects, by visual inspection, slump, or other tests, that any other concrete appears substandard, additional test cylinders shall be required. The Contractor shall provide cylinder molds at the construction site and shall have the cylinders tested by an approved laboratory, with the Contractor bearing all costs. If any test cylinder falls below 3000 psi at 28 days, this shall be sufficient cause to reject that portion of concrete. The Contractor shall remove and replace defective concrete with acceptable material at his own expense. The test cylinders shall comply with ASTM C31 for making and curing test specimens in the field. Additional information concerning testing is found in the SPECIAL PROVSIONS.

In addition, the contractor shall perform one slump test and one air entrainment test for each concrete truck.

Field testing will not be required for non-structural concrete placement such as pre-cast manhole

bases, concrete collars, yard hydrant concrete pads, fence post concrete anchors, monitoring well concrete pad, control panel concrete pad, cleanout collars, manhole collars, and drop manhole concrete encasements.

TP-208 PLACING CONCRETE:

Before placing concrete, the Contractor shall give 72-hour advance notice to permit proper inspection of forms and reinforcement by the Owner or Representative.

After completion of the mixing, the concrete shall be rapidly conveyed to and deposited in the forms. Consolidate the concrete, immediately after placing, by mechanical vibrating equipment, supplemented by hand-spading, roding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI recommended practices.

The concrete shall be placed in such a manner as to prevent excessive crawling and segregation of the aggregate. No concrete shall be used that has partially set before final placing, nor shall retempering of the concrete be permitted. All concrete shall be placed in the forms no more than 90 minutes after mixing.

TP-209 FORMS:

The Contractor shall provide forms that will produce correctly aligned concrete. The centering of the forms shall be true and rigid and thoroughly braced both horizontally and diagonally. Forms shall be sufficiently strong to carry the dead weight of the concrete as a liquid without deflection, and tight enough to prevent leakage of mortar. The inside of forms shall be coated with an approved oil or thoroughly wetted. The Owner or Representative shall be notified prior to removal of form work.

The final concrete structure shall be inspected for alignment, elevation, and concrete quality. Final concrete structure alignment and elevation shall be checked by use of land surveying instruments.

Should the concrete structure alignment, elevation, and/or quality test results be determined unsatisfactory by the Owner or Ownerôs Representative, the entire structure or parts of the structure will be rejected. All further alignment or elevation corrections, or any concrete removal and/or replacement, shall be at the Contractorôs expense.

Honeycombed and void areas in the concrete shall be removed and patched to produce a sound concrete product by a method selected by the Contractor and approved by the Owner or Ownerôs Representative.

TP-210 MORTAR:

Mortar shall be made of one-part masonry cement, three parts sand, and only a sufficient amount of water to make a workable plastic mix. Retempered mortar shall not be used.

TP-211 GROUT:

Grout shall be made of one part Portland cement, two parts sand, and only a sufficient amount of water to make a workable plastic mix. Retempered grout shall not be used.

TP-212 MEASUREMENT AND PAYMENT:

Concrete and other work or materials required by this section shall not be measured and paid separately. Rather, they shall be included in the unit or lump sum bid prices of those items shown on the Bid Schedule that require the inclusion of such materials or work, even if not specifically mentioned within the measurement and payment sections of those particular pay items.

TP-213 SUBMITTALS:

A. Concrete testing laboratory

B. Certification of concrete strength by the concrete supplier and/or proposed concrete mix

C. Curing Compound

TECHNICAL PROVISIONS

SECTION 06 ï GRAVITY SANITARY SEWERS

TP-601 SCOPE:

The work covered by this section consists of furnishing all plant, labor, equipment, materials and incidentals, in connection with the construction of gravity sewer mains and appurtenances, in accordance with these drawings and specifications.

TP-602 GENERAL:

All facilities shall be constructed in the locations to the grades and of the sizes shown on the drawings. Excavation, trenching and backfilling shall be in accordance with Section 01 of these Technical Provisions. Any section of sewer that is found defective in material, alignment, grade or joint shall be corrected so as to meet these specifications and drawings.

TP-603 MATERIALS:

A. Pipe, Joints and Fittings

1. PVC Gravity Sewer Pipe: Sewer pipe shall be PVC and shall conform to all requirements of product standard ASTM D3034 for pipe diameters up to 15 inches and ASTM F679 for 18-inch to 48-inch diameter sewer mains. Sewer pipe shall meet the pipe compound requirements of ASTM D1784 and shall be made with PVC 1120 resin, Type I, Grade I. Pipe stiffness shall meet ASTM D2412. Pipe shall be nominal size, SDR-35. Joints shall be furnished with one end belled. The joint shall be integral bell and spigot with a Rieber rubber gasket. The integral bell shall meet ASTM D 3212. The gaskets shall be as recommended by the pipe manufacturer and shall meet ASTM F477.

   Plastic pipe with scratches, gouges, or grooves deeper than 10 percent of the wall thickness shall be rejected.

2. Services Wyes and Risers: PVC fittings utilized shall be single gasketed bell and spigot push-on type, meeting ASTM 3034.

3. Ductile Iron Pipe: All ductile iron pipe shall be in accordance with AWWA C151 and shall be in 18 to 20 foot lengths with single rubber gasket (push-on) joints in accordance with AWWA C111. Pipe shall be 350 psi rated. All ductile iron pipe used for sewer shall be cement-mortar lined in accordance with ASTM A746 and AWWA C104.

B. Manholes

1. General: All concrete used in constructing the manhole shall conform to Section 02 of the specifications. All concrete used for manholes shall be batched with a chemical resistant admixture for protection against hydrogen sulfide gas. The admixture shall be equal to Moxie 1800 Super-Admix as manufactured by Moxie International. Contractor shall provide most recent concrete cylinder break result which shall be no more than 30 days old. . Manholes shall meet the minimum standards of ASTM C478-18 ï Standard Specification of Circular Precast Reinforced Concrete Manhole Sections.

2. Lines and Grades: All manhole locations shall be as shown on the drawings unless field changes are necessary. Sewer line cut stakes shall be provided by the Contractor at each manhole and at the midpoint between each manhole at a minimum. A minimum of 2 offset stakes shall be provided for each cut stake. Further information on staking is found in TP-1.

3. Manhole Frames and Covers: Frames and covers shall be made of cast iron with a combined weight (frames and cover) of not less than 266 pounds. Cast iron frames and covers shall conform to drawings in all essentials of design. The cover shall have a lifting pocket.. Manhole frames and covers shall meet ASTM A48. Before leaving the foundry, all castings shall be thoroughly cleaned after which they shall be dipped twice in a preparation of hot asphalt or coal tar and oil, in such a manner as to form a firm coating. The manhole and covers shall be set such that the top of the cover shall be 3 inches above unpaved roads where paving is expected later or ground level as shown on the drawings or as directed by the Owner or Ownerôs. Frames and covers shall be East Jordan Iron Works, Inc. Product No. 00120211, 1202Z Frame with vent hole (1202 Assembly, Product No. 00120202) or without vent hole (1202A Cover, Product No. 00120263) or approved equal.

4. Manhole Bases: Bottom manhole sections shall have integral precast base or floor slabs. Manhole bases shall be a minimum of 6 inches thick for 48 inch diameter manholes and a minimum of 8 inches thick for manholes larger than 48 inches. If precast concrete manhole bases are used, they shall be bedded on 8 inches of crushed rock or gravel meeting the following requirements: 100% passing a 40 mm screen and not more than 10% passing a No.40 sieve, with uniform grading. Precast bases with precast channels shall be pre-approved on a case-by-case basis by the Owner or Ownerôs representative. Cast in place base slabs shall be constructed with reinforced concrete as shown in the detail plans. The contractor shall submit detail drawings showing the size, placement, and spacing of reinforcing bars for manhole bases. This requirement applies for both pre-cast and cast-in-place manhole bases. Cast in place base slabs shall be constructed with a keyed joint for the

manhole barrels to be installed into as shown on the detail drawings.

5. Standard Manholes: Standard manholes are those which have a depth, measured from the invert of the outlet pipe to the top of the cover, greater than 6 feet. Standard manholes shall be constructed of 4 feet inside diameter, 5 inches thick precast concrete manhole sections. Cone sections shall be eccentric, 5 inches thick precast concrete. Standard manholes shall have a 6 inch thick concrete base slab, and shall be constructed as shown on the detail drawings.

6. Shallow Manholes: Shallow manholes shall have a depth of 6 feet or less, and shall be constructed of 4 feet inside diameter, 5 inches thick precast concrete sections with 8 inch thick reinforced concrete flat top cover and 6 inch thick base slabs. Shallow manholes shall be constructed as shown on the detail drawings.

