

TASK ORDER NO.01
NORMAN UTILITIES AUTHORITY
OWNER
AND
CAROLLO ENGINEERS, INC.

This Task Order is issued by the OWNER and accepted by ENGINEER pursuant to the mutual promises, covenants and conditions contained in the Agreement between the above named parties dated the _____ day of _____, 20__, in connection with:

Contract: K-2526-17

Various Improvements at the Norman Water Treatment Plant and Well Field
(Project)

PURPOSE

The purpose of this Task Order is to: Authorize services for final design (task 2), bidding services (Task 3), and engineering services during construction (task 4).

ENGINEER'S SCOPE OF SERVICES

Engineer's scope of services shall be as described in Exhibit A to this Task Order No. 1.

TIME OF PERFORMANCE

Engineer's time of performance shall be as described in Exhibit A to this Task Order No. 1.

PAYMENT

Engineers payment for basic services associated with Task 2, Task 3, and Task 4 shall not exceed a lump sum amount of \$1,146,525.00 as defined in Exhibit B to this Task Order. This lump sum amount includes compensation for Engineer's services and services of Engineer's Subcontractors and Subconsultants, if any. The Lump Sum amount constitutes full and complete compensation for Engineer's Basic Services as defined in the scope of services in Exhibit A to this Task Order including labor costs, overhead, profit, expenses (other than those expenses expressly eligible for reimbursement, if any), and Engineer's Subcontractor and Subconsultant charges.

The portion of the Lump Sum amount billed for Engineer's services will be based upon Engineer's estimate of the proportion of the total services completed during the billing period to the Lump Sum as defined in Section 2 of the Agreement.

Engineer's payment for the Not-to-Exceed fee of \$125,000 for Additional Services defined in Exhibit C shall be based on the Standard Hourly Rates established within the Exhibit. For the specified category of services, the Owner shall pay Engineer an amount equal to the cumulative hours charge to the Additional Services ammount by each class of Engineer's times the Standard Hourly rates for each applicable billing class.

Contract: K-2526-17

Standard Hourly Rates include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profile. The total Not-To Exceed fee will incorporate all labor at standard hourly rates and reimbursable expenses (including Engineer's Subcontractor and Subconsultant charges, if any). The amounts billed will be based on the cumulative hours charge to the specified category of services within the Additional Services (Exhibit C) during the billing period established in the agreement by each class of Engineer's employees times the Standard Hourly Rates for each applicable billing clause, plus reimbursable expenses (including Engineer's Subcontractor and Subconsultant charges, if any). The standard hourly Rates and reimbursable schedule provided in Exhibit B can be adjusted annually (as of January 1st) to reflect equitable changes in the compensation payable to Engineer.

The total value of the contract is \$1,271,525 (Basic and Additional Services)

EFFECTIVE DATE

This Task Order No.01 is effective as of the ____ day of _____, 20__.

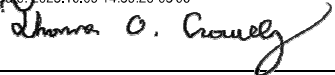
IN WITNESS WHEREOF, duly authorized representatives of the OWNER and of the ENGINEER have executed this Task Order No. 01 evidencing its issuance by OWNER and acceptance by ENGINEER.

CAROLLO ENGINEERS, INC.

Accepted this 8th day of October, 2025

Digitally signed by Thomas O. Crowley
Contact Info: Carollo Engineers, Inc.
Date: 2025.10.09 14:59:26-05'00'

By: _____


Vice President

By: _____

Senior Vice President

Contract: K-2526-17

By:

NORMAN UTILITIES AUTHORITY

APPROVED as to form and legality this ____ day of _____, 20 ____.

AUTHORITY Attorney

Approved by the Trustees of the NORMAN UTILITIES AUTHORITY this ____ day of

_____, 20

NORMAN UTILITIES AUTHORITY

ATTEST

By: _____

CHAIRMAN

SECRETARY

**EXHIBIT A to TASK ORDER NO. 1
SCOPE OF SERVICES**

Various Improvements to Norman Water Treatment Plant and Well Field

**BASIC SCOPE OF SERVICES
BACKGROUND**

The following scope of services is intended to supplement Paragraph 2 – Basic Services in the Contract. The Engineer will provide the following scope of services for the Project as follows:

Task 1 - Preliminary Report Services:

No Services

Task 2 - Final Plan Services

The engineer will provide Final Plan Services in accordance with Task 2 of the Basic Contract and as supplemented herein. The final plan services will consist of an intermediate deliverable (2-D plans only), final deliverable including a stamped and signed agency review submittal (plans and Specifications Div 0-17) and bid set deliverable incorporating agency review comments and owner comments into the bid set deliverable.

A preliminary AACE Class IV estimate was prepared to estimate the total construction cost of the major design elements. These are presented in Table 1 below, these include the midpoint, high range (+30 percent), and low range (-10%) anticipated by the estimate level. The detailed estimate is provided in Attachment 1 to this Exhibit A.

Table 1 – Preliminary AACE Class IV OPCC				
Design Element	Description	High Range (+ 30%)	Midpoint	Low Range (-10%)
PROJECT-01				
WTP-01	Ozone System Improvements			
	Ozone System Contactor Improvements	\$657,000	\$505,000	\$480,000
	Ozone System Chiller Improvements	\$1,417,000	\$1,090,000	\$1,035,000
WTP-02	WTP SCC No. 3 Rehabilitation	\$1,869,000	\$1,438,000	\$1,366,000
WTP-03	OSHG Improvements	\$1,058,200	\$814,000	\$732,600
WTP-04	CFE Sampling and Analysis	\$157,000	\$121,000	\$115,000
WTP-05	Administration Building Roof Repairs	\$241,000	\$185,000	\$175,000
WTP-06	Chloramine System Improvements	\$195,000	\$150,000	\$135,000
WRF-01	Secondary Clarifier 3 Rehabilitation	\$1,840,000	\$1,415,000	\$1,344,000
	Subtotal PROJECT-01	\$7,434,200	\$5,718,000	\$5,382,600
WELL-01	Well 46 Redrilling assistance	\$150,000	\$120,000	\$100,000
WELL-02	Well Plans and Specs Assistance	\$1,500,000	\$1,250,000	\$1,200,000

Notes: 1. Cost estimates are based on June 2024 dollars, escalation to midpoint should be performed by OWNER.

Summary of Major Design Elements:

The Tables 2-4 below present a summary of the major design elements associated with the task 2 services.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
WTP-01: OZONE SYSTEM IMPROVEMENTS CONTACTOR		
Ozone Contactor – Civil Paving and Grading, Drainage	No Improvements	No Improvements
Ozone Contactor – Architectural	No Improvements	No Improvements
Ozone Contactor- Structural	No Improvements	No Improvements
Ozone Contactor – HVAC/Mechanical	No Improvements	No Improvements
Ozone Contactor - Mechanical	Drain and Clean Ozone Contactor to Install new sample piping.	New sample piping to be installed in common inlet chamber, one immediately following first cell, and a third sample immediately following Captor addition in each of the two contactors.
Ozone Contactor Structural	New Penetrations	New penetrations above water level for discharge of sample pumps. New penetration for Conductivity probe in roof.
Ozone contactor electrical	No Improvements	No Improvements
Ozone contactor Instrumentation and control	New instruments	Add ORP sensor and install into two channel transmitters for PH.
Ozone Destruct Building – Civil	No Improvements	No Improvements
Ozone Destruct Building – Architectural	No Improvements	No Improvements

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Ozone Destruct Building Structural	Misc Metals	Supports for new pumps
Ozone Destruct Building – HVAC	No Improvements	No Improvements
Ozone Destruct Building-Mechanical – Demolition	Demolish existing sample pump and piping that is too high to be utilized as its air binds pumps.	Demolition to make space for new sample pumps and piping.
Ozone Destruct Building Mechanical – Sample Lines	Install new sample lines at a lower elevation repurpose some of the discharge lines and core drill locations for new discharge lines	New sample piping to feed four new sample pumps all located below
Ozone Destruct Building – Mechanical Sample Pumps	Install new prepurchased sample pumps in ozone destruct building	New Sample pumps (4) prepurchased.
Ozone Destruct Building – Electrical	Sample Pump Starter	Install prepurchased sample pump starter in ozone destruction building location. Install new power from DP panel Install new power and control wire to sample pumps from existing and new starter.
Ozone destruct building electrical	New Ozone Sample Probes	Install new transmitters and new conduit/wire to PCM cabinet
Ozone destruct building instrumentation and control	New Ozone Sample Probes	Install new prepurchased ozone sample probes and install suction lines to sample pumps.
Ozone destruct building instrumentation and control	PCM Cabinet	Provide new CBs in pcm cabinet and programming for PCM to integrate new ozone system controls to allow captor addition based on ozone residual.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Ozone destruct building instrumentation and control	SCADA programming	Update SCADA screens for ozone contactor control.
WTP-01- OZONE SYSTEM IMPROVEMENTS – 2-25 TON CHILLERS		
Civil Paving and Grading	Drainage – Surface Only	Provide temporary stormwater plan, surface drainage of concrete pad for chillers. Provide updated stormwater calculation to City with Agency review set.
Civil Paving and Grading	Paving/Approach	A 5 ft sidewalk approach will be provided from the roadway to access the chiller Building Entrance
Civil – Landscaping	Seeding/Sodding	Sod will be placed in disturbed areas
Civil-Excavation and backfill	Geotechnical	Over excavation of slab with backfill of aggregate base course (36”) beneath matt foundation. Deep foundations not anticipated.
Architectural	Chiller Awning – Architectural features Roof	Gabled Roof – Standing Seam Metal
Architectural	Chiller Awning Features:	1)
Structural – Slab on Grade with Structural Columns	Chiller Awning – Foundation Design and Contingency	The foundation will be designed to enable to carry reaction loads from the Metal Awning Structure based on preliminary design information provided by manufacturer. A contingency will be included for adjustment of columns based upon shop drawing review calculations.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Structural – Slab on Grade with Structural Columns	Chiller Awning – Foundation Supports	Foundation will have small concrete columns designed to “raise up” the connections of the metal Awning structure to allow for fastening of the metal awing support columns to the concrete without concern for long term rust.
Structural – Slabe on Grade	Chiller Awning -Foundation Slope	Slope of concrete will be 0.5% to shed water to perimeter Zurn CI trench drains on the long axis of Foundation
Structural	Pads for Chillers	Chillers will be provided with 4” equipment pads.
Structural	Duct Bank Stub out	Stub out for Duct Bank to Provide primary Power to Building 480V DPPA/DPPB
Structural	Metal Awing	Metal Awing will be provided by a manufacturer. Will be designed with an eave height of 12 feet and facilitate servicing of two (2) 25-ton chillers.
Mechanical – Plumbing	Chiller Area	Trench drains with PVC drains draining to MH discharge to Lagoons
Mechanical – Process - Utility Water	Ozone Building Utility Makeup/fill water	Utility water line 2” will be routed from the Ozone Building downstream of existing BFP. The expansion tank and air separator on the chilled water loop will be located in the Ozone Building.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Mechanical – Process CWS/CWR	Cooling water Supply/Return Piping	Utility lines will be run from chiller inlet/outlet to/from Cooling water skids located in Ozone building. It will be designed to allow for either an open loop or closed loop cooling system to be employed for the Ozone Generation System.
Mechanical – Process CWS/CWR	Cooling water Supply/Return Valves	Utility valves will be installed on existing CWS/CWR and New CWS/CWR lines to isolate automatically and prevent shutoff of cooling water
Mechanical Process – CWS/CWR	Cooling water supply/return drains	Manual Drains will be provided at low spots to drain piping.
Mechanical Process – Chiller System	2-25 Ton Chillers with Supply Pumps	Prepurchased by the City of Norman and installed by contractor
Mechanical Process – Chiller System	One (1) Makeup water tank	Prepurchased by the City of Normand and Installed by Contractor.
Mechanical Process – Chiller System	One (1) Expansion Tank	Prepurchased by the city of Norman and installed by Contractor
Mechanical Process – Chiller System	One (1) Chemical Feed Pot	Prepurchased by the City of Norman and installed by Contractor.
Electrical	Yard Electrical Duct Bank	Power and control conduit Duct bank from Existing Ozone MCCA/MCCB to Chiller Area. Includes two EMH's with sump pumps.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Electrical	Circuit Breakers and Disconnects	Circuit Breakers and Disconnect switches for 2-25 Ton Chillers MCCA/MCCB and PCM-OZ Cabinet
Electrical	2- 25 Ton Chiller VCP's	Vendor control Panels Prepurchased by the City of Norman and Installed by Contractor.
Electrical	Conduit and Wire in ozone Building	Power and control conduits from new actuators to DPPA/DPPB and PCM-OZ
Electrical	Conduit and Wire to Instrumentation	Conduit and wire from PCM-OZ to Instrumentation at Chiller (flowmeters, pressure switches)
Instrumentation	Chiller instrumentation not provided by Chiller	Flowmeter, Pressure switches, temperature probes.
Instrumentation	SUEZ Scope of work	Program setpoint read to Chiller system to maintain inlet temperature to ozone skid at maximum of 75F.
Instrumentation	Programming PCM-oz	Program PCM Ozone and HMI to integrate chiller information and setpoints
Instrumentation	Programming SCADA	Create SCADA Screen for Chillers
Instrumentation- Networking	Network programing	Place Ozone System on Plant Communications network.
WTP-02 SCC Clarifier No. 3 Rehabilitation		
Civil	No Improvements	No Improvements
Stormwater	No Improvements	No Improvements
Architectural	Existing handrail	Repair/replace as necessary
Structural	Structural Repairs of Concrete	Unit Price for concrete repairs
HVAC	No Improvements	No Improvements

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Mechanical	Westech Scope	Replace Rake turntable bearings. Replace Rake Gearbox Replace Motors for Turbine and Rake Replace Rake arm squeegees Replace Rake Arms
Mechanical	Painters Scope	Blast, Puddle weld, metal repairs, recoat unit pricing for metal repairs.
Mechanical	Hot box/lime feed hoses	Remove and reinstall as necessary to complete scope.
Electrical	Light	Removal and reinstall
Electrical	Conduits/wires	No work
Instrumentation	No improvements	No Improvements
WTP_03 OSHG System Improvements (2–5-ton Chiller and New Brine Tank)		
Demolition	OSHG Discharge Piping	Remove existing discharge Piping
Demolition	Existing Anionic Polymer Tote Scale	Remove scale and provide to Norman as salvage. Fill in Scale Sump.
Civil	Paving and Grading	Saw cut and remove existing pavement on west side of chemical building Integrate new OSHG Brine Tank into existing Pavement and Replace as necessary
Civil	Excavation and Backfill Brine Tank	Over excavate and backfill with select fill for tank pad
Civil	Drainage/Stormwater	No Improvements
Architectural	No Improvements	No Improvements
Structural	Foundation of OSHG Brine tank	Matt foundation. No deep foundations required.
HVAC	No Improvements	No Improvements

