

REQUEST FOR PROPOSALS

CITY OF LOVINGTON LEA COUNTY, NEW MEXICO

<u>Lovington Water Well Project</u> <u>Proposal No. 1349</u> <u>SAP 16-A4045-STB and SAP 16-4046-STB</u>

Competitive sealed proposals for the construction of Lovington Wells 28, 29, 30, Lovington, New Mexico will be received at the office of the City Manager or his designee, at the City of Lovington Commission Chambers, 214 South Love Street, P.O. Box 1268, Lovington, New Mexico 88260, (575) 396-2884 until **10:00 A.M.** on **Monday, January 29, 2018.** Proposals received after this date and time will not be accepted, and will be returned unopened.

Complete sets of Proposal Documents will be available on **Monday, January 15, 2018** from the Project Engineer, Pettigrew & Associates, P.A., 100 East Navajo Drive, Suite 100, Hobbs, New Mexico 88240, (575) 393-9827.

CITY OF LOVINGTON, NEW MEXICO

BY: JAMES R. WILLIAMS, CITY MANAGER

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ENGINEERING CERTIFICATION

All Municipal Public Works Projects estimated \$100,000 or more shall be stamped by a Registered Professional Engineer

This is to certify that I am a Registered Professional Engineer in the State of New Mexico, that these documents were prepared by me, or directly under my supervision, and that the same are true and correct to the best of my knowledge and belief.



Jum P. Hicks

Debra P. Hicks Number 10871 State of New Mexico

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I. OVERVIEW OF RFP AND PROJECT

A. PURPOSE OF THIS REQUEST FOR PROPOSALS

City of Lovington is requesting competitive sealed proposals for construction of the project named and described below for City of Lovington in accordance with these specifications and all Special Conditions, Plans, and Documents thereto.

All potential Offerors are to read, understand and accept the requirements of this Request for Proposals (RFP), especially the mandatory requirements.

This is a qualifications-based selection with cost as a consideration. The Offeror is required to provide, as part of the Volume 1: Technical Proposal, the qualifications and other documents requested in this RFP. Volume 2: Price Proposal will be evaluated separately from the Technical Proposal.

The award of a contract(s) for contractor services shall take into consideration certain contractor qualification and performance factors that add value to a procurement contract. Factors such as contractor past performance, technical expertise and experience, management capabilities and resources, will form the basis for the criteria to be considered, in addition to price to perform the scope of work. Award shall be made in accordance with the terms conditions, and requirements stated herein.

B. PROJECT DESCRIPTION

Furnishing all materials, labor, machinery, equipment, tools, etc., necessary to furnish and install full depth improvements for each individual well (total of three) including the well drilling and completion, pump development and testing to determine well characteristics; furnishing, installing and testing the new well pump with all appurtenances. Appurtenances shall include, but not be limited to the riser discharge pipe, check valves, pitless adaptor, meter, pump main line isolation valve, side waste line and valve, electrical disconnect & piping, all for the construction of a new water well. Temporary and above-ground piping & assembly shall be utilized, both for specified well capacity testing, and for final pump testing after installation of the selected well pumping unit. Electric and control elements also include a new motor starter, pump control panel, the installation of electrical disconnect and local conduit and checkout of the well water level airline. Each completed well and well discharge piping shall be housed within a Pump House building of 15 feet-3 inches by 10 feet-3 inches, or approximately 163 square feet; and which consists of a pre-engineered metal building with reinforced concrete floor.

C. PROJECT FUNDING

City of Lovington has funds to administer various projects and will be referred to throughout the contract documents as the "Owner".

D. PROPOSAL SECURITY

Proposal security in the amount of 5% of the amount of the proposal shall accompany the proposal and must be in the form of a certified or bank cashier's check made payable to Owner or a proposal bond issued by a surety licensed to conduct business in the State of New Mexico and named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department. The Proposal Security of the successful proposer will be retained until he has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if he fails to execute and deliver the Agreement and furnish the required Contract Security within fifteen (15) days of the Notice of Award, Owner may annul the Notice of Award and the Proposal Security of that Proposer will be forfeited. The Proposal Security of any proposer whom the Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earliest of the seventh day after the executed agreement is delivered by Owner to Contractor and the required Contract Security is furnished or the sixty-first day after the proposal opening. Proposal Security of other proposers will be returned within seven (7) days of the proposal opening.

The Offeror will provide, with the proposal, a notarized declaration from a bonding company licensed to do business in the State of New Mexico confirming the Offeror's ability to obtain Performance; Labor, and Payment Bond for projects which exceed \$125,000.00.

E. CONTRACT TIME

The dates of substantial and final completion have been included in the Price Proposal. Contract Time will be included in each executed agreement. Any provisions for liquidated damages are set forth in the Contract Documents.

F. SUBCONTRACTOR LISTING FORMS

LIST OF SUBCONTRACTORS: Each contractor shall submit a list of proposed Subcontractors to be used on the project. This information will be reviewed for the apparent low proposer. If the contractor desires, the list of Subcontractors may be submitted in a sealed envelope. If the contractor is not the apparent low proposer, the Subcontractor may request the list to be returned, and it will be returned unopened.

In addition, if a Subcontractor's work to be constructed in the project is greater than \$5,000.00 or one-half of one percent of the total project cost, whichever is greater, each proposer shall in his proposal furnish:

The name and location of the place of business of each Subcontractor under subcontract to the Contractor who will perform work or labor or render service to the Contractor in or about the construction of the public works construction project in an amount in excess of the listing threshold.

Subcontractor qualification statements shall be required for all subcontractors listed where the value of the subontract is fifty thousand (\$50.000), or five percent, whichever is greater.

G. NEW MEXICO PREVAILING WAGE RATES

The Proposer's attention is directed to the fact that wages to be paid on this project shall not be less than the prevailing wage rates as listed by the New Mexico State Office of Labor Commission. Wage rates for this project are included in these documents. It shall be the successful Proposer's responsibility to inform himself thoroughly of all state, federal, and local laws and statutes pertaining to the employment of labor, the freedom of organization, and the conditions of employment and shall strictly adhere to such laws and regulations as are applicable. There shall be no discrimination because of race, creed, color, national origin, or legal political affiliation in the employment of persons qualified by training and experience for work under this contract.

H. PUBLIC WORKS APPRENTICE AND TRAINING ACT

Any proposer on a City of Lovington Project shall comply with Section 13-40-1 of the New Mexico State Statutes, known as the "Public Works Apprentice and Training Act."

City of Lovington shall verify that the proposer is not out of compliance with this Act by contacting the New Mexico Construction Industries Division prior to awarding of the contract.

The City may prematurely terminate this Contract if the Public Works Director judges that the Contractor has inadequately or unsatisfactorily met its obligation under this Contract. This agreement may be terminated by any party for cause upon 30-days written notice to the other participants in the contract. As used herein, the term "cause" will mean a material breach of the Agreement by a non-terminating party, or acts or conduct by a non-terminating party that substantially alters the terminating party's ability to benefit from this Agreement, which breach, acts, or conduct are not cured or remedied within the 30-day period following the giving of notice by the terminating party (which notice shall detail the nature of the breach, acts, or conduct constituting the case for termination and specify the effective date of termination in the event such breach, acts, or conduct are not cured or remedied within 30 days following the giving of such notice).

I. PERMITS, PLAN CHECKING FEES, OTHER CHARGES

The Owner will not pay for business licenses, professional affiliations and similar costs of doing business which are the Offeror's obligation to secure and maintain. The cost of all bonding will be paid by the Offeror and will not be paid by the Owner. These costs are to be included in Offeror's Price Proposal.

J. METHOD OF AWARD:

The Owner intends to award this procurement to the highest ranked Offeror(s) in accordance with the Request for Proposals requirements.

Further, based on the City of Lovington's needs, Owner reserves the right to reject any and all proposals and waive any and all informalities and the right to disregard all nonconforming or conditional proposals or counter proposals.

If the contract is to be awarded, Owner will give the apparent successful proposer a Notice of Award within thirty (30) days after the day of the proposal opening.

Simultaneously with delivery of the executed counterparts of the agreement to Owner, Contractor shall deliver to Owner the required Certificate of Insurance.

The Price Proposal is separated into three Bid Lots based upon type of construction. Each Bid Lot contains a Base Bid and Additive Alternates. Bidder is not required to bid on all Bid Lots. Bidder may, at his or her discretion, submit Price Proposals for any or all Bid Lots.

Scope of Work for Bid Lots include: Bid Lot 1-Well Construction Bid Lot 2-Pump House Bid Lot 3-Electrical

Bid Lots will be evaluated within each Bid Lot (not the sum of the Bid Lots). Owner anticipates the award of multiple contracts per Bid Lot.

*NOTE: Please read all of the RFP documents carefully for mandatory requirements.

II. CONDITIONS GOVERNING THE PROCUREMENT

This section lists the major events of the Selection Process and specifies general requirements.

A. SEQUENCE OF SELECTION PROCESS EVENTS

	Event	Responsible Party	Date	Location
1.	Advertisement	City of Lovington Procurement	01/14/2018	Public Advertisement
2.	RFP and Construction Documents Made Available to Potential Offerors on the procurement website:	City of Lovington Procurement	01/14/2018	City of Lovington Website:
3.	Submission of Price & Technical Proposals: Volume 1 & 2	Offerors	01/29/2018 10:00 AM deadline	Lovington City Hall 214 S. Love Street Lovington New Mexico 88260
4.	Bid Opening	Evaluation Committee	01/29/2018	Lovington City Hall 214 S. Love Street Lovington New Mexico 88260

5.	Board Evaluation	Board of Commissioners	01/29/2018- 02/02/2018	Lovington City Hall 214 S. Love Street Lovington New Mexico 88260
6.	Board Approval	Board of Commissioners	02/05/2018	Lovington City Hall 214 S. Love Street Lovington New Mexico 88260
7.	Notice of Award		02/06/2018	Lovington City Hall 214 S. Love Street Lovington New Mexico 88260

NOTICE: City of Lovington reserves the sole right, without incurring any liability, to change any aspect of the proposed procurement described above, including the right not to proceed with the procurement and/or the right to proceed in a different manner or on a different timeline than as described above.

B. EXPLANATION OF SELECTION PROCESS EVENTS

1. Issue RFP

This RFP is issued by the City of Lovington in accordance with the provisions of Sections 1.4.8 NMAC, and General Government Administration Procurement Code Regulations for Use of Competitive Sealed Proposals for Construction and Facility Maintenance, Services and Repairs.

The Request for Proposals (RFP) documents consist of all the documents listed in the Table of Contents and all documents incorporated in this RFP.

- 2. Submission of Technical Proposal and Price Proposal
 - a) Receipt of Proposals:

Each proposal will consist of Volume 1 - Technical Proposal (one original and five copies) Volume 2 - Price Proposal (one original and five copies). These two volumes shall be submitted in two separate sealed envelopes or packages and submittal of proposals are due by 10:00 a.m., November 9, 2016. Clearly label each envelope or package with the RFP number, volume number & name, Offeror's name, address and date of submittal.

Offeror shall deliver proposals to: City of Lovington 214 S. Love Street Lovington New Mexico 88260 ATTENTION: Mr. James R. Williams, City Manager Telephone: (575) 396-2884

City of Lovington's City Manager's office will time-stamp proposals upon arrival at the City Manager's office and hold in a secure location. A public log will be kept of the names and submittal times of all proposals. Proposals delivered after the deadline will be deemed non-responsive, and will be returned unopened to the Offeror. It is solely the Offeror's responsibility to ensure that Proposals arrive at the appointed date, time and location. Proposals may be delivered early to avoid any possible delay of the submission.

Proposals may be hand carried/delivered or shipped/mailed by common carrier, courier of US Postal Service. No other method of delivery will be allowed. Telephone, telegraphic, facsimile offers will <u>NOT</u> be accepted.

b) Opening of Proposals:

Proposals shall not be opened publically or open to public inspection until after the contract is signed. The City of Lovington's City Manager or his designee will designate one or more witnesses to be present during the opening of the proposals. The witness(es) and the City Manager will sign an affidavit identifying the offeror's proposal contents for the procurement file.

c) Collusion

No proposer shall be interested in more than one proposal. Collusion among proposers or submission or more than one proposal under different names by any firm or individual shall be cause for rejection of all proposals without consideration.