7. Inlet Manholes: Inlet manholes shall have a depth of 6 feet or less, and shall be constructed of 4 feet inside diameter, 5 inches thick precast concrete sections with reinforced concrete cover 8 inches thick and base slabs 6 inches thick, respectively in accordance with ASTM C478-18. The inlet manhole shall be constructed as shown on the detail drawings.

8. Diversion Manholes: Diversion manholes shall have a depth of 6 feet or less, and shall be constructed of 4 feet inside diameter, 5 inches thick precast concrete sections with reinforced concrete cover 8 inches thick and base slabs 6 inches thick, respectively in accordance with ASTM C478-18.. Diversion manholes shall be constructed as shown on the detail drawings. Each diversion manhole shall be provided with a fiberglass gate frame and gate. The fiberglass gate frame shall have a thickness of 3/16-inch. The gate frame shall have a channel that is ¼-inch. The fiberglass gate shall be ¼-inch thick. The gate frame and gate shall be constructed as shown on the detail drawings.

9. Drop Manholes: An interior drop bowl, drop pipe, and fasteners shall be installed for the inlet pipe in the existing drop manhole. The interior drop bowl shall be B-8 Drop Bowl, part number B8DB, as manufactured by Reliner/Duran, Inc. of Lyme, Connecticut or equal. The interior drop bowl shall be installed as per manufacturerôs recommendation using stainless steel fasteners. The drop pipe shall be securely attached to the manhole wall using stainless steel Reliner Adjustable Clamping Brackets or equal and stainless steel fasteners. The drop pipe shall be 8-inch SDR35. The adjustable clamping brackets shall be made of 1-1/2ò width, 11 gauge, type 304 stainless steel. The pinch bolts and nuts shall be 3/8ò diameter 18-8 stainless. Bracket interval shall be 4 feet maximum and a minimum of two brackets. The connection of the drop bowl to the drop pipe shall be by flexible external pipe

coupler. The turn-out at the base and end of the drop pipe shall be installed using a 45 degree PVC pipe elbow.

10. Waterstops: All pipe penetrations through the manhole shall be equipped with waterstop devices. Waterstop devices shall be equal to concrete manhole adapter as manufactured by Fernco. Grouting shall be only applied between the penetrating PVC and receiving concrete invert to create a smooth, watertight transition.. Grouting shall not be applied to or around the boot connectors.

C. Terminal Sewer Main Cleanouts: Such cleanouts shall be of the same material as the gravity sewer main and sized as called for on the bid schedule. Cleanouts are to be constructed as shown on the detail drawings. Frame and lid shall be equal to East Jordan Iron Works, Inc. Product No. 00157804, Catalog No. 1578ZPT and 1578APT with a locking cover. Covers shall be marked "SEWER. The open pipe inside the locked cover shall be plugged with a Cherne Original Gripper, or equal.

D. Warning Tape: Warning tape shall be green in color with "Caution - Buried Sewer Line Below" continuously printed on it. Tape shall be a minimum of 3-inches wide, 5 mils total thickness, composed of plastic with a metal foil core, and equal to Traceline Underground Utility Marking Tape. The warning tape shall be installed 12 inches above the pipe. This tape shall also be installed on sewer service lines.

E. Marker Post: 2-1/2 inch diameter aluminum or steel utility markers with stampable brass or aluminum caps shall be installed to mark the location of all manholes and terminal sewer main cleanouts. Marker posts shall be painted with a minimum of 2 coats of yellow paint designed for outdoor commercial use. The marker posts shall be properly cleaned and the surface prepared in accordance with the paint manufacturerôs recommendations prior to painting. Markers shall be 60-inch long, 2.5 inch diameter, Bernsten Model A1NBF60-OS aluminum posts, or approved equal. Marker posts shall be installed, to leave 36 inches exposed above ground. Where possible, the markers shall be located immediately above the indicated item. The Owner will specify the location for markers requiring offset installation. The Contractor shall be responsible for accurately stamping the location, orientation and size of the sewer main, manholes, terminal cleanouts, and appurtenances on the cap. Installation and stamping of marker posts shall be considered incidental to installation of sewer main, manholes, terminal cleanouts, and appurtenances.

Under no circumstances shall marker posts be installed within the right-of-way of any roadways, unless specifically indicated on a right-of-way permit. Instead, the contractor shall install carsonite marker posts to mark the locations of valves, vaults, bends, tees, crosses, interconnections, etc. within the right-of-way of roadways. Carsonite markers shall be 72 inches in length, 3.75 inches in width, green in color, model CRM306607 with anchor barb and ñCaution Sewer Pipelineò text on the

marker as manufactured by Carsonite Composites, or equal. The carsonite markers shall be installed directly over the item that it is marking with a 24 inch bury depth.

TP-604 TRENCH EXCAVATION AND BACKFILL:

Trenching and backfilling operations shall be performed as specified in Section 01 of the Technical Provisions.

TP-605 INSTALLATION OF GRAVITY SEWER LINES:

The bottom of the trench shall be shaped to give uniform support to the pipe. Pipe laying shall proceed upgrade, with the spigot end pointing in the direction of the flow. Each pipe shall be laid true to line and grade as shown on the drawings, and in such a manner as to form a close concentric joint with the adjoining pipe. As the work progresses, the interior of the sewer shall be cleared of all dirt and extraneous materials of every description. If the maximum width of the trench at the top of the pipe specified in Section 01 of these Technical Provisions is exceeded for any reason other than at the direction of the Owner or Ownerôs representative, the Contractor shall install such concrete cradling, encasement, gravel base or other bedding as may be required to satisfactorily support the added load of the backfill. Trenches shall be kept free from water and the pipe shall not be laid when conditions of the trench or weather are unsuitable for such work. At all times when work is not in progress, all open ends of pipe and fittings shall be securely closed so that no trench water, earth or other substances will enter the pipe.

TP-606 WATER AND SEWER LINE SEPARATION REQUIREMENTS:

A. General: Water lines located near sewers present conditions for serious potential cross contaminations. Protection from cross contamination can be provided by separation of the facilities and use of special piping materials. For measuring separation between pipes, all measurements shall be the clearance between pipes (pipe O.D. to pipe O.D.).

For the purposes of this section, the term ñlinesò shall include mains, laterals, and service lines for both water and sewer.

B. Horizontal Separation of Water and Sewer Lines: When water and sewer lines are laid parallel to each other, the horizontal distance between the water and sewer lines shall be at least 10 feet. Each line shall be laid in a separate trench.

When physical conditions, such as an existing obstruction, will not allow the required 10-foot horizontal separation, the water and sewer lines may be laid closer than 10 feet if the bottom of the water line is at least 18 inches above the top of the sewer line.

C. Vertical Separation of Water and Sewer Lines: When water lines cross sewer lines, the water line should be above the sewer line with no less than 18 inches vertical clearance (Measuring pipe O.D. to pipe O.D.).

Whenever possible the water line shall be above the sewer line. If the minimum 18-inch clearance cannot be obtained with the water line above the sewer, the water line must be installed under the sewer line.

Where a water line must cross under a sewer line, a vertical clearance of at least 18 inches between the bottom of the sewer line and the top of the water line shall be maintained. The water main shall be the normal water distribution pipe as specified on the construction drawings, with a 20-foot pipe section centered on the sewer crossing. No joints in sewer lines shall be permitted within 9 feet of a water line.

Where a water line must cross sewer service lines or mains, and the water line is not a minimum of 18 inches above the sewer service line or main, special protection is required. In these instances, the sewer service line or main shall be reconstructed of ductile iron pipe of the same size as the original sewer service line or main for a distance of 10 feet on either side of the water/sewer crossing point. As an alternative method of providing special protection, the contractor may place concrete a minimum of 8ò greater than the outside diameter of the pipe (i.e. 4ò of concrete all the way around the pipe) for a length of 20 feet (10 feet on either side of the water/sewer crossing point), if approved by the project engineer. Concrete shall meet TP-2 requirements. All existing sewer grades shall be maintained.

D. Water Main Separation from Sewer Manholes: No water pipe shall pass through, under, or come into contact with any part of a sewer manhole.

E. Separation Between Water Lines and Components of the Sewage Disposal System: Water lines shall not be installed within 10 feet of a septic tank, within 25 feet of a drainfield, or 50 feet from an outhouse. Also, waterlines shall not be installed within 100 feet of the perimeter fence of an individual lagoon, or within 500 feet of the perimeter fence of a community lagoon.