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Mechanical – Brine Tank	New 8,000-gallon Brine tank	FRP Preinsulated Brine tank with Brine Guard system
Mechanical – Yard Piping	Brine Feed, Water Feed	Buried piping from Chemical Building to Brine tank.
Mechanical – Trench Piping	Discharge Piping in Trench	Install new discharge piping in chemical trench with spares
Mechanical – Yard Piping	OSHG Containment Piping	Install 8-inch containment piping from Filter Building to MH with spare tubing for OSHG Feed.
Mechanical -Chemical Building Piping	Brine Feed, Water Feed, Chiller Feed and Chiller Discharge	Water Feed from Softeners, Brine feed to Unit.
Mechanical OSHG Chiller	OSHG 2-5 Ton Chiller	Pre-Purchase Single Chiller without pumps with expansion/mixing tank to supply chilled water to 70F to the OSHG system. Chiller will operate to fill tank.
Mechanical – Chiller Installation	OSHG Chiller and Expansion Tank in Chemical Building	Locate Chiller and expansion tank in current tote scale location for anionic polymer.
Electrical – Chiller Installation	OSHG Chiller and Expansion tank package VCP OZ MCC A	Power feed from OZ MCC A to OSHG Transfer Switch
Electrical Chiller	OSHG Chiller and Expansion tank package VCP OZ MCC B	Power feed from OZ MCC B Breaker to OSHG Transfer Switch
Electrical Chiller	OSHG Chiller Transfer switch	Power feed from OSHG Transfer Switch to Chiller VCP
Electrical Chiller Controls	Conduit and wire – Control feed to Chiller VCP	Feed from PCM- CHEM to Chiller VCP. Manual Switching.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Electrical – Brine VCP	Conduit and Wire – Power feed VCP	Power feed from existing DPP to Truck Unloading Panel VCP
Electrical – Brine Tank VCP	Conduit and Wire -Control Feed VCP	Communications Discrete and Analog from PCM to VCP
Electrical – Brine Tank	Conduit and Wire – Instrumentation Wiring	Wiring from Field Instruments to VCP's
Instrumentation- Brine and Chiller	Programming for OSHG VCP's	Hire Denora to incorporate Instrumentation points and controls to OSHG Generation panels.
Instrumentation – Brine and Chiller	PCM Programming	Program existing PCM-CHEM
Instrumentation – Brine and Chiller	SCADA Programming	Integrate Brine tank into Scada Screenshot for OSHG
WTP-04 Combined Filter Effluent Sample Pipe		
Civil	No Improvements	No Improvements
Mechanical Yard Piping	CFE Sample line	Install CFE Containment pipe and tubing from Filter building to CFE Manhole
Mechanical CFE Existing Manhole	Sampling	Install Willow Well Jet pump and stinger in existing pipe Prior to OSHG Injection for measurement of CFE turbidity
Mechanical- UV Building	Sampling – WQ	Install water quality station to measure turbidity inside of UV Building
Electrical	Conduit and Wire- yard	Power and control conduit from UV Building Electrical room to Sampling pump
Electrical	Conduit and wire – UV Bldg	Power and control wire from UV Building PCM to WQ Analyzer panel.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Instrumentation	Sampling instruments	New turbidity meter and flow switch
Instrumentation	PCM Programming	Program existing PCM-UV
Instrumentation	SCADA Programming	Integrate WQ into SCADA screens.
WTP-05 Architectural Improvements Administration Building		
None		
STRUCTURAL		
Architectural Improvements	Remove existing Roof and Flashing	Remove existing roof above transition from Filter Building to Admin Building
Architectural Improvements	New Roof and Flashing	Install new roof and flashing.
Architectural Improvements	Remove existing flashing and portions of roof	Remove flashing and cut membrane.
Architectural	New Belly band and flashing	
Architectural	Various improvements to seal flashing around bay windows	Remove flashing seal windows and install new flashing
WTP-06 Chloramine Improvements		
1 MG Clearwell Improvements	Sample at one locations for Mono and Total Chlorine	Vertical Submersible sample pump at 1MG clearwell to measure chloramine concentration at new analyzers located in UV building.
6 MG Clearwell Improvements	Sample at two locations for Mono and total chlorine	Vertical Submersible sample pump at 1MG clearwell to measure chloramine concentration at new analyzer located in UV building.
UV Building Analyzers	3 total 3 monochloramine analyzers	Located in UV Building and plumbed to drain area.

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
HSP discharge Modifications	Provide ability to take discharge of pump station to lagoon with air gap	New 12-inch main and flowmeter from HSP to lagoon Manhole with Air gap to provide ability to drain and neutralize to the lagoon
Calcium Thiosulfate Discharge Pipe Modifications	Provide ability to feed to Neutralize from the existing HSP	New flow paced chemical feed for discharge of HSP to neutralize prior to the lagoon.
WRF-01 Secondary Clarifier No. 3 Rehabilitation		
Civil	No Improvements	No Improvements
Stormwater	No Improvements	No Improvements
Architectural	Existing handrail	Repair/replace as necessary
Structural	Structural Repairs of Concrete	Unit Price for concrete repairs
Structural	PRV's	Assess and remove/replace as needed
HVAC	No Improvements	No Improvements
Mechanical	Coating of Effluent launder	Concrete coating of effluent launder.
Mechanical	Westech Scope	Replace Rake turntable bearings Replace Rake Gearbox Replace Motors for Rake Replace Torque Monitoring Replace Rake arm squeegees. Replace Rake Arms
Mechanical	Painters Scope	Blast, Puddle weld, metal repairs, recoat unit pricing for metal repairs.
Mechanical	Launder Covers	Remove and reinstall as necessary to complete scope.
Mechanical	Weir	Remove and replace with new FPR Weir

Table -2 Major Work Elements Norman WTP Various Improvements – PROJECT 01		
PROJECT ELEMENT	DESCRIPTION	FEATURES
Mechanical	Scum box, Scum beach, Scum Pipe	Remove and replace
Mechanical	Stamford Baffle	Remove and replace
Electrical	New Conduit and Wire	New conduit to splice box at edge of clarifier as necessary
Electrical	New Conduit/wires	Torque unit connection to existing control panel
Electrical	Light	Removal and reinstall
Electrical	Conducts/wires	No work
Instrumentation	No improvements	No Improvements
None		
WTP		

Attachment 4 to Exhibit A provides the existing site plan drawings for Well No. 46.

Table -3 Major Work Elements Norman WTP Various Improvements – WELL-01		
<u>PROJECT ELEMENT</u>	<u>DESCRIPTION</u>	<u>FEATURES</u>
Well No. 46 Redrilling Specs	Specifications	Specifications will be provided containing criteria for redrilling, well development, and relocation of Well 46 pump and motor adjacent to the existing well. These will be provided to Norman for bidding purposes. Norman will be responsible for all DIV 0/1 specifications.
Well No. 46 Redrilling drawings – Well drawing and well pump setting.	Drawings – Mechanical	Drawings will be provided showing the redrilling of Well 46 and removing and setting the existing well pump. These will be provided to Norman for bidding purposes. Norman will be responsible for packaging up drawings and specifications for bidding purposes.
Well No. 46 Redrilling Drawings connection to existing piping	Drawings Mechanical	Drawings will be provided illustrating the mechanical connections from the existing Well 46 with piping and support details connecting well 46 to the existing piping. This will be created specifically for Norman to perform the work. NO CADD work will be performed.
Well n. 46 Redrilling Drawings – Connections to existing electrical and I&C Controls	Drawings Electrical	Drawings will be provided illustrating the electrical and controls connections from the well No. 46 VFD to the relocated Well No. 46 pump. This will be created

Table -3 Major Work Elements Norman WTP Various Improvements – WELL-01		
<u>PROJECT ELEMENT</u>	<u>DESCRIPTION</u>	<u>FEATURES</u>
		specifically for Norman to perform the work. NO CADD work will be performed.

Table -4 Major Work Elements Norman WTP Various Improvements – WELL-02		
<u>PROJECT ELEMENT</u>	<u>DESCRIPTION</u>	<u>FEATURES</u>
New Well Property Topographic and Boundary Survey	Civil Site Plan Drawings-Existing conditions	A topographic survey of existing conditions will be provided by the City of Norman. Norman will provide CADD file of survey at 0.5 ft contours
New Well Site Paving and Grading	Civil Site Plan Drawings-New work	Civil Drawings will be provided showing the coordinates and elevations of the well, well house pad, and other surface features with respect to the 100 year and 500-year flood elevations. These are unique drawings and can't be repeated from previous work.
New Well Site Paving and Grading	Civil Site Plan Drawings Paving and Grading.	Civil Drawings will be provided showing new grading and paving coordinates and details for unit price estimates of bid form for civil items, clearing and grubbing, site excavation, backfill and compaction, paving, etc. These are unique drawings and can't be repeated from previous work.
New Well Site Yard Utilities	Mechanical and Electrical Site Plan Drawings	Mechanical drawings will show the plan and profile of the well discharge and

Table -4 Major Work Elements Norman WTP Various Improvements – WELL-02		
PROJECT ELEMENT	DESCRIPTION	FEATURES
		blowoff hydrant details. Electrical drawings will show where the utility will set the pole for the well feed and the location, details of the utility disconnect and metering station for the well. These are unique drawings and can't be repeated from previous work.
New Well Site Architectural Elevations, Sections, and Details	Well House	Architectural will not require any updates. Existing drawings will be reused of the well house. The energy code used during the design has not changed from the original design (2006).
New well site Geotechnical	Geotechnical Report	Utilizing existing geotechnical information, a memorandum will be provided indicating the design conditions for the foundation at the new well site.
New Well Site Structural Notes and Details	Structural design criteria notes and sections and details for well house	Utilize the existing drawings, structural will review and reuse drawings. The drawings will be reviewed for compliance with the 2018 IBC. The fee is based upon the assumption that the structural details will not need to be modified for the existing site.
New Well Site Mechanical Well Sections and Details	Plan, section, and details showing the well, well pump, and packing for the well casing.	The existing drawings for the perforated well will be reused and adjusted for the well site.

Table -4 Major Work Elements Norman WTP Various Improvements – WELL-02		
PROJECT ELEMENT	DESCRIPTION	FEATURES
New Well Site Mechanical Piping Sections and Details	Plans, sections and details showing the well pump piping and blowoff	The existing drawings will be reused and adjusted for the specific well site. No changes are anticipated.
New Well Site Electrical One-line and panel schedules	Electrical one lines, lighting, and panel schedules,	The existing drawings will be reused. The drawings will be reviewed with respect to the change in code from 2014 to 2020 NEC. No changes are anticipated.
New Well Site Electrical Power and Control Plans	Electrical power and control plan, conduit schedules, etc.	Existing drawings will be reused, the drawings will be reviewed with respect to the change in code from 2014 to 2020 NEC. No changes are anticipated.
New Well Process and Instrumentation Drawings	Well Network Drawing	Network drawings will be modified to include new well site telemetry to the Norman WTP. The specifications will require the contractor to do a radio path study to assess the elevation and orientation of the antenna connected to the well house.
New Well Process and Instrumentation Drawings	Well P&ID Drawings	The P&ID drawings will be reused with the new tags being provided on the drawing for the new well instrumentation and controls.
New well process and instrumentation Drawings	PLC and control panel details	The Well control panel drawings will be reused with the new tags being provided on the drawing for the new well control panel elements.
New Well Typical Details	Typical Detail Sheets utilized in well construction	The typical drawings will be reused for the new well typical details. No Changes

Various Improvements at the Norman WTP
Final July 2025

Task 1 through Task 5 services
Exhibit A to Task Order No. 1

Table -4 Major Work Elements Norman WTP Various Improvements – WELL-02		
<u>PROJECT ELEMENT</u>	<u>DESCRIPTION</u>	<u>FEATURES</u>
		are anticipated
New Well Specifications	Technical Specifications division 2 through division 17	The technical specifications Div 02-17 will be modified to fit the new well scope of work. It will be the responsibility of Norman to integrate the Division 0 and Division 1 specifications for the construction of the new well at the website. SOME work is required on the specifications to change the footers, review and edit, each specification for the applicability of the specifications to the scope work associated with the new well. review and reuse drawings. The specifications will be reviewed for compliance with the 2018 IBC and 2020 NEC code requirements. Where possible, the existing shop drawings will be attached as an exhibit particularly in the case of the plc and telemetry equipment which must be standardized

Assumptions -PROJECT-01

1. Design Duration
 - a. Utilities Review of Interim and Final submittal – 2 weeks
 - b. City of Norman Development Center Code Review will not be required for the project permitting. .
 - c. ODEQ Review – 45 days.
2. Bidding Duration: 3 months following submission of Bid set.
3. Project Management:
 - a. Project Status Reports, Project Schedule, Project Action Decision Logs will be combined for both projects. Separate distinctions for each project will be made within the document.
 - b. Total project duration of 6 months for design and 3 months for bidding.
 - c. Project Progress Meetings 6 total,
 - d. Separate Interim and Final review workshops
 - e. With the exception of the WELL-01 and WELL-02 Project 01 will be designed and bid in ONE bid Project. This PROJECT-01 will include the following:
 - i. WTP-01 Ozone System Improvements
 - ii. WTP-02 SCC Clarifier 3 Rehabilitation
 - iii. WTP-03 OSHG Improvements
 - iv. WTP-04 CFE Sampling and Analysis
 - v. WTP-05 Administration Building Roof Repairs
 - vi. WTP-06 Chloramine Sampling Improvements
 - vii. WRF-01 Secondary Clarifier Rehabilitation
4. Survey:
 - a. A topographic survey will be completed of the existing Chiller area.
 - b. A point survey will be completed of existing WRF Clarifier No. 3 to confirm weir levelness.
 - c. A point survey will be completed of existing area around placement of new brine storage tank.
5. Geotechnical:
 - a. Existing geotechnical will be utilized, no additional geotechnical field work will be required.
 - b. A memorandum will be provided by a geotechnical engineer to supplement the existing geotechnical report for the Phase II services meant to incorporate the structural design of the following into the geotechnical report:
 - i. Foundation
6. Submittals:
 - a. Interim, Final and Bid Set Submittals for
 - b. Well 46 redrilling submittals will consist of a Final and Bid set submittal. Well 46 deliverables (Stamped and Signed for the bid set submittal will contain technical

- specifications and drawings related to the redrilling and
7. OPCC:
 - a. OPCC will be delivered at interim, Final, and Bid Set Submittals.
 8. Utility Coordination:
 - a. Since all the utilities and associated easements on-site are known, utility coordination meetings will not be required.
 - b. Potholing will not be required for the Basic Services but has been included with the additional services.
 9. Design Documents:
 - a. Documents for each project phase will NOT be prepared assuming that SRF funding with AIS, Davis Bacon, and Build America Buy America Act (BABA) requirements will NOT be applicable to Task 2 and Task 3 of the project.
 - b. Contract documents will employ delegated designs for the following:
 - i. Shoring and protection of existing utilities
 - ii. Temporary bulkheads.
 - iii. Metal Canopy over Chiller Units
 - c. Engineer will utilize Revit Civil 3D program for civil, sitework, and yard piping
 - d. The engineer will assist in prepurchasing the 2-25 ton chillers associated with the Ozone Cooling system. The scope assumes that no additional prepurchasing will be necessary to satisfy schedule needs.
 - e. The engineer will perform architectural services associated with the existing administration building. The scope assumes that no additional architectural services will be required. .
 - f. Engineer's Division 1-17 specifications will be utilized.
 - g. City of Norman front ends will be utilized, which requires an Engineer corporate review.
 - h. For Well 46 and New Well to be located on the Designated City Property, Engineer will provide stamped and sealed drawings and Technical Specifications
 10. Permitting:
 - a. The following permitting submittals are anticipated:
 - i. ODEQ Construction Permit – Agency Review/Final Submittal.
 - b. No Environmental permitting will be required as the SRF permitting process can be accomplished through the preparation of a categorical exclusion.
 11. Property Assistance:
 - a. All design work will be within the property owned by City of Norman. Therefore, no property or easement acquisition services will be required.
 12. Owner Responsibilities:
 - a. Owner will furnish Engineer available studies, reports, and other data pertinent to Engineer's services; obtain or authorize Engineer to obtain or provide additional

reports and data as required; furnish to Engineer services of others required for the performance of Engineer's services hereunder, and Engineer will be entitled to use and reasonably rely upon all such information and services provided by Owner or others in performing Engineer's services under this scope of work.

- b. Owner will arrange for access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services hereunder.