3. Proposal Evaluation

The Evaluation Committee will meet to review all proposals. The technical proposal evaluation will be scored first and independently of the price proposal evaluation, as described in detail in a later section of this RFP. The Evaluation Committee may decide to hold interviews with the highest-ranked Offerors. The Evaluation Committee reserves the right to award the contract without interviews. If fewer than three proposals are received, the Evaluation Committee may recommend award or may reissue the RFP. The Committee shall determine the rankings without the possibility of a tie.

4. Board Approval

The Office of the City Manager shall present the selected Offeror(s)' proposal(s) to the Board of Commissioners for approval, at their next regularly scheduled meetings.

5. Notice of Award

The City of Lovington City Manager's office shall prepare the Notice of Award and send it to the selected Offeror(s).

- 6. Award of this proposal incorporates all agreements and understandings between the City and the Contractor regarding the provision of services to the facilities named herein. No prior agreements or understandings, verbal or otherwise between the parties, will be valid or enforceable unless set forth herein.
- 7. Award of the proposal will not be altered, changed or amended except by an instrument in writing executed by the parties hereto.

8. Upon award, the agreement between Contractor(s) and the City will be governed by the laws of the State of New Mexico and enforced in the District Court of City of Lovington.

C. STANDARD CONDITIONS GOVERNING THE PROCUREMENT

This section contains guidelines under which this RFP is issued, and conditions concerning how the project will be completed.

The Owner may evaluate the Proposals based on the anticipated completion of all or any portion of the Project. The Owner reserves the right to divide the Project into multiple parts, to reject any and all Proposals and re-solicit for new Proposals, or to reject any and all Proposals and temporarily or permanently abandon the Project, should the need arise. Owner makes no representations, written or oral, that it will enter into any form of agreement with any Offeror.

1. Protests

In accordance with Section 13-1-172 NMSA 1978, any Offeror who is aggrieved in connection with a solicitation or the award of a contract may protest to the City Manager. The protest must be submitted in writing within fifteen (15) calendar days after knowledge of the facts or occurrences giving rise to the protest. Protests must be submitted in written form to:

City of Lovington 214 S. Love Street Lovington New Mexico 88260 ATTENTION: Mr. James R. Williams, City Manager Telephone: (575) 396-2884

The protest letter shall include the name and address of the protestant, the solicitation number, and a statement of the grounds for protest, including appropriate supporting exhibits. Protests received after the deadline will not be accepted.

2. Incurring Cost

Any cost incurred by the Offeror in preparation, transmittal, or presentation of any proposal or material submitted in response to this RFP shall be borne solely by the Offeror.

3. Third-Party or Subcontracting Contractor Contract Responsibilities

Direction of all work that may result from this procurement must be performed by the Offeror and payments will only be made to the Offeror. Use of consultants identified in the proposal is permitted, but since the award is made on a quality-based evaluation process, reassignment of Contractor duties and responsibilities to a third party is not acceptable

4. Amendments or Modifications to a Proposal by Offeror Proposals may be modified or withdrawn by an appropriate document duly executed (in the manner that Proposal must be executed) and delivered to the place where proposals are to be submitted at any time prior to the opening of proposals.

- 5. Offeror's Rights to Withdraw Proposal No Offeror may withdraw their proposal for 30 days after the actual date of the receipt thereof (Proposal Due Date).
- 6. Disclosure of Proposal Contents

Proposals shall not be opened publically or open to public inspection until after the contract is signed. At that time, all proposals will be open to the public, except for the material which has clearly been noted and determined by the City of Lovington City Manager to be proprietary or confidential as noted by the Offeror.

7. Confidential Data

Confidential data is normally restricted to confidential financial information concerning the Offeror's organization and data that qualifies as a trade secret under the Uniform Trade Secrets Act, Sections NMSA 1978 § 57-3A-7. Any pages of a proposal on which the Offeror has stamped or imprinted "proprietary" or "confidential" must be readily separable from the proposal in order to facilitate public inspection for the non-confidential portion of the qualifications-based proposal.

8. Termination of RFP

This RFP may be canceled at any time and any and all proposals may be rejected in whole or in part when the Owner determines such action to be in the best interest of the City of Lovington. The RFP process may be terminated at any time if sufficient appropriations or authorizations do not exist. Such termination will be effected by sending written notice to the Offeror.

9. Sufficient Appropriation

Any contract awarded as a result of this RFP process may be terminated if sufficient appropriations or authorizations do not exist. Such termination will be effected by sending written notice to the contractor. The Owner's decision as to whether sufficient appropriations and authorizations are available will be accepted by the contractor as final.

If the determination is made that there is insufficient funding to continue or finalize a project, the successful Offeror will be compensated to the level of effort performed, as authorized by the Owner prior to that determination.

10. Offeror Qualifications

The Evaluation Committee may consider any relevant information or data, from any reliable source (references) relating to the RFP evaluation factors and the Offeror's ability to successfully perform.

Such information may be obtained from the Offeror's prior customers, commercial and public databases or other reliable sources. The Offeror shall furnish to Owner all such information and data for this purpose as Owner may request including but not limited to proof of financial resources, production or service facilities, personnel and experience adequate to complete the project. Owner reserves the right to reject any Proposal if the evidence submitted by, or investigation of, such Offeror fails to satisfy Owner that such Offeror is qualified to carry out the obligations of the Contract and to complete the work described therein.

The Evaluation Committee may reject the proposal of any Offeror who is not a responsible Offeror or fails to submit a responsive offer as defined in Sections 13-1-83 and 13-1-85 NMSA 1978.

11. Right to Waive Technical Irregularities

The Evaluation Committee reserves the right to waive technical irregularities per state code 13-1-132, (see "Technical Irregularities" in Definitions and Terminology section below). The Evaluation Committee also reserves the right to waive mandatory requirements provided that all of the otherwise responsive proposals failed to meet the same mandatory requirements and the failure to do so does not otherwise materially affect the procurement. This right is at the sole discretion of the Evaluation Committee.

12. Potential Civil and Criminal Penalties

The City of Lovington Procurement Policy R-12-40 and the New Mexico Procurement Code, 13-1-28 through 199, NMSA, 1978, shall apply to this procurement and prevail over any inconsistent terms and govern all interpretations of contract documentation. In addition, criminal laws prohibit bribes, gratuities and kickbacks.

13. Indemnity by Contractor

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless; the City, its officials, employees, agents, successors, and assigns from and against any and all liabilities, penalties, fines forfeitures, demands, claims, causes of action, suits, and costs and expenses incidental thereto, including cost of defense, settlement, and reasonable attorney fees, which any or all of them may hereinafter suffer, incur, be responsible for or pay our as a result of bodily injuries, including death, to any person, damage, including loss of use, to any property, public or private, contamination of or adverse effects on the environment, or any violation or alleged violation of statutes, ordinances, orders, rules or regulation of any governmental entity or agency, directly or indirectly, or arising out of or resulting from the acts, or failure to act, of the Contractor, is employees, agents, Subcontractors, or other persons engaged by or under the control, supervision or direction of the Contractor, or its Subcontractors, in the performance of this agreement. To the extent, if at all, Section 56-7-1 1 NMSA 1978 is applicable, the duty of the Contractor to indemnify the City shall not extend to liability, claims, damages, losses or expenses, including fees of lawyers and costs, arising out of (i) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by City, or by its agents or employees; or (ii) the giving or the failure to give directions or instructions by the City or by its agent or employees, where the giving or failure to give directions or instruction is the primary cause of bodily injury, wrongful death or damage to property. This paragraph shall survive after the completion or the termination of the contract.

14. Release of Information

Only the Owner is authorized to release information covered by this RFP. The Offerors must refer to the Owner any requests to release any information that pertains to the work or activities covered by any action or award related to this RFP.

15. Interpretations

All questions about the meaning or intent of the Contract Documents shall be submitted to Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the proposal documents. Questions received less than five (5) days prior to the date for opening of proposals will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

16. Licensing Requirements

The Contractor and subcontractors shall comply with all licensing laws and regulations. The Contractor shall, as part of the proposal, provide copies of all of the Contractor's valid licenses necessary to perform the work in the State of New Mexico. Copies of the subcontractors' licenses need be provided only if requested of the Owner.

17. Subcontractors

The Subcontractors Fair Practices Act, 13-4-31 et. seq. per NMAC 1.4.8.13, paragraph C applies to this procurement. Therefore, any request for substitution on the part of the Owner or the Offeror shall comply with this section.

Since the award is made on a qualification-based evaluation process, replacement of subcontractors after award and prior to contract execution may cause the Offeror to be disqualified.

18. Non-Conforming Proposals

Proposals will be reviewed, for completeness, format and compliance with the requirements of the RFP. Incomplete proposals will be considered non-responsive and subject to rejection.

Proposals that are qualified with conditional clauses, alterations, items not called for in the RFP documents, or irregularities of any kind are subject to rejection by the Owner, at its option.

If any proposal is deemed non-responsive by the Evaluation Committee, the Offeror will be notified in writing of such determination.

- 19. It is expressly agreed and understood that the Contractor is not authorized to act as an agent of the City or to enter into any contract on behalf of the City. It is also acknowledged that the Contractor, its agents and employees, by virtue of award of this proposal, are not entitled to any fringe benefits available to the employees of City of Lovington.
- 20. The Proposer agrees that the products or services furnished under this contract shall be covered by the most favorable commercial warranties given to any customer. Proposer agrees not to disclaim warranties of fitness for a particular purpose or merchantability.
- 21. Proposal specifications indicate the minimum standard of quality, performance or other pertinent characteristics required. All services equal or exceeding these specifications will be considered. **All options, variations or exceptions to specifications must be listed.**

- 22. Each proposer is to submit its proposal on the form provided. The form must be fully completed.
- 23. In signing this proposal, the Proposer certifies that there has been no direct or indirect action in restraint of free competitive proposal in connection with this proposal submitted to City of Lovington.
- 24. In submitting this proposal, the proposer represents the proposer has familiarized himself with the nature and extent of the Request for Proposals dealing with Federal, State and local requirements which are part of this Request for Proposals.

D. DEFINITIONS AND TERMINOLOGY

This section contains definitions that are used throughout this Request for Proposals (RFP), including appropriate abbreviations.

"Architect" means a member of the project team who is a New Mexico licensed architect and is responsible for the architectural services.

"Award of Contract" shall mean a formal written notice by the City of Lovington that a firm has been selected to enter into negotiations for a contract for construction services.

"Contract" means an agreement between City of Lovington and a New Mexico licensed contractor for the work covered by this RFP.

"Contract Documents" means any one, or combination, of the following documents: Request for Proposal, Addenda, Agreement between the Owner and the Contractor for General Conditions of the Contract, and the drawings and specifications.

"Contractor" means any person, corporation, or partnership that has entered into a contract with a state agency or a local public body.

"Design Professional" means architect or engineer.

"Determination" The written documentation of a decision made by the Evaluation Committee including findings of fact required to support a decision. A determination becomes part of the procurement file to which it pertains.

"Engineer" means a member of the project design team who is a New Mexico licensed engineer and is responsible for the engineering services.

"Evaluation Committee" A body constituted in accordance with Section 1.4.8.16 NMAC 2005 to evaluate proposals and make selection recommendation and or selection. The Evaluation Committee consists of at least three members appointed by the City of Lovington. The committee should collectively possess expertise in the technical requirements of the project, construction, design and contracting.

"Firm" means the company or other business entity referenced under 1.4.8 NMAC for the purpose of identifying, individually or collectively: a general contractor, a prime contractor or a subcontractor, of any tier, whether basic trade subcontractor, specialty subcontractor or other.

"General Conditions" - The terms "can", "may", "should", "preferably", or "prefers" identifies a desirable or discretionary item of the RFP. Failure to comply with such an item will not result in the rejection of the Offerors proposal.

"Mandatory Requirements" - The terms "must," "shall," "will," "is required," or "are required" identify a mandatory requirement of this RFP. Failure to comply with such a mandatory factor may result in the rejection of the Offeror's proposal. Rejection of the proposal will be subject to review by the Evaluation Committee.