TP-607 CONCRETE ENCASEMENT OF SEWER MAIN:

Sewer line sections indicated on the plans as requiring concrete encasement shall be constructed in accordance with the detail drawings. Transition from PVC to DI sewer pipe shall be accomplished with approved a transition boot. DI piping shall extend a minimum of 6-1/2 feet beyond the limits of indicated concrete encasement unless otherwise directed in the plans and detail drawings. Concrete requirements shall be as indicated in Section 02 of these Technical Provisions.

TP-608 INSTALLATION OF MANHOLES:

Manhole invert channels shall be smooth and semi-circular in shape, conforming to the inside of the

adjacent sewer pipe section. The invert shall be finished smoothly with a semi-circular cross section. Flat-bottomed inverts shall not be acceptable. Inverts with humps or low spots or roughness of finish which will catch solid materials will not be acceptable. Inverts shall not be brush finished. A minimum invert elevation drop of one-tenth of a foot from the entrance to the outlet shall be provided in all manholes where there is a change in direction, or change in grade. Changes in direction of flow shall be made with a smooth curve of as large a radius as the size of the manhole will permit. S-curves will not be acceptable. Changes in sizes and grade of the channels shall be made gradually and evenly. The manhole shall be positioned such that the pipes intersect in the center of the manhole circle. The invert channels will be formed directly in the concrete. For those manholes where the sewer pipe does not change grade or slope, the invert may be constructed by laying a full section of sewer pipe through the manhole and cutting out the top half after the surrounding concrete has hardened.

The floor of the manhole outside the channels shall be smooth and shall slope toward the channel at a 15 percent grade. , installed as shown on the drawings. Any deviation of alignment of more than 3 inches for any step shall be cause for it to be reinstalled at the Contractor's expense.

The tops of all manholes shall have a concrete collar of the dimensions shown on the detail. Manholes shall be installed at the locations and elevations shown on the site plans or as directed by the Owner or Ownerôs representative in the field. Joints between precast manhole sections shall be sealed with "Ram Nek" bituminous rope type sealer, Reduced Friction Seal pre-lubricated gasket or equal. The sections shall then be grouted to a smooth finish on the interior and exterior of the manhole. Grout for jointing shall be as specified in Section 02 of the Technical Provisions. Manhole sections, and adjustment rings if required, shall be grouted in place when the manhole is constructed. The grout shall be spread evenly over the entire mating surface. The maximum number of adjustment rings shall be as indicated on the plans. The jointing and sealing materials shall be approved by the Owner or Ownerôs representative prior to installation.

Any drop manholes shall be constructed at the locations shown on the plans in accordance with the details shown on the construction drawings. Bases, walls and cones shall conform to the drawings. The manhole covers shall be set to the elevations shown on the drawings.

All connections between sewer pipe and manhole walls shall be sealed with non-shrinking grout in such a manner to make the manholes water tight.

Manholes shall not be acceptable if any evidence of infiltration into them is found. The Contractor shall take whatever actions are necessary, at his expense, to ensure that the manholes are completely watertight.

Precast manholes shall not be altered or modified in anyway. Precast manhole bases, barrel sections, etc. shall be installed in their precast condition. Chipping or altering the concrete shall not be allowed.

TP-609 CONNECTION TO EXISTING MANHOLES:

Connection of newly constructed sewer mains to existing manholes shall be of either the drop or at-grade type as indicated in the drawings and listed on the bid schedule. Reconstruction of manhole bases and inverts, all necessary piping, and associated work required to complete the connection shall comply with the provisions of Section TP-608.

All pipe entrances into the existing manhole shall be core bored, and a waterstop and watertight sealer shall be installed on each pipe penetrating into the manhole. All voids shall be repaired with non-shrink grout. Grouted areas shall be painted with bituminous coating on exterior. The invert shall be constructed as specified in TP-608 Installation of Manholes. Chipping and altering existing concrete inverts to connect the new sewer main pipe into the manhole is allowed.

TP-610 TESTING:

A. Sewer Main Alignment: After the gravity sewer lines have been completely backfilled and the contractor has verified the line as ready for testing, the Owner or his/her representative will check the alignment by shining a light between manholes. Any deviation from true line or grade may be cause for rejection of the line. Any deviation from true line or grade which prevents water from draining by gravity from the sewer system, including manholes, shall be corrected such that the facilities meet these specifications and drawings. For horizontal alignment only, a deviation allowance of one-quarter of the inside diameter of the pipe may be excepted by the Owner or Ownerôs representative.

B. Sewer Main Water Tightness:

Testing for water tightness in gravity sewer mains may be accomplished by either of the following two methods:

1. Exfiltration/Infiltration: Tests for water tightness in the gravity sewer mains shall be made by the Contractor in a manner approved by and in the presence of the Owner or Ownerôs representative. The sewer and manhole connections shall not leak under either external or internal water pressure in excess of 10 gallons per day per inch diameter per 1000 feet of sewer. The test shall be run for a minimum of a four hour period.

   Infiltration testing shall be completed under existing ground water conditions. Exfiltration testing shall be conducted under an internal pipeline test pressure generated by a manhole water level at least 1 foot above the highest elevation of the sewer main to be tested. Leakage by either infiltration or exfiltration greater than specified above shall be corrected by the Contractor at his expense. All equipment and water for these tests shall be furnished by the Contractor. This test will be made after the line has been completely backfilled.

2. Low Pressure Air Test:

Test Requirements & Setup:

a. Test each newly installed section of gravity sewer line between manholes.
b. Slowly introduce air pressure to approximately 5.0 psig.
c. Allow pressure to stabilize for at least five (5) minutes. Adjust pressure to 5.0 psig or the increased test pressure as determined below if groundwater is present. Start the test.

Test Procedure:

a. Determine the test duration for a sewer section with a single pipe size from the table below:

Low Pressure Air Test ï Test Times	
Sewer Main Diameter (inches)	Test Time (Minutes/100 Feet of Sewer Main)
8	1.2
10	1.5
12	1.8
24	3.6

b. Record the drop in pressure during the test period. If the air pressure has dropped more than 1.0 psig during the test period, the line is presumed to have failed. If the 1.0 psig air pressure drop has not occurred during the test period, the test shall be discontinued and the line will be accepted.

c. If the line fails, determine the source of the air leakage, make corrections and retest. The Contractor has the option to test the section in incremental stages until the leaks are isolated. After the leaks are repaired, retest the entire section between manholes.

C. Flushing: The Contractor shall flush all sewer lines before pre-final inspection to remove sand, silt and other foreign material which might have entered the pipe during construction. Water used for flushing shall be domestic quality or as approved by the Owner or his/her representative. All equipment and water for the flushing shall be furnished by the Contractor. This test will be made after the line has been completely backfilled. The Contractor shall dispose of all water and foreign matter after flushing in an approved manner.

D. Deflection Test: The maximum allowable deflection (reduction in vertical inside diameter) for PVC pipe shall be five percent. However, up to seven and one half

percent may be allowed 30 days after final backfilling. Deflection testing is required in all cases between all manholes. All locations with excessive deflection shall be excavated and repaired by re-bedding or replacement of the pipe. Acceptable methods of deflection testing include use of properly sized go-no-go mandrels or deflectometer. Deflection testing is not required for ductile iron sewer mains.

D. Manhole Testing: All manholes shall be tested for watertightness. Each manhole shall be tested immediately after assembly and prior to backfilling. All lift holes shall be plugged with an approved non-shrink grout. All pipes entering the manhole shall be plugged, taking care to securely brace the plug. If the manhole fails the initial test, necessary repairs shall be made and the manhole shall be retested. One of the following methods shall be used.

1. Vacuum Testing: Vacuum testing should be conducted in accordance with ASTM C-1244 (Vacuum Test for Concrete Manholes), except as modified below. The vacuum test head shall be placed inside the top section and the seal inflated in accordance with the manufacturers' recommendations. A vacuum of 10 inches of mercury shall be drawn and the vacuum pump shut off. With the valves closed, the time shall be measured for the vacuum to drop to 9 inches. The manhole shall pass if the time is greater than 60 seconds for 48-inch diameter, 75 seconds for 60-inch, and 90 seconds for 72-inch diameter manholes.

