The City of
NORMAN

201 West Gray, Bldg. C • P.O. Box 370
Norman, Oklahoma 73069 • 73070

UTILITIES ENGINEERING
Phone: 405-366-5443
Fax: 405-366-5447

March 10, 2011

Mr. Michael Graves, P.E.
Garver, LLC
1016 24th Avenue NW
Norman, OK 73069

Re: Norman Utilities Authority
Design Contract K-1011-148
Phase 2 WWTP Expansion Project

Dear Mr. Graves:

On February 22, 2011, the Norman Utilities Authority (NUA) approved Contract K-1011-148. The contract authorizes your firm to perform surveying and preliminary engineering design services for the above project. One original is enclosed.

We have scheduled the Kickoff Meeting for this project at the WWTP Break Room on March 15, 2011 at 10:00 am. Please proceed with task completion in accordance with the schedule contained in Exhibit C and summarized below.

Task	Completion Time	Completion Date
Surveying	45 days	April 29, 2011
Engineering Report	120 days	July 13, 2011

If you have questions or need additional information, please call at 405-366-5377

Sincerely,
CITY OF NORMAN

Mark Daniels, P.E.
Utilities Engineer

cc: Ken Komiske, Director of Utilities
Steve Hardeman, Acting Utilities Superintendent (with contract)
Ryan Bart, Acting Utilities Supervisor
Ed Dihrberg, ODEQ (with scope)
Tony Mensah, OWRB (with scope)
Office of the City Clerk

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES
NORMAN UTILITIES AUTHORITY
NORMAN, OKLAHOMA
Project No. K-1011-148

This is an Agreement made as of March 8, 20 11, between the **Norman Utilities Authority**, hereinafter called "Owner" and **Garver, LLC**, hereinafter called the "Engineer".

The Owner intends to make the following improvements

Phase 2 WWTP Expansion Design

The Engineer will provide engineering and surveying services related to these improvements as described herein.

The Owner and the Engineer in consideration of the mutual covenants in this contract agree in respect of the performance of professional engineering and surveying services by the Engineer and the payment for those services by the Owner as set forth below. Execution of the agreement by the Engineer and the Owner constitutes the Owner's written authorization to the Engineer to proceed on the date first above written with the services described herein.

SECTION 1 - EMPLOYMENT OF THE ENGINEER

The Owner agrees to employ the Engineer, and the Engineer agrees to perform professional engineering and surveying services in connection with the proposed improvements as stated in the sections to follow. These services will conform to the requirements and standards of the Owner, and the standards of skill and care ordinarily used by members of the Engineer's profession practicing under similar conditions. Engineer shall correct the services that fail to satisfy this standard of care. No warranty, express or implied is included in this Agreement or in any drawing, specifications, report or opinion produced pursuant to this Agreement. For having rendered such services, the Owner agrees to pay the Engineer compensation as stated in the sections to follow. All of the engineering and surveying services included in this Agreement will be supplied by the Engineer's personnel or personnel under subcontract to the Engineer including those identified in the Engineer's proposal (Carollo Engineers).

SECTION 2 - SCOPE OF SERVICES

The Engineer's scope of services is described in attached Appendix A.

SECTION 3 - PAYMENT

For the work described under SECTION 2 - SCOPE OF the Owner will pay the Engineer a lump sum basis. The Owner intends to pay the Engineer from its Sewer Sales Tax and Sewer Excise Tax fund and represents that funds are available to pay the Engineer from the Sewer Sales Tax and Sewer Excise Tax Fund, or funds will be borrowed from another source as necessary to pay the Engineer.

If any payment due the Engineer under this agreement is not received within 60 days from date of invoice, the Engineer may elect to suspend services under this agreement without penalty or liquidated damages assessed from the Owner.

The table below presents a summary of the fee amounts and fee types for this contract.