Assumptions -WELL 46 Redrilling

1. Design Duration: Delivered 3 months from Notice to Proceed.
2. Bidding Duration: Not applicable, City of Norman will be responsible for the bidding of the Well No. 46 Redrilling
3. Project Management: - SEE PROJECT 01
4. Survey:
 - a. No survey will be necessary.
 - b. The City of Norman will provide existing CAD files for locating new wells in accordance with current state plane coordinates.
5. Geotechnical:
 - a. Existing geotechnical and well logs will be utilized, no additional geotechnical field work will be required.
6. Submittals:
 - a. Well 46 redrilling submittals will consist of a Final and Bid set submittal. Well 46 deliverables (Stamped and Signed for the bid set submittal) will contain technical specifications and drawings related to the redrilling and connection of the new well and pump to the existing well piping and electrical supply.
7. OPCC:
 - a. No OPCC Will be provided.
8. Utility Coordination:
 - a. None.
9. Design Documents:
 - a. For Well 46 redrilling and setting of the well pump, located on the Designated City Property, Engineer will provide stamped and sealed drawings and Technical Specifications Division 02 through Division 17 for use by the City in soliciting contractors for the project.
 - b. For Well 46 piping and electrical connections the engineer will provide markups in Bluebeam directing the city to reconnect the well and well pump to the electrical and mechanical support systems.
 - c. Norman will be responsible for the preparation of the Division 0 and Division 1 specifications for bidding for Well 46 redrilling and well pump setting.

- d. Norman will be responsible for packaging of the specifications and drawings into a bid set for the Well 46 redrilling and well pump setting.
- 10. Permitting:
 - a. No permit assistance will be required.
- 11. Property Assistance:
 - a. All design work will be within the property owned by City of Norman. Therefore, no property or easement acquisition services will be required.
- 12. Owner Responsibilities:
 - a. See PROJECT 01 Summary for Owners requirements.

Assumptions NEW WELL Drawings and Specifications

- 1. Design Duration: Delivered 6 months from Notice to Proceed.
- 2. Bidding Duration: Not applicable, City of Norman will be responsible for the bidding of the New Well.
- 3. Project Management: - SEE PROJECT 01
- 4. Survey:
 - a. No survey will be necessary.
 - b. Topographic survey of existing conditions will be provided by City of Norman. Norman will provide CADD file of survey at 0.5 ft contours.
 - c. If a new survey is required, additional services has been provided for the additional survey.
- 5. Geotechnical:
 - a. Existing geotechnical and well logs will be utilized, no additional geotechnical field work will be required.
- 6. Submittals:
 - a. New well submittals will consist of a Final and Bid set submittal. Bid Set Submittal will be stamped and signed.
 - b. The city of Norman will be responsible for providing the Division 0 and Division 1 specifications and integrating these with the technical specifications. The city of Norman will be responsible for packaging up the drawings and specifications for bidding.
- 7. OPCC:
 - a. No OPCC Will be provided.
- 8. Utility Coordination:
 - a. None.
- 9. Design Documents:
 - a. New well submittals will consist of new site civil drawings establishing the elevations and access to and from the site as well as new electrical and yard piping

drawings establishing the connections of the new well to the available utilities.

- b. New Well submittals will also consist of new Process and Instrumentation drawings illustrating the new tags for the equipment for programming purposes and integration of the new well site into the telemetry.
 - c. New well submittals will consist of reusing previous well drawings and technical specifications (DIV 2 through DIV17_ generated by Engineer under a previous contract amendment, reviewed for applicability, modified (if necessary) to suit the specific well site conditions.
 - d. Final and Bid set (Stamped and Signed) will be provided of the drawings and technical specifications as illustrated herein.
10. Permitting:
- a. No permit assistance will be required.
11. Property Assistance:
- a. All design work will be within the property owned by City of Norman. Therefore, no property or easement acquisition services will be required.
12. Owner Responsibilities:
- a. See PROJECT 01 Summary for Owners requirements.

Major Tasks:

A. Project Management and Progress Reporting:

1. The Engineer will provide project management and progress reporting functions required to successfully complete Tasks 2 and 3.
2. Monthly Progress Reporting: The Engineer will prepare and submit to the Owner monthly invoice packets including the following:
 - a. A cover letter providing general project status, progress completed during the invoice period for each major subtask, overall percent complete for each major subtask, planned activities for the upcoming month, information requests, action items required to be addressed by the Owner, schedule status with any applicable delays, and a list of potential scope adjustments.
 - a. Monthly invoice.
 - b. Updated project schedule.
3. Potential Scope Adjustment Register: The Engineer will maintain a potential scope adjustment (PSA) register. In the event there is consideration given for changes to the Project's scope of work, the Engineer will develop and present PSAs with the next monthly invoice transmittal.
 - a. Engineer will itemize the potential changes detailing the anticipated cost impact to the Engineer's contract and the Project's construction cost.
 - b. Engineers will detail impacts, if any, to the project schedule.
4. Progress Meetings:
 - a. The engineer will conduct regular monthly progress status meetings with the Owner. The meetings will cover the following items at a minimum:
 - b. Update the team on project status, progress achieved, budget and schedule status/concerns and potential deviations from the Scope of Services and corrective actions.
 - c. Discuss project issues, coordinate work activities and review work activities planned for the upcoming period. These progress meetings will be in addition to other work product review meetings or workshops with the Owner as identified herein. The Engineer will prepare an agenda for each meeting.
 - d. Engineers will distribute meeting minutes within seven (7) calendar days of the meeting.
5. Quality Assurance and Quality Control: The design documents will be reviewed by the Engineer's technical advisors and/or senior technical staff for quality assurance and quality control (QA/QC) purposes prior to delivery to the Owner.
 - a. Engineer QA/QC reviews of each deliverable will be completed prior to submitting to the Owner for review. A concurrent QA/QC review with the Owner will not be permitted without prior written approval from the Owner.
 - b. Results of the reviews will be maintained by the Engineer in its records files until

completion of the Project. The results of the QA/QC review will be incorporated into the Final Contract Documents.

6. Schedule: ENGINEER will provide an updated detailed schedule for execution of the project prior to the initiation of Task 2.

Schedule will be updated monthly based on progress.

B. Interim Design

1. Engineers will advance the design to an approximate Interim design level.
2. Plans: See Attachment 2 within Exhibit A for a detailed schedule of plans associated with the design documents.
3. Specifications: - See Attachment 3 within this Exhibit A for estimated specification matrix for the scheduled submittals.
4. Opinion of Probable Construction Costs:
 - a. Provide an updated OPCC following the recommendations of the Association of Advancement of Cost Engineering (AACE) International Recommendation Practice No. 18R about methodology and accuracy.
 - b. The cost opinion level of accuracy presented by the Engineer will be a Class 2 – Control or Bid/Tender cost opinion in accordance with accepted industry guidelines defined by AACE. The Class 3 estimate is commensurate with developed of the design concept to a 30% to 70% level; the expected accuracy on the low end will be -5 to -15 percent and the expected accuracy on the high end will be from +5 to +15 percent.
 - c. Engineer will summary and detail reports of the OPCC. Summary OPCC report will match the anticipated bid structure of the project.
 - d. Engineer will provide a variance for the summary and detailed OPCC reports comparing the updated OPCC with previous design milestone OPCC's. Engineers will provide explanations for work items with significant cost increases. A significant cost increase for a line item will be any increase of 10% or greater from the original OPCC.
5. Deliverable: Engineer will provide the following with Interim design deliverable:
 - a. Plans: Provide full-scale plans in PDF format.
 - b. Specifications: Provide in PDF format.
 - c. Updated OPCC with variance report: Provide in PDF format.
 - d. Updated Quality Control Testing and Inspection Schedule: Provide in PDF format.
 - e. Updated Schedule of Special Inspections: Provide in PDF format.
6. Review Meeting: Engineer will conduct the meeting between Owner's Project Team and Engineer to review the Interim design deliverable.
 - a. Prepare and submit an agenda for two (2) business days prior to the review meeting.
 - b. Prepare and submit meeting minutes to the Owner for review and comment within seven (7) calendar days of the meeting.
 - c. Engineer will incorporate the Owner review comments into the Final design

deliverable and submit a response matrix documenting the proposed action to the Owner's comments with the Final design deliverable.

C. Final Design

1. After writing notice from the Owner, the Engineer will advance the design to a final design level as approximate.
2. Plans:
 - a. Updates to all drawings provided with Interim design.
 - b. See Attachment 2 with this Exhibit A for a detailed schedule of plans associated with the design documents for the project. All other drawings are required for a complete design.
3. Specifications:
 - a. Updates to all specifications provided with the Interim design.
 - b. Owner front-end specifications including draft bid format in .csv file format.
 - c. See Attachment 3 within Exhibit A for estimated specification matrix for the scheduled projects.
 - d. All other specifications are required for a complete design.
4. Opinion of Probable Construction Costs:
 - a. Provide an updated OPCC following the recommendations of the Association of Advancement of Cost Engineering (AACE) International Recommendation Practice No. 18R regarding methodology and accuracy.
 - b. The cost opinion level of accuracy presented by the Engineer will be a Class 2 – Control or Bid/Tender cost opinion in accordance with accepted industry guidelines defined by AACE. The Class 2 estimate is commensurate with development of the design concept to a 30% to 70% level; the expected accuracy on the low end will be -5 to -15 percent and the expected accuracy on the high end will be from +5 to +15 percent.
 - c. The engineer will provide summary and detailed reports of the OPCC. Summary of the OPCC report will match the anticipated bid structure of the Projects.
 - d. Engineer will provide a variance for the summary and detailed OPCC reports comparing the updated OPCC with previous design milestone OPCC's. Engineers will provide explanations for work items with significant cost increases. A significant cost increase for a line item will be any increase of 10% or greater from the original OPCC.
5. Deliverable: Engineer will provide the following with each Final design deliverable:
Plans: Provide full-scale plans in PDF format.
 - a. Specifications: Provide in PDF format.
 - b. Updated OPCC and variance report: Provide in PDF format.
 - c. Updated Quality Control Testing and Inspection Schedule: Provide in PDF format.
 - d. Updated Schedule of Special Inspections: Provide in PDF format.
 - e. Interim Design Comment Response Matrix and Decision Log: Provide in PDF

format.

6. Review Meeting: Engineer will conduct the meeting between Owner's Project Team and Engineer to review the Final design deliverable.
 - a. Prepare and submit an agenda for two (2) business days prior to the review meeting.
 - b. Prepare and submit meeting minutes to the Owner for review and comment within seven (7) calendar days of the meeting.
 - c. Engineer will incorporate Owner review comments into the Final design deliverable and submit a response matrix and decision log documenting the proposed action to the Owner's comments with the Bid Set deliverable.

D. Bid Set Design Documents

1. After written notice from the Owner, Engineer will advance the design to an approximate 100% design level ready for bid.
2. Incorporate comments from Engineer's internal Quality Control, Owner, and applicable regulatory agencies into the Bid Set Design Documents.
3. Opinion of Probable Construction Costs:
 - a. Provide an updated OPCC following the recommendations of the Association of Advancement of Cost Engineering (AACE) International Recommendation Practice No. 18R regarding methodology and accuracy.
 - b. The cost opinion level of accuracy presented by the Engineer will be a Class 1 – Control or Bid/Tender cost opinion in accordance with accepted industry guidelines defined by AACE. The Class 1 estimate is commensurate with development of the design concept to a 50% to 100% level; the expected accuracy on the low end will be -3 to -10 percent and the expected accuracy on the high end will be from +3 to +10 percent.
 - c. Engineers will provide summary and detailed reports of the OPCC. Summary of the OPCC report will match the anticipated bid structure of the Projects.
 - d. Engineer will provide a variance for the summary and detailed OPCC reports comparing the updated OPCC with previous design milestone OPCC's. Engineers will provide explanations for work items with significant cost increases. A significant cost increase for a line item will be any increase of 10% or greater from the original OPCC.
4. Deliverable:
 - a. Plans:
 - i. Electronic: Provide full-scale plans in PDF format.
 - ii. Hard copy: Provide up to three (3) half-scale sets and one (1) full-scale set.
 - b. Specifications:
 - i. Electronic: Provide in PDF format. PDF format will be fully indexed using the Table of Contents and bookmarks will be created in the navigation frame for each major entry in the Table of Contents.
 - ii. Hard copy: Provide up to three (3) double-sided sets.

- c. Updated OPCC and variance report: Provide in PDF format.
- d. Updated Quality Control Testing and Inspection Schedule: Provide in PDF format.
- e. . Final Design Comment Response Matrix and Decision Log: Provide in PDF format.

E. Utility Coordination -

- 1. Electric:
 - a. No coordination is needed with electrical utilities on this project.
- 2. Natural Gas:
 - a. Utility Potholing: No utility potholes are anticipated at this time. However, if during the progression of the design, potholing for identification becomes necessary to include existing utility/yard piping in the contract documents, a unit price for potholing has been included with the additional services.

F. Geotechnical Services

- 1. Not Provided

G. Permitting

- 1. Engineer will provide services for the identification of and submittal preparation of applicable permits.
 - a. Provide assistance to Owner in obtaining permits from federal, state, and local agencies.
 - b. Submit the required sets of documents for review and approval.
 - c. Provide formal responses to any comments received and incorporate revisions into the Construction Contract Documents.
 - d. Provide in the Construction Contract Documents a list of permits which must be obtained by the Contractor.
- 2. The following permits are anticipated:
 - a. ODEQ – Stormwater Permit Not Required
 - b. ODEQ – Construction Permit.
 - c. City of Norman Stormwater Permit – Not Required
 - d. City of Norman Building Permit – Not Required
- 3. The owner will pay all applicable permit fees.

H. Property assistance – None Required

I. DWSRF Support Services:

None Required.

Task 3 - Bidding Services

Engineer will provide Bidding Services in accordance with Task 3 of the Basic Contract and as supplemented herein.

A. Bid Review:

1. The engineer will review bids for completeness, conformance with the Bid Documents, and coordinate as required to resolve any clarifications.

B. Conformed Drawings and Specifications:

1. Following the bid opening and award of Bid, revise the Drawings and Specifications to incorporate changes made during the Bidding Project by addendum to present a unified set of documents for use during the construction process. A copy of all addenda will be placed at the front of the Conformed Specifications.
2. Deliverable:
 - a. Electronic: Provide in PDF format.
 - b. Hard Copy – Owner:
 - i. Provide one (1) full-scale set of Conformed Drawings.
 - ii. Provide two (2) half-scale sets of Conformed Drawings.
 - iii. Provide two (2) copies of the Conformed Specifications.
 - c. Hard Copy – Contractor:
 - i. Provide two (2) full-size sets of Conformed Drawings.
 - ii. Provide two (2) copies of the Conformed Specifications.

C. DWSRF Support Services:

1. Not applicable

Task 4 - Construction Administration Services

General:

Engineer will timely respond to select Submittals, Requests for Information, Substitutions, Change Orders, and Amendments from the Contractor. Engineer is responsible for inspection and construction administration of the project by using its professional skills and knowledge to timely raise to the Owner any issues which are known or should have been known by Engineer, related to Contractor's performance, non-performance, means, methods, techniques, sequences, or procedures of construction that are non-compliant with the design or will diminish project goals.

Engineer will comply with all applicable and required safety regulations, laws, and programs in its design. Engineer, as inspector, will record and timely notify Owner if the Contractor does not comply with the Contract requirements. Engineer will notify Owner of any observed safety issues at the project, and any identified failures of the Contractor to meet their safety precautions, plans and programs

Assumptions: The following assumptions were utilized in preparing the estimated effort associated with the Task 4 construction administration and construction inspection for Project—01 as defined in Table 1 above. The other projects listed will NOT be provided with Task 4 services.