2. Hydrostatic Testing: Hydrostatic testing shall be conducted in accordance with ASTM C-969 except as modified below. The mains into and out of the manhole shall be stoppered with a suitable device such as a tethered pneumatic plug. The manhole shall be filled with water to the ring. After a period of at least one hour to allow for concrete absorption and to allow the water level to stabilize, the manhole shall be refilled and the water level shall be checked. The hydrostatic test shall then begin and shall be administered for a period of 4 hours. If the water level is found to drop more than ¼ inch per foot of depth of the manhole over this 4 hour duration, then the leakage shall be considered excessive and the Contractor shall be required to make all necessary repairs and retest the manhole. The exterior of the manhole shall be inspected during this period for visible evidence of leakage. Visible moisture, sweating, or beads of water on the exterior of the manhole shall not be considered leakage, but any water running across the concrete surface will be considered leakage and shall be repaired to the satisfaction of the Engineer regardless of the volume of water lost during the test.

TP-611 CLEANUP:

Upon completion of the work, the entire site shall be cleared of all debris, and the ground surface shall be finished to smooth and uniform slopes. All fences, clotheslines, gravel driveways or other

obstructions removed during construction shall be left in a condition at least equal to their condition prior to construction. Cleanup shall be considered an incidental item and no additional payment shall be made for it, but rather its costs shall be merged with the applicable pay item irregardless of whether cleanup is specifically included in the measurement and payment section.

TP-612 MEASUREMENT AND PAYMENT:

A. Gravity Sewer Main: Gravity sewer main shall be measured in linear linear feet along the centerline of the pipe, center to center of the manhole without deduction for fittings or diameter of manholes, for each of the various sizes and types of pipe installed. Payment for sewer pipe shall be at the contract unit price for the various sizes and types of sewer main installed as shown on the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, materials, exfiltration/infiltration testing, and incidentals required for a complete installation, including but not limited to excavation, bedding, stabilization material, laying and jointing pipe, exfiltration/infiltration testing or air testing, supplying water, plugging, measuring, flushing, backfilling, as-builts, and final cleanup.

B. Shallow Manholes: Shallow manholes shall have a depth of 6 feet or less when measured from the invert of the outlet pipe to the top of the cover, and shall be measured each. Payment shall be at the contract unit price shown on the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for a complete installation, including but not limited to excavation, concrete, frame and cover, adjustment of height, invert forming, connection to sewer lines, backfilling, as-builts, and final cleanup.

C. Standard Manholes: Standard manholes shall have a depth greater than 6 feet when measured from the invert of the outlet pipe to the top of the cover, and shall be measured each. Payment shall be at the contract unit price for the various depths of manholes installed as shown on the Bid Schedule, which shall be full compensation for furnishing all labor, equipment, material, and incidentals required for a complete installation, including but not limited to excavation, concrete, frame and cover, adjustment of height, invert forming, connection to sewer lines, backfilling, as-builts, and final cleanup.

D. Drop Manholes: Drop manholes shall be measured each. Payment shall be at the contract unit price shown on the Bid Schedule, which shall be full compensation for furnishing all labor, equipment, material, and incidentals required for a complete installation, including but not limited to excavation, concrete, frame and cover, adjustment of height, invert forming, connection to sewer line, backfilling, as-builts, and final cleanup.

E. Inlet Manholes: Inlet manholes shall be measured each. Payment shall be at the contract unit price shown on the Bid Schedule, which shall be full compensation for furnishing all labor, equipment, material, and incidentals required for a complete

installation, including but not limited to excavation, concrete, frame and cover, gate frame and gates, adjustment of height, invert forming, piping, connection to sewer line, backfilling, as-builts, and final cleanup.

F. Diversion Manholes: Inlet manholes shall be measured each. Payment shall be at the contract unit price shown on the Bid Schedule, which shall be full compensation for furnishing all labor, equipment, material, and incidentals required for a complete installation, including but not limited to excavation, concrete, frame and cover, gate frame and gates, adjustment of height, invert forming, connection to sewer line, backfilling, as-builts, and final cleanup.

G. Terminal Sewer Main Cleanouts: Sewer main cleanouts installed at the terminal end of a sewer main shall be measured each. Payment shall be at the contract unit price on the Bid Schedule, which shall be full compensation for furnishing all labor, equipment, material, and incidentals required for a complete installation, including but not limited to excavation, concrete, frame and cover, fittings, backfilling, as-builts, and final cleanup.

H. Connection to Existing Manhole: Connections to existing manholes shall be measured each. Payment shall be at the contract unit price shown in the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, material, and incidentals required for a complete installation, including but not limited to excavation, cutting into the existing manhole, grouting, fittings, removing the existing invert, pouring and forming a new invert, backfilling, as-builts, and final cleanup.

I. Water and Sewer Main Crossings - Sewer Mains: All costs associated with completion of water and sewer main crossings shall be merged with other bid items and will not be considered a separate item for payment. No additional payment will be made for installation of ductile iron pipe associated with water and sewer main crossings.

J. Concrete Encasement: The concrete encasement shall be measured in linear feet along centerline of the encased pipe, beginning to end of encasement. Payment shall be at the contract unit price shown in the Bid Schedule, which shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for a complete installation.

TP-613 SUBMITTALS:

A. PVC sewer pipe and fittings
B. Ductile iron sewer pipe and fittings
C. Manhole ring and cover
E. Pre-Cast Manhole including base and pre-cast channels
F. Sewer main warning tape

G. Cleanout frame and lid
H. Exfiltration/Infiltration/Air testing method
I. Fiberglass gate frame and gates
J. Detail drawing of size, placement, and spacing of reinforcing bars for manhole bases

TECHNICAL SPECIFICATIONS

SECTION 07 - SEWER SERVICE LINES

TP-700 GENERAL:

The Contractor shall provide all labor, equipment and materials required to install the residence sewer service line indicated on the site layout plans. Installation shall include necessary fittings for connection to the building sewer stubout, tapping of the sewer, installation of the wye or tee as required. All permits, permissions or other authorizations required by the tribal or municipal utility authority for tapping and connection are the responsibility and cost of the Contractor.

TP-701 MATERIALS:

All pipe and fittings required for completion of the sewer service line installation shall meet the requirements of the latest revision of ASTM D 3034. All service line piping shall be 4 inches PVC unless otherwise directed. Pipe shall be nominal size, SDR-35, 0.125-inch minimum wall thickness.

TP-702 INSTALLATION:

Trenching and excavation for sewer service lines shall be in accordance with the provision of Section 01 . The grade from building to sewer main connection shall be uniform and not less than 2 percent. Any changes or deviations in line shall be made with bends not exceeding an angle of 45 degrees.

TP-703 CLEANOUTS:

Sewer service line cleanouts will be installed at the locations indicated in the plans. The cleanout shall be constructed of SDR-35 PVC with a cast iron ferrule equal to a Tyler 2-11. The cleanouts shall be installed with a brass hex socket plug equal to Tyler A Low Square Head cleanout plug. A clear silicon lubricant shall be applied to the cleanout plug to allow for easier removal. The cleanouts shall be constructed in the manner indicated in the detail drawings.

TP-704 SEWER MAIN CONNECTION:

Sewer service line connections to main lines shall be made in accordance with the details as shown on the drawings, or as indicated by the Owner or Owner's Representative. The Contractor shall connect the service line to the main with the appropriate sized sewer saddle or sewer wye as shown on the detail drawings. Sewer wyes shall be PVC. Sewer saddles shall be Romac "CB" or equal. The time and method of connection to existing mains shall be approved by the Owner or Owner's Representative prior to such connection. In no case shall a tapping method be approved that does not provide for a water tight connection to the sewer main.

TP-705 WATER AND SEWER CROSSINGS:

Where water service lines must cross sewer service lines or mains, and the water line is not a minimum of 18 inches above the sewer service line or main, special protection is required. In these instances, the sewer service line or main shall be reconstructed of ductile iron pipe of the same size as the original sewer service line or main for a distance of 10 feet on either side of the water/sewer crossing point. All existing sewer grades shall be maintained.

Water and Sewer Service Line Separation Within 5 ft. of House: This section shall apply to that portion of water and sewer service lines located within five feet of the house. All lines within five feet of the house will be considered as part of the house plumbing. For new construction all service lines shall have 10 foot minimum horizontal separation.

This can best be accomplished by having the water and sewer service lines exit the house 10 feet apart or from different sides. If the 10 foot separation cannot be maintained, and prior written approval is obtained from the Owner or Owner's Representative, and the top of the water service line is at least 12 inches below the bottom of the sewer service line, and the water and sewer service lines are continuous with no joints until the 10 foot separation requirement is met, service lines can be laid closer together than 10 feet.