WORK DESCRIPTION	FEE AMOUNT	FEE TYPE
Engineering Report	$ 332,200	LUMP SUM
Surveys	$ 65,600	LUMP SUM
Preliminary Design	TBD	TBD
Final Design	TBD	TBD
Bidding Services	TBD	TBD
Construction Phase Services	TBD	TBD
Construction Observation Services	TBD	TBD
Services After Construction – Warranty Follow-Up, Start-Up, etc.	TBD	TBD
TOTAL FEE	**$ 397,800**	**LUMP SUM**

The lump sum amount to be paid under this agreement is $397,800

The Owner will pay the Engineer on a monthly basis, based upon statements submitted by the Engineer to the Owner indicating the estimated proportion of the work accomplished. Payments not received within 60 days of invoice date will be subject to a one percent monthly simple interest charge. The fees associated with the Scope of Work identified in Section 2 are only for this Agreement. Any amendments to this Agreement must be agreed to by the Owner and Engineer. All amendments shall include an updated level of effort and fee.

Additional Services (Extra Work). For work not described or included in Section 2 – Scope of Services but requested by the Owner in writing, the Owner will pay the Engineer, for time spent on the project, at the rates shown in Appendix B for each classification of the Engineer's personnel plus reimbursable expenses including but not limited to printing, courier service, reproduction, and travel.

SECTION 4 - OWNER'S RESPONSIBILITIES

In connection with the project, the Owner's responsibilities shall include, but not be limited to, the following:

1. Giving thorough consideration to all documents presented by the Engineer and informing the Engineer of all decisions within a reasonable time so as not to delay the work of the Engineer.

2. Making provision for the employees of the Engineer to enter public and private lands as required for the Engineer to perform necessary preliminary surveys and other investigations.

3. Obtaining the necessary lands, easements and right-of-way for the construction of the work. All costs associated with securing the necessary land interests, including property acquisition and/or easement document preparation, surveys, appraisals, and abstract work, shall be borne by the Owner outside of this contract, except as otherwise described in Section 2 – Scope of Services.

4. Furnishing the Engineer such plans and records of construction and operation of existing facilities, available aerial photography, reports, surveys, or copies of the same, related to or bearing on the proposed work as may be in the possession of the Owner. Such documents or data will be returned upon completion of the work or at the request of the Owner.

5. Furnishing the Engineer a current boundary survey with easements of record plotted for the project property.

6. Paying all plan review and advertising costs in connection with the project.

7. Providing legal, accounting, and insurance counseling services necessary for the project and such auditing services as the Owner may require.

8. Furnishing permits, permit fees, and approvals from all governmental authorities having jurisdiction over the project and others as may be necessary for completion of the project.

9. Giving prompt written notice to the Engineer whenever the Owner observes or otherwise becomes aware of any defect in the project or other events which may substantially alter the Engineer's performance under this Agreement.

10. Furnishing the Engineer a current geotechnical report for the proposed site of construction. The Engineer will coordinate with the geotechnical engineer, the Owner has contracted with, on the Owner's behalf for the information that is needed for this project.

11. Owner will not hire any of the Engineer's employees during performance of this contract and for a period of one year beyond completion of this contract.

SECTION 5 – MISCELLANEOUS

5.1 Instruments of Service

The Engineer's instruments of service provided by this agreement consist of the printed hard copy reports, drawings, and specifications issued for the Assignment or Project, whereas electronic media, including CADD files, are tools for their preparation. As a convenience to the Owner, the Engineer will furnish to the Owner both printed hard copies and electronic media. In the event of a conflict in their content, however, the printed hard copies shall take precedence over the electronic media.

The Engineer's electronic media are furnished without guarantee of compatibility with the Owner's software or hardware, and the Engineer's sole responsibility for the electronic media is to furnish a replacement for defective disks within thirty (30) days after delivery to the Owner.