"Offeror/Proposer" is any person, corporation, or partnership who chooses to submit a proposal in response to this RFP, with the intent of providing construction services for this project.

"Owner", as defined in the Agreement between the Owner and Contractor, shall be City of Lovington.

"Pre-listed subcontractors" means the subcontractors, of any tier, that the Offeror is required to list, pursuant to 1.4.8.13 NMAC of 1.4.8 NMAC, at the time it submits a proposal in response to this request for proposals.

"Prime Contractor" means the New Mexico licensed contractor selected.

"Project Architect, Project Engineer, Contract Engineer or Contract Architect" means architect/engineer.

"Project Design Team or Contract Architect or Engineer Design Team" means all members of the Design Professional's firm, including its consultants, who are responsible for the design of and who will be participating in the construction and completion of the project.

"Proposal" is the Offeror's response to this RFP.

"Reckless" shall mean the submission or omission of a false or misleading material fact in connection with a request for proposals under 1.4.8 NMAC that the submitting firm and/or person knew or should have known was false or misleading;

"Request for Proposals" or "RFP" means this document, any attachments incorporated by reference, and any amendments issued for use in soliciting proposals for construction of this project.

"Resident Business" or "Resident Contractor" means an entity that has a valid resident certificate issued by the NM Taxation and Revenue Department pursuant to Section 13-1-21 NMSA 1978.

"RFP documents" means any one or any combination of the following documents: Request for Proposals, technical proposal; price proposal; financial proposal; contractor's qualifications statement.

"Responsive Offer" or "Responsive Proposal" An offer or proposal which conforms in all material respects to the requirements set forth in the RFP as determined by the Evaluation Committee/City of Lovington City Manager. Material respects of an RFP include, but are not limited to quality, quantity or delivery requirements.

"Responsible Offeror" means an Offeror who submits a responsive proposal and who has furnished, when required, information and data to prove that his financial resources, production or service facilities, personnel, service reputation and experience are adequate to make satisfactory delivery of the services described in the proposal.

"Selection" A formal written notice by City of Lovington City Manager's office that a firm has been selected to enter into a contract to provide this service.

"Statement of Qualifications Forms" means the forms included as a part of this RFP, which all Offerors shall complete, including the qualifications for the Team member.

"Technical Irregularities" Are matters of form rather than substance evident from the proposal document, or insignificant mistakes that can be waived or corrected without prejudice to other Offerors; that is, when there is no effect on price, quality or quantity. The Evaluation Committee/City of Lovington City Manager may waive such irregularities, or allow an Offeror to correct them, if either is in the best interest of City of Lovington. Examples include the failure of an Offeror to:

"User" means the school City of Lovington staff occupying the facility or facilities, for which a project is being designed.

"User Contact" is the person designated by the City of Lovington to speak on behalf of the staff concerning the scope of work and programming requirements for the project.

"Veteran Resident Contractor" - is a contractor that has applied to the NM Taxation and Revenue Department, qualified, and been issued a valid Veteran Resident Preference Certificate pursuant to Section 13-1-22 NMSA 1978.

III. CONTRACTUAL AGREEMENT AND BONDS

A. Performance, Labor, and Payment Bonds (Projects in excess of \$125,000.00)

A 100% Performance Bond and a 100% Payment and Materials Bond executed by a surety company authorized to do business in the State of New Mexico will be required from the successful Offeror prior to award of a contract. The Performance and Labor and Payment Bonds shall be AIA Document A312 or approved equivalent.

B. Time of Delivery and Form of Bonds

The Offeror will, prior to commencement of Work, furnish such bonds.

The bonds will be written on the AIA Document A312, form included, or approved equivalent, Performance Bond and Labor and Payment Bond.

The AIA A312, form included, or approved equivalent, 1984 Labor and Payment Bond shall in effect, limit the time line Surety has to respond. The bond shall be modified as follows:

Paragraph 6 of this Payment Bond is deleted in its entirety and replaced with the following provision: Within 30 days (1) after the claimant has satisfied the conditions of Paragraph 4 and (2) after the Surety has received at its home office all supporting documentation it requested to substantiate the amount of the claim, the Surety shall pay or arrange for payment of any undisputed amounts. Failure of the Surety to satisfy the above requirements shall not be deemed a forfeiture or waiver of the Surety's or the Contractor's defenses under this Bond or their right to dispute such claim. However in such event the claimant may bring suit against the surety as provided under this bond.

C. Subcontractor Bonding

Each subcontractor shall provide a performance and payment bond on a public works construction project if the subcontractor's contract (to the Contractor) for work to be performed on a project is one hundred twenty-five thousand dollars (\$125,000) or more. Failure of a Subcontractor to provide required bond shall not subject the Owner to any increase in cost due to approved substitution of Subcontractor.

IV. PROPOSAL RESPONSE FORMAT AND ORGANIZATION

A. Number of Proposals

Each Offeror's proposal shall be submitted in two parts, Volume 1: Technical Proposal Volume 2: Price Proposal

Only one (1) complete original proposal may be submitted by each Offeror.

B. Volume 1: Technical Proposal

1. Submission of Volume 1-Technical Proposal

By the date and time of Submission of Technical Proposals, Offeror shall submit one (1) original copy and five (5) copies of the Technical Proposal, each to include the following documents:

- ____Tab 1 Letter of Submittal
- ____Tab 2 Contractor Statement of Qualifications and Attachments
- ____Tab 3 Past Performance
- ____Tab 4 Management Plan
- ____Tab 5 Project Staffing
- ____Tab 6 Health and Safety
- 2. Detailed Requirements for Volume 1-Technical Proposal
 - a) Technical Proposal Format

Proposals shall be submitted in a spiral or three-ring binder. Page format shall be $8-1/2'' \times 11''$ with foldout sheets (if any) allowed up to $11'' \times 17''$ in size. Foldout pages shall be counted as two pages and shall be numbered as such. Text will be no smaller than 10 point.

Proposals shall not exceed 30 pages total for all of the tabbed sections listed below. Each sheet face that is printed with text or graphics counts as one page. Contents of Tab 6 – Health and Safety are not to be counted towards the 30 page maximum total. Tab Dividers do not count as pages provided the only text or graphics on the dividers are the tab numbers and section titles:

Tab 1 – Letter of Submittal

- Tab 2 Contractor's Statement of Qualifications & Attachments
- Tab 3 Past Performance
- Tab 4 Management Plan
- Tab 5 Project Staffing
- Tab 6 Health and Safety

Any response that exceeds the referenced page limitation shall BE DEEMED NON-RESPONSIVE AND THE PROPOSAL WILL NOT BE EVALUATED. If there are any questions regarding format requirements, please contact James R. Williams, City Manager, prior to submission of Documents.

Tabs/Evaluation Categories:

All sections shall be separated by numbered tabs that correspond to the Submission Requirements and Evaluation Categories, 1 through 6, as shown below. Pages within shall be numbered consecutively.

TAB 1 - LETTER OF SUBMITTAL

Each proposal must be accompanied by a submittal letter. Any submittal letter that omits any of the following information may be deemed 'non-responsive'. The submittal letter shall include acknowledgment and, where appropriate, certification of the following:

- 1. Identify the name(s), title(s), telephone number(s), fax number(s) and e-mail address(es) of the person or persons who have authority to contractually obligate the Offeror for the purpose of this RFP and who has sufficient knowledge to fully address all matters and respond to all inquiries included in the RFP submittal. The Letter of Submittal shall be signed by one of the persons so identified.
- 2. If a joint proposal is being submitted, identify the firms, and disclose the percentage of the work/services to be executed by each firm, based on the dollar amount of the fee proposed in the Price Proposal, so that the resident contractor preference or veteran resident contractor preference can be applied in proportion to the work done by each contractor. Do NOT include prices in the Letter of Submittal.
- 3. Acknowledge acceptance of all conditions that govern the procurement. Acknowledge that the information provided in the proposal is truthful, accurate

and complete, and that the firm is bound by all information, data, certifications, disclosures and attachments submitted.

- 4. Acknowledge that, the omission of any material fact concerning requested information, or the submission of any material false or misleading statement, or misrepresentation of a material fact concerning any requested or submitted information, may lead to the disqualification of the proposal as 'non-responsive'.
- 5. Acknowledge that the Owner has a right to obtain relevant information from other sources (references) to determine that the Offeror is 'responsible'.
- 6. Acknowledge that if awarded the contract, the RFP documents, and all terms and conditions stated therein, and all information, data, certifications, disclosures and addendum shall be incorporated as part of the Contract.
- 7. Acknowledge the receipt of all addenda to this RFP and list them by number.
- 8. Provide certification and/or documentation that the firm possesses the necessary equipment, financial resources, technical resources, management, professional and craft personnel resources and other required capabilities to successfully perform the contract, or will achieve same through its prelisted subcontractors.

TAB 2 – CONTRACTOR STATEMENT OF QUALIFICATIONS & ATTACHMENTS

Completely fill out the attached General Contractor Statement of Qualifications form and its associated attachments, providing all requested information.

TAB 3 – PAST PERFORMANCE

Provide the following information through written narrative and documentation:

- a. Past performance summary and past capability to meet schedules, budgets, and project administration requirements for comparable projects. Provide five (5) examples of prior projects. The documentation shall include:
 - 1. Was the project completed early? If yes, how was that accomplished?
 - 2. Was the project completed late? If yes, how many days and why?
 - 3. Were you or your subcontractors called back to the job for any reason during the warranty period? After the warranty period?
 - 4. Were there any outstanding issues remaining after the warranty inspection?
 - 5. Did your firm refuse to do additional work requested by the owner? If yes, why?
- b. Evidence of past performance quality and overall customer satisfaction.
- c. Record of compliance with applicable laws and regulations on past projects.
- d. Past record of achievement of health and safety targets.
- e. List of references

Offers are cautioned that the Evaluation Committee will use data provided by teaming partners as well as data obtained from other sources in the evaluation of past performance.

<u>TAB 4 – MANAGEMENT PLAN</u>

Provide the following information:

a. Management Team: provide an organization chart of the Management Team.

- b. Describe the technical approach to project that is intended to ensure that tasks are executed within cost, schedule, and quality goals.
- c. Safety plan/program
- d. Project Schedule- Provide a schedule identifying the planned completion dates for the contract milestones. The schedule shall show the sequence, duration and logic tie-ins of tasks, major activities and site visits.

TAB 5 – PROJECT STAFFING

Provide the following information:

- a. Brief resume (education, professional certification(s), years with firm, total years of experience, and a brief description of experience supporting the proposed role) for each key project personnel.
- b. Describe Contractor's participation in skill training.
- c. Address reliable staffing sources/project staffing.

TAB 6 – HEALTH AND SAFETY

Provide the following information:

- a. Provide a summary description of the Contractor's Health and Safety program. (One copy only of the full Contractor's Written Safety Program)
- b. Identify the competent person responsible for, and capable of, implementing the safety and health program/plan.
- c. Address project specific health and safety risks that have been identified by the RFP and additional risks that the Offeror's team has identified. Describe processes to minimize risk and to ensure that health and safety issues are clearly communicated with the contractors, subs, and the owner.
- d. Offerors shall provide their Experience Modification Rate (EMR), Total Case Rate (TCR), and Days Away, Restricted, and Transfer (DART) for the past three years with the proposal.
- e. Offerors shall provide with proposal a copy of their OSHA 300 Log (current and previous two years)

(See Section V. Proposal Evaluation, B. Evaluation Criteria, below, for detailed scoring guidelines for the "Health and Safety" category)

IMPORTANT NOTE ON THE TECHNICAL PROPOSAL'S CONTENTS:

Regarding the apparent duplication of required information between certain Attachments of the Contractor's Statement of Qualifications and the other sections of the Technical Proposal:

The intention of Tabs 4, 5, and 6 of the Technical Proposal is to provide a place for the proposer to make a concise presentation of the strengths of the proposed team in the exact categories that the committee will be scoring, unencumbered by the format of the Statement of Qualifications Forms. If the proposer so chooses, other sections of the Technical Proposal may be referenced within these Tabs, without wholly duplicating that information. Also, information presented elsewhere may be summarized or condensed within these Tab sections to make the proposer's presentation more clear.