TP-706 SEPTIC TANK ABANDONMENT

Where shown on the drawings and on the bid schedule, the contractor shall abandon existing septic tank(s) by pumping the tank, knocking a hole in the bottom of the tank to prevent accumulation of water, crush the top of the tank, and backfill with native fill material. The septic tank shall be pumped by a licensed septic tank pumping company and the septage shall be hauled to an approved septage disposal site.

TP-707 AS-BUILT DRAWINGS:

As-built drawings to be furnished by the Contractor for sewer service lines shall include two swing ties from permanent structures or facilities to each of the following:

A. Tapping point at sewer main
B. Intersection point with other utilities
C. Location of cleanouts
D. Point of connection to the house stubout.

TP-708 MEASUREMENT AND PAYMENT - SEWER SERVICE LINES:

A. Sewer Service Line: PVC sewer service pipe shall be measured in linear feet along the centerline of the pipe, including fittings. Payment for sewer service lines shall be at the contract unit price shown in the Bid Schedule, this price being full compensation for

furnishing all labor, equipment, materials, and incidentals required for a complete installation; including, excavation, bedding, stabilization material, pipe, sewer saddle or sewer wye, connections to the sewer service cleanout, fittings, trench backfilling, as-builts, and final clean-up.

B. Cleanouts: Payment for sewer service cleanouts shall be at the contract unit price shown on the Bid Schedule, and shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for complete installation; including, excavation, connections to the tight line and house plumbing, as-builts, and final clean-up.

C. Septic Tank Abandonment: Payment for abandonment of the existing septic tank shall be at the contract unit price per job and shall be full compensation for pumping and crushing the existing concrete tank, backfilling the void left by the tank, and compacting the soil to prevent subsidence and to bring it to the same level as the surrounding grade. If the existing septic tank is any material other than concrete, the Contractor shall be paid at the contract unit price per job to pump and remove the existing septic tank. The Contractor shall be responsible for all costs associated with the removal, including, but not limited to transporting and disposing of the septic tank at a State licensed and approved waste disposal site located off the particular reservation where the work is to be performed. The payment shall also be full compensation for backfilling the void with soil from the designated area, and compaction to prevent subsidence and to bring it to the same level as the surrounding grade.

TP-709 SUBMITTALS:

All materials listed below will require that a submittal be provided to the Owner for approval prior to the start of any construction requiring those materials.

A. PVC Sewer Pipe for Service Lines
B. Service Line Cleanout
C. Sewer Main Saddle or Wye and Fittings
D. Permits - if required

TECHNICAL PROVISIONS

SECTION 11 - ROADWAY, RAILROAD, AND SPECIAL UTILITY CROSSINGS

TP-1100 SCOPE OF WORK:

Specifications included herein are intended to support requirements of the Special Provisions and Section 1 - TRENCH EXCAVATION & BACKFILL FOR PIPELINES AND APPURTENANT STRUCTURES where road, railroad and special utility crossings are necessary for the installation of sanitation facilities under this contract. A copy of the permit is included in the Appendix to these specifications. The contractor shall meet all requirements and conditions of this permit with respect to materials, equipment, notification and timing.

Requirements of the permit or permits shall control if contradictions exist between specifications and such permits. All work within the right-of-way of roads shall be performed in accordance with the ñStandard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-14ò. At least 2 weeks prior to performing the crossing, the contractor shall submit a traffic control plan showing how they intend to safely control traffic in the area of the crossing for review and approval by the project engineer. For road crossings, the Contractor shall have at least one lane open to traffic at all times.

The work to be completed under these Technical Provisions includes the furnishing of all labor, materials, transportation, tool, supplies and appurtenances necessary to complete the crossings in accordance with the indicated requirements.

TP-1101 ROADWAY CROSSINGS METHODS:

A. Open Cut Crossing:

Unpaved Roads: Where open cutting of an unpaved roadway is allowed as indicated on the plans, excavation and backfilling requirements shall be as indicated in Technical Provision Section 01 of these specifications.ò

Paved Roads: Where open cutting of a paved roadway is allowed as indicated on the plans, excavation requirements shall be as indicated in Technical Provision Section 01 of these specifications. All open cut crossings shall be backfilled using lean concrete backfill (flowable fill). Flowable fill meet the following requirements:

Fly ash, 150 to 300 lbs/yd3
Air content ï optional
Slump, 6ò to 11ò
Compressive strength, 30 psi to 220 psi at 28 days
Aggregate particle size - < 1ò diameter
Aggregate passing No. 200 sieve ï 10% max

B. Bored Road Crossing: Where only bored road crossing shall be permitted as indicated on the plans, the Contractor shall furnish all equipment, material and labor required to complete the installation. Alignment of the borehole shall be such that all grades and alignment of the pipeline to be encased as shown on the plans are

maintained. Failure to maintain such grades and alignment will result in rejection of the crossing for payment. Such operations shall be scheduled so that it may be completed from start to finish without delay and in accordance with appropriate permits and the standards of AWWA C-600.

The use of water under pressure jetting or puddling shall not be permitted to facilitate boring, pushing or jacking operations.

If excessive voids or too large a bored hole is produced during casing or pipeline installations, or if it is necessary to abandon a bored or tunneled hole, prompt remedial action shall be taken by the Contractor. All voids or abandoned holes caused by boring or jacking are to be filled by pressure grouting. The grout material shall be as specified by the Grantor providing the crossing permit.

The hole diameter shall not exceed the outside diameter of the casing pipe (including coating) by more than two (2) inches on casings with an inside diameter greater than twelve (12) inches.

TP-1102 ROADWAY CROSSING MATERIALS AND INSTALLATION:

Encasement pipe for the road crossing shall meet the following minimum diameters to provide sufficient space for the installation of the carrier pipe with mechanical restrained joints inside the casing pipe, unless otherwise indicated on the drawings:

Carrier Pipe Nominal Diameter	Minimum Nominal Casing Pipe Diameter
4ò	12ò
6ò	14ò
8ò	18ò
10ò	20ò
12ò	24ò

The smooth walled steel pipe shall conform to the requirements of ASTM A53, Grade B, Type E, standard weight with a minimum wall thickness of 0.375ò and shall have a minimum yield strength of 35,000 psi and a minimum tensile strength of 60,000 psi. The pipe shall be approved by the Project Owner or Ownerôs Representative before installation.

The pipeline encasement pipe shall be installed in the manner specified by the Grantor providing the crossing permit or as indicated in the plans. The pipeline shall be installed in the encasement pipe as shown on the plans providing suitable spacers that will prevent disturbance of the assembled joints. The casing spacers shall be approved by the Owner or Owner's Representative and shall be installed per manufacturer's specifications. The encasement pipe shall be installed at a uniform grade and extend the complete width of the Grantor's right-of-way or as indicated in the plans or applicable permits. Both ends of the encasement shall have a rubber end seal that will wrap around the outside diameter of the casing pipe and the utility pipe. This seal shall have a maximum over lay of (12") and be held in place with stainless steel straps. All water and sewer lines installed within the casing pipe shall be installed with mechanical restrained joints on every pipe joint within the casing pipe.

TP-1103 ROADWAY RESTORATION:

A. General: Whenever existing roadways or driveways are disturbed during the normal course of construction, the Contractor shall restore the roads and driveways to their original condition. The Contractor shall comply with the standards and construction requirements of the applicable local, municipal, county, state and federal highway authorities. Surfacing shall be replaced where the roadway has gravel, asphaltic or concrete surfacing.

Asphaltic mix surfacing shall be placed in the roadway to a minimum depth of 4 inches. Concrete aprons or pavement, which must be removed to allow for excavation, must be removed and repaired in the following manner; All openings shall either be cut square or sawed straight at 90 degree bends, with no angled cuts. The contractor shall obtain approval from the issuer of the road cut permit on the quality of the cut prior to placing the asphalt or concrete patch. The cut shall be filled with a reinforced concrete patch 6 inches thick. Concrete shall meet TP-2 requirements. The reinforcement shall be 6-inch by 6-inch wire mesh. Reinforcing, placing, and type of joints shall be inspected by the Owner or Ownerôs Representative before the concrete is poured. A compacted stabilized gravel base course shall be placed in the roadway at all locations where surfacing is required, prior to placement of the bituminous wear course or concrete patching.

When a road cut and patch is performed on a paved road and the new utility installation is installed in an existing driveway, the contractor shall restore the driveway turnout to its original condition. If the existing driveway turnout is not paved, the contractor shall install base course from the edge of the roadway to the edge of the road right of way or a distance of 5 feet from the edge of the road, whichever is less, to protect the new road patch from being damaged.