General – Construction Administration:

- 1) The project will be NOT be funded through the DWSRF program. As a result, verification of contractors compliance with the AIS provisions will NOT be part of the submittal review process. BABA will not be applicable to this project.
- 2) Payment of material testing is not the responsibility of the Engineer.
- 3) Payment of third-party special inspections is not the responsibility of the Engineer. Engineer, as person in responsible charge of the project, Engineer will furnish special inspectors to correspond with and supervise the special inspections required by the current City of Norman Adopted codes.
- 4) Engineers will utilize electronic based repository provided by Engineer to Contractor for construction document control including processing of RFI's, submittals, design clarification memorandum, and potential change orders. When

approved, up to two (2) Hard Copies will be available at the engineering site with the required cover sheet for Owner review. Any hard copies for construction documents are assumed to be provided by the Contractor.

- 5) Regular site visits will be conducted concurrently with the monthly on-site construction meetings and will consist of a site walkthrough following the meeting.
- 6) Compensation for Recoverable Costs through Construction Contract: The engineers compensation for basic services specifically excludes the following:
 - a. Excessive submittal Reviews in Accordance with Specification Section 01330, Paragraph 1.07, B.4.
 - b. Review of Substitutions in Accordance with Specification Section 01600, Paragraph 1.05, B.8.
 - c. Inspections or Designs Related to correction of Defective Work as specified in Division 0. .
 - d. Multiple or Staggered development of punch lists for either Final or Substantial Completion milestones as defined in Division 0.
 - e. All other services identified as requiring payment by the Contractor.
- 7) Contactor will be responsible for construction staking.

Key Construction Metrics: Table 5 below represents the key assumptions utilized in developing the construction Administration Phase level of effort.

Table 5 – Basis of ESDC			
Description	Units	Quantity	Comments
Pework Meeting	EA	1	
Construction Duration	Months	6	
Monthly Project Reporting	Ea	6	1
Project Meetings Virtual	EA	4	2
Project Meetings On Site	Ea	2	2
Project Site Walkthroughs – Following Meetings	EA	4	3
Special On-Site Meetings	EA	0	4
Submittal – Monthly Schedule Reviews	EA	4	6
Initial Submittal Reviews	EA	25	5
Re-submittal Reviews	EA	12	5
Request for Information (RFI)	EA	15	6
Design Clarification (DC)	EA	0	6
Potential Change Order Reviews (PCO)	EA	3	6

Monthly Payment applications	EA	15	
Special Inspections Site Visits – Geotechnical	EA	None	7
Special Inspections Site Visits – Structural	EA	1	7
Special Inspections Site Visits – Roofing		None	7
Special Inspections Site Visits – Electrical		None	7
Method of Procedure Reviews	EA	4	8
Commissioning Plan Reviews	EA	2	8
Commissioning Plan Meetings	EA	2	8
Substantial Completion Punchlist Walkthrough	EA	2	9
Final Completion Punchlist Walkthrough	EA	2	9

Notes:

1. Project reporting will be done throughout the months of construction.
2. Engineer will require the contractor to conduct monthly project meetings at the site. However, Engineer will attend some of these meetings virtually and some will on-site.
3. Project Site walkthroughs will occur following each on site meeting. No walkthroughs will be conducted for virtual meetings. .
4. Special On-site meetings occur when field decisions require input from engineer on site.
5. See Table 4 for an estimate of submittals and resubmittals anticipated.
6. Requests for information, Design Clarifications, and Potential Change Order Reviews are based on design and construction industry standards for level of care in the design and construction of water and wastewater systems of similar complexity.
7. Special Inspections site visits include any follow up necessary with inspections and testing to conform to the requirements of the adopted building codes.
8. The Method of Procedures (MOP) reviews associated with Specification Section 01440. The Commissioning and Startup plan review associated with Specification Section 01756.
9. Engineers walkthrough associated with the development of preliminary and final punch list associated with the substantial completion milestone.

Specific Subtasks associated with Task 4:

A. Project Management and Progress Reporting:

1. The Engineer will provide project management and progress reporting functions required to successfully complete Tasks 4 - 6.
2. Monthly Progress Reporting: The Engineer will prepare and submit to Owner monthly invoice packets including the following:
 - a. A cover letter providing general project status, progress completed during the invoice period for each major subtask, overall percent complete for each major subtask, planned activities for the upcoming month, information requests, action items required to be addressed by the Owner, schedule status with any applicable delays, and a list of potential scope adjustments.
 - b. Monthly invoice.
 - c. Updated project schedule.

3. Potential Scope Adjustment Register: The Engineer will maintain a potential scope adjustment (PSA) register. In the event there is consideration given for changes to the Project's scope of work, Engineer will develop and present PSAs with the next monthly invoice transmittal.
 - a. Engineer will itemize the potential changes detailing the anticipated cost impact to the Engineer's contract and the Project's construction cost.
 - b. Engineer will detail impacts, if any, to the project schedule.
4. Initial Contractor Submittals
 - a. Engineer will complete reviews of the following initial submittals from the Contractor:
 - i. Construction schedule
 - ii. Schedule of values and estimated monthly payments.
 - iii. Schedule of submittals.
5. Construction Schedule Review
 - a. Engineer will review monthly construction schedule updates submitted by the Contractor and advise Owner of general progress and delays.
 - b. Engineer will inform Contractor of delays and request a corrective action plan and recovery schedule from the Contractor.

B. Pre-Work Conference

1. Engineer will submit draft pre-work conference agenda to Owner for review seven (7) days prior to the pre-work conference.
2. Engineer will distribute Conformed Documents to all parties at the pre-work conference.

C. Meetings and Site Visits

1. Construction Progress Meetings
 - a. Engineer will coordinate and facilitate monthly progress meetings during construction with the Owner and representatives from the Contractor to discuss the progress of the work and resolve issues. Contractor will prepare meeting agenda and minutes and provide updated submittal logs, RFI logs, and change order logs to Owner.
 - b. Engineer will coordinate and facilitate bi-monthly virtual progress meetings during construction. The purpose of the bi-monthly meetings will be to review and discuss status of RFI's, Submittals, design change memoranda (DCM's), and potential change orders with the contractor and resident inspection team.
 - c. Engineer will review updated logs provided by the Contractor prior to the meeting.
2. Special On-site Meetings
 - a. Engineer will attend special on-site meetings (not conducted on the same day as the regularly scheduled meetings) at the request of the Owner to discuss and assist in resolving construction issues.
 - b. The intent of these meetings is to expedite the submittal review process, resolve change orders, requests for information, and other issues that arise during

construction.

3. Site Visits

- a. Engineer will make visits to the project sites at intervals appropriate to the various stages of construction, as the Engineer deems necessary, to observe as an experienced and qualified design professional the progress of the Contractor's executed Work.
 - b. The intent of these visits is to complete spot checking of the Contractor's work, selective sampling, and similar methods of general observation of the Work based on the Engineer's exercise of professional judgement.
 - c. Engineer will document site visits and submit a report to the Owner within seven (7) calendar days of each site visit unless complete in conjunction with a monthly progress meeting.
 - d. These visits are in addition to inspection visits completed under Task 6 – Inspection Services.
 - e. Defective Work: Engineer will notify the Owner and Contractor if, on the basis of the Engineer's observations, the Engineer believes that such Work (a) is defective under the standards set forth in the Construction Contract Documents, (b) will not produce a completed Project that conforms to the Construction Contract Documents, or (c) will imperil the integrity of the design concept of the completed Project as functioning whole as indicated by the Construction Contract Documents.
4. See tables 3 and 4 for assumptions regarding estimates for the number of construction meetings (virtual), construction meetings (on-site), Special site visits, and visits conducted in conjunction the project.

D. Submittals

1. Engineer will review Contractor's submittals log documenting the following items:
 - a. Submittal name and number
 - b. Date submitted by the Contractor
 - c. Date the submittal was returned to the Contractor
 - d. Submittal disposition (e.g., No Exceptions Noted, Revise and Resubmit, Rejected, etc.)
 - e. The Contract Documents permit the Contractor to submit up to one resubmittal to attain approval from the Engineer for a particular submission. The cost of submittal review beginning with the second resubmittal will be borne by the Contractor. Reimbursement by Owner will be made via directive from the Owner.
 - i. Submittals that do not adhere to the requirements specified in specification 01330 – Submittal Procedures will constitute an automatic rejection.
2. Contractor will submit an updated log to the Owner and Engineer prior to every construction progress meeting per project specifications to meet these obligations
3. Engineer will complete first submission submittal reviews within thirty (30) calendar days of receipt from Contractor. Resubmittals will be completed within (14) calendar days. It is assumed that if Engineer assigns a Rejected, Correct and Resubmit, or Record

purposes only to a submittal, Owner review time will not be included with the initial submittal review time. Only submittals that are approved or approved as noted will receive the additional Owner review time. If no comments are received from the Owner within a seven (7) calendar day period, Engineer will conclude that the Owner has no comments and will release submittal to avoid potential project delays.

4. Review of submittals includes all Operation and Maintenance (O&M) manuals submitted by the Contractor as required by the Construction Contract Documents.
5. See table 3 for assumptions regarding estimates for the number of unique submittals and resubmittals associated with the project,

E. Requests for Information, Design Change Memoranda, and Change Orders

1. Requests for Information (RFI)
 - a. Engineer will be responsible for generating and preparing responses to all RFIs which includes requests for substitution and/or “or-equal”.
 - b. Contractor will maintain and update an RFI log documenting the following items:
 - i. RFI number and name
 - ii. Date submitted by the Contractor
 - iii. Date response was returned to the Contractor
 - iv. Brief description of the response
 - c. Contractor will submit an updated log to the Owner and Contractor prior to every construction progress meeting per project specifications to meet these obligations.
 - d. See tables 3 and 4 for assumptions regarding estimates for the number of unique Requests for Information associated with the project.
2. Design Change Memoranda
 - a. Design Change Memoranda (DCM’s) will be initiated by the Engineer when questions and concerns arise that cannot be resolved through a close and thorough examination of the Contract Document, or for which an interpretation may result in a material change in the design or operational intent of the facility. DCM’s will include sketches and drawing/specification revisions.
 - b. See tables 3 and 4 for assumptions regarding estimates for the number of unique Design Change Memoranda associated with the project.
3. Change Orders
 - a. Engineer will review Potential Change Order (PCO) submissions by the Contractor and make recommendations to the Owner regarding the acceptance or rejection of the project change. The includes requests for additional time and/or money from the Contractor.
 - b. Engineer will prepare change order requests to the Contractor for proposed changes. Change orders, including modified and/or additional drawings, specifications, and other exhibits will be prepared to define the scope and extent of the change and to solicit a price proposal from the Contractor to complete the Work.

- c. CO and PCO Log:
 - i. Contractor will maintain and update a CO and PCO log.
 - ii. Contractor will submit an updated log to the Engineer and Contractor prior to every construction progress meeting per project specifications to meet these obligations.
- d. See tables 3 and 4 for assumptions regarding estimates for the number of unique Potential Change Orders associated with the project.
- e.

F. Quality Control Testing and Special Inspection Coordination and Review

- 1. Quality Control Testing:
 - a. Engineer will coordinate the quality control sampling, testing, and inspections required by the Construction Contract Documents with the Owner selected testing firm.
 - b. Engineer will review all tests and reports for conformance with the Construction Contract Documents.
 - c. Engineer will notify the Contractor and Owner of deficiencies in materials or testing.
 - d. Engineer will review testing claims to ensure the Owner does not pay for re-testing that is due to the Contractor.
- 2. Special Inspections:
 - a. Engineer will monitor construction progress and coordinate all required special inspections.
 - b. Engineer will record and document the special inspection program and coordinate its implementation with Owner and City of Norman Developmental Services Department, Code Enforcement Division if required.
 - c. Engineer will review special inspection reports and ensure deficiencies are addressed by the Contractor.
 - d. On-Site Special Inspections: See tables 3 and 4 for assumptions regarding the number of on-site special inspection/inspectors to be conducted as part of the project.

G. Monthly Payment Request Reviews:

- 1. Engineer will review monthly progress payment requests from the Contractor and make recommendations to the Owner for payment.
- 2. The review will include assessment of materials and/or equipment stored on-site or off-site in approved and bonded warehouse and for which the Contractor is requesting payment for stored materials.
- 3. Engineer's Inspector (as part of Task 6 services) will review pay applications to confirm compliance with SRF Requirements.
- 4. See tables 3 and 4 for assumptions regarding estimates for the number of unique Payment Applications associated with the Project.

H. Start-Up and Testing Support:

- 1. Engineer will review the Contractor's proposed start-up and testing plan for compliance

with the Construction Contract Documents.

2. Engineer will review start-up and testing reports from the Contractor, including subcontractors and manufacturers, for compliance with the Construction Contract Documents.
3. Engineer will attend special commissioning meetings associated with the startup and commissioning plans for the project. The commission meetings will be special on-site meetings associated with the discussion and review of startup and commissioning activities.
4. See tables 3 and 4 for assumptions regarding estimates for the number of MOP's, Commissioning Plans, and commissioning meetings associated with the Project.

I. Substantial and Final Completion Punchlist Development:

1. Substantial Completion Milestone:
 - a. Engineer will conduct a preliminary multidisciplined on-site walkthrough to develop the preliminary punchlist for the substantial completion milestone as defined in the contract documents. Excessive punchlist item will cause the engineer to abandon the punchlist activities, notify the contractor and not return to the site until the contractor completes the work in a manner that a productive substantial completion punchlist can be developed.
 - b. Engineer will prepare a preliminary punchlist in Plangrid (Plangrid, inc) and provide the contractor with access to provide status of each punchlist item.
 - c. Engineer will periodically review and when punchlist items are complete, return to the site to confirm completion and certify substantial completion.
2. Final Completion Milestone:
 - a. Engineer will conduct a preliminary multidisciplined on-site walkthrough to develop the preliminary punchlist for the final completion milestone as defined in the contract documents. Excessive punchlist item will cause the engineer to abandon the punchlist activities, notify the contractor and not return to the site until the contractor completes the work in a manner that a productive substantial completion punchlist can be developed.
 - b. Engineer will prepare a preliminary punchlist in Plangrid (Plangrid, inc) and provide the contractor with access to provide status of each punchlist item.
 - c. Engineer will periodically review and when punchlist items are complete, return to the site to confirm completion and certify final completion.
3. See tables 3 and 4 for assumptions regarding estimates for the number of punchlist walkthroughs conducted as part of this task. Additional punchlist items will be included as part of additional services to be reimbursed by the contractor as part of a deductive change order.

J. Project Closeout:

1. Engineer will review final post-construction videos and photos required by the Construction Contract provided by the Contractor prior to the Final Inspection meeting

- and include deficiencies on the punch list submitted to the Contractor.
2. Engineer will confirm record copies are provided by the Contractor to the Owner of the following at project closeout:
 - a. Submittals: electronic format of final versions.
 - b. O&M Manuals:
 - i. Provide final versions in PDF format.
 - ii. Coordinate transmittal of Contractor-provided hard copies to the Owner.
 - c. Warranties: electronic format.
 - d. RFIs: electronic format.
 - e. DCMs: electronic format.
 - f. Meeting Minutes: electronic format.
 - g. Construction Progress Photographs: electronic format.
 - h. Site Visit Reports: electronic format.
 - i. Start-up and Testing Reports: electronic format.
 - j. Quality Control Testing Reports: electronic format.
 - k. Special Inspection Reports: electronic format.
 - l. COs and PCOs: electronic format.
 - m. As Built Surveys – Topographic
 - n. As Built Surveys – Point Files of Underground utilities
 - o. As Built Surveys – Drone surveys of all topographic and underground features as recorded during the monthly drone surveys.
 3. Engineer will provide to the Owner the following at project closeout:
 - a. As-Built Drawings: as required by Task 5.
 - b. Inspection Reports provided under Task 6: electronic format.
 4. Electronic documents will be provided via a portable hard drive or flash drive unless otherwise approved by the Owner. Files will be organized in folders by type of document. Documentation noted in Project Closeout is assumed to be available via the Construction Management software. Engineer will review/compile final archiving data from the Construction Management software and submit all electronic data to Owner per the electronic documents requirements noted.