The Engineer retains ownership of the printed hard copy drawings and specifications and the electronic media. The Owner is granted a license for their use, but only in the operation and

maintenance of the Project or Assignment for which they were provided. Use of these materials for modification, extension, or expansion of this Project or on any other project, unless under the direction of the Engineer, shall be without liability to the Engineer and the Engineer's consultants. The Owner shall indemnify, defend, save harmless the Engineer, the Engineer's consultants, and the officers and employees of any of them from and against any and all claims, liabilities, damages, losses, and costs, including but not limited to costs of defense, arising out of the Owner's use of these materials for modification, extension, or expansion of this Project or on any other project not under the direction of the Engineer.

Because data stored in electronic media form can be altered, either intentionally or unintentionally, by transcription, machine error, environmental factors, or by operators, it is agreed that the Owner shall indemnify, defend, save harmless the Engineer, the Engineer's consultants, and the officers and employees of any of them from and against any and all claims, liabilities, damages, losses, and costs, including but not limited to costs of defense, arising out of changes or modifications to the data in electronic media form in the Owner's possession or released to others by the Owner and for any use of the electronic media and printed hard copy drawings and specifications outside the license granted by this provision.

5.2 Opinions of Cost

Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s)' methods of determining prices, or over competitive bidding or market conditions, the Engineer's Estimates of Project Costs and Construction Costs provided for herein are to be made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but the Engineer cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from estimates prepared by the Engineer.

The Owner understands that the construction cost estimates developed by the Engineer do not establish a limit for the construction contract amount. If the actual amount of the low construction bid exceeds the construction budget established by the Owner, the Engineer will not be required to re-design the project without additional compensation.

5.3 Underground Utilities

The Engineer will provide research regarding utilities and survey utilities located and marked by their owners as provided for in this agreement. However, since many utility companies typically will not locate and mark their underground facilities prior to notice of excavation, the Engineer cannot be responsible for knowing whether underground utilities are present or knowing the exact location of utilities for design and cost estimating purposes. Additionally, the Engineer cannot be responsible for damage to underground utilities, unmarked or improperly marked, caused by geotechnical, potholing, or other subconsultants working under a subcontract to this agreement.

5.4 Hazardous Substances

If hazardous substances in any form are encountered or suspected, ENGINEER will stop its own work in the affected portions of the PROJECT to permit testing and evaluation. ENGINEER will, if requested by OWNER, conduct tests to determine the extent of the problem and will perform the necessary studies and recommend necessary remedial measures at an additional fee with contract terms to be negotiated.

5.5 Insurance

The Engineer currently has in force, and agrees to maintain in force for the life of this Contract, the following schedule of insurance:

Worker's Compensation	Statutory Limit
Automobile Liability (Combined Property Damage and Bodily Injury)	$500,000.00
General Liability (Combined Property Damage and Bodily Injury)	$1,000,000.00
Professional Liability	$2,000,000.00

Engineer shall furnish Owner certificates of insurance that shall include a provision that such insurance shall not be canceled without at least thirty days written notice to Owner. All project contractors shall be required to include Owner and Engineer as additional insured on their General Liability Insurance policies. Engineer and Owner each shall require its insurance carriers to waive all rights of subrogation against the other and its directors, officers, partners, commissioners, officials, agents and employees for damages covered by property insurance during and after the services. A similar provision shall be incorporated into all contractual arrangements entered into by Owner and shall protect Owner and Engineer to the same extent.

5.6 Records

The Engineer will retain all pertinent records for a period of two years beyond completion of the project. Owner may have access to such records during normal business hours.

5.7 Indemnity Provision

Subject to the limitation on liability set forth in Section 5.8, the Engineer agrees to indemnify the Owner for damages, liabilities, or costs (including reasonable attorneys' fees) to the extent the damages and costs are caused by the negligent acts, errors, or omissions of the Engineer, its subconsultants, or any other party for whom the Engineer is legally liable, in the performance of their professional services under this contract.

The Owner agrees to indemnify the Engineer for damages, liabilities, or costs (including reasonable attorneys' fees) to the extent the damages and costs are caused by the negligent acts, errors, or omissions of the Owner, its agents, or any other party for whom the Owner is legally liable, in the performance of their professional services under this contract.