C. Volume 2: Price Proposal

- 1. Submission of Volume 2-Price Proposal
 - Original Price Proposal, sealed in separate envelope, to include:
 - ____ Item 1 Offeror Information which included the information listed immediately below
 - Resident Contractor Preference Number (In-state Certification No.) on Proposal Form and a copy of certificate.
 - Resident Veteran Contractor Preference Number (In-state Certification No.) on Proposal Form and a copy of certificate
 - ____NM DOL (Workforce Solutions) Certificate Number
 - ____Contractor's New Mexico Gross Receipts Tax Number
 - ____Contractor's Federal Employee Identification Number
 - ____Acknowledgment of Receipt of Addenda (If applicable)
 - ____ Price
 - ____Signature and Corporate Seal (if applicable)
 - ____ Item 2 Proposal Security (Bond or Cash), Agent's Affidavit
 - ____ Item 3 Notarized Declaration Letter from Surety
 - ____ Item 4 Certificate of Insurance
 - ____ Item 5 Resident Contractor (or Veteran Resident Contractor) Preference Certificate
 - ____ Item 6 Contractor's State of NM W-9 Form
 - ____ Item 7 Offeror's Contractor's License(s)

After award of a contract, all Offerors of record may make arrangements with the City of Lovington to have their proposal copies returned or picked up. The City of Lovington shall not be responsible for any shipping or mailing costs to return proposals. If Offeror does not request the return of proposals within a reasonable period of time, the City of Lovington will shred and destroy them.

2. Detailed Requirements of Volume 2-Price Proposal

ITEM 1 - PRICE PROPOSAL FORM:

Price Proposals shall be presented in the form provided herein.

The proposal, bearing original signatures, must be typed or hand-written in ink on the Price Proposal Form.

All proposals are subject to all applicable taxes. Do not include the taxes in the total proposal price. Taxes will be added and paid at time of billing.

In submitting this proposal, each Offeror must satisfy all terms and conditions of the Proposal Documents. All work covered by this Request for Proposals shall be in accordance with applicable state laws and, if price proposal amount is \$50,000 or more, is subject to the minimum wage rate determination issued by the office of the NM Work Force Solutions Department for this project. If the price proposal amount of the contractor or any subcontractor exceeds \$60,000, the contractor and/or subcontractor must comply with the registration requirements pursuant to the NM Work Force Solutions Department Registration Act.

Before submitting a proposal, each Offeror shall carefully examine the RFP; and shall include in the proposal the cost of all items required by the RFP. If the contractor observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the contractor shall promptly notify the specified City of Lovington City Manager and the necessary changes shall be accomplished by addendum.

ITEM 2 - PROPOSAL SECURITY (BOND OR CASH):

Proposal security in the amount of 5% of the amount of the proposal shall accompany the proposal and must be in the form of a certified or bank cashier's check made payable to Owner or a proposal bond issued by a surety licensed to conduct business in the State of New Mexico and named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department. The Proposal Security of the successful proposer will be retained until he has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if he fails to execute and deliver the Agreement and furnish the required Contract Security within fifteen (15) days of the Notice of Award, Owner may annul the Notice of Award and the Proposal Security of that Proposer will be forfeited. The Proposal Security of any proposer whom the Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the seventh day after the executed agreement is delivered by Owner to Contractor and the required Contract Security is furnished or the sixty-first day after the proposal opening. Proposal Security of other proposers will be returned within seven (7) days of the proposal opening.

No Offeror may withdraw his proposal for 30 days after the actual date of the opening thereof.

ITEM 3 - NOTARIZED DECLARATION LETTER FROM SURETY:

The Offeror will provide, with the price proposal, a notarized declaration letter from a bonding company licensed to do business in the State of New Mexico confirming the Offeror's ability to obtain a Performance Bond, and a Labor and Payment Bond in an amount not less than 100% of the price proposal.

ITEM 4 - CERTIFICATE OF INSURANCE:

The offeror will be required to carry:

General liability insurance in the amount of \$1,000,000.00 per occurrence and \$2,000,000.00 aggregate.

Auto liability insurance in the amount of \$1,000,000.00.

Workers Compensation insurance as required by New Mexico State Statute.

City of Lovington will be listed as an additional insured on all policies and proof of coverage must be provided before work begins. Award will be contingent upon receipt of proof of insurance.

ITEM 5 - RESIDENT CONTRACTOR (OR VETERAN RESIDENT CONTRACTOR) PREFERENCE CERTIFICATE:

The New Mexico Procurement Code provides for preference for resident and resident veteran businesses and contractors under certain conditions. If applicable, the preference will be provided to those proposers that have provided a valid preference certificate with their bid.

In order for a proposer to receive any of the available preferences, that proposer <u>must</u> submit a copy of their applicable preference certificate with their proposal. The preference certificate <u>must</u> have been issued by the New Mexico Taxation and Revenue Department. Providing only a preference number is not acceptable and will not qualify the proposer any preference. Preference does not apply to contracts that use federal funds.

For more information, or to obtain application forms, please go to: <u>http://www.tax.newmexico.gov/Businesses/Pages/In-StatePreferenceCertification.aspx</u>

Note that only an officially issued preference certificate will be considered. Submission of a copy of a submitted application pending receipt of an officially issued preference certificate is not acceptable.

A **RESIDENT VETERANS PREFERENCE CERTIFICATION** form is included in this Request for Proposal.

Resident Business Preference

The New Mexico Procurement Code provides for preference for resident businesses and Contractors under certain conditions. If applicable, the preference will be provided to those Offerors that have provided a valid resident business preference certificate with their bid, as required by 13-1-22 NMSA 1978.

In order for a proposer to receive preference as a resident business, that proposer <u>must</u> submit a copy of their resident business preference certificate with their proposal. The preference certificate <u>must</u> have been issued by the New Mexico Taxation and Revenue Department. Providing only a preference number or a copy of the application is not acceptable.

<u>ITEM 6 – CONTRACTOR'S STATE OF NM W-9 FORM:</u> Each Offeror shall complete and provide a State of New Mexico W-9 Form.

ITEM 7 – OFFEROR'S CONTRACTOR'S LICENSE(S)

Each Offeror shall provide a photocopy of their Contractor's License or Licenses.

V. PROPOSAL EVALUATION

A. EVALUATION PROCESS AND SCORING METHODOLOGY

1. Receipt and Opening of Proposals

Proposals, and modifications to proposals, received prior to or at the submission deadline shall be time-stamped upon receipt and the Price Proposal shall be separated from the Technical Proposal and held in a secure place until the Evaluation Committee has scored the Technical Proposal. Proposals shall not be opened publically or open to public inspection until after the contract is signed.

2. Proposal Discussions

Per 1.4.1.39 NMAC 2005, if mistakes are discovered after receipt of the proposal, The Evaluation Committee may request clarifications of information submitted by any or all Offerors in a written format with a specified deadline for response.

3. Evaluation Committee

The Evaluation Committee shall consist of a minimum of three (3) persons appointed by the City of Lovington. The team shall collectively possess expertise in the technical requirements of the project, construction design and contracting. The Owner may use independent consultants or agents to support the Committee, provided appropriate precautions are taken to avoid potential conflicts of interest.

4. Technical Proposal Evaluation

The City Manager shall review each proposal to determine if it meets all of the mandatory requirements. Volume One Technical Proposals that do not meet the mandatory requirements shall be considered "non-responsive" and the corresponding Volume Two Price Proposal(s) will not be opened or evaluated. The Offeror shall be notified in writing of the determination. The City Manager will then distribute the proposals and individual score sheets to the Evaluation Committee, and will review how the proposals shall be scored. The Evaluation Committee members shall score the technical proposals individually. Price proposals shall remain sealed until the Evaluation Committee has completed its evaluation of the technical proposals for all offerors and has prepared the final technical scores as required by the §1.4.8.12.B NMAC.

5. Price Proposal Evaluation

Procedures for scoring price proposals under this rule shall be in accordance with NMAC 1.4.8 and are summarized as follows:

- 1) Price proposals shall be initially evaluated to ensure that the price(s) offered is responsive to the RFP requirements and instructions and is realistic in respect to the project plans and specifications.
- 2) Price proposals shall be evaluated on the basis of the numerical weight assigned to price in the RFP and scored in accordance with the following process to permit the scoring of competing offeror's price proposals in relation to one another: the offeror with the lowest price shall receive the maximum price score.
- 3) The price score of each other offeror shall be determined by applying the following mathematical formula: price of lowet offeror divided by the price fro this offeror multiplied by the maximum price score.

<u>price of lowest offeror</u> x maximum price score = price score of this offeror price of this offeror

6. Combining Scores, Preference Adjustments and Ranking of Proposals The individual scores on the Technical Proposals will be combined with the price proposal score. These individual subtotals will then be adjusted for Resident Contractor Preference or Veteran Resident Contractor Preference.

Per 13-1-21 and 13-1-22 NMSA 1978 (SB 1, 2011 Special Legislative Session, effective 10/5/2011) a resident contractor who holds a valid certificate issued by the NM Taxation and Revenue Department shall be awarded the equivalent of five percent of the total possible points assigned to the procurement.

A veteran resident contractor who holds a valid certificate issued by the NM Taxation and Revenue Department shall be awarded the equivalent of between zero and ten percent of the total possible points assigned to the procurement, depending on the annual revenues of the firm and the aggregate annual veteran preference awards, as described in detail in Item 5, Section IV above.

When a joint proposal is submitted by a combination of resident veteran, resident or nonresident businesses, the preference shall be calculated in proportion to the percentage of the contract, (based on the dollar amount of the goods or services provided under the contract), that will be performed by each business as specified in the joint bid or proposal.

The adjusted point subtotals will be converted to a numeric ranking of all proposals per committee member. The individual member rankings per Offeror will then be totaled together to determine the overall ranking of the proposals.

B. EVALUATION CRITERIA

A maximum total of 170 points are possible in scoring each proposal for the evaluation. The Evaluation Committee will evaluate the proposals and may conduct interviews with Offerors.

The Technical Proposal shall consist of 100 points total, the Price Proposal shall consist of 70 points.

The evaluation criteria to be used by the Evaluation Committee for the proposal shortlist and the corresponding point values for each criterion are as follows:

VOLU	ME 1 – TECHNICAL PROPOSAL	
Oualif	ications	20 points
Past P	erformance	20 points
De	tailed Past Performance Scoring Guideline criteria listed below	20 points
<u>20</u> A.	Budget and schedule data	3.0 points
В.	(if available), performance quality and customer satisifaction	3.0 points
С.	Compliance with applicable laws and regulations	7.0 points
D.	Safety performance record	7.0 points
Mana	gement Plan	20 points
De	tailed Management Plan Scoring Guideline criteria listed below	-
A.	Management Team	6.0 points
В.	Technical approach to project	3.0 points
С.	Safety plan/programs	6.0 points
D.	Project Schedule	5.0 points
Proje	t Staffing	20 points
De	tailed Project Staffing Scoring Guideline criteria listed below	
Α.	Participation in skill training	10.0 points
В.	Reliable staffing sources/project staffing	10.0 points
Healt	n and Safety	20 points
<u>De</u>	tailed Health and Safety Scoring Guideline criteria listed below	
А.	Summary Description of Health and Safety Plan	1.0 points
	A1. One Full Copy of Written Safety Program	1.0 points
В.	Competent Person Responsible/Capable of Implementing	1.0 points
С.	Project Specific Health/Safety Risks	4.0 points
	C1. Describe Processes to Clearly Communicate Health/Safety Issues	1.0 points
D.	Written Safety Program Compliant; Provide One Copy	3.0 points
Ε.	List of Key Safety Personnel/Safety Manager for This Project	1.0 points
<i>F</i> .	Experience Modification Rate Past 3 Years (Equal to, or Better Than Average)	3.0 points
G.	Recordable Incident Rate for current and previous two (2) years OSHA 300 Log	3.0 points
Н.	Free of Committing Serious/Willful Violations of Federal/State Safety Laws	2.0 points
Subto	tal of Technical Proposal	100 points

VOLUME 2 – PRICE PROPOSAL

Price Proposal (Price Proposal submittal) based on requirements set forth in Plans and <u>Specifications.</u>70 points

Subtotal of Price Proposal	70 points

170 points

TOTAL POINTS

City of Lovington intends to award this project to the highest ranked Proposer(s) in accordance with the Request for Proposals. City of Lovington reserves the right to reject any and all proposals, to waive technical irregularities, and to award the contract to the Proposer who's Proposal deems to be in the best interest for the City of Lovington. Also, it should be noted per State Statute the use of this bid by other local public bodies is permissible upon mutual consent from the City of Lovington and the offeror(s).