Task 5 - As-Built Drawings Services:

A. General:

1. Corrected Final Plans with any changes that reflect actual construction.
 - a. Corrected Final Plans with any changes based on field surveys that reflect that actual construction. Corrections, comments, changes, and any other markings must be highlighted in RED. AutoCAD files are to be tied to Oklahoma State Plane Coordinate System (NAD_1983_COWS96_StatePlane_Oklahoma_North_FIPS_3501_Ft_US), Elevation NAVD 88/.
2. GPS Coordinates for Installed Assets.
 - a. GPS Coordinates from permanent benchmark of installed assets, appurtenances, valves, etc., to be included with As-Built Plans.
3. Operations and Maintenance Manuals Engineer will update the following chapters of the Plant Operations and Maintenance manuals:
 - a. Ozone Generation: Update to include closed loop chiller system.
 - b. OSHG:: Update to include second brine tank and open loop chiller system for the exiting OSHG system.
4. AutoCAD .dwg files will be provided in AutoCAD version 2024 or later.
5. Warranty Assistance: No warranty assistance will be provided with this project. The Owner's project manager will be responsible for establishing, tracking, and verification of completion of the post-construction period warranty items related to the maintenance or performance bonds.

Completion Times:

Table 6 presents a summary of the project milestone dates based on the detailed schedule for

Table 6 Phase Design Deliverables		
Work Item	Time to Complete (weeks)	Completion Time from NTP (weeks)
Task 2 – Interim Design Submittal	18	18
Task 2 – Final Design Submittal	12	30
Task 2 – 100% Design Submittal	12	42
Task 3 – Bidding Services	12	54
Task 4 – Construction Administration Task	24	78
Task 5 – As Built Services	12	98

END OF BASIC SERVICES.

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Contract K-2526-17
Task Order No. 1
Exhibit A- Scope of Services

Attachment 1 to Exhibit A – OPCC



ATTACHMENT 1 TO EXHIBIT A- COST ESTIMATE

Cost Estimate Norman WTP Various Improvements

Project: Project XXXX - Various Improvements
Client: City of Norman
Location: Norman WTP
Zip Code: 73072

Carollo Job #
Project Duration 52 weeks
Super on Site 46 weeks
HVAC onsite 8 weeks
Electrical Onsite 27 weeks

Estimate Class: 4
PIC: Thomas Crowley
PM: Brendan Woiohan
Date: May 28, 2024
By: BW
Reviewed: TOC

SPEC. NO.	Element	DESCRIPTION	QUANTITY	UNIT	UNIT COST	Sub Markup	SUBTOTAL	TOTAL
Construction Element General Conditions								
0	Mobilization	1 LS			\$ 50,000	0% \$	50,000 \$	74,113
1	1 General Conditions - Project Manager	686 hours			\$ 75	0% \$	51,480 \$	76,306
1	1 General Conditions - Foreman	1,840 hours			\$ 70	0% \$	128,800 \$	190,914
	1 General Conditions - Admin	1,040 hours			\$ 45	0% \$	46,800 \$	69,369
1	1 General Conditions - Trailers and Consumables	12.00 Months			\$ 7,722	0% \$	92,667 \$	137,355
16	1 General Conditions - Electrical Foreman	1,080 Hours			\$ 80	20% \$	103,680 \$	153,680
15	1 General Conditions - HVAC Foreman	352 hours			\$ 70	20% \$	29,568 \$	43,827
	General Conditions - Survey Cre	1 LS			\$ 15,000	20% \$	18,000 \$	26,681
2	2 General Cleanup and Sodding of Trailer Area	1 LS			\$ 10,000	20% \$	12,000 \$	17,787
	SUBTOTAL							\$ 790,031
WTP01-01 Construction Element - Clarifier #3 Rehabilitation and Repair								
2	Site Prep - Drain and clean clarifier No. 3	320 hours			\$ 55	20% \$	21,120 \$	31,305
2	Selective Demolition of Clarifiers - Labor	200 MH			\$ 60	20% \$	14,400 \$	21,344
2	Selective Demolition of Clarifiers - Equipment	10 days			\$ 1,500	20% \$	18,000 \$	26,681
2	Remove and Reinstall Lime Feed Stations & Hotbox No. 3 Labor	128 MH			\$ 55	20% \$	8,448 \$	12,522
2	Remove and Reinstall Lime Feed Stations & Hotbox No. 3 Materials	1 LS			\$ 3,500	20% \$	4,200 \$	6,225
2	Common Work Items - Handrail, Effluent Sump, Concrete - No. 3	1 LS			\$ 20,000	20% \$	24,000 \$	35,574
3	Miscellaneous Concrete Repairs (patching/crack injection, etc)	1 LS			\$ 20,000	20% \$	24,000 \$	35,574
5	Miscellaneous Metals - Purchase Weld Filler and Plates	1 ls			\$ 35,000	20% \$	42,000 \$	62,255
5	Miscellaneous Metals - Labor for metal Repairs	640 hours			\$ 65	20% \$	49,920 \$	73,994
7	Weld Filler - Clarifier No. 3 Materials	1,950 LF			\$ 8	20% \$	18,720 \$	27,748
7	Weld Filler - Clarifier No. 3 Labor	1,950 LF			\$ 12	20% \$	27,456 \$	40,697
7	Weld Filler - Clarifier No. 3 Materials	2,340 LF			\$ 8	20% \$	22,464 \$	33,297
7	Weld Filler - Clarifier No. 3 Labor	2,340 LF			\$ 12	20% \$	33,696 \$	49,946
9	Lead Paint Rehabilitation Clarifier #3	- LS			-	20% \$	- \$	-
9	Lead Paint Rehabilitation Clarifier #3	- LS			-	20% \$	- \$	-
9	Blast and Paint Clarifier #3	1 LS			\$ 434,500	20% \$	434,500 \$	644,038
11	Purchase Equipment and Manufacturers Field Services - Westech No. 3	1 LS			\$ 75,000	20% \$	75,000 \$	111,169
11	Install, test, Commission, Clarifier No. 1 Suez Parts	100 MH			\$ 55	20% \$	5,500 \$	8,152
	SUBTOTAL							\$ 1,220,520
WTP01A Construction Element - Contactor Improvements								
2	Site Prep - Drain and Clean Ozone Contactors- Labor	80 MH			\$ 65	\$	5,200 \$	7,708
2	Site Prep - Drain and Clean Ozone Contactors- Equipment	1 LS			\$ 5,000	\$	5,000 \$	7,411
2	Contactor Prep Scaffolding and Equipment Rental	14 days			\$ 2,000	\$	28,000 \$	41,503
15	Piping Improvements In Contactor 1	1 LS			\$ 50,000	\$	50,000 \$	74,113
15	Piping Improvements in Contactor 2	1 LS			\$ 50,000	\$	50,000 \$	74,113
15	Piping Improvements in Ozone Building	1 LS			\$ 30,000	\$	30,000 \$	44,468
11	Install, test, and Comission Prepurched Sample Pumps	1 LS			\$ 15,000	\$	15,000 \$	22,234
16	Install, Test, and Comission Electrical Support Equipment	1 LS			\$ 10,000	20% \$	12,000 \$	17,787
17	Ozone Probe Purchase and Installation	3 EA			\$ 6,500	20% \$	23,400 \$	34,685
17	Ozone Transmitter	1 EA			\$ 5,000	20% \$	6,000 \$	8,894
17	Prepurched Instrumentation Installation, Testing, Commissioning	1 LS			\$ 18,000	20% \$	21,600 \$	32,017
17	PLC Programming - PLC Ozone Destruct	100 Points			\$ 200	20% \$	24,000 \$	35,574
17	SCADA Programming - HMI Screen Modifications	160 MH			\$ 100	20% \$	19,200 \$	28,459
	SUBTOTAL							\$ 428,963
WTP-01B Construction Element - 2-60 Ton Chillers								
15	2 6-inch waterline	100 LF			\$ 150	\$	15,000 \$	22,234
15	2 6-inch waterline fittings	15 EA			\$ 250	\$	3,750 \$	5,558
2	2 trenching	100 LF			\$ 25	\$	2,500 \$	3,706
15	2 buried 6-inch gate valves	4 EA			\$ 1,500	\$	6,000 \$	8,894
15	2 above ground valves	4 EA			\$ 1,200	\$	4,800 \$	7,115
15	2 mixing valves	1 ea			\$ 2,500	\$	2,500 \$	3,706
2	3 excavation for concrete pad	194 cuyd			\$ 25	\$	4,861 \$	7,205
2	3 backfill for concrete pad	177 cuyd			\$ 80	\$	14,187 \$	21,028
3	3 concrete pad	36 cuyd			\$ 1,500	\$	83,333 \$	123,521
5	5 Miscellaneous Metals	1 LS			\$ 6,500	\$	6,500 \$	9,635
5	5 Metal Awning Purchase	1 EA			\$ 50,000	\$	50,000 \$	74,113
5	5 Metal Awning Install	64 hours			\$ 55	\$	3,520 \$	5,218
15	15 Chiller Purchase	2 EA			\$ 80,000	\$	160,000 \$	237,160
15	15 Chiller Installation	500 hours			\$ 55	\$	27,500 \$	40,762
16	16 Electrical Feeder and Disconnect	2 LS			\$ 50,000	20% \$	120,000 \$	177,870
17	17 SCADA and PLC Integration	100 Pionts			\$ 1,000	20% \$	120,000 \$	177,870
	SUBTOTAL							\$ 925,593
Construction Element -OSHG Improvements								
11	OSHG Heat Exchanger Purchase	1 ea			\$ 15,000	\$	15,000 \$	22,234
11	OSHG Heat Exchanger Installation	60 hours			\$ 70	\$	4,200 \$	6,225
11	8,000 gallon Brine Tank Purchase	1 EA			\$ 45,000	\$	45,000 \$	66,701
2	Saw Cut and Remove Pavement and Curb	80 LF			\$ 175	20% \$	16,800 \$	24,902
2	Overexcavate Foundation	74 CY			\$ 75	\$	5,556 \$	8,235
3	Backfill with CLSM	59.2593 CY			\$ 125	\$	7,407 \$	10,980
3	Matt Foundation Slab 15 x15	21 CY			\$ 1,250	\$	26,042 \$	38,600
3	Repair concrete and install Expansion Joints	225 SF			\$ 50	\$	11,250 \$	16,675
5	Miscellaneous Metals	1 LS			\$ 3,500	20% \$	4,200 \$	6,225
11	Crane Rental to Unload and Install tank	1 LS			\$ 4,500	20% \$	5,400 \$	8,004
11	Install Tank - Mechanical	120 hours			\$ 75	\$	9,000 \$	13,340
16	Electrical Feeders to Instrumentation and Truck Unloading Panel	500 LF			\$ 35	20% \$	21,000 \$	31,127
17	Unloading Panel and Instrumentation Mounting	90 hours			\$ 85	20% \$	9,180 \$	13,607
17	PLC and SCADA Programming to incorporate points	1 LS			\$ 25,000	20% \$	30,000 \$	44,468
2	Demolish existing Piping	1 LS			\$ 15,000	\$	15,000 \$	22,234
15	Install new 1-1/2" PVC in Chemical Trench	5,000 LF			\$ 25	\$	125,000 \$	185,281
15	Install New 8-inch PVC Containment Pipe to CFE Manhole	200 LF			\$ 150	\$	30,000 \$	44,468
	SUBTOTAL							\$ 563,306
Construction Element WRF Clarifier #3 Rehabilitation								
2	Site Prep - Drain and clean clarifier No. 3	400 hours			\$ 55	\$	22,000 \$	32,610
2	Selective Demolition of Clarifiers - Labor	200 MH			\$ 60	\$	12,000 \$	17,787
2	Selective Demolition of Clarifiers - Equipment	10 days			\$ 1,500	\$	15,000 \$	22,234
2	Remove and Reinstall Launder Covers - Labor	128 MH			\$ 55	\$	7,040 \$	10,435
	Type 1 & 2 Repair: Floor - 1/2" to 1 1/2" Repair	50 SF			\$ 45.00	20% \$	2,700 \$	4,002
	Type 1 Repair: Wall - 1/2" or less Repair	20 SF			\$ 52.00	20% \$	1,248 \$	1,850
	Type 2 Repair: Wall - 1/2" to 1 1/2" Repair	10 SF			\$ 62.00	20% \$	744 \$	1,103
	Crack Repair	50 LF			\$ 60.00	20% \$	3,600 \$	5,336
	Remove and Replace Clarifier PRV's	5 EA			\$ 3,500.00	20% \$	21,000 \$	31,127
	Xpex Coating on Clarifier Launderers	3,724 SF			\$ 25.00	20% \$	111,708 \$	165,579
	New Clarifier FRP Stanford Baffles& Wier - Purchase	1 LS			\$ 30,000	20% \$	36,000 \$	53,361
	New Clarifier FRP Stanford Baffles& Wier - Installation - Labor	240 Hours			\$ 55	20% \$	15,840 \$	23,479
	New Clarifier FRP Stanford Baffles& Wier - Installation - Equipment	5 days			\$ 500	20% \$	3,000 \$	4,447
	New Scum Beach, Baffle and Scum Pipe Assembly - Purchase	1 LS			\$ 20,000	20% \$	24,000 \$	35,574
	New Scum Beach, Baffle and Scum Pipe Assembly - Labor	128 hours			\$ 55	20% \$	8,448 \$	12,522
	New Scum Beach, Baffle and Scum Pipe Assembly - Equipment	5 Days			\$ 750	20% \$	4,500 \$	6,670
	Sandblast Exterior of Concrete	1,178 SF			\$ 7	20% \$	9,896 \$	14,668
	Sandblast and Paint 125 Ft Diameter Secondary Clarifier	1 LS			\$ 325,000	20% \$	390,000 \$	578,078
	Weld Filler - Clarifier No. 3 Materials	975 LF			\$ 8	20% \$	9,360 \$	13,874
	Weld Filler - Clarifier No. 3 Labor	975 LF			\$ 12	20% \$	14,040 \$	20,811
	Weld Filler - Clarifier No. 3 Materials	1,170 LF			\$ 8	20% \$	11,232 \$	16,649
	Weld Filler - Clarifier No. 3 Labor	1,170 LF			\$ 12	20% \$	16,848 \$	24,973
	Westec Equipment Purchases (New Bearings, Gearbox, Motor)	1 LS			\$ 35,000.00	\$	35,000 \$	51,879
	Electrical Purchase - Disconnect	1 ES			\$ 3,500	20% \$	4,200 \$	6,225
	Electrical Purchase - 1" conduit and Wires	375 LF			\$ 25	20% \$	11,250 \$	16,675