In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of the Engineer and the Owner, they shall be borne by each party in proportion to its own negligence.

5.8 Design without Construction Phase Services

In the event the Engineer's Scope of Services under this agreement is not amended to include project observation or review of the Contractor's performance or any other construction phase services, the Owner assumes all responsibility for interpretation of the Construction Contract Documents and for construction observation and supervision and waives any claims against the Engineer that may be in any way connected thereto.

In addition, the Owner agrees, to the fullest extent permitted by law, to indemnify and hold the Engineer harmless from any loss, claim or cost, including reasonable attorneys' fees and costs of defense, arising or resulting from the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Construction Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of the Engineer.

If the Owner requests in writing that the Engineer provide any specific construction phase services and if the Engineer agrees in writing to provide such services, then they shall be compensated for the work as Additional Services.

5.9 Limitation of Liability

In recognition of the relative risks and benefits of the project to both the Owner and the Engineer, the risks have been allocated such that the Owner agrees, to the fullest extent permitted by law, to limit the liability of the Engineer and his or her subconsultants to the Owner and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims for expenses from any cause or causes, so that the total aggregate liability of the Engineer and his or her subconsultants to all those named shall not exceed the Engineer's total fee for services rendered on this project. Such claims and causes include, but are not limited to negligence, professional errors or omissions, strict liability, and breach of contractor warranty.

5.10 Mediation

In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the project, the Owner and the Engineer agree that all disputes between them arising out of or relating to this Agreement shall be submitted to non-binding mediation unless the parties mutually agree otherwise.

The Owner and the Engineer further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with subcontractors, subconsultants, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements.

5.11 Termination

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The non-performing party shall have fifteen (15) calendar days from the date of the termination notice to cure

or to submit a plan for cure acceptable to the other party. Owner may terminate or suspend performance of this Agreement for Owner's convenience upon written notice to Engineer. Engineer shall terminate or suspend performance of the services on a schedule acceptable to Owner. If termination or suspension is for Owner's convenience, Owner shall pay Engineer for all the services performed to date, amount not to exceed the normal fee amount due for the services rendered and termination or suspension expenses. Upon restart, an equitable adjustment shall be made to Engineer's compensation.

5.12 Delay in Performance

Neither Owner nor Engineer shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this Agreement, such circumstances include, but are not limited to abnormal weather conditions; floods; earthquakes; fire; epidemics; war; riot and other civil disturbances; strikes, work slowdowns and other labor disturbances; sabotage; judicial restraint; and inability to procure permits, licenses, or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either Owner or Engineer under this Agreement. Should such circumstances occur the non-performing party shall, within a reasonable period after being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement.

5.13 Communications

Any communication required by this Agreement shall be made in writing to the address specified below:

ENGINEER:	Michael J. Graves Garver, LLC. 1016 24th Ave N.W. Norman, OK 73069 405-329-2555 mjgraves@garverusa.com	OWNER:	Mark Daniels Norman Utilities Authority 201-C West Gray Norman, OK 73070 405-366-5377 mark.daniels@normanok.gov

Nothing contained in this Article shall be construed to restrict the transmission of routine communications between representatives of Engineer and Owner.

SECTION 6 - CONTROL OF SERVICES

This is an Oklahoma Contract and in the event of a dispute concerning a question of fact in connection with the provisions of this contract which cannot be disposed of by mutual agreement between the Owner and Engineer, the matter shall be resolved in accordance with the Laws of the State of Oklahoma.

This Agreement may be terminated by either party by seven (7) days written notice in the event of substantial failure to perform in accordance with the terms hereof by the one (1) party through no fault to the other party or for the convenience of the Owner upon delivery of written notice to the Engineer. If this Agreement is so terminated, the Engineer shall be paid for the time and materials expended to accomplish the services performed to date, as provided in SECTION 3 - PAYMENT; however, the

Engineer may be required to furnish an accounting of all costs.