B. Materials:

1. Base Course: Base course material shall consist of clean, hard durable pit-run gravel that has been screened to the following gradation prior to compaction.

% Passing by Weight			
Sieve Size	**Min.**	**Max.**	**% Deviation Allowed**
1-inch	100	---	N/A
¾ inch	97	100	N/A
No. 4	41	71	7
No. 40	12	28	5
No. 200	9	16	4

In addition, the base course shall also meet the following requirements:

Item	**Requirement**
Los Angeles Abrasion, AASSHTO T 96	50% max.

Sodium Sulfate Soundness Loss (5 Cycles), AASHTO T 104	12% max.
Durability Index (Coarse), AASHTO T 210	35 min.
Durability Index (Fine), AASHTO T 210	35 min.
Fractured Faces, ASTM D 5821	50% min.

The material passing the No. 4 Sieve and retained on the No. 200 Sieve shall be uniformly graded. The plasticity index of the material passing the No. 40 Sieve shall not be greater than 8 ($\pm$ 4) as determined by AASHTO T27 & T11 latest revision. The maximum liquid limit shall be 35 as determined by AASSHTO T89. The base course shall be free from organic matter and lumps or balls of clay. Material that breaks up when alternatively frozen and thawed or wetted and dried shall not be used. Fine aggregate, material passing a No. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.

The gravel shall have a percentage of wear of not more than 30% when tested in accordance with ASTM C131, latest revision.

The thickness of the base course shall be at least equal to the thickness of the existing pavement base course; however, in no case shall the thickness of the replaced base course be less than 12 inches on arterial streets and 8 inches for residential streets.

2. Concrete Pavement Surfacing: Concrete for pavement patches shall meet all requirements of Section 02 of the Technical Provisions.

3. Hot Mix Asphaltic Pavement Surfacing: Hot mix asphalt pavement shall meet the requirements of Superpave SP-III or SP-IV or as approved by the road department issuing the permit.

   Oiling or processing shall be carried on only when the atmospheric temperature in the shade is above 35°F and rising and the weather is not foggy, rainy or stormy.

   The mineral aggregate and asphaltic material shall be mixed until all of the articles are uniformly coated and the asphaltic material is free of excess volatile matter. It shall then be laid and compacted with a pneumatic-tire roller. The entire surface shall be smooth and free of rough joints, tire tread marks, and segregated areas.

   Any areas that are shown to be insufficiently aerated, improperly coated, under-compacted, or are otherwise unsuitable shall be removed and replaced with suitable material.

   The contractor shall install an asphalt tack coat to all of the joints where the new asphalt patch meets the existing asphalt road.

   If hot mix asphalt is not available at the time of the road cut, the contractor shall place the flowable fill up to the top of the existing roadway until the hot mix asphalt is available. The contractor shall then remove the top layer of flowable

fill to the depth needed for the asphalt patch and place the asphalt patch. No additional compensation for remobilization shall be provided for this scenario.

4. Gravel: Where re-graveling is required after crossing existing gravel roads, thegravel shall be of the same size and type in existence on the roadway and as approved by the Owner or Ownerôs Representative.

TP-1104 SIDEWALK AND CURB AND GUTTER RESTORATION

Where a road cut is being performed and an existing sidewalk and/or curb and gutter must also be cut to facilitate the installation of the proposed utility, the Contractor shall be responsible for cutting the existing sidewalk and/or curb and gutter and restoring it to its original condition. Concrete shall meet TP-2 requirements. The cost for sidewalk and curb and gutter cutting and restoration shall be incidental.

TP-1105 BARRICADES, GUARDS AND SAFETY PROVISIONS:

The Contractor shall be responsible for erecting and maintaining adequate barricades, construction signs, torches, red lanterns, flagmen and guards as required, during the progress of the construction work and until it is safe to resume use of the roadway. Rules and regulations of the permit grantor regarding safety provisions shall be observed. All work within the right-of-way of roads shall be performed in accordance with the latest edition of the Manual on Uniformed Traffic Control Devices (MUTCD).

TP-1106 RAILROAD AND SPECIAL UTILITY CROSSINGS:

Railroads and other specialized utility crossings shall comply with all requirements of the permits indicated. Pipeline alignment and grades shall be maintained as shown on the plans.

TP-1107 CLEANUP:

Upon completion of the work, the entire site shall be cleared of all debris, and the ground surface shall be finished to smooth and uniform slopes. Cleanup shall be considered an incidental item and no additional payment shall be made for it. All of the right-of-way area and structures shall be left in a condition at least equal to their condition prior to construction.

TP-1108 AS-BUILT DRAWINGS:

The Contractor shall be responsible for keeping accurate records of all installed items under this section of the specifications, and marking-up the construction drawings in sufficient detail to be accepted by the Owner or Ownerôs Representative for as-built drawings.

The recording of the ñas-builtò information is considered an integral part of the progress of this construction and shall be reviewed with the Owner or Ownerôs Representative in determining progress under this contract.

TP-1109 MEASUREMENT AND PAYMENT:

Payment for bored roadway, open cut roadway, railroad or special utility crossings shall be measured in linear feet along the centerline of the casing. Payment shall be full compensation for all materials, equipment, labor, and incidentals for a complete installation including, but not limited to, boring, asphalt cutting, excavation, encasement and carrier pipe, carrier pipe

connection fittings and joint restraints, blocking/casing spacers, backfilling, paved and gravel roadway restoration, sidewalk and/or curb and gutter cutting and restoration, barricades, guards and safety provisions, traffic control plan, cleanup, and record drawings. Such payment shall also be full compensation for all required certificates of insurance, development of approved traffic control plans and implementation of traffic control.

TP-1110 SUBMITTALS:

A. Road Crossing Encasement Piping

B. Gravel (if required)

C. Asphalt Mix

D. Boring Method

E. Casing Spacers

F. Traffic Control Plan

TECHNICAL PROVISIONS

SECTION 28 ï HIGH DENSITY POLYETHYLENE (HDPE)
PIPE & FITTINGS

TP-2801 SCOPE:

This specification includes but is not limited to high density polyethylene (PE 3408) pressure pipe primarily intended for the transportation of water and sewage either buried or above grade.

TP-2802 REFERENCES:

Reference:	Title:
AWWA C901	Polyethylene (PE) pressure Pipe & Tubing, ½ inch through 3 inch for water service
AWWA C906	Polyethylene (PE) pressure Pipe & Fittings, 4inch through 63 inch for water distribution
ASTM D3035	Standard Spec for PE Pipe (DR-PR) Based on Controlled Outside Diameter
ASTM D3261	Butt Heat Fusion PE Fittings for PE Pipe & Tubing
ASTM D3350	Standard Specification for PE Pipe & Fittings Materials
ASTM D1238	Melt Flow Index
ASTM D1505	Density of Plastics
ASTM D2837	Hydrostatic Design Basis
NSF Standard #14	Plastic Piping Components & Related Materials

TP-2803 GENERAL:

A. Use: High Density Polyethylene (HDPE) pipes/fittings shall be allowed for use as water, wastewater and reclaimed water pressure pipe where compatible with the specific conditions of the project. All materials used in the production of water main piping shall be approved by the National Sanitation Foundation (NSF).

B. Documentation:

1. Documentation from the resinôs manufacturer showing results of the following tests for resin identification:

a. Melt Flow Index ASTM D1238

b. Density ASTM D1505

C. Manufacturer: All HDPE pipe and fittings shall be from a single manufacturer, who is fully experienced, reputable and qualified in the manufacture of the HDPE pipe to be furnished. The pipe shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these Specifications. Qualified manufacturers shall be Performance Pipe (Division of Chevron Chemical Company), JM Eagle, WL Plastics, United Poly Systems or equal as approved by the Owner or Ownerôs Representative.

D. Finished Product Evaluation:

1. Production staff shall check each length of pipe produced for the items listed below. The results of all measurements shall be recorded on production sheets, which become part of the manufacturerôs permanent records.

a. Pipe process shall be checked visually, inside and out for cosmetic defects (grooves, pits, hollows, etc.)

b. Pipe outside diameter shall be measured using a suitable periphery tape to ensure conformance with ASTM F714 or ASTM D3035, whichever is applicable.

c. Pipe wall thickness shall be measured at 12 equally spaced locations around the circumference of both ends of the pipe to ensure conformance with ASTM F714 or ASTM D3035, whichever is applicable.

d. Pipe length shall be measured.

e. Pipe marking shall be examined and checked for accuracy.

f. Pipe ends shall be checked to ensure they are cut square and clean.

g. Subject inside surface to a ñreverse bend testò to ensure pipe is free of oxidation (brittleness)

E. Stress Regression Testing: The polyethylene pipe manufacturer shall provide certification that stress regression testing has been performed on the specific polyethylene resin being utilized in the manufacture of this product. This stress regression testing shall have been done in accordance with ASTM D2837 and the manufacturer shall provide a product supplying a minimum Hydrostatic Design Basis (HDB) of 1,600 psi as determined in accordance with ASTM D2837.