Electrical Instalation - Labor	96	Hours	\$	75	20%	\$	8,640	\$	12,807	
Westec Equipment Installation Services	50	hours	\$	225		\$	11,250	\$	16,675	
SUBTOTAL										\$ 1,201,429
Construction Element - CFE Sampling Pipe										
Sample Pump Purchase	2	Ea	\$	5,500		\$	11,000	\$	16,305	
Sample Pump Misc Metals	1	LS	\$	2,500		\$	2,500	\$	3,706	
Sample Pump Install	100	hours	\$	35		\$	5,500	\$	8,152	
Trenching for 1" PVC Sample line	200	LF	\$	25		\$	5,000	\$	7,411	
Water Quality Panel Assembly (turbidimeter)	1	LS	\$	20,000		\$	20,000	\$	29,645	
Electrician and Instrumentation	1	LS'	\$	15,000		\$	15,000	\$	22,234	
Programming	1	LS	\$	10,000		\$	10,000	\$	14,823	
SUBTOTAL										\$ 102,275
Construction Element - Administration Building Repair										
Remove Existing Roof and Flashing - Transition	40	MH	\$	55	20%	\$	2,640	\$	3,913	
Reroof with NEW TPO and Reflash - Transition	150	SF	\$	50	20%	\$	9,000	\$	13,340	
Remove Existing Roof and Flashing - Main Roof	80	MH	\$	55	20%	\$	5,280	\$	7,826	
Partially Remove TPO Roof and Apply Belly Band	860	SF	\$	20	20%	\$	20,640	\$	30,594	
Reflash Roof - Materials	1	LS	\$	15,000	20%	\$	18,000	\$	26,681	
Reflash Roof - Labor	200	MH	\$	35	20%	\$	13,200	\$	19,566	
Testing and comissioning Scanes and Repairs	1	LS	\$	6,500	20%	\$	7,800	\$	11,562	
Insulation board and Spray Foam Insulation	1	LS	\$	15,000	20%	\$	18,000	\$	26,681	
Miscellaneous Wall Board Repairs and Framing	1	LS	\$	10,000	20%	\$	12,000	\$	17,787	
SUBTOTAL										\$ 157,949
SUBTOTAL										
Raw Project Subtotal						\$	3,636,408	\$	5,390,066	\$ 5,390,066
Local Sales Tax						\$	-			
State Sales Tax						\$	-			
Escalation (1 yr)	10.00%					\$	363,641			
Subtotal Bid Packages						\$	4,000,049			
Change Orders - Other Work						\$	-			
Subtotal Direct Costs	0.00%					\$	4,000,049			
Builders Risk Insurance	1.25%					\$	50,001			
General Contractor OH&P	20.00%					\$	800,010			
Performance and Maintenance Bond	1.25%					\$	50,001			
Cost of Work						\$	4,900,060			
Design Risk Contingency	10.00%					\$	490,006			
Total Construction Costs						\$	5,390,066			
AACE High Range	30%					\$	7,007,086			
AACE Low Range	-5%					\$	5,120,563			

Contract K-2526-17
Task Order No. 1
Exhibit A- Scope of Services

Attachment 2 to Exhibit A Preliminary List of Drawings

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

PROJECT 01 DRAWING LIST

AREA 00_GENERAL
 AREA 10_SITE WORK
 AREA 30 SOLIDS CONTACT CLARIFIERS
 AREA 41 OZONE BUILDING
 AREA 42 OZONE CONTACTOR
 AREA 43 OZONE DESTRUCT BUILDING
 AREA 65 CHEMICAL BUILDING
 AREA 74 CLEARWELLS
 AREA 84 ADMINISTRATION BUILDING
 AREA 199 TYPICAL DETAILS

PROJECT 01 DRAWING LIST

AREA 00 GENERAL DRAWINGS

"1" - Included with Submittal

Sheet	Area	Disc	#	Description			INTERIM	FINAL	BID	NOTES
1	00	G	- 01	Cover Sheet	5		1	1	1	
2	00	G	- 02	Sheet Index	5		1	1	1	
3	00	G	- 03	Notes and Symbols	5		1	1	1	
4	00	G	- 04	Overall Site Plan and Area Index	5		1	1	1	
5	00	G	- 05	Ozone Chilled Water Process Schematic	25		1	1	1	
6	00	G	- 05	Sodium Hypochlorite Chilled Water Process Schematic	15		1	1	1	
7	00	G	- 06	Equipment Schedule	15		1	1	1	
8	00	G	- 06	Civil Notes and Details	5			1	1	
9	00	G	- 07	Design Criteria	5		1	1	1	
10	00	GC	01	General Civil Notes	5			1	1	
11	00	GS	- 01	Structural Notes	5		1	1	1	
12	00	GM	- 01	General Mechanical Notes and Symbols	25		1	1	1	
13	00	GM	- 01	Mechanical Symbols	5		1	1	1	
14	00	GM	- 03	Pipe Schedule	5		1	1	1	
15	00	GH	01	General HVAC Notes and Symbols	5		1	1	1	
16	00	P	- 01	Plumbing Symbols and Schematics	5		1	1	1	
17	00	GE	- 01	Electrical Legend	5		1	1	1	
18	00	GE	- 02	Electrical One-Line	5		1	1	1	
19	00	GE	- 03	Electrical Abbreviations	5			1	1	
20	00	GE	04	Electrical Schedules	45				1	
21	00	GE	05	PanelBoard Schedules	45				1	
22	00	GN	- 01	Symbols and Abbreviations I	5		1	1	1	
23	00	GN	- 02	Symbols and Abbreviations II	5		1	1	1	
24	00	GN	- 03	Symbols and Abbreviations III	5		1	1	1	
25	00	GN	- 04	Symbols and Abbreviations IV	5		1	1	1	
26	00	GN	- 05	Equipment Tagging System	5		1	1	1	
27	00	NS	- 01	PCS Block Diagram I	5			1	1	Shows changes to Ozone Communications

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

28	00	NS	-	02	PCS Block Diagram II	5			1	1	Shows changes to Ozone Communications
29	00	NS	-	03	PCS Block Diagram III	25				1	Shows changes to Ozone Communications
30	00	NS		04	TABLES FOR I/O Points	10				1	Shows I/O Points added
31	00	NS	-	08	Control Schematics I	35		1		1	Shows Chiller Pump Control Schematics
32	00	NS	-	09	Control Schematics III	35				1	Shows Ozone Sample Pump Controls
TOTAL GENERAL						32	385	Sub-Total			
PROJECT 01 DRAWING LIST											
AREA 10 CIVIL/SITEWORK											
33	10	C	-	01	Location, Laydown and Parking Plan	5			1	1	
34	10	C	-	02	Construction Erosion Control Plan (Contractor Laydown Areas)	15			1	1	
35	10	C	-	03	Construction Erosion Control Plan Details (Contractor Laydown Areas)	15			1	1	
36	10	CS	-	03	Civil Site Plan 3	25			1	1	Shows Civil Changes for Brine Tank additiona
37	10	CS	-	04	Civil Site Plan 4	25			1	1	Shows Civil Changes for Chiller addition
38	10	CG		03	Civil Grading Plan 3	25			1	1	Shows Grading changes for siting chiller addition
39	10	CP		01	Control Points	5			1	1	Shows control points
40	10	CD	-	04	Civil Details I	5			1	1	
41	10	C	-	05	Civil Details II	5			1	1	
42	10	YP	-	02	Area 2 Yard Piping	50			1	1	Shows yard piping changes for chiller area
43	10	YP	-	03	Area 3 Yard Piping	25			1	1	Shows yard piping changes for brine area and replacement of SH Lines.
44	10	YP	-	10	Yard Piping Partial Plan - Chiller Area	35		1	1	1	
45	10	YP	-	11	Yard Piping Partial Plan - OSHG Area	25			1	1	Shows yard piping for Brine Storage tank
46	10	YP	-	12	Yard Piping Partial Plan - CFE Area	5			1	1	Showsh yard piping for replacement of SH lines
47	10	YP	-	13	Yard Piping Profiles	5			1	1	Profile of CWS and CWR lines from Chiller area to Ozone building
48	10	YP	-	14	Yard Piping Profiles II	25			1	1	
49	10	YP	-	15	Yard Piping Coordinates	25			1	1	Coordinates for CWS and CWR lines

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

50	10	YP	-	42	Plan and Section of CFE Manhole	15					1	CFE Sample pump installation in MH with support
51	10	E	-	02	Electrical Site Plan 2	35					1	
52	10	E	-	03	Electrical Site Plan 3	35					1	
53	10	E	-	10	Partial Electrical Site Plan - Brine Area	25					1	Wire and conduit powerin the brine tanks from Chemical Building. PCM-CHEM
54	10	E	-	11	Partial Electrical Site Plan - CFE Manhole	25					1	Wire and conduit to new sample pump from PCM- UV and PB-UV
55	10	E	-	12	Electrical Duct Bank Sections	10					1	

TOTAL AREA 10 **23** **465**

PROJECT 01 DRAWING LIST

AREA 30 - SOLIDS CONTACT CLARIFIER

56	30	D	-	01	Demolition/Relocaiton Plan SCC No. 3	10				1	1	
57	30	M	-	01	SCC Rehabilitation Plan	25				1	1	Rehabilitation Plans with Notes
58	30	M	-	02	SCC Rehabilitation Sections and Details	25				1	1	Rehabilitation Plans with Notes
59	30	M	-	03	SCC No. 3 Rehabilitation Photos	25				1	1	Photos with Notes
60	30	E	-	01	Electrical Demolition Plan	25	0				1	Electrical demo of conduit/wire to allow for coating
61	30	E	-	02	SCC No. 3 Electrical Plan	25					1	Electrial reinstallation of conduit/wire to reconnect

TOTAL SCC **6** **135**

PROJECT 01 DRAWING LIST

AREA 41 OZONE BUILDING + SUPPORT

62	41	SA	-	01	Foundation and Roof Plan Chiller building with Hardware Schedule	55				1	1	Prefabricated Concrete Building
63	41	SA	-	02	Chiller Building Sections	55				1	1	Prefabricated Concrete Building
64	41	SA	-	03	Chller Building Elevations	45					1	Prefabricated Concrete Building
65	41	M	-	01	Mechanical Plan - Ozone Building Enlarged Plan	25		1		1	1	
66	41	M	-	02	Mechanical Partial Plan - Ozone Building	45				1	1	
67	41	M	-	03	Mechanical Sections I	30		1		1	1	
68	41	M	-	04	Mechanical Sections II	30		1		1	1	
69	41	M	-	05	Chiller Building Plan	45		1		1	1	
70	41	M	-	06	Chliier Building Sections	35				1	1	
71	41	M	-	08	Chiller Details	35				1	1	
72	41	M	-	01	Chiller Building HVAC Plan	45				1	1	
73	41	M	-	01	Chiller Building HVAC Sections	45				1	1	

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

74	41	E		01	MCC-Ozone A one line	15			1	1	Showin Chiller Power to DPPA, and DPPA to Chiller A
75	41	E		02	MCC OZ A Elevation	15			1	1	Showin Chiller Power to DPPA, and DPPA to Chiller A
76	41	E		03	MCC-Ozone B one line	15			1	1	Showing Chiller power to DPPB and DPPB to Chiller B VCP
77	41	E		04	MCC-OZ B Elevation	15			1	1	Showing Chiller power to DPPB and DPPB to Chiller B VCP
78	41	E		05	Chiller Building Electrical Panel Schedule	25			1	1	Showing DPPA and DPPB and LP Schedules, Luminare Schedules
78	41	E		06	Electrical Power and Control Plan - Ozone Building Enlarged Plan	25				1	Showing Chiller power to Chiller B
79	41	E		07	Electrical Power and Control Plan - Ozone Building Electrical and Control Room	25				1	Wire and conduit powering the Chillers, CAT 6 to PCM CHEM
80	41	E		08	Electrical - Chiller Building Power and Control Plan	35				1	
81	41	E		09	Electrical - Power and control details	35				1	
82	41	E		10	Electrical - Chiller Building lighting and recepticle Plant	25			1	1	
83	41	N		04	Closed Loop Cooling Water System I	25		1	1	1	
84	41	N		05	Closed Loop Cooling Water System II	25		1	1	1	
85	41	N		09	Chiller Feed Pumps	25		1	1	1	
86	41	N		10	Packaged Chiller Unit No. 1	25		1	1	1	
87	41	N		11	Packaged Chiller Unit No. 2	25		1	1	1	
88	41	N		12	OSHG Chiller Unit No. 1	25			1	1	Expansion tank for

TOTAL AREA 41 **28** **870**

PROJECT 01 DRAWING LIST

AREA 42/43_OZONE CONTACTOR & DESTRUCT BUILDING

88	42	M	-	01	Ozone Contactor TOp Plan	15	1	1	1	1	
89	42	M	-	02	Ozone Contactor Intermediate Plan	15		1	1	1	
90	42	M	-	03	Ozone Contactor Sections and Details I	15			1	1	
91	42	M	-	04	Ozone Contactor Sections and Details II	15		1	1	1	
92	42	N	-	01	Ozone Contactor No. 1 P&ID	15		1	1	1	
93	42	N	-	02	Ozone Contactor No. 2 P&ID	15			1	1	
94	43	M	-	01	Ozone Destruct Building Plan	35		1	1	1	
95	43	M	-	02	Ozone Destruct Building Sections and Details	35		1	1	1	
96	43	E	-	01	Ozone Destruct Building Power and Control Plan	25			1	1	

TOTAL AREA 42/43 **9** **185**

PROJECT 01 DRAWING LIST

AREA 50 FILTERS

97	50	M	-	01	Filter Gallery Partial Plan and Section	35			1	1	Replaces SH Line, show new WQ panel with on-line analyzer
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Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

98	50	E	-	01	Filter Gallery Partial Plan and Section	35				1	Adds new WQ panel for CFE Turbidity
99	50	N	-	22	Combined Filter Effluent	40			1	1	new water quality panel controls for CFE turbidity monitoring
Total Area 50 - FILTERS						3	110				
PROJECT 01 DRAWING LIST											
AREA 65 CHEMICAL BUILDING											
100	65	S	-	13	Chemical Building Sections and Details- Brine Tank Foundation	25			1	1	Brine Tank Foundation
101	65	M	-	25	Chemical Building - CTS Storage and Meetering	50				1	Chemical Building Heat Exchangers for SH
102	65	M	-	28	Chemical Building Brine Tank Plan, Sections and Details	25			1	1	
103	65	M	-	29	Chemical Building Brine Tank Sections II	25			1	1	
104	65	N	-	1	SH Brine Tank I-Exsting	10			1	1	Existing Brine Tank
105	65	N	-	1A	SH Brine Tank II	25			1	1	Second Brine Tank
106	65	N	-	01B	SH Softened Water Prep	25			1	1	Chiller heat exchanger additiona
107	65	N	-	27	SH Feed	25			1	1	Pushwater valving and controls
108	65	N		15	HP Feed	0			1	1	
109	65	E		01	Chemical Building - CTS Storage and Metering	55				1	Electrical power to temperature probe to monitor heat exchanger
TOTAL CHEMICAL BUILDING						10	265				
PROJECT 01 DRAWING LIST											
AREA 74 CLEARWELLS											
110	74	SM		01	1MG Clearwell Plan, Section and Details Sample pump and Piping	65			1	1	Electrical power to temperature probe to monitor heat exchanger
111	74	SM		02	6MG Clearwell Plan, Section and Details Sample pump and Piping	65			1	1	Electrical power to temperature probe to monitor heat exchanger
TOTAL CLEARWELLS						2	130				
PROJECT 01 DRAWING LIST											
AREA 84 ADMINISTRATION BUILDING											
112	84	D	-	04	Roof Plan	5			1	1	Roof plan showing partial Roof demo
113	84	D	-	09	Wall Sections Demo	25			1	1	Wall Sections showing where we want to demo flashing/cap

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

114	84	A	-	04	Roof Plan	25			1	1	Roof plan showing portions of new membrane and where we want to tie into old
115	84	A	-	09	Wall Sections Modifications I	15			1	1	Wal sections showing how we want to rebuild membrane roof, repair, and reflash cap
116	84	A	-	10	Wall Sections Modifications II	15			1	1	Wal sections showing how we want to rebuild membrane roof, repair, and reflash cap
117	84	A	-	14	Wall Details Modifications	15			1	1	Caulking and flashing details

TOTAL AREA 84 ADMINISTR

6 100

AREA XX - WRF Clarifier No. 3

118	XX	G	-	01	Site and Location Plan	5			1	1	
119	XX	G	-	02	Site Mobilization and Staging Plan	5			1	1	
120	XX	D	-	01	Demolition/Relocation Plan WRF CLARIFIER No. 3	35			1	1	
121	XX	M	-	01	WRF Clarifier Rehabilitation - Plan	25			1	1	Rehabilitation Plans with Notes
122	XX	M	-	02	WRF Clarifier Rehabilitation - Sections	25			1	1	Rehabilitation Plans with Notes
123	XX	M	-	03	WRF Carifer Rehabilaitation Details	35			1	1	Details showing new scum box, scum pipe, Wier partial section, Popoff Valve replacement
124	XX	M	-	04	WRF Clarifier Rehabilitation photos	25					
125	XX	E	-	01	Electrical Demolition Plan	15			1	1	Electrical demo of conduit/wire to allow for coating
126	XX	E	-	02	WRF Clarifier Electrical Rehabilitation Plan	25			1	1	Electrial reinstallation of conduit/wire to reconec

TOTAL WRF CLARIFIER NO.