SECTION 7 - SUCCESSORS AND ASSIGNS

The Owner and the Engineer each bind himself and his successors, executors, administrators, and assigns of such other party, in respect to all covenants of this Agreement; except as above, neither the Owner nor the Engineer shall assign, sublet, or transfer their interest in this agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body which may be a party hereto.

SECTION 8 – APPENDICES AND EXHIBITS

8.1 The following Appendices and/or Exhibits are attached to and made a part of this Agreement:
- 8.1.1 Appendix A - Scope of Services
- 8.1.2 Appendix B – Estimated Fee Breakdown

This Agreement may be executed in two (2) or more counterparts each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

OWNER	ENGINEER
NORMAN UTILITIES AUTHORITY	**GARVER, LLC**
By: Cindy Schoot	By: Herbert J. Graves
Title: Chairman	Title: Water Team Leader
ATTEST: Brenda Hall	ATTEST:

NORMAN UTILITIES AUTHORITY OFFICIAL SEAL OKLAHOMA

APPROVED AS TO FORM BY CITY OF NORMAN LEGAL DEPARTMENT
BY _____ DATE 7/1/11

APPENDIX A – SCOPE OF SERVICES

2.1 General

Generally, the scope of services includes Conceptual Design and Surveying services necessary for the production of an Engineering Report for Phase 2 Expansion to the ***Norman Utilities Authority Wastewater Treatment Plant.*** Improvements will consist primarily of upgrading and expanding existing treatment processes and the addition of new disinfection treatment processes.

The Engineering Report will be prepared according to the most recently adopted Oklahoma Water Resources Board (OWRB) Clean Water State Revolving Fund (CWSRF) requirements. It assumed that the Owner will obtain a Categorical Exclusion from the Environmental Review process. As such, the Engineer has not included any Environmental Services within this Scope of Work.

Additional services anticipated upon completion of the Engineering Report including preliminary design and final design, bidding services, construction support, observation, and operations startup services. When authorized by the Owner, these services may be added by written amendment.

2.2 Conceptual Design

The conceptual design phase submittal will include an Engineering Report and an opinion of probable construction cost. This conceptual submittal will be for the purpose of coordinating the proposed improvements with the Owner, the Oklahoma Department of Environmental Quality (ODEQ), and the Oklahoma Water Resources Board (OWRB) and to develop an order of magnitude cost estimate for the project. The scope of services for the Engineering Report will be based on items discussed and documented at the December 29, 2010 Norman WWTP Phase 2 Scope Development Meeting. Major elements of the Engineering Report will include the following facility or process evaluations.

- WWTP Annual Average Design Flow Rate of 17 Million Gallons per Day (MGD).
  - Max Month and Max Day Design Flow Rates will be provided by the Owner at the completion of the ongoing Wastewater Collection System Flow Monitoring and Modeling Study.
  - Engineer will assume the 17 MGD design excludes the Little River Basin sewer flows that will eventually flow to the North Plant.
  - Engineer will assume the sludge generated in the Little River Basin will be treated at the South WWTP.
  - Engineer will evaluate future flow rate phasing options when necessary to maintain project budget ($20 Million in Construction Costs).
- WWTP Effluent Water Quality Requirements will be consistent with the conventional pollutant requirements identified within the Owner's current OPDES Permit (NO. OK0029190 effective July 1, 2010).
  - Engineer will consider future limits for phosphorus, nitrogen, and potentially lower limits for conventional parameters when recommending Phase 2 Improvements.
- Feasibility of new Flow Equalization Basins.
- Hydraulic Grade Line (HGL) determination throughout the treatment processes from the WWTP influent to the WWTP outfall.
- Evaluate additional redundancy requirements for screening conveyors at the Headworks and Westside Lift Station. Also, consider remedies to existing Headworks conveyor incline.
- New Influent Flow Measurement.
- New Primary Clarifier Flow Split.