Tab 2: Contractor Statement of Qualifications

Name of Offeror (firm):

Does the firm have a current contractor registration?

Does the firm have all applicable business and/or contractor licenses required by state or local law?

Does the firm possess the necessary equipment, financial resources, technical resources, management, professional and craft personnel resources and other required capabilities to successfully perform the contract?

Has the firm had any business, trade or contracting license suspended or revoked? If yes, explain

Has the firm been debarred by any government agency? If yes, explain

Has firm entered into any contracted that has defaulted or has been terminated on any project? If yes, explain.

Has the firm committed willful or repeated violations of federal or state wage laws as determined by a final nonappealable decision of a court or government agency? If yes, explain.

Has the firm committed serious or willful violations of federal state safety laws as determined by a final non-appealable decision of a court or government agency? If yes, explain

List most recent Experience Modification Rating (EMR).
List most recent Total Lost Workday Incident Rates (number of lost time injuries and illnesses x 200,000 ± total hours worked)
Recordable incident rates (number of injuries x 2000,000 \pm total hours worked)

Name of Offeror:

Previous Project Experience:

List all projects, minimum of three (3), Offeror has performed work on in the five (5) years immediately preceding the submission of its proposal that are similar in size and scope. The Offeror must have been the prime contractor and performed at least 50 percent of the work value with their own forces. Use additional sheets as necessary.

Project	Information			
	Project Name:			
	Location of Project:			
	Owner:			
	Original Contract Value:		Completed Value:	
Knowle	dgeable Owner Contact Person:			
	Knowledgeable Owner Contact F	erson		
	Role on Project:			
	E-mail Address:			
	Telephone Number:			
Descrip	otion of Project:			

Attach any types of performance evaluation reports prepared in connection with the project.

SUBCONTRACTOR'S QUALIFICATION STATEMENTS

Name of Subcontractor (firm):
Address:
Category of work:
Does the firm have a current contractor registration?
Does the firm have all applicable business and/or contractor licenses required by state or local law?
Does the firm possess the necessary equipment, financial resources, technical resources, management, professional and craft personnel resources and other required capabilities to successfully perform the contract?
Has the firm had any business, trade or contracting license suspended or revoked? If yes, explain
Has the firm been debarred by any government agency? If yes, explain
Has the firm defaulted on any project? If yes, explain.
Has the firm committed willful or repeated violations of federal or state wage laws as determined by a final non- appealable decision of a court or government agency? If yes, explain.
Has the firm committed serious or willful violations of federal state safety laws as determined by a final non-appealable decision of a court or government agency? If yes, explain
List most recent Experience Modification Rating (EMR).
List most recent Total Lost Workday Incident Rates (number of lost time injuries and illnesses x 200,000 / total hours worked)
Recordable incident rates (number of injuries x 2000,000 ± total hours worked)

Name of Offeror:

Previous Project Experience:

List all projects, minimum of three (3), Offeror has performed work on in the five (5) years immediately preceding the submission of its proposal that are similar in size and scope. The Offeror must have been the prime contractor and performed at least 50 percent of the work value with their own forces. Use additional sheets as necessary.

Project	Information	
	Project Name:	
	Location of Project:	
	Owner:	
	Original Contract Value:	Completed Value:
Knowled	dgeable Owner Contact Perso	1:
	Knowledgeable Owner Conta	t Person
	Role on Project:	
	E-mail Address:	
	Telephone Number:	
Descript	tion of Project:	

Attach any types of performance evaluation reports prepared in connection with the project.

PRICE PROPOSAL FORM

TABLE OF ARTICLESPageArticle 1 – Bid Recipient.1Article 2 – Bidder's Acknowledgements.1Article 3 – Bidder's Representations.1Article 4 – Further Representations.2Article 5 – Basis of Bid.3Article 6 – Time of Completion.11Article 7 – Attachments To This Bid.11Article 8 - Defined Terms.11Article 9 – Bid Submittal.12

ARTICLE 1 – BID RECIPIENT

1.01This Bid is submitted to: City of Lovington
214 S. Love Street
Lovington, New Mexico 88260
ATTENTION: Mr. James R. Williams, City Manager

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:
 - A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>

- B. Bidder has visited the Well Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Sites and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Sites (except Underground Facilities).
- E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and

procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

- F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
- I. Bidder has has read and reviewed section 01010 of the technical specifications and is familiar with the construction sequencing for the project.
- J. Bidder shall be prepared to coordinate work sequence with other contractors as well as Owner. Each bidder is responsible for ensuring the timely completion of his or her work as well as notifying the owner of any delays or scheduling conflicts. Overall construction sequence and project coordination will be discussed and established in the mandatory pre-construction meeting after the project has been awarded.
- K. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- L. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- M. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 – FURTHER REPRESENTATIONS

- 4.01 Bidder further represents that:
 - A. this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
 - B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
 - C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
 - D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

ARTICLE 5 – BASIS OF BID

5.01 The Price Proposal is separated into three Bid Lots based upon type of construction. Each Bid Lot contains a Base Bid and Additive Alternates. Bidder is not required to bid on all Bid Lots. Bidder may, at his or her discretion, submit Price Proposals for any or all Bid Lots.

Scope of Work for Bid Lots include: Bid Lot 1-Well Construction Bid Lot 2-Pump House Bid Lot 3-Electrical

Bid Lots will be evaluated within each Bid Lot (not the sum of the Bid Lots). Owner anticipates the award of multiple contracts per Bid Lot. Place "N/A" for unit price, if not proposing on a Bid Lot.

*NOTE: Please read all of the RFP documents carefully for mandatory requirements.

5.02 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BID LOT 1 - WELL CONSTRUCTION

BASE BID - CATEGORY A-WELL #30-Well Drilled/Pump Installed/Pump House Complete

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Mobilization/demobilization (Well 30 Only), CIP	LS	1		
2	Reaming the exploratory borehole to 26-in. for conductor casing	LF	50		
3	Install 22-inch conductor casing	LF	50		
4	Drill 6-inch exploratory borehole below conductor casing	LF	200		
5	Geophysical well logs, CIP	LS	1		
6	Reaming the exploratory borehole to 20-in. below conductor casing	LF	200		
7	Provide and install 12-3/4-in. HSLA blank casing	LF	170		
8	Provide and install 12-3/4-in SS well screen, with 0.040-in. slots	LF	80		
9	Provide and install gravel pack	CF	228		
10	Provide annular bentonite seal	CF	35		
11	Provide annular concrete grout	СҮ	28		
12	Provide caliper survey, CIP	LS	1		
13	Bailing, and air-lift development	HR	16		
14	Development pumping	HR	12		
15	Disinfection, CIP	LS	1		
16	Supply, install, and remove test pump	LS	1		
17	Pumping tests	HR	36		
18	Water quality testing & analysis	EA	1		
19	Final well video	LS	1		
20	Furnish & install discharge head & assembly, CIP	LS	1		
21	Furnish & install well pump & column pipe, complete and in place (CIP)	LS	1		
	SUBTOTAL BID LOT 1 WELL CONSTRUCTION: BASE BID-CATEGORY A-WELL #30-Well Drilled/Pump Installed/Pump House Complete (Items 1-21)			\$	
BASE BID - CATEGORY B-WELL #29-Well Drilled

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Mobilization/demobilization (Well 29 only), CIP	LS	1		
2	Reaming the exploratory borehole to 26-in. for conductor casing	LF	50		
3	Install 22-inch conductor casing	LF	50		
4	Drill 6-inch exploratory borehole below conductor casing	LF	200		
5	Geophysical well logs, CIP	LS	1		
6	Reaming the exploratory borehole to 20-in. below conductor casing	LF	200		
7	Provide and install 12-3/4-in. HSLA blank casing	LF	170		
8	Provide and install 12-3/4-in SS well screen, with 0.040-in. slots	LF	80		
9	Provide and install gravel pack	CF	228		
10	Provide annular bentonite seal	CF	35		
11	Provide annular concrete grout	CY	28		
12	Provide caliper survey, CIP	LS	1		
13	Bailing, and air-lift development	HR	16		
14	Development pumping	HR	12		
15	Disinfection, CIP	LS	1		
16	Supply, install, and remove test pump	LS	1		
17	Pumping tests	HR	36		
18	Water quality testing & analysis	EA	1		
19	Final well video	LS	1		
	SUBTOTAL BID LOT 1 WELL CONSTRUCTION: BASE BID-CATEGORY B-WELL #29-Well Drilled (Items 1-19)			\$	

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Mobilization/demobilization (Well 28 only), CIP	LS	1		
2	Reaming the exploratory borehole to 26-in. for conductor casing	LF	50		
3	Install 22-inch conductor casing	LF	50		
4	Drill 6-inch exploratory borehole below conductor casing	LF	200		
5	Geophysical well logs, CIP	LS	1		
6	Reaming the exploratory borehole to 20-in. below conductor casing	LF	200		
7	Provide and install 12-3/4-in. HSLA blank casing	LF	170		
8	Provide and install 12-3/4-in SS well screen, with 0.040-in. slots	LF	80		
9	Provide and install gravel pack	CF	228		
10	Provide annular bentonite seal	CF	35		
11	Provide annular concrete grout	CY	28		
12	Provide caliper survey, CIP	LS	1		
13	Bailing, and air-lift development	HR	16		
14	Development pumping	HR	12		
15	Disinfection, CIP	LS	1		
16	Supply, install, and remove test pump	LS	1		
17	Pumping tests	HR	36		
18	Water quality testing & analysis	EA	1		
19	Final well video	LS	1		
	SUBTOTAL BID LOT 1 WELL CONSTRUCTION: BASE BID-CATEGORY C-WELL #28-Well Drilled (Items 1-19)			\$	

BASE BID - CATEGORY C-WELL #28-Well Drilled

ADDITIVE ALTERNATE A BID-WELL #29-Pump Installed/Pump House Complete

ITEM NO	DESCRIPTION		QUANTITY	UNIT PRICE	AMOUNT
1	Furnish & install discharge head & assembly, CIP	LS	1		
2	Furnish & install well pump & column pipe, complete	LS	1		
	SUBTOTAL BID LOT 1 PUMP HOUSE: ADDITIVE ALTERNATE A BID-Well #29 Drilled/Completed (Items 1-2)			\$	

ADDITIVE ALTERNATE B BID-WELL #28-Pump Installed/Pump House Complete

ITEM				UNIT	
NO	DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
1	Furnish & install discharge head & assembly, CIP	LS	1		
2	Furnish & install well pump & column pipe, complete	LS	1		
	SUBTOTAL BID LOT 1 PUMP HOUSE: ADDITIVE ALTERNATE B BID-Well #28 Drilled/Completed (Items 1-2)			\$	

BID LOT 2 - PUMP HOUSE

BASE BID - CATEGORY A-WELL #30 Well Drilled/Pump Installed/Pump House Complete

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Grading & earthwork for well pump house	LS	1		
2	Construct well pump foundation pad, CIP	CY	1		
3	Construct well pump house foundation, CIP	CY	6		
4	Construct pre-engineered metal building with all architectural & structural appurtenances, CIP				
5	Furnish and Install Mechanical, Piping & Valves for pump house to limits shown, Including DI & steel pipe above and below ground, including gate valves, saddle-type flow meter, check valve, & drain line with all appurtenances required, complete and in place (CIP)	LS	1		
6	Furnish & Install plunge pool per plans	LS	1		
	SUBTOTAL BID LOT 2 PUMP HOUSE: BASE BID-CATEGORY A-Well #30 Well Drilled/Pump Installed/Pump House Complete (Items 1-6)			\$	