9 195

PROJECT 01 DRAWING LIST

AREA 199 TYPICAL DETAILS

127	199	A	-	01	Architectural Typical Details I	5			1	1	
128	199	A	-	02	Architectural Typical Details I	5			1	1	
129	199	C	-	01	Civil Typical Details I	5			1	1	
130	199	E	-	01	Electrical Typical Details I	5			1	1	
131	199	E	-	02	Electrical Typical Details II	5			1	1	
132	199	N	-	02	Instrumentation Typical Details I	5			1	1	
133	199	P	-	01	Piping Typical Details I	5			1	1	

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
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134	199	P	-	02	Piping Typical Details II	5			1	1	
135	199	S	-	01	Structural Typical Details	5			1	1	
TOTAL TYPICAL DETAILS						9	45				
TOTAL OVERALL PROJECT						137	2,885	38	114	136	
PROJECT 01											

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

WELL-02 PROJECTD DRAWING LIST

865,500

Sheet	Area	Disc	#	Description				FINAL	BID	
1	00	G	- 01	Cover Sheet, Sheet index, and location plan	15			1	1	
2	00	PQ	- 01	Summary of Pay Quantities and Notes	15			1		
3	00	LM	- 01	Location Map (NOT USED	0					Placed on Cover Sheet
4	00	EC	- 01	Stormwater Pollution Prevention Plan - 1	15			1		
5	00	EC	- 02	Stormwater Pollution Prevention Plan - 2	15			1		
6	00	C	- 01	Civil Site Plan Existing Conditions (includes FEMA map)	15			1	1	Added drawing for clarity on grading
7	00	C	- 02	Proposed Well Site Plan	55			1	1	
	00	C	- 03	Proposed Well Grading Plan	55			1	1	
	00	C	- 04	Civil Site Details (Fence, Road, Curb and Gutter, mow strip)	15					and just combined sheets
8	00	C	- 05	Well Section (perferated Only - Includes Well Detail Matrix)	10					Remove Screen well detail, only bid perforated
	00	C	- 05A	Groundwater Design Matrix	0					combined with 05
9	00	C	- 06	Well Piping Details (typical well section, plan and details, updated quantities)	15					
10	00	C	- 07	Well Drainage Details (section with area inlet plan)	15					
	00	C	- 08	Miscellaneous Detaisl for Piping	15					Details have changed on the Piping due to
	00	C	- 09	City of Norman Standards	5					
	00	A	- 100	Groundwater Well field Development - Architectural	5					
	00	A	- 101	Groundwater Well Field Development - Architectural Sections	5					
	00	S	- 01	Structural Design Criteria Notes I	24					Was done by White but Carollo will do Norman has Changed Code from 2015 IBC to 2018 IBC with local amendments so these need to be reviewed and changed.
	00	S	- 02	Structural Design Criteria Notes I	24					Was done by White but Carollo will do Norman has Changed Code from 2015 IBC to 2018 IBC with local amendments so these need to be reviewed and changed.
	00	S	- 03	Tables and Nailing Schedule	24					Was done by White but Carollo will do Norman has Changed Code from 2015 IBC to 2018 IBC with local amendments so these need to be reviewed and changed.
	00	S	- 04	CMU Details and Bond Beams	24					Was done by White but Carollo will do Norman has Changed Code from 2015 IBC to 2018 IBC with local amendments so these need to be reviewed and changed.
	00	GE	- 01	Electrical Legends	5					
	0	GE	- 02	Electrical Abbreviations	5					

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
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										Was done by Carollo, drawings and Wire Sizes need to be reviewed and updated to 2020 NEC from 2014 NEC Also plans need to be updated with OG&E info on conductors and locaiton
		E	-	01	One Line Drawings and Schedules	24				
		E	-	02	Ground Well Electrical Plans	12				Was done by Carollo, drawings and Wire Sizes need to be reviewed and updated to 2020 NEC from 2014 NEC
		E	-	03	Electrical Site Plan	32				Needs to be updated with Well specific Information
		E	-	04	Conduit Schedule I	24				Was done by Carollo, drawings and Wire Sizes need to be reviewed and updated to 2020 NEC from 2014 NEC
		E	-	05	Conduit Schedule II	0				Deleted Not necessary
		E	-	06	Electrical Typical Details I	5				Not much impact from code changes
		E	-	07	Electrical Typical Details II	5				Not much impact from code changes
		E	-	08	Electrical Typical Details III	15				Need some adjustment due to codes
		E	-	09	Electrical Typical Details IV	5				Not much impact from code changes
		GN	-	01	Instrumentation Symbols and Abbreviations - I	5				No Changes
		GN	-	02	Instrumentation Symbols and Abbreviations - II	5				No Changes
		GN	-	03	Instrumentation Symbols and Abbreviations - III	5				No Changes
		GN	-	04	Instrumentation Symbols and Abbreviations - IV	5				No Changes
		GN	-	05	Schematic Symbols	5				No Changes
		GN	-	06	Sample Loop Drawing	5				No Changes
		N	-	01	Well P&ID	5				Need to update tags
		N	-	02	PCM Cabinet	5				Need to update tags
		N	-	03	Monitoring Well	5				No Changes
		NG	-	01	Typical PCM Cabinet	5				Needs Some Review to update PLC

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

											Need to update this to integrate next gen telemetry equipment and antenna into existing block diagram
		NN	-	01	Network Block Diagram	55					
		NN	-	02	Network Connection Diagram	16					Need to update this to integrate next gen telemetry equipment and antenna into existing block diagram
		NS	-	01	PCM Power Schematic	5					Needs Some Review to update PLC
		NS	-	02	Well Pump VFD Schematic	5					Needs Some Review to update PLC
		NS	-	03	Exhaust Fan and Louver Schematic	5					

Subtotal Civil, Mechanical, Architectural	270
Subtotal Structural	96
Subtotal Electrical &IC	268
Total	634
	634

Interim Set Labor	
Final Set Labor	0.65
Bid Set Labor	0.35

CURRENT CODES

2018 International Building Code including State and Local Amendments

2018 International Existing Building Code including State and Local Amendments

2006 International Energy Conservation Code

2018 International Plumbing Code including State and Local Amendments

2018 Fuel Gas Code including State and Local Amendments

2020 National Electrical Code (NFPA 70) including State and Local Amendments

2018 International Residential Code including State and Local Amendments

2018 International Property Maintenance Code including Local Amendments

 [Building Code Amendments](#)

ORIGINAL DESIGN CODES

1. Building code:
 - a. International Building Code (IBC), 2015.
 - b. Local amendments.
 - c. International Existing Building Code (IEBC), 2015.
 - d. Local amendments.
2. Electrical code:
 - a. National Fire Protection Association (NFPA), NFPA 70: National Electrical Code (NEC), 2014.
 - b. Local amendments.
3. Energy code:
 - a. International Energy Conservation Code (IECC), 2006.
4. Fire code:
 - a. International Fire Code (IFC), 2015.
 - b. Local amendments.
5. Fuel gas code:

Attachment 2 to Exhibit A (TO4)
Estimated Drawing List
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
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- a. International Fuel Gas Code (IFGC), 2015.
 - b. Local amendments.
6. Mechanical code:
- a. International Mechanical Code (IMC), 2015.
 - b. Local amendments.
7. Plumbing code:
- a. International Plumbing Code (IPC), 2015.
 - b. Local amendments.

Contract K-2526-17
Task Order No. 1
Exhibit A- Scope of Services

Attachment 3 to Exhibit A Preliminary List of Specifications

Attachment 3 to Exhibit A
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

SPECIFICATION LIST PROJECT-01

DIVISION 0 (Front Ends)

"X" Denotes included with Deliverable

MF50-Div Section Number	Abbreviation	Section Title	Interim	Final	Bid Set
		Cover Sheet	X	X	X
00_11_13		Advertisement for Bids			X
00_21_13		Instructions to Bidders			X
00_41_00		Bid Form	X	X	X
00_54_35		Sureties Agreement to Assignment			
00_55_00		Notice to Proceed			
00_61_13.13		Performance Bond			
00_61_13.14		Statutory Bond			
00_61_19		Maintenance Bond			
00_52_23		Agreement		X	X
00_72_00		General Conditions		X	X
00_73_00		Special Provisions		X	X
		Attachment A - Geotechnical Report		X	X

DIVISION 1 - General Requirements

01_11_00		Summary of Work	X	X	X
01_11_02		Contract Document Language		X	X
01_14_00		Work Restrictions		X	X
01_20_20		Measurement and Payment		X	X
01_29_73		Schedule of Values		X	X
01_29_77		Applications for Payment		X	X
01_31_19		Project Meetings	X	X	X
01_31_24		Web Based Construction Management	X	X	X
01_32_21		Project Schedules and Reports	X	X	X

**Attachment 3 to Exhibit A
Task Order No. 1 to Contract K-2526-17**

**Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority**

DIVISION 1 - General Requirements (Continued)

"X" Denotes included with Deliverable

MF50-Div Section Number	Abbreviation	Section Title	Interim	Final	Bid Set
01_32_22		Safety Plan		X	X
01_32_34		Photographic and Videographic Documentation	X	X	X
01_33_00		Submittal Procedures	X	X	X
01_35_21		Selective Alternates and Demolition	X	X	X
01_35_73		Delegated Design Procedures			
01_41_00		Regulatory Requirements	X	X	X
01_45_00		Quality Control and Quality Assurance	X	X	X
01_45_55		Special Tests and Inspections	X	X	X
01_50_00		Temporary Facilities and Controls	X	X	X
01_56_17		Erosion and Sediment Control			
01_60_00		Product Requirements			
01_71_23		Field Engineering	X	X	X
01_75_17		Commissioning		X	X
01_75_18		Disinfection			
01_77_00		Closeout Procedures		X	X
01_78_24		Operation and Maintenance Manuals	X	X	X
01_78_36		Warranties and Bonds	X	X	X
01_81_50		Project Design Criteria	X	X	X

DIVISION 3 - Concrete

03_01_02		Concrete Repair Mortar	X	X	X
03_01_04		Structural Concrete Repair	X	X	X
03_01_06		Concrete Restoration	X	X	X
03_01_30		Concrete Modification and Repair	X	X	X
03_11_07		Concrete Formwork			
03_15_00		Concrete Acessories	X	X	X
03_15_14		Hydrophilic Waterstop			
03_20_00		Concrete Reinforcing	X	X	X
03_21_17		Adhesive-Bonded Reinforcing Bars and All Thread Rods in Concrete	X	X	X
03_30_00		Cast-in-Place Concrete	X	X	X
03_41_32		Precast and Prestressed Structural Concrete			
03_60_00		Grouting	X	X	X
03_63_01		Epoxies	X	X	X
03_63_02		Epoxy Resin/Portland Cement Bonding Agent	X	X	X
03_64_24		Epoxy Injection System	X	X	X
03_64_25		Hydrophilic Foam Polyurethane Resin Injection System	X	X	X

DIVISION 05 - Metals

05_05_24		Mechanical Anchoring and Fastening to Concrete and Masonry		X	X
05_12_00		Structural Steel Framing		X	X
05_14_05		Structural Aluminum		X	X
05_50_00		Metal Fabrications		X	X

DIVISION 06- Wood, Plastics and Composites

06_80_17		Fiber Rienforced Plastic fabrications		X	X
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DIVISION 07 - Thermal and Moisture Protection

Attachment 3 to Exhibit A
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

07_90_00		Joint Sealants		X	X
07_92_02		Epoxy and Silicone Bonded Expansion Joint Seals		X	X

DIVISION 08 - Openings

08_17_34		Pre-Assembled Plastic Door Assemblies		X	X
08_71_00		Door Hardware		X	X
08_91_00		Louvers		X	X

DIVISION 09 - Finishes

09_96_01		High Performance Coatings	X	X	X
09_96_08		Concrete Repair and Coating	X	X	X

DIVISION 13 - Special Construction

13_34_26		Fabricated Modular Building		X	X
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DIVISION 22 - PLUMBING

22_42_01 Plumbing Systems

DIVISION 23 - HVAC

23_05_00		Common Work Results for HVAC		X	X
23_05_93		Testing, Adjusting, and Balancing for HVAC		X	X
23_09_13		Instrumentation and Control Devices for HVAC		X	X
23_81_14		Air Conditioning Units		X	X
23_83_01		Heating Units		X	X
23_31_13		Metal Ductwork		X	X

DIVISION 26 - Electrical

26_05_00		Common Work Results for Electrical	X	X	X
26_05_09		Low Voltage Motors up to 500 Horsepower		X	X
26_05_18		600-Volt or Less Wires and Cables	X	X	X
26_05_20		Fiber Optic Cable and Appurtenances		X	X
26_05_21		Low Voltage Wire Connections	X	X	X
26_05_26		Grounding and Bonding		X	X
26_05_29		Hangers and Supports	X	X	X
26_05_33		Conduits	X	X	X
26_05_34		Boxes	X	X	X
26_05_44		Duct Banks		X	X
26_05_53		Identification for Electrical Systems		X	X
26_05_74		Electrical System Studies		X	X
26_06_01		Conduit Schedule		X	X
26_08_50		Field Electrical Acceptance Tests		X	X
26_22_14		Dry-Type Transformers		X	X
26_24_16		Panelboards		X	X
26_28_17		Disconnect Switches		X	X
26_41_01		Lightning Protection		X	X
26_50_10		Lighting: LED Luminaires		X	X
26_05_53		Indentification for Electrical Systems	X	X	X

DIVISION 31 - Earthwork

MF50-Div Section Number	Abbreviation	Section Title	Interim	Final	Bid Set
31_00_00		Earthwork	X	X	X

**Attachment 3 to Exhibit A
Task Order No. 1 to Contract K-2526-17**

**Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority**

31_05_15	Soils and Aggregates for Earthwork
31_23_24	Controlled Low Strength Material (CLSM)
31_23_35	Trenching

DIVISION 32 - Exterior Improvements

32_92_23	Sodding	X	X	X
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DIVISION 40 - Process Integration

40_05_00.01	Common Work Results for General Piping	X	X	X
40_05_00.03	Pipe Identification	X	X	X
40_05_00.09	Piping Systems Testing	X	X	X
40_05_06.01	Pipe Specialties	X	X	X
40_05_06.03	Pipe Couplings	X	X	X
40_05_19.01	Ductile Iron Pipe: AWWA C151	X	X	X
40_05_57.24	Electric Actuators	X	X	X
40_05_64	Butterfly Valves	X	X	X
40_61_00	Common Work Results for Process Control and Instrumentation Systems	X	X	X
40_61_15	Control Strategies		X	X
40_71_15	Flow Measurement: Magnetic Flowmeters	X	X	X
40_71_23.21	Flow Measurement: Orifice Plate	X	X	X
40_73_29	Pressure/Vacuum Measurement: Differential	X	X	X