- Evaluate existing Primary Clarifiers capacity and mechanisms for reuse or upgrade. Consider the addition of a new Primary Clarifier, and Chemically Enhanced Primary Treatment.
- Evaluate primary solids handling including gravity thickener operation and potential rerouting of primary sludge.
- Rotating Biological Contactor and Trickling Filter/Biotowers processes demolition. Evaluate the benefits of maintaining existing Secondary Pump Station for future use.
- Upgrade and Expansion of Activated Sludge System.
    - Consider potential nutrient removal requirements in future OPDES permit.
    - Consider benefits of improved primary treatment and tertiary treatment to offset additional aeration basin capacity.
- Existing Secondary Clarifier capacity and mechanisms evaluation for reuse or upgrade.
    - Consider operational and regulatory impacts of shallow sidewall depth in Secondary Clarifier Nos. 1 and 2.
    - Consider covering weirs for algae control.
- Existing RAS/WAS pump station capacity and upgrade evaluation.
    - Consider potential for a new independent Waste Activated Sludge (WAS) pump station.
    - Consider potential for additional pumps and discharge piping for WAS within the existing RAS/WAS pump station.
- New effluent filtration options including, conventional, disc, and membrane filtration alternatives.
- New Ultraviolet Disinfection.
    - Include discussion of alternate disinfectants.
    - Include discussion for disinfection of non-potable and future reuse water, including on site hypochlorite generation.
- New Post Aeration.
    - Consider diffused air and cascade aeration alternatives.
- Water Reuse Discussion.
    - A general discussion of water reuse opportunities and evaluation of existing and proposed ODEQ regulations.
- Effluent pumping (forced discharge) versus parallel outfall piping at the design flow rates and the 25 &100-year flood conditions.
- Class A Biosolids Evaluation.
    - Include budgetary cost estimate for Co-composting as a Class A biosolid alternative.
- Evaluate new Methane Gas Storage System and consider Digester No.1 new cover as a gas holder.
- Anaerobic Digester Improvements including a new digester cover for existing Digester No.1 and improved interconnecting piping to provide redundant operation of North and South Plant Digesters.
    - Consider options to convert one secondary digester to a primary digester (i.e. three primary digesters and one secondary digester).
    - Consider a new sludge blend tank to accept thickened primary and thickened secondary sludges for blending prior to entering the primary digester.
- Evaluate feasibility of implementing Odor Control technologies/features to the planned improvements.
- New Backup Power Generator System for new equipment and processes and replacement of existing Backup Power Generator System. Evaluate more energy efficient power generation technologies and compare to traditional engine driven generators.
- Implement all improvements to existing Supervisory Control and Data Acquisition (SCADA) system.

2.2.1 Project Administration
Provide for the preparation of monthly invoicing with percent completes by task and monthly progress report.

2.2.2 Kickoff Meeting
A kickoff meeting will be scheduled and attended by Engineer and Owner. The purpose of the kickoff meeting will be to review the objectives of the project, review the scope of work, present the schedule including workshops and meetings, and to highlight the deliverables.

2.2.3 Monthly Meeting
Engineer will attend monthly coordination meetings with Owner. It is assumed that four (4) progress meetings will be necessary for this phase of the project based on the preliminary schedule. These meetings will provide updated information on the Engineer's status of the project and provide a forum for Owner input and review of Engineer's work.

2.2.4 Existing System Assessment
Engineer will review Owner provided historical data and assess the existing wastewater treatment facilities, including existing liquid process treatment units, solids handling, and hydraulic capacity. Engineer will document the project planning area, 20-year population and flow projection for ODEQ purposes, Full Build-Out of the Norman 2025 Land Use and Transportation Plan population estimates, existing system condition assessment, and an identifiable need for the project.

2.2.5 Alternatives Evaluation
Engineer will identify and evaluate alternatives, including relative costs, for upgrades and expansion for the major unit processes identified above. The alternatives will be planned to meet the defined population and flow requirements for the 20-year horizon for ODEQ purposes and the Full Build-Out of the Norman 2025 Land Use and Transportation Plan population estimates.