ITEM NO	DESCRIPTION		QUANTITY	UNIT PRICE	AMOUNT
1	Grading & earthwork for well pump house	LS	1		
2	Construct well pump foundation pad, CIP	CY	1		
3	Construct well pump house foundation, CIP	СҮ	6		
4	Construct pre-engineered metal building with all architectural & structural appurtenances, CIP				
5	Furnish and Install Mechanical, Piping & Valves for pump house to limits shown, Including DI & steel pipe above and below ground, including gate valves, saddle-type flow meter, check valve, & drain line with all appurtenances required, complete and in place (CIP)	LS	1		
6	Furnish & Install plunge pool per plans	LS	1		
	SUBTOTAL BID LOT 2 PUMP HOUSE: ADDITIVE ALTERNATE A BID-Well #29 Pump Installed/Pump house Complete (Items 1-6)			\$	

ADDITIVE ALTERNATE A BID-WELL #29 Pump Installed/Pump House Complete

ADDITIVE ALTERNATE B BID-WELL #28-Pump Installed/Pump House Complete

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Grading & earthwork for well pump house	LS	1		
2	Construct well pump foundation pad, CIP	CY	1		
3	Construct well pump house foundation, CIP	CY	6		
4	Construct pre-engineered metal building with all architectural & structural appurtenances, CIP	S.F.	164		
5	Furnish and Install Mechanical, Piping & Valves for pump house to limits shown, Including DI & steel pipe above and below ground, including gate valves, saddle-type flow meter, check valve, & drain line with all appurtenances required, complete and in place (CIP)	LS	1		
6	Furnish & Install plunge pool per plans	LS	1		
	SUBTOTAL BID LOT 2 PUMP HOUSE: ADDITIVE ALTERNATE B BID-Well #28 Pump Installed/Pump House Complete (Items 1-6)			\$	

BID LOT 3 - ELECTRICAL

BASE BID - CATEGORY A-WELL #30-Well Drilled/Pump Installed/Pump House Complete

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Furnish & install pump house electrical, CIP	LS	1		
2	Furnish & install pump house SCADA system, CIP	LS	1		
	SUBTOTAL BID LOT 3 ELECTRICAL: BASE BID-CATEGORY A-Well #30 Drilled/Completed (Items 1-2)			\$	

BID LOT 3 - ELECTRICAL

ADDITIVE ALTERNATE A-WELL #29-Pump Installed/Pump House Complete

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Furnish & install pump house electrical, CIP	LS	1		
2	Furnish & install pump house SCADA system, CIP	LS	1		
	SUBTOTAL BID LOT 3 ELECTRICAL: ADDITIVE ALTERNATE A BID-Well #29 Pump Installed/Pump House Completed (Items 1-2)			\$	

BID LOT 3 - ELECTRICAL

ADDITIVE ALTERNATE B BID- WELL #28-Pump Installed/Pump House Complete

ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Furnish & install pump house electrical, CIP	LS	1		
2	Furnish & install pump house SCADA system, CIP	LS	1		
	SUBTOTAL BID LOT 3 ELECTRICAL : ADDITIVE ALTERNATE B BID-Well #28 Pump Installed/Pump House Completed (Items 1-2)			\$	

SUBTOTAL BID LOT 1 WELL CONSTRUCTION:

- BASE BID -CATEGORY A-WELL # 30-Well Drilled/Pump Installed/Pump House Complete (Items 1-21)
- BASE BID-CATEGORY B WELL # 29-Well Drilled (Items 1-19)
- BASE BID-CATEGORY C WELL # 28-Well Drilled (Items 1-19)
- ADDITIVE ALTERNATE A BID- Well # 29 Drilled/Completed (Items 1-2)
- ADDITIVE ALTERNATE B BID- Well # 28 Drilled/Completed (Items 1-2)

\$ _____ \$ _____ \$ _____

TOTAL BID LOT 1 WELL CONSTRUCTION

NMGRT @ 7.250 %

SUBTOTAL BID LOT 2 PUMP HOUSE:

•	BASE BID -CATEGORY A-WELL # 30-Well Drilled/Pump Installed/Pump House Complete
	(Items 1-4)

- ADDITIVE ALTERNATE A BID- Well # 29 Pump Installed/Pump house Complete (Items 1-6)
- ADDITIVE ALTERNATE B BID- Well # 28 Pump Installed/Pump house Complete (Items 1-6)

NMGRT @ 7.250 %

TOTAL BID LOT 2 PUMP HOUSE

SUBTOT	AI R	ID I	OT 3	FI FC	TRICAL

- BASE BID-CATEGORY A-Well # 30 Drilled/Completed (Items 1-2)
- ADDITIVE ALTERNATE A BID- Well # 29 Pump Installed/Pump house Complete (Items 1-2)
- ADDITIVE ALTERNATE B BID- Well # 28 Pump Installed/Pump house Complete (Items 1-2)

NMGRT @ 7.250 %

TOTAL BID LOT 3 ELECTRICAL

\$	
\$	
ċ	

\$

Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that any estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Bidder acknowledges that **ALL Unit Price BID ITEMS** that are for the **same described work** under any of the individual well Categories (Categories A, B or C) of the BASE BID, or for ADDITIVE ALTERNATE A or B BIDS SHALL BE BID at the **same Unit Prices** in each of the portions of the BID. Failure to follow this instruction may be a basis for rejection of the BID.

5.03 Offeror's Declaration Form (Mandatory)

Offerors must indicate the Lot or Lots to which it is submitting a response by placing an "X" next to each item that applies.

(____) BID LOT 1-WELL CONSTRUCTION

- (____) BASE BID-CATEGORY A WELL # 30-Well Drilled/Pump Installed/Pump House Complete
 - ____) BASE BID-CATEGORY B WELL # 29-Well Drilled
- (_____) BASE BID-CATEGORY C WELL # 28-Well Drilled
- (_____) ADDITIVE ALTERNATE A BID-WELL # 29-Drilled/Completed
- ____) ADDITIVE ALTERNATE B BID-WELL # 28- Drilled/Completed

(____) BID LOT 2-PUMP HOUSE

(____) BASE BID-CATEGORY A - WELL # 30-Well Drilled/Pump Installed/Pump House Complete

____) ADDITIVE ALTERNATE A BID-WELL # 29-Pump Installed/Pump House Complete

) ADDITIVE ALTERNATE B BID-WELL # 28-Pump Installed/Pump House Complete

(____) BID LOT 3-ELECTRICAL

- (____) BASE BID-CATEGORY A WELL # 30-Well Drilled/Pump Installed/Pump House Complete
- _____) ADDITIVE ALTERNATE A BID-WELL # 29-Pump Installed/Pump House Complete
-) ADDITIVE ALTERNATE B BID-WELL # 28-Pump Installed/Pump House Complete

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that all Work for Bid Lots 1, 2, and 3 including Base Bid Categories (A, B, and C), and Additive Alternates (A and B) (if selected) shall be completed and ready for final payment within the scheduled construction time. Construction is scheduled to take 30 days for the construction of Well #30 and 110 days for the remaining construction items (140 Calendar days total) from notice to proceed to substantial completion.

6.02 The City of Lovington reserves the right to rearrange the standing of Additive Alternate Sequence, if in the best interest of the City.

ARTICLE 7 - ATTACHMENTS TO THIS BID

- 7.01 The following documents shall be submitted with and made a condition of this Proposal:
 - _____ Item 1 Offeror Information which included the information listed immediately below
 - _____Resident Contractor Preference Number (In-state Certification No.) on Proposal Form and a copy of certificate.
 - Resident Veteran Contractor Preference Number (In-state Certification No.) on Proposal Form and a copy of certificate
 - ____NM DOL (Workforce Solutions) Certificate Number
 - ____Contractor's New Mexico Gross Receipts Tax Number
 - ____Contractor's Federal Employee Identification Number
 - ____Acknowledgment of Receipt of Addenda (If applicable)
 - ____ Price
 - ____Signature and Corporate Seal (if applicable)
 - ____ Item 2 Required Bid security in the form of a certified check, bank money order, bank draft payable to the City of Lovington or a Bid bond (on the form attached) issued by a surety meeting the requirements of these Contract Documents.
 - ____ Item 3 Notarized Declaration Letter from Surety
 - ____ Item 4 Certificate of Insurance
 - ____ Item 5 Resident Contractor (or Veteran Resident Contractor) Preference Certificate
 - ____ Item 6 Contractor's State of NM W-9 Form
 - ____ Item 7 Offeror's Contractor's License(s)

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

This Bid submitted by:	
lf Bidder is: <u>An Individual</u>	
Name (typed or printed):	
By:(Individual's signature)	(SEAL)
Doing business as:	
<u>A Partnership</u> Partnership Name:	(SEAL)
By:	
Name (typed or printed):	
A Corporation Corporation Name:	(SEAL)
State of Incorporation: Type (General Business, Professional, Service, Limited Liability):	
By:	
Name (typed or printed):	
Title:(CORPORATE SEAL)	
Attest:	
Date of Qualification to do business in[State Where Project is Located	/] is\\
A Joint Venture Name of Joint Venturer:	
First Joint Venturer Name:	(SEAL)
By:	

(Signature of first joint venture partner – attach evidence of authority to sign)

(SEAL)
ttach evidence of authority to sign)
ning for each individual, partnership, and corporation that is ner indicated above.)
Facsimile:
_, 20
(If applicable) (If applicable)

Include necessary Certifications and determined preference percentage.

OPTIONS, EXCEPTIONS, OR VARIATIONS

LOVINGTON WATER WELL PROJECT PROPOSAL NO. 1349 SAP 16-A4045-STB AND SAP 16-4046-STB DUE DATE: **Monday, January 29, 2018 10:00 A.M.**

Please state each and every option, exception, or variation to the specifications (if any) for the products or services offered. **Please sign below and return with your offer.**

THERE **ARE** OPTIONS, EXCEPTIONS, OR VARIATIONS.

Signature

THERE <u>**ARE NO**</u> OPTIONS, ETC. LISTED. The products or services offered on this Invitation to Proposal meet or exceed all Specifications, Terms, and Conditions described in said Invitation to Proposal without exceptions. I understand products of services not meeting all Specifications, Terms, and Conditions will be rejected and all costs will be borne by the seller.

Signature

LIST OF SUBCONTRACTORS

- 1. To be fully executed and included with proposal as a condition of the proposal.
- 2. The listing threshold is \$5,000.00 or one half of one percent of the total project cost whichever is greatest.

Nature of work	Subcontractor Name	Location of Business

Note:

A contractor or subcontractor that submits a proposal valued at more than sixty thousand dollars (\$60,000) in order to respond to a request for proposals or to be considered for award of any portion of a public works project greater than sixty thousand dollars (\$60,000) for a public works project that is subject to the Public Works Minimum Wage Act [13-4-10 to 13-4-17 NMSA 1978], the contractor, serving as a prime contractor or not, shall be registered with the division at the time of bid opening. Bidding documents issued or released by a state agency or political subdivision of the state shall include a clear notification that each contractor, prime contractor or subcontractor is required to be registered pursuant to this subsection.

CAMPAIGN CONTRIBUTION DISCLOSURE FORM

Pursuant to NMSA 1978, § 13-1-191.1 (2006), any person seeking to enter into a contract with any state agency or local public body **for professional services**, a design and build project delivery system, or **the design and installation of measures the primary purpose of which is to conserve natural resources** must file this form with that state agency or local public body. This form must be filed even if the contract qualifies as a small purchase or a sole source contract. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

Furthermore, the state agency or local public body shall void an executed contract or cancel a solicitation or proposed award for a proposed contract if: 1) a prospective contractor, a family member of the prospective contractor, or a representative of the prospective contractor gives a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process or 2) a prospective contractor fails to submit a fully completed disclosure statement pursuant to the law.

THIS FORM MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

"**Applicable public official**" means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

"Campaign Contribution" means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official's behalf for the purpose of electing the official to either statewide or local office. "Campaign Contribution" includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

"Family member" means spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law.

"**Pendency of the procurement process**" means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

"**Person**" means any corporation, partnership, individual, joint venture, association or any other private legal entity.