F. Compatibility: Contractor is responsible for compatibility between pipe materials, fittings and appurtenances.

G. Warranty: The pipe MANUFACTURER shall provide a warranty against manufacturing defects of material and workmanship for a period of one year after the final acceptance of the project by the Owner or Ownerôs Representative. The MANUFACTURER shall replace at no expense to the Owner any defective pipe/fitting material including labor within the warranty period.

TP-2804 PRODUCTS:

A. Materials for Pipe Sizes 4-inch Diameter and Larger:

1. Materials used for the manufacture of polyethylene pipe and fittings shall be made from a PE-4710 high density polyethylene resin compound meeting cell classification 445574C per ASTM D3350 or PE 3408 high density polyethylene resin compound meeting cell classification 345464C per ASTM D3350. HDPE pipe for sewer mains shall be white or light grey in color.

2. The High Density Polyethylene (HDPE) pipe shall comply with AWWA Specifications C906.

3. Dimensions and workmanship shall be as specified in ASTM F714. HDPE fittings and transitions shall meet ASTM D3261. HDPE pipe shall have a minimum resin density of 0.947 grams per cubic centimeter for PE-4710 and 0.940 grams per cubic centimeter for PE-3408. All HDPE pipe and fittings shall have a Hydrostatic Design Basis (HDB) of 1,600 psi.

4. HDPE pipe and accessories 4-inch diameter and larger, shall be IPS and meet the following requirements:

PE-4710 Requirements		
	Type of Installation	
Requirements	Water Mains	Sewer Mains
SDR Rating	SIDR-7	DR-17
PSI Rating (at 73.4^{o}F)	200 psi	125 psi

PE-3408 Requirements		
	Type of Installation	
Requirements	Water Mains	Sewer Mains
SDR Rating	DR-9	DR-17
PSI Rating (at 73.4^{o}F)	200 psi	100 psi

B. Materials for Pipe Sizes 2-inch Diameter and Less:

1. Materials used for the manufacture of polyethylene pipe and fittings shall be made from a PE-4710 high density polyethylene resin compound meeting cell classification 445574C per ASTM D3350 or PE 3408 high density polyethylene resin compound meeting cell classification 345464C per ASTM D3350.

2. The High Density Polyethylene (HDPE) pipe shall comply with AWWA Specifications C901.

3. Dimensions and workmanship shall be as specified in ASTM D3035. HDPE fittings and transitions shall meet ASTM D3261. HDPE pipe shall have a minimum resin density of 0.947 grams per cubic centimeter for PE-4710 and 0.940 grams per cubic centimeter for PE-3408. All HDPE pipe and fittings shall have a Hydrostatic Design Basis (HDB) of 1,600 psi.

4. HDPE pipe and accessories 2-inch diameter and less, shall be 200 psi at 73.4^0F meeting the requirements of SIDR-7 for PE-4710 or SDR 9 for PE-3408 as minimum strength. Pipe shall be IPS.

C. Pipe Fittings: All molded fittings and fabricated fittings shall be fully pressure rated to match the pipe SDR pressure rating to which they are made. All fittings shall be molded or fabricated by the manufacturer. No Contractor fabricated fittings shall be used unless approved by the Owner or Ownerôs Representative.

The manufacturer of the HDPE pipe shall supply all HDPE fittings and accessories as well as any adapters and/or specials required to perform the work as shown on the drawings and specified herein.

Fittings from manufacturers other the HDPE pipe manufacturer may only be used if they meet all of the requirements of this specification, are compatible with the HDPE pipe, and are approved by the Owner or Ownerôs Representative. These fittings shall be as manufactured by Specified Fittings, Improved Piping Products, George Fisher, or approved equal.

All fittings shall be installed using butt-fused fittings, thermo-fused fittings/couplings, or flanged adapters and must be approved by the Owner or Ownerôs Representative. No size on wet taps shall be permitted.

All transition from HDPE pipe to ductile iron or PVC shall be made per the approval of the Owner or his/her representative and per the HDPE pipe manufacturerôs recommendations and specifications. All cast components of the transition fitting (end rings, center ring, and bolt cams) shall be ductile iron as per ASTM A 536, grade 65-45-12. The gaskets shall be formed from virgin Nitrile Butadiene Rubber (NBR) compounded for water and sewer service in accordance with ASTM D2000, also resistant to hydrocarbons. The rubber shall

be NDF 61 Certified rubber. Nuts and bolts shall be 304 stainless steel. The transition fitting shall be center ring fusion bonded epoxy meeting AWWA C213 and NSF 61 certified. For water applications, the transition coupling shall be equal to the Alpha Wide Range Coupling as manufactured by Romac Industries, Inc., unless the transition coupling is attaching to asbestos cement water main. For asbestos cement water main, a Macro HP Extended Range Coupling as manufactured by Romac Industries Inc. shall be used. Joint restraint requirements shall meet TP-4 and the standard details.

For sewer applications, the transition coupling shall be equal to the Macro HP Extended Range Coupling as manufactured by Romac Industries, Inc.

D. Warning Tape: Metallic impregnated warning tape shall be blue in color with ñCaution ï Buried Water Line Belowò continuously printed on it for water line pipe. Metallic impregnated warning tape shall be green in color with ñCaution ï Sewerline Belowò continuously printed on it for sewer line pipe. Tape shall be a minimum of 3-inches wide, 5 mils total thickness, composed of plastic with a metal foil core, and equal to Traceline Detectable for Underground Utility Marking Tape. Where copper tracer wire is buried with the pipe line, the locator/warning tape shall be plastic without metal foil. The warning tape shall be installed above the pipe with an 18-inch maximum bury depth.

E. Copper Tracer Wire (For Water Mains and Sewer Force Mains Only):

1. Wire: 12-gauge single strand copper polyethylene insulated tracing wire, type THHN/THWN.

2. Installation/Termination: Tracer wire shall be securely attached to the top of the pipe a minimum of three (3) times for each pipe length. The wire shall be properly grounded at all valve boxes, fire hydrants, and flush hydrants. For terminations at hydrants, the wire is to extend up through the interior and is to be affixed to the safety flange bolt. For gate valve boxes, the wire is to extend up through the interior of the gate valve box. Adequate tracer wire slack shall be maintained to allow for easy access.

TP-2805 JOINTING METHOD:

A. The pipe shall be joined with butt, heat fusion joints as outlined in ASTM D2657. All joints shall be made in strict compliance with the manufacturerôs recommendations. A factory qualified joining technician as designated by the pipe manufacturer or experienced, trained technician shall perform all heat fusion joints in the presence of the Owner or Ownerôs Representative.

B. Lengths of pipe shall be assembled into suitable installation lengths by the butt-fusion process. All pipe so joined shall be made from the same class and type of raw material made by the same raw material supplier. Pipe shall be furnished in standard laying lengths not to exceed 50 feet and no shorter than 20 feet.

C. On the days butt fusions are to be made, the first fusion shall be a trial fusion in the presence of the Owner or his/her representative. The following shall apply:

1. Heating plates shall be inspected for cuts and scrapes. The plate temperature shall be measured at various locations to ensure proper heating/melting per manufacturerôs recommendations and approval by Owner or Ownerôs Representative.

2. The fusion or test section shall be cut out after cooling completely for inspection.

3. The test section shall be 12-inches or 30 times (minimum) the wall thickness in length and 1-inch or 1.5 times the wall thickness in width (minimum).

4. The joint shall be visually inspected as to continuity of ñbeadsò from the melted material, and for assurance of ñcold jointò prevention (i.e. ï joint shall have visible molded material between walls of pipe). Joint spacing between the walls of the two ends shall be a minimum of 1/16 inch to a maximum of 3/16 inch.

TP-2806 INSTALLATION:

A. High Density Polyethylene (HDPE) Pipe shall be installed in accordance with the instruction of the manufacturer, as shown on the drawings and as specified herein. A factory qualified joining technician as designated by the pipe manufacturer shall perform all heat fusion joints.

B. HDPE shall be installed either by Open Trench Construction or Directional Bore Method as outlined in Section TP-2805, Item P ï Open Trench Installation or Item Q ï Directional Bore Installation.