Process design criteria will be documented to identify basis of unit sizing and verification of ODEQ regulatory conformance. In the event a variance request is recommended, Engineer will provide necessary justification.

2.2.6 Process Control and SCADA Workshop
Engineer will attend one (1) meeting with Owner and Owner's IT and Operations staff. The purpose of this meeting is to coordinate the Owner's desired method and level of process control and remote operation capabilities.

2.2.7 Construction Sequencing
Engineer will review potential construction sequencing and the overall approach to project implementation to minimize disruption in the routine WWTP operation.

2.2.8 Draft and Final Report Submittal
Prepare five (5) copies of the draft report and submit for review by the Owner. Revise and finalize the report based upon Owner review comments. Submit three (3) final copies of the report to ODEQ and five (5) copies to the Owner.

Engineer anticipates two-weeks of Owner review and comment time once the draft submittal is delivered.

2.2.9 Draft Review Workshop
Engineer will lead an Engineering Report review workshop with Owner. Engineer will document Owner input and modify the Engineering Report accordingly.

2.2.10 Council Study Session
Prepare a presentation of the Engineering Report findings and recommendations. Present the findings and recommendations to the City Council during a Council Study Session.

2.2.11 ODEQ Meeting
Represent Owner at one (1) meeting with the Oklahoma Department of Environmental Quality to review and present the final Engineering Report. Owner may invite their desired meeting attendees. An OWRB representative will be invited to participate in this meeting.

2.3 Surveys

The Engineer will provide field survey data for designing the project, and this survey will be tied to the Owner's control network.

The Engineer will conduct field surveys, including locations of pertinent features or improvements. Engineer will located buildings and other structures, streets, drainage features, trees over eight inches in diameter, visible utilities as well as those underground utilities marked by their owners and/or representatives, and any other pertinent topographic features that may be present at and/or along the project site. Engineer will establish control points for use during construction.

Engineer will establish 40 outdoor and 10 indoor control points for development of a hydraulic model suitable for determining current and future flow rates.

Engineer will utilize Owner provided site topography in 1-ft contours that reflect the WWTP site existing ground.

2.4 Schedule

The Engineer shall begin work under this Agreement within ten (10) days of a Notice to Proceed and shall complete the work in accordance with the schedule below:

Phase Description	Calendar Days
Engineering Report	120 days from start date
Owner Review and Comment	14 days from submittal
Surveys	45 days from start date

2.5 Additional Services

The following items are not included under this agreement but will be considered as Additional Services and necessary for successful completion of the project. Additional Services will be as directed by the Owner in writing for an additional fee as agreed upon by the Owner and the Engineer.

- Geotechnical Services
- Environmental Services

- Sludge Management Plan
- Preliminary Design
- Final Design
- Bidding Services
- Construction Phase Services
- Construction Observation Services
- Operation and Maintenance Manuals
- Treatment Process Start-up Assistance
- Warranty Assistance
- Water Reuse Master Plan

2.6 Extra Work

The following items are not included under this agreement but will be considered as Extra Work. Extra Work will be as directed by the Owner in writing for an additional fee as agreed upon by the Owner and the Engineer.

1. Redesign for the Owner's convenience or due to changed conditions after previous alternate direction and/or approval.
2. Submittals or deliverables in addition to those listed herein.
3. Preparation of a Storm Water Pollution Prevention Plan (SWPPP).
4. Construction materials testing.
5. Environmental Handling and Documentation, including wetlands identification or mitigation plans or other work related to environmentally or historically (culturally) significant items.
6. Coordination with FEMA and preparation/submittal of a CLOMR and/or LOMR.
7. Funding application and support.