"**Prospective contractor**" means a person who is subject to the competitive sealed proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person qualifies for a sole source or a small purchase contract.

"**Representative of a prospective contractor**" means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

DISCLOSURE OF CONTRIBUTIONS:	
Contribution Made By:	
Relation to Prospective Contractor:	
Name of Applicable Public Official:	
Date Contribution(s) Made:	
Amount(s) of Contribution(s):	
Nature of Contribution(s):	
Purpose of Contribution(s):	
(Attach extra pages if necessary)	
Signature	Date
Title (position)	
OR	
NO CONTRIBUTIONS IN THE ACCRECATE	

NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE to an applicable public official by me, a family member or representative.

Signature

Date

Title (position)

Veterans Preference Certification

_____ (Name of Business) hereby certifies the following in regard to application of the resident veteran preference to this formal request for proposals process:

Please check one box only:

I declare under penalty of perjury that my business prior year revenue starting January 1 ending December 31 is less than \$3M allowing me the 10% preference discount on this bid or proposal. I understand that knowingly giving false or misleading information about this fact constitutes a crime.

"I agree to submit a report, or reports, to the State Purchasing Division of the General Services Department declaring under penalty of perjury that during the last calendar year starting January 1 ending December 31, the following to be true and accurate:

"In conjunction with this procurement and the requirements of this business' application for a Resident Veteran Business Preference/Resident Veteran Contractor Preference under Sections 13-1-21 or 13-1-22 NMSA 1978, when awarded a contract which was on the basis of having such veterans preference, I agree to report to the State Purchasing Division of the General Services Department the awarded amount involved. I will indicate in the report the award amount as a purchase from a public body or as a public works contract from a public body as the case may be."

"I declare under penalty of perjury that this statement is true to the best of my knowledge. I understand that giving false or misleading statements about material fact regarding this matter constitutes a crime."

(signature of Business Representative)*

(Date)

*Must be an authorized signatory for the Business.

The representation made in checking the boxes constitutes a material representation by the business that is subject to protest and may result in denial of an award or unaward of the procurement involved if the statements are proven incorrect.

AFFIDAVIT OF NON-COLLUSION

I state that I am ______(title) of ______ (name of firm) and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this Offer.

I state that;

- 1) The price(s) and amount of this Offer have been arrived at independently and without consultation communication or agreement with any other Proposer or potential Proposer.
- 2) That neither the price(s) nor the amount of this Offer, and neither the approximate price(s) nor approximate amount of this Offer, have been disclosed to any other firm or person who is a Proposer or potential Proposer, and they will not be disclosed before Solicitation opening.
- 3) No attempt has been made or will be made to induce any firm or person to refrain from proposing on this contract, or to submit an Offer higher than this Offer, or to submit any intentionally high or noncompetitive Offer or other form of complementary Offer.
- 4) The Offer of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Offer.
- 5) ______(name of firm), its affiliates, subsidiaries, officers. directors and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted of or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to proposing on any public contract, except as described herein.
- 6) I state that ______ (name of firm) understands and acknowledges that the above representations are material and important, and will be relied on by the City of Lovington in awarding the contract(s) for which this Offer is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the City of Lovington of the true facts relating to the submission of Offers for this contract.

(Authorized Signature)

(Name of Company/Position)

Sworn to and subscribed before me this _____ day of _____, 20____.

Notary Public for New Mexico

My Commission Expires: _____

Price Proposal Form-20

COMPLIANCE WITH REGULATORY AGENCIES

Please fill out this form to document and submit your response to the evaluation criteria listed in the Instruction to Proposers.

Has your firm during the past five (5) years been free of any determination by a court or administrative agency of laws and/or regulations pertaining to the payment of prevailing wages or employment of apprentices on public works projects? _____Yes _____No

If "no" please explain:

Has your firm during the past five (5) years been free of any determinations by a court or administrative agency of violations or notice of violation pertaining to the Occupational Safety and Health Administration (OSHA), Department of Transportation (DOT), or Environmental Protection Agency (EPA) requirement on a job site? _____ Yes _____ No

If "no" please explain:_____

Has your firm during the past five (5) years been free of any determinations by a court or administrative agency of violations pertaining to Construction Industry Division requirements pertaining to projects? _____Yes _____No

If "no" please explain:______

Is your firm free of any Subcontractor Fair Practices Act violations for the past five (5) years?

If "no" please explain:

Has your firm been free of violation of any Federal, State or Local Agency requirement on a jobsite that has resulted in a fine because violations? _____Yes _____No

If "no" please explain:______

The undersigned hereby state under penalty of perjury that the above statements are true and accurate.

Name

Title

Signature

Date

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency.

Have not within a three year period preceding this proposal been convicted of all has a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal of State Antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,

Are not presently indicted for otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses in enumerated in paragraph (2) of this certification and

Have not within a three year period preceding this proposal had one or more public transaction (Federal, State, or local) terminated for cause or default.

I understand that a false statement of this certification may be ground for rejection of this proposal or termination of the award. Under 18USC Sec. 101, a false statement may result in a fine up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name and Title of Authorized Representative

Signature of Authorized Representative

Date

PROPOSAL SECURITY BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, ______, as surety are held and firmly bound unto City of Lovington, a New Mexico municipal corporation, City of Lovington, New Mexico, hereinafter called the OWNER, in the penal sum of ______ Dollars (\$_____) Lawful money of the United States, for the payment of which sum will and truly be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that Whereas the Principal has submitted the Accompanying Proposal, dated ______, 20__, to City of Lovington, New Mexico, for:

LOVINGTON WELLS 28, 29, 30

NOW, THEREFORE, if the Principal shall not withdraw said Proposal within the period therein after the opening of the same or, if no period be specified, within thirty (30) days after the said opening, and shall within the period specified therefore, or if no period be specified within fifteen (15) days after the prescribed forms are presented to him for signature, enter into a Written Contract with the Owner in accordance with the Proposal as accepted, and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract; or in the event of the withdrawal of said Proposal within the period specified, if the Principal shall pay the Owner the difference between the amount specified in said Proposal and the amount for which the Owner may procure the required work or supplies or both, if the latter be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals this ______ day of ______, 20___, the name and corporate seal of each corporate party being hereto affixed and these presents signed by its undersigned representative pursuant to authority of its governing body.

In presence of:

(Individual Principal)	(SEAL)	(Business Address)
(Partnership)	(SEAL)	(Business Address)
ATTEST: Affix Corporate		By: (Corporate Principal)
Seal		(Business Address) By:
ATTEST:		
Affix Corporate Seal		(Corporate Surety) Bv:
COUNTERSIGNED:		,
Ву:		
Attorney-in-Fact, State of		
	<u> </u>	

Power-of-Attorney for person signing for Surety Company must be attached to bond.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we (1) ______ a (2) ______ hereinafter called "PRINCIPAL" and (3) _______ of ______ State of ______, hereinafter called the "SURETY", are held and firmly bound unto (4) City of Lovington, New Mexico, a New Mexico municipal corporation, City of Lovington, New Mexico, hereinafter called "OWNER", in the penal sum of ______ Dollars (\$______) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, personal representatives, and successors and assigns, jointly and severally, firmly by these presents.

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

LOVINGTON WATER WELL PROJECT

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

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations, or addition to these terms of the contract or to the work or to the specifications.

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

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed as an original, this the_____ day of_____, 20____.

ATTEST:

	Principal	
Principal-Secretary		
(SEAL)	Ву:	
Witness as to Principal	Address	
Address	Surety	
ATTEST:	By: Attorney-in-Fact	
(Surety) Secretary	Address	
(SEAL)		
Witness as to Surety	Address	
Note: Date of Bond must not be prior to	date of contract.	

- (1) Correct name of Contractor.
- (2) A corporation, a partnership, or an individual as case may be.
- (3) Correct name of Surety.
- (4) Correct name of Owner.
- (5) If Contractor is partnership, all partners should execute Bond.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we (1)______, a (2) ______, hereinafter called "Principal", and (3) _______of _____, State of _____, hereinafter called the "Surety", are held and firmly bound unto (4) City of Lovington, a New Mexico municipal corporation, City of Lovington, New Mexico, hereinafter called "Owner", in the penal sum of ______Dollars (\$______) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, personal representatives, and successors and assigns, jointly and severally, firmly by these presents.

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

LOVINGTON WATER WELL PROJECT

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including, but not limited to, all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment, and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

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

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

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this the ______ day of _____, 20____.

ATTEST:

	Principal
Principal-Secretary	
(SEAL)	Ву:
Witness as to Principal	Address
Address	Surety
ATTEST:	Attorney-in-Fact
(Surety) Secretary	Address
(SEAL)	
Witness as to Surety	Address
Note: Date of Bond must not be prior	to date of contract.

- (1) Correct name of Contractor.
- (2) A corporation, partnership, or individual, as case may be.
- (3) Correct name of Surety.
- (4) Correct name of Owner.
- (5) If Contractor is partnership, all partners should execute Bond.

This bond is issued simultaneously with Performance Bond in favor of contracting agency for the faithful performance of the contract.

		Contra	actor's Ap	plication for	Payment No.				
		Application Peric	od:			Application Date:			
To (Owner):		From (Contracto	r):			Via (Engineer):			
Project:		Contract:							
Owner's		Contractor's Proj	ect No.			Engineer's Project No.			
Contract No.						. .			
Application fo	or Payment Cha	nge Order Summary							
Approved Change	e Orders		1. C	RIGINAL CONT	RACT PRICE	\$			
Number	Additions	Deductions	2. N	et change by C	hange Orders	\$			
			3. C	urrent Contrac	t Price (Line 1 ± 2) \$			
			4. T	OTAL COMPLE	TED AND STORED	TO DATE			
			((Column F on Pr	ogress Estimate)	\$			
			5. R	ETAINAGE:	-	\$			
			a	. X	Work	Completed \$			
			b	. x —	Store	d Material \$			
			C.	Total Retain	age (Line 5a + Lir	ne 5b) \$			
			6. A	MOUNT ELIGIB	LE TO DATE (Line	4 - Line 5c) \$			
TOTALS			7. L	ESS PREVIOUS I	PAYMENTS (Line	6 from prior \$			
			A	pplication)					
NET CHANGE BY				8. AMOUNT DUE THIS APPLICATION \$					
CHANGE ORDERS			9. BALANCE TO FINISH, PLUS RETAINAGE \$						
			. ((Column G on Pr	rogress Estimate -	+ Line 5 above)			
Contractor's Cert	tification		Paym	ent of:	\$				
The undersigned Cor	ntractor certifies th	at to the best of its			(Line	e 8 or other – attach expla	anation of the other amount)		
knowledge: (1) all pre	evious progress pa	yments received from	ls rec	ommended					
Owner on account of	f Work done under	the Contract have been	by:						
applied on account to	o discharge Contra	Work covered by prior			(Engineer)		(Date)		
Applications for Pavn	ment: (2) title of all	Work, materials and			5				
equipment incorpora	ated in said Work o	r otherwise listed in or	Paym	ient of:	\$				
covered by this Appli	ication for Paymen	t will pass to Owner at time	,		·				
of payment free and clear of all Liens, security interests and			ls app	proved by:					
encumbrances (except such as are covered by a Bond acceptable				,		(Owner)	(Date)		
interest or	ng Owner against a	any such liens, security				. ,	· · ·		
encumbrances); and (3) all Work covered by this Application for			Annr	oved by:					
Payment is in accordance with the Contract Documents and is not			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	cica by.	Eurodina A	gency (if applicable)	(Data)		
defective.					r unung Ag	gency (II applicable)	(Date)		
		Data	-						
ву:		Date:	J						

Progress Estimate													Co	ontractor's	App	lication		
For (contract):			Application Number:															
Application Period:				Date:	on			-					·					
	А			В	в с		D		D E							F		
	ltem	Bid	Unit	Bid Value	Estim	ated	Value	Materia	als		Ŵ	/ork Con	npleted	ł	Total	%	Balance	
Bid Item No.	Description	Quantity	Price		Quar Insta	ntity lled		Presen Store (not in	tly d C)	Qty	Pr	revious	Qty	This Period	Completed and Stored to Date (D+ E)	(<u>F</u>) B	to Finish (B – F)	
	TOTALS																	

CONSTRUCTION CONTRACT

This is an agreement made by and between City of Lovington, a New Mexico corporation, City of Lovington, New Mexico, hereinafter called "Owner" and ______ of , hereinafter referred to as Contractor.