C. Care shall be taken in loading and transporting and unloading to prevent injury to the pipe. Pipe or fittings shall not be dropped. All pipe or fittings shall be examined before installation, and no piece shall be installed which is found to be defective. Any damage to the pipe shall be repaired as directed by the Owner or Ownerôs Representative. If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner by the Contractor, at his own expense.

D. Under no circumstances shall the pipe or accessories be dropped into the trench or forced through a directional bore upon ñpull-backò.

E. Care shall be taken during transportation of the pipe such that it will not be cut, kinked or otherwise damaged.

F. Ropes, fabric or rubber protected slings and straps shall be used when handling pipes. Chains, cables or hooks inserted into the pipe ends shall not be used. Two slings spread

apart shall be used for lifting each length of pipe.

G. Pipes shall be stored on level ground, preferably turf or sand, free of sharp objects, which could damage the pipe. Stacking of the polyethylene pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature conditions. Where necessary due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.

H. Pipe shall be stored on clean level ground to prevent undue scratching or gouging. The handling of the pipe shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. The maximum allowable depth of cuts, scratches or gouges on the exterior of the pipe is 5 percent of the wall thickness. The interior pipe surface shall be free of cuts, gouges or scratches.

I. Pipe shall be laid to lines and grade shown on the drawings with bedding and backfill as shown on the drawings.

J. When laying pipe is not in progress, including lunchtime, the open ends of the pipe shall be closed by fabricated plugs, or by other approved means.

K. Sections of pipe with cuts, scratches or gouges exceeding 5 percent of the pipe wall thickness shall be removed completely and the ends of the pipeline rejoined.

L. The pipe shall be joined by the method of thermal butt fusion, as outlined in TP-2804. All joints shall be made in strict compliance with the manufacturerôs recommendations.

M. Mechanical connections of the polyethylene pipe to auxiliary equipment such as valves, pumps and tanks shall be through flanged connections which shall consists of the following:

1. A polyethylene flange shall be thermally butt-fused to the stub end of the pipe.

2. A 316 stainless steel back up ring shall mate with a 316 stainless steel flange.

3. 316 stainless steel bolts and nuts shall be used.

N. Flange connections shall be provided with a full-face neoprene gasket.

O. All HDPE pipe must be at the temperature of the surrounding soil at the time of backfilling and compaction.

P. If defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner at no additional cost to the Owner. All pipe and fittings shall be thoroughly cleaned before installation, shall be kept clean until they are

used in the work and when laid, shall conform to the lines and grades required.

Q. Open Trench Installation:

1. Trenching and backfilling operations shall be performed as specified in Section 1 - TRENCH EXCAVATION & BACKFILL of the Technical Provisions.

2. The centerline of the pipe shall not deviate from a straight line drawn between the centers of the openings at the ends of the pipe by more than 1/16-inch per foot of length. If a piece of pipe fails to meet this requirement check for straightness, it shall be rejected and removed from the site. Laying instructions of the manufacturer shall be explicitly followed.

3. Good alignment shall be preserved during installation. Deflection of the pipe shall occur only at those places on design drawings and as approved by the Owner or his/her representative. Fittings, in addition to those shown on the drawings, shall be used only if necessary or required by the Owner or Ownerôs Representative.

4. Each length of the pipe shall have the assembly mark aligned with the pipe previously laid and held securely until enough backfill has been placed to hold the pipe in place. Joints shall not be ñpulledò or ñcrampedò.

5. Precautions shall be taken to prevent flotation of the pipe in the trench.

6. When moveable trench bracing such as trench boxes, moveable sheeting, shoring or plates are used to support the sides of the trench, care shall be taken in placing and moving the boxes or supporting bracing to prevent movement of the pipe, or disturbance of the pipe bedding and the backfill. Trench boxes, moveable sheeting, shoring or plates shall not be allowed to extend below top of the pipe. As trench boxes, movable sheeting, shoring and plates are moved, pipe bedding shall be placed to fill any voids created and the backfill shall be recompacted to provide uniform side support for the pipe.

7. Restrained joints shall be installed where shown on the drawings or as directed by the Owner or Ownerôs Representative.

R. Directional Bore Installation: Refer to Section 56 ï Horizontal Directional Drilling.

TP-2807 PIPE CLEANING:

At the conclusion of the work, thoroughly clean all of the new pipe lines to remove all dirt, stones, pieces of wood or other material which may have entered during the construction period by forcing a cleaning swab through all mains 6-inch or greater. Flushing velocities shall be a minimum of 2.5 feet per second. All flushing shall be coordinated with the Owner or Ownerôs Representative. Debris cleaned from the lines shall be removed from the job site.

TP-2808 TESTING:

A. Pressure testing shall be conducted per the Manufacturerôs recommendations and as approved by the Owner or his/her representative.

B. All HDPE water mains shall be disinfected prior to pressure testing in accordance with Section 4 ï TP 411 Disinfection of Mains.

C. All HDPE mains shall be field-tested. Contractor shall supply all labor, equipment, material, gages, pumps, meters and incidentals required for testing. Each main shall be pressure tested upon completion of the pipe laying and backfilling operations, including placement of any required temporary roadway surfacing.

D. All mains shall be tested at 150 percent of the operating design pressure of the pipe unless otherwise approved by the Owner or Ownerôs Representative.

E. Pressure testing procedure shall be per manufacturerôs recommendations or as follows:

1. Fill line slowly with water. Maintain flow velocity less than 2 feet per second.

2. Expel air completely from the line during filling and again before applying test pressure. Air shall be expelled by means of taps at points of highest elevation.

3. Apply initial test pressure and allow to stand without makeup pressure for two to three hours, to allow for diametric expansion or pipe stretching to stabilize.

4. After this equilibrium period, apply the specified test pressure and turn the pump off. The final test pressure shall be held for one to three hours.

5. Upon completion of the test, the pressure shall be bled off from a location other than the point where the pressure is monitored. The pressure drop shall be witnessed by the Owner or his/her representative at the point where the pressure is being monitored and shall show on the recorded pressure read-out submitted to the Owner.

F. Allowable amount of makeup water for expansion during the pressure test shall conform to Chart 6, Allowance for Expansion Under Test Pressure, Technical Report TR 31/9-79, published by the Plastic Pipe Institute (PPI). If there are no visual leaks or significant pressure drops during the final test period, the installed pipe passes the test.

G. If any test of pipe laid disclosed leakage significant pressure drop greater than the manufacturerôs recommended loss, the Contractor shall, at his/her own expense, locate and repair the cause of leakage and retest the line. The amount of leakage, which will be permitted, shall be in accordance with AWWA C600 Standards.

H. All visible leaks are to be repaired regardless of the amount of leakage.

TP-2809 SITE CLEAN UP:

Upon completion of the work, the entire site shall be cleared of all debris, and the ground surface shall be finished to smooth and uniform slopes. Cleanup shall be considered an incidental item and no additional payment shall be made for it

TP-2810 AS-BUILT INFORMATION:

The Contractor shall be responsible for keeping accurate records of all installed items under this section of the specifications, and indicating revisions of the furnished construction drawings in sufficient detail to be accepted by the Owner for as-built drawings. Sufficient detail under this contract means that the Contractor shall take accurate measurements and record them on the drawings to provide the minimum information of at least two swing ties and distances to permanent objects and/or marker posts for all valves, pressure reducing valves, air and vacuum valves, hydrants, connections to other lines, and bends; the beginning, end of any stabilization material placed; the beginning, end, and depth to rock encountered; the beginning, end, and depth of any encasement installed; ant the location and depth of any other utilities encountered. Further information on as-builts is contained in the Special Provisions section of these specifications.

The recording of the as-built information is considered an integral part of the progress of this construction and shall be reviewed with the Owner or Ownerôs Representative in determining progress under this contract.

TP-2811 MEASUREMENT AND PAYMENT:

A. HDPE PIPE: The HDPE pipe shall be measured in linear feet along the centerline of the pipe, including fittings, for each of the various sizes of HDPE pipe installed. Payment for HDPE pipe shall be at the contract unit price shown on the Bid Schedule. This price shall be full compensation for furnishing all labor, equipment, materials, and incidentals required for a complete installation, including excavation, bedding, stabilization material, pipe installation, fittings, thrust blocks, water main warning tape, hydrostatic testing, disinfection, trench backfilling, as-builts, and final cleanup.

TP-2812 SUBMITTALS:

A. HDPE Pipe & Fittings

B. Warning Tape

C. Copper Tracer Wire