43 Process Gas and Liquid Handling, Purification, and Storage

43_25_20.0 Submersible Vertical Sample Pumps

43_41_46	Fiberglass Reinforced Plastic Aboveground Storage	X	X	X
43_42_21.04	Expansion Tanks - Prepurchase	X	X	X
43_42_21.04	Expansion Tanks - Installation	X	X	X
43_42_21.08	Air Cooled Chillers - Prepurchase	X	X	X
43_42_21.08	Air Cooled Chillers - Installation	X	X	X

DIVISION 46 - Water and Wastewater Equipment

46_05_10	Common Work Results for Mechanical Equipment	X	X	X
46_05_94	Mechanical Equipment Testing	X	X	X
46_43_23	Spiral Scraper Circular Secondary Clarifier Rehabilitation	X	X	X
46_43_54	Solids Contact Clarifier Rehabilitation	X	X	X
46_61_13C	Filter Media - Contractors Requirements	X	X	X
46_61_20	Fiberglass Filter Troughs	X	X	X

- END OF SPECIFICATION LIST - PROJECT 01

**Attachment 3 to Exhibit A
Task Order No. 1 to Contract K-2526-17**

**Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority**

SPECIFICATION LIST - PROJECT WELL-01 (DIVISION 0 and DIVISION 1 WILL BE PROVIDE BY THE CITY)

02670		Drilling and Wells	NA	X	X
02672		Well Development, Pump Testing and Well Completion	NA	X	X
02987		Packer Testing	NA	X	X

- END OF SPECIFICATION LIST - WELL 01

SPECIFICATION LIST PROJECT WELL-02 (DIVISION 0 and DIVISION 1 WILL BE PROVIDED BY CITY)

02670		Drilling and Wells	N	X	X
02672		Well Development, Pump Testing and Well Completion	NA	X	X
02987		Packer Testing	NA	X	X
03100		Concrete Formwork	NA	X	X
03200		Concrete Reinforcement	NA		X
04100		Mortar and Masonry Grout	NA		X
04300		Unit Masonry System	NA		X
06411		Wood Blocking and Curbing	NA		X
06175		Shop Fabricated Wood Trusses	NA		X
07219		Foam in place Insulation	NA		X
07411		Standing Seam Metal Roof	NA	X	X
07900		Joint Sealer	NA	X	X
08111		Standard Doors and Frames	NA	X	X
09900		Paints and Coatings	NA	X	X
13121		Fiberglass Enclosures	NA	X	X
15000		Water Distribution	NA	X	X
16000		General Electrical Provisions	NA		X
17000		Process Control and Instrumentation Systems	NA		X

- END OF SPECIFICATION LIST - WELL 02

Contract K-2526-17
Task Order No. 1
Exhibit A- Scope of Services

Attachment 4 to Exhibit A – Well 46 redrilling drawings.

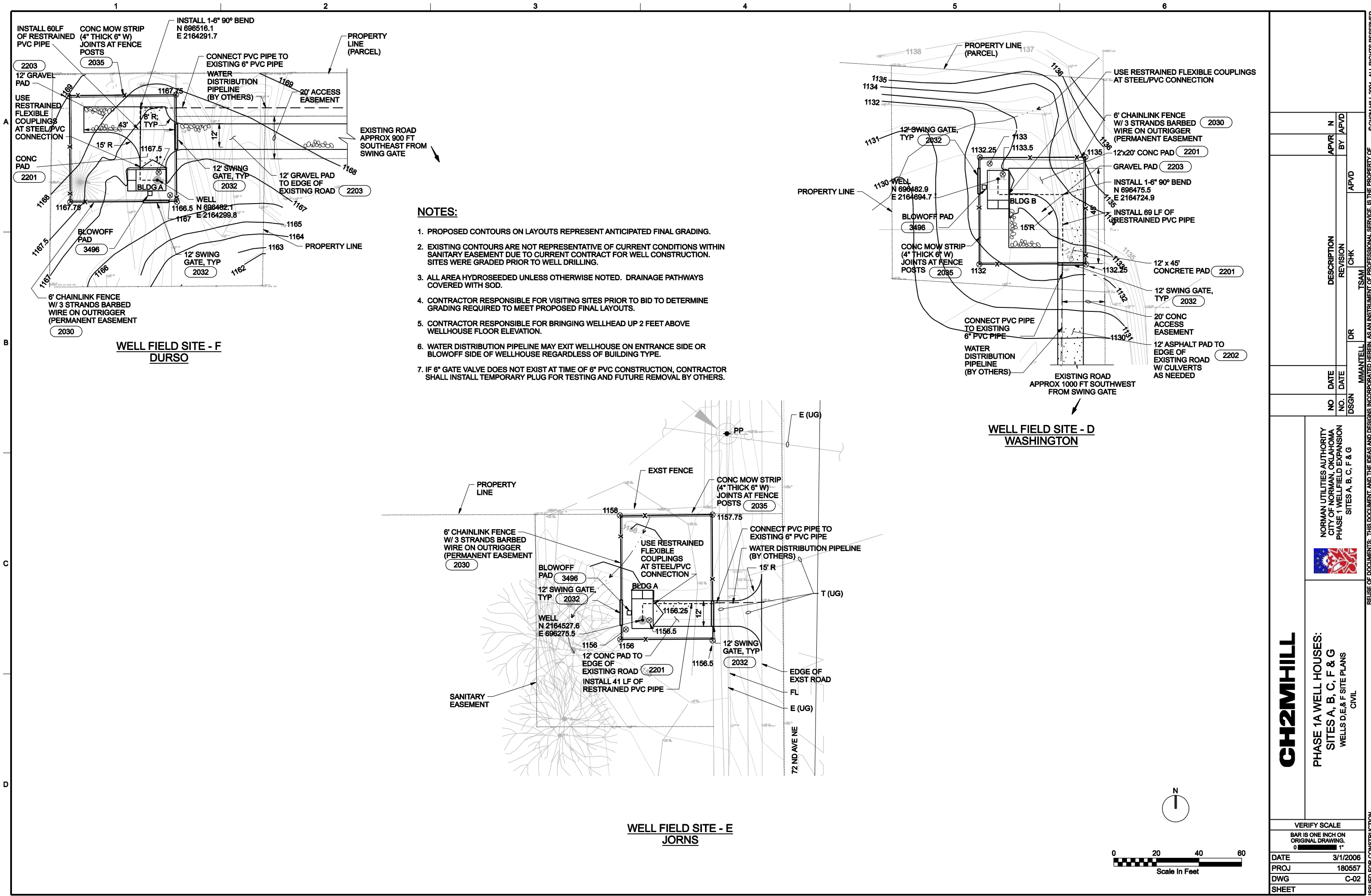


Exhibit B - Fee Estimate Summary
Task Order No. 1 to Contract K-2526-17

Various Improvemets at the Norman WTP

Norman Utilities Authority

Total Project Estimate

Design Element	Description	High Range (+ 30%)	Midpoint	Low Range (-10%)
PROJECT-01				
WTP-01	Ozone System Improvements			
	Ozone System Contactor Improvements	\$657,000	\$505,000	\$480,000
	Ozone System Chiller Improvements	\$1,417,000	\$1,090,000	\$1,035,000
WTP-02	WTP SCC No. 3 Rehabilitation	\$1,869,000	\$1,438,000	\$1,366,000
WTP-03	OSHG Improvements	\$1,058,200	\$814,000	\$732,600
WTP-04	CFE Sampling and Analysis	\$157,000	\$121,000	\$115,000
WTP-05	Administration Building Roof Repairs	\$241,000	\$185,000	\$175,000
WTP-06	Chloramine System Improvements	\$195,000	\$150,000	\$135,000
WRF-01	Secondary Clarifier 3 Rehabilitation	\$1,840,000	\$1,415,000	\$1,344,000
	Subtotal PROJECT-01	\$7,434,200	\$5,718,000	\$5,382,600
WELL-01	Well 46 Redrilling assistance	\$150,000	\$120,000	\$100,000
WELL-02	Well Plans and Specs Assistance	\$1,500,000	\$1,250,000	\$1,200,000
	TOTAL ALL PROJECTS	\$9,084,200	\$7,088,000	\$6,682,600

TASK ORDER NO. 1 FEE ESTIMATES

<u>Task</u>	<u>Description</u>	<u>Hours</u>	<u>Fees</u>	<u>% of Const. Cost</u>	
Project 01- WTP Various Improvements					
Task 1	Study Phase Services				
	No Work				
Task 2	Design Phase Services				
Task 2.1	Project Management and Progress Reporting	394	\$ 103,487		
Task 2.2	PROJECT 01 Interim Design Deliverables	789	\$ 141,780		
Task 2.3	PROJECT 01 Final Design Deliverables	2,372	\$ 375,588		
Task 2.4	PROJECT 01 Bid Set Deliverables	691	\$ 118,534		
	Subtotal Task 2	4,246	\$ 739,389	12.93%	
Task 3	Bidding Phase Services				
Task 3.1	Bidding Services	85	\$ 16,437		
Task 3.2	Conformed Documents	89	\$ 11,772		
	Subtotal Task 3	174	\$ 28,210	0.49%	
Task 4	Construction Administration Services				
Task 4.1	Project Management and Progress Reporting	48	\$ 12,816		
Task 4.2	Pework Conference	8	\$ 2,000		
Task 4.3	Meetings and Site Visits	72	\$ 19,800		
Task 4.4	Submittals				
	Initial Submittal Review	200	\$ 56,000		
	Resubmittal Review	100	\$ 28,000		
Task 4.6	RFI, DCM, and Change Orders				
	Respond to RFI's	60	\$ 16,500		
	Prepare DCM	None			
	Prepare Change Orders	None			
Task 4.7	Special Inspections Coordination	16	\$ 4,560		
Task 4.8	Monthly Payment Applications	24	\$ 6,960		
Task 4.9	Substantial Completion and Final Completion Punchlists	64	\$ 18,880		
Task 4.10	Project Closeout	16	\$ 4,480		
	Subtotal Task 4	608	\$ 169,996	3.0%	
Task 5	As Built Services				
Task 5.1	As Built Services and O&M Updates	203	\$ 27,238		
	Project 01 WTP Various Improvements - Subtotal (Basic Services)	5,028	\$ 964,832	16.87%	\$964,832
Well 01 and Well 02 Redrilling Assistance					
Task 2	Design Phase Services				
Task 2.5	Well-46 Redrilling Assistance	174	\$ 33,517		
Task 2.6	Well-02 Wells Plans and Specs Assistance	388	\$ 148,176		
	Well 01 and Well 02 Redrilling assistance - Subtotal (Basic Services)	562	\$ 181,693	13.26%	
	Total Basic Services All Projects	5,591	\$ 1,146,525	16.18%	
	Additional Services- Not to exceed		\$ 125,000		
	Total Basic and Addtiional Services		\$ 1,271,525		\$1,271,525
	Subtotal Remaining Services Contract K-1112-124 - WTP Improvements		\$ (91,000)		
	Subtotal Remaining Services Contract K-1112-124 - WellField		\$ (35,000)		
	Subtotal Remaining Services		\$ (126,000)		
	Cost of Services for Amendment No. 3 , Task Order No. 1		\$ 1,145,525		

**EXHIBIT C TO TASK ORDER NO. 1
ADDITIONAL SERVICES
VARIOUS IMPROVEMENTS AT THE NORMAN WTP**

Additional Services will only be provided upon prior written and clearly detailed directions of the Utilities Manager. The Engineer may be directed to perform any, all or none of the following Additional Services that may include, but not be limited to, the following:

- AS.1: Geotechnical and Survey: Additional geotechnical investigation and Surveys necessary for completion of the project.
- AS.2: Subsurface Utility Engineering (SUE) Services: Engineer will undertake subsurface utility investigations. Compensation for this task will be as outlined below. Where required, Engineer will provide subsurface utility engineering (SUE) services to determine conflicts with existing utilities. The SUE services will determine the exact location and depth of the existing utility. The actual number of locations will be determined after field investigation and preliminary survey services are completed. SUE services will either be Quality Level "A" or Quality Level "B" in accordance with ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data) as recommended by the Engineer and approved by the Owner. Additional legal descriptions, exhibits, and acquisition services.

Unit Prices:

Item	Unit Price	Unit
Additional Geotechnical Borings	\$3,500	Each
SUE – Quality "A"	\$1,500	Each

- AS.3: Temporary Cooling Systems for Ozone and OSHG Summer 2025: Engineer will provide assistance with the sizing and installation of the following:
- 1-10 Ton air cooled rental chiller and balancing tank to be powered from the existing OZ MCC and connected to the existing neutralized and dechloraminated utility water feed to the OSHG units.
 - 1 60-ton air cooled rental chiller to cool the open loop utility water feed to the ozone generation unit heat exchanger. The unit will be powered from the OZ MCC and temporary hoses would be provided to connect to the unit .

- c) Assistance will be:
- i) Review of purchasing agreement.
 - ii) Examining the existing MCC OZ A/B and developing temporary breaker sizes for connection to and protection of the MCC when connecting the temporary units.
 - iii) Review of cable sizes, amp draw, and distance to unit from the MCC for sufficiency.
 - iv) Review of piping connections and chiller connections.
 - v) Calculation of heat load within the building to assess whether the units must be placed outside.
 - vi) Site visits to review installation (2 site visits assumed).

Billing will be on time and materials not to exceed \$50,000.

AS.4: Additional Services necessary for completion of the project. A detailed scope and fee for the additional services will be submitted.

Compensation for Additional Services: Included in the not exceed total compensation is an allowance for Additional Services in an amount not to exceed \$125,000. This allowance is to be used and paid to the Engineer in the manner established in this Contract, unless other compensation means are agreed to in writing by the Utilities Manager. Additional Services compensation may only be used after the Engineer has performed Additional Services upon prior written authorization by the Utilities Manager. Invoices submitted for Additional Services will represent only the hours actually worked on this project by the Engineer's employees and the Engineer's consultants' employees and will be accounted for separately for each Additional Service performed. The Standard Hourly Rates for the time and materials billing basis for the additional services is provided in Attachment 1 to Exhibit C.

Contract K-2526-17
Task Order No. 1
Exhibit A- Scope of Services

Attachment 1 to Exhibit C – Additional Services Standard Hourly Rate Schedule

Attachment 1 to Exhibit C
Fee Schedule through December 31, 2025
Task Order No. 1 to Contract K-2526-17

Hourly Rates utilized for Additional Services
Various Improvemets at the Norman WTP
Norman WTP
Norman Utilities Authority

<u>Category</u>		<u>Hourly Rate</u>
Engineers/Scientists		
Engineer I-II (EIT)	\$	170.00
Engineer II-III (EIT-PE)	\$	185.00
Engineer III-IV (Staff Professional)	\$	197.16
Engineer V-VI (Professional)	\$	249.10
Project Professional	\$	275.28
Lead Project Professional	\$	291.75
Project Manager/Senior Professional	\$	312.97
Project Director/ Quality Control Manager	\$	341.61
Technicians		
Technicians	\$	134.51
Senior Technicians	\$	187.62
Support Staff		
Document Processing / Clerical	\$	113.56
Inspector - Senior		NA
Inspector - Junior		NA
Special Inspector		NA
Project Equipment and Communication Expenses		
(PECE) Charge Per Direct Labor Hour	\$	15.50
Other Direct Expenses		
Travel and Subsistence		at cost
Mileage Charge Per Mile	\$	0.545
Subconsultant		Cost + 10%
Other Direct Costs		At Cost
Expert Witness		Rate x 2.0

This fee schedule is revised in January of every year it is to be utilized for invoicing of Additional Services. .

Invoice for Additional Services for each month will be prepared based on the fee schedule in effect during the month.