APPENDIX B

NORMAN UTILITIES AUTHORITY
WWTP PHASE 2 EXPANSION DESIGN

FEE SUMMARY

Title I Services	Estimated Fees
Surveys	$65,600
Conceptual Design	$332,200
Preliminary Design	$0
Final Design	$0
Bidding Services	$0
Subtotal for Title I Services	**$397,800**

Title II Services	
Construction Phase Services	$0
Construction Observation	$0
Application Engineering	$0
Operations Start-up and Training	$0
Operations and Maintenance Manuals	$0
Warranty Assistance	$0
Subtotal for Title II Services	**$0**

APPENDIX B

NORMAN UTILITIES AUTHORITY
WWTP PHASE 2 EXPANSION DESIGN

SURVEYS

WORK TASK DESCRIPTION	E-6	E-5	S-5	S-4	S-3	S-2	S-1	2-Man Crew (Survey)	3-Man Crew (Survey)	2-Man Crew (GPS Survey)	3-Man Crew (GPS Survey)	MANHOUR SUBTOTALS
1 Surveys - Topographic												
Horizontal Control			2					16		10		
Vertical Control			2					24				
Topographic Surveys			12					180				
Hydrographic Profile			4					16				
Data Processing/DTM Preparation			12	48								
Travel								32				
Subtotal - Surveying	0	0	32	48	0	0	0	268	0	10	0	
Hours	**0**	**0**	**32**	**48**	**0**	**0**	**0**	**268**	**0**	**10**	**0**	**358**
Salary Costs	$0.00	$0.00	$4,000.00	$4,704.00	$0.00	$0.00	$0.00	$43,148.00	$0.00	$1,410.00	$0.00	$53,352.00

SUBTOTAL - SALARIES: **$53,662.00**

DIRECT NON-LABOR EXPENSES

Document Printing/Reproduction/Assembly	$40.00
Postage/Freight/Courier	$23.00
Office Supplies/Equipment	$0.00
Communications	$90.00
Survey Supplies	$125.00
Aerial Photography	$0.00
GPS Equipment	$0.00
Computer Modeling/Software Use	$0.00
Traffic Counting Equipment	$0.00
Project Expenses	$11,670.00

SUBTOTAL - DIRECT NON-LABOR EXPENSES **$11,948.00**

SUBTOTAL: **$65,610.00**

TOTAL FEE: **$65,610.00**

APPENDIX B

NORMAN UTILITIES AUTHORITY
WWTP PHASE 2 EXPANSION DESIGN

CONCEPTUAL DESIGN

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	T-2	T-1	X-3	X-2	X-1	MANHOUR SUBTOTALS
1. Engineering Report												
Project Administration	12	48			24					48		132
Kickoff Meeting		24			48					6		78
Monthly Meetings (4)		72			114					18		234
Existing System Assessment	12	40			120	66						238
Alternatives Evaluation		44			340	202						586
Process Control and SCADA Workshop		44	48		48							140
Construction Sequencing		24			72							96
Draft Report Preparation	12	24			140	160	48			48		432
Draft Report Workshop		24			48					6		78
Final Report Preparation	12	18			72	86	12			48		248
Final Report QA/QC	18	18	18							6		60
Presentation to NUA		24			36					6		66
Presentation to ODEQ		18			18							36
Subtotal - Engineering Report	66	422	66	0	1110	514	60	0	0	186	0	2424
Hours	66	422	66	0	1110	514	60	0	0	186	0	2,424
Salary Costs	$17,028.00	$83,134.00	$10,626.00	$0.00	$124,320.00	$60,372.00	$5,220.00	$0.00	$0.00	$13,578.00	$0.00	$305,298.00

SUBTOTAL - SALARIES: **$305,298.00**

DIRECT NON-LABOR EXPENSES

Document Printing/Reproduction/Assembly	$2,300.00
Postage/Freight/Courier	$530.00
Office Supplies/Equipment	$960.00
Communications	$600.00
Survey Supplies	$0.00
Aerial Photography	$0.00
GPS Equipment	$0.00
Computer Modeling/Software Use	$1,860.00
Testing	$3,200.00
Travel	$17,400.00

SUBTOTAL - DIRECT NON-LABOR EXPENSES: **$26,950.00**

SUBTOTAL: **$332,248.00**

TOTAL FEE: **$332,248.00**

Contract No. K-1011-148