The parties to this agreement, in consideration of their mutual promises agree as follows:

<u>Description</u>. Contractor hereby agrees with Owner to commence and complete the construction to be known as:

LOVINGTON WATER WELL PROJECT

and more fully described as follows, to-wit:

Furnishing all materials, labor, machinery, equipment, tools, etc., necessary to furnish and install full depth improvements for each individual well (total of three) including the well drilling and completion, pump development and testing to determine well characteristics; furnishing, installing and testing the new well pump with all appurtenances. Appurtenances shall include, but not be limited to the riser discharge pipe, check valves, pitless adaptor, meter, pump main line isolation valve, side waste line and valve, electrical disconnect & piping, all for the construction of a new water well. Temporary and above-ground piping & assembly shall be utilized, both for specified well capacity testing, and for final pump testing after installation of the selected well pumping unit. Electric and control elements also include a new motor starter, pump control panel, the installation of electrical disconnect and local conduit and checkout of the well water level airline. Each completed well and well discharge piping shall be housed within a Pump House building of 15 feet-3 inches by 10 feet-3 inches, or approximately 163 square feet; and which consists of a pre-engineered metal building with reinforced concrete floor.

All construction shall be in accordance with, and this Contract shall include and the parties hereto shall be bound by all provisions of the following, which are each incorporated by reference as if set forth in full herein: <u>New Mexico Standard Specifications for Public Works Construction, 2006 Edition</u> as amended with updates. Contractor hereby covenants, warrants, and acknowledges that Contractor possesses <u>New Mexico Standard Specifications for Public Works Construction 2006 Edition</u> and knowledge of its contents.

All construction shall further be in accordance with, and this Contract shall include and the parties hereto shall be bound by, all provisions of the following, which are each attached hereto and incorporated by reference as if set forth in full herein:

A. <u>RFP</u>

- B. <u>Technical Proposal</u>
- C. <u>Price Proposal</u>
- D. <u>Proposal Bond</u>
- E. <u>Performance Bond</u>
- F. <u>Payment Bond</u>
- G. <u>Construction Contract</u>
- H. <u>Certificate of Insurance</u>
- I. <u>Minimum Wages & Certified Payroll</u>
- J. <u>Special Conditions</u>
- K. <u>General Conditions</u>
- L. <u>Supplemental Technical Specifications</u>
- M. <u>Construction Drawings</u>
- N. <u>Addenda</u>

<u>Price</u>: Contractor shall perform the construction of the said Project on a per unit basis in accordance with the Proposal quantities. The parties understand and agree that the total price of this contract is based on certain prices quoted for certain unit items of goods multiplied by an estimated number of units which will be required for the job, combined with a figure which represents the price to be paid for the necessary services which will be required to complete this performance under this contract. The parties understand and agree that all parties involved have made a serious good faith effort to arrive at the closest and most accurate estimates possible and that certain adjustments in quantity may have to be made as the performance under this contract proceeds. However, the parties agree that the unit prices upon which the total contract is based will remain the same, as will the figure quoted for services, unless otherwise provided herein. The Proposal sets forth the breakdown of the unit prices, estimated number of units, and the figure for services, which figures have been used to arrive at the Proposal Item prices shown on the Proposal. The Proposal sets forth the

TOTAL BID LOT 1 WELL CONSTRUCTION: TOTAL BID LOT 2 PUMP HOUSE: TOTAL BID LOT 3 ELECTRICAL: \$ _____ \$ _____

	TOTAL BID PRICE	\$
New Mexico Gross Receipts Tax will be add	ed to this amount at time of bi	lling.

<u>State Wage Rates</u>: State wage rates are included in these documents and shall be followed during the entire term of this contract plus extensions. These shall be provided to the Contractor and the Contractor shall submit the proper report to the State verifying conformance following performance of any work.

<u>Termination of Contract</u>: Either party may terminate this or any extensions of the contract upon receipt of written notice by other party 0 days in advance of termination. All funds due the Contractor for work performed up to the date of termination shall be paid in full.

Termination of Contract Clause: The terms of this Agreement are contingent upon sufficient appropriations and authorization by the Legislature of New Mexico for the performance of this Agreement. If sufficient appropriations and authorization are not made by the Legislature, OWNER may immediately terminate this Agreement by giving CONTRACTOR written notice of such termination. The OWNER's decision as to whether sufficient appropriations are available shall be accepted by CONTRACTOR and shall be final. CONTRACTOR hereby waives any rights to assert an impairment of contract claim against the OWNER or the New Mexico Environment Department (NMED), or the State of New Mexico in the event of immediate or early termination of this Agreement by the OWNER or NMED.

This contract is funded in whole or in part by funds made available under a NMED Grant Agreement. Should the NMED early terminate the grant agreement, OWNER may early terminate this contract by providing CONTRACTOR written notice of such termination. In the event of termination pursuant to this paragraph, OWNER's only liability shall be to pay CONTRACTOR or vendor for acceptable goods delivered and services rendered before the termination date.

<u>Time for Completion, Liquidated Damages</u>: Contractor hereby agrees to commence work under this contract **as stated in Article 6 Time of Completion of the Price Proposal Form**. Time is an essential element of the Contract, and it is important that the Contractor pursue timely completion of the Work. Contract administration costs, including engineering, inspection, and supervision, will be increased as the time to complete the Work increases. The public is impacted and inconvenienced when a Project is incomplete and not available for us. If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the City of Lovington in the amount of \$1500 for each calendar day of delay until the work is completed or accepted.

<u>Payment</u>: Owner agrees to pay Contractor for the performance of this Agreement and to make payments on account thereof as provided in "Payment to Contractor" of the Special Conditions.

The construction contract specifically provides in a clear and conspicuous manner for a payment later than twenty-one days after submission of an undisputed request for payment

This contract contains the entire agreement between the parties and no statement, promises, or inducements made by either party or agent of either party that is not contained in this written agreement shall be valid or binding; and this agreement may not be enlarged, modified, or altered except in writing signed by the parties. The Contractor's Proposal is attached hereto and is referred to herein and contains the description of the Contractor's proposal on the price of the Project; however, this Contract supersedes the Proposal and the terms hereof are controlling on any and all terms other than the job description and price and on any and all terms where the documents conflict.

Indemnity by Contractor: To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless; the City, its officials, employees, agents, successors, and assigns from and against any and all liabilities, penalties, fines forfeitures, demands, claims, causes of action, suits, and costs and expenses incidental thereto, including cost of defense, settlement, and reasonable attorney fees, which any or all of them may hereinafter suffer, incur, be responsible for or pay our as a result of bodily injuries, including death, to any person, damage, including loss of use, to any property, public or private, contamination of or adverse effects on the environment, or any violation or alleged violation of statutes, ordinances, orders, rules or regulation of any governmental entity or agency, directly or indirectly, or arising out of or resulting from the acts, or failure to act, of the Contractor, is employees, agents, subcontractors, or other persons engaged by or under the control, supervision or direction of the Contractor, or its subcontractors, in the performance of this agreement. To the extent, if at all, Section 56-7-1 1 NMSA 1978 is applicable, the duty of the Contractor to indemnify the City shall not extend to liability, claims, damages, losses or expenses, including fees of lawyers and costs, arising out of (i) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by City, or by its agents or employees; or (ii) the giving or the failure to give directions or instructions by the City or by its agent or employees, where the giving or failure to give directions or instruction is the primary cause of bodily injury, wrongful death or damage to property. This paragraph shall survive after the completion or the termination of the contract.

<u>Miscellaneous</u>: This agreement shall inure to the benefit of and be binding upon the successors in interest and assigns of the respective parties.

It is hereby agreed by the parties that there will be no assignment or transfer of this agreement, nor of any interest in this agreement, without prior written agreement of the parties to this agreement.

It is mutually understood and agreed that this agreement shall be governed by the laws of the State of New Mexico, both as to interpretation and performance.

IN WITNESS WHEREOF, the parties hereto have executed six (6) copies of this document, each of which shall be deemed an original on the ______ day of ______, 20____.

City of Lovington Board of City Commissioners

By:		Date:
•	Board Chairman	
Atte	ested	
By:_		Date:
Con	tractor	
By:		Date:
,	Authorized Official	
-	Title of Authorized Official	_

STATE OF NEW MEXICO) COUNTY OF			(SEAL)	
			(Contractor) this day of	
Му Со	mmission Expires:		Notary Public	
1. 2.	Sole Proprietorship: General Partnership:	Signature of both Signature of all ge	husband and wife. eneral partners, if possible, and a fully executed copy	
3.	Corporation:	Signature of presi obtain a certificate prior to execution Mexico State Corp "good standing" directors. If corpo secretary is claime clear up problem	dent, attested by secretary; with corporate seal. Also, e of good standing issued by S.C.C. within 60 days and n of any document, place a telephone call to the New poration Commission at 827-4510 to confirm current of corporation and correct listing of officers and pration is not in "good standing" and/or president and ed to be different that listing at S.C.C., Contractor <u>must</u> with S.C.C. before contract is executed.	

REPLACE WITH AWARDED CONTRACTORS PROOF OF INSURANCE

Insurance Coverage:

The Contractor shall obtain, and provide proof thereof, to the Owner the following insurance coverage:

- 1) General liability insurance in the amount of \$1,000,000.00 per occurrence and \$2,000,000.00 aggregate.
- 2) Auto liability insurance in the amount of \$1,000,000.00.
- 3) Workers Compensation insurance as required by New Mexico State Statute.

City of Lovington will be listed as an additional insured on all policies, and proof of coverage must be provided before work begins. Award will be contingent upon receipt of proof of insurance.

Contractor shall further obtain and provide proof to the Owner of any other insurance coverage required by the statues of the State of New Mexico or regulations of any agency of the State of New Mexico governing this type of Project.

Workers Compensation is required along with State statutory employer's liability limits regardless of the number of employees.

REPLACE WITH CONTRACTORS NM W-9 FORM

Each Offeror shall complete and provide a State of New Mexico W-9 Form.

Contactors W-9 Form-1

REPLACE WITH OFFEROR'S CONTRACTOR'S LICENSES

Each Offeror shall provide a photocopy of their Contractor's License or Licenses.

The awarded Contractor will be responsible sending *Notification of Award (NOA)* and the Statement of Intent to the New Mexico Labor Department of Labor before work starts. After a contractor/ subcontractor has finished work on the project, but before the final payment is made, an Affidavit of Wage Paid must be returned to the DOL office.

Certified payrolls for the awarded Prime Contractor and any subcontractor shall be sent to the following:

City of Lovington 214 South Love Street Lovington, New Mexico 88260 (575) 396-2884

The outside of the envelope shall be marked with the following:

Certified Payroll LOVINGTON WATER WELL PROJECT PROPOSAL NO. 1349 SAP 12-1349-STB

The first weeks certified payroll shall have First on the front page and numbered consecutively thereafter. The last weeks certified payroll shall have Final on the front page.

State wage rates shall be followed during the entire term of this contract plus extensions. Prior to renewing this contract, the Owner will obtain a copy of the updated wage rates from the State. The updated wage rates will be provided to the Contractor and incorporated into this agreement upon renewal of the contract. The Contractor shall submit the proper report to the Sate verifying conformance following performance of any work.

The Wage Rate Decision No. is part of the executed contract and will be added prior to signing and execution of the contract.

Wage Rate Decision No. LE-17-1920-H



STATE OF NEW MEXICO NEW MEXICO DEPARTMENT OF WORKFORCE SOLUTIONS Labor Relations Division, 121 Tijeras Ave NE, Suite 3000 Albuquerque, NM 87102 www.dws.state.nm.us

Wage Decision Approval Summary

1) Project Title: Water Well Drilling and Construction Requested Date: 12/21/2017 Approved Date: 12/21/2017 Approved Wage Decision Number: LE-17-1920-H

Wage Decision Expiration Date for Bids: 04/20/2018

2) Physical Location of Jobsite for Project: Job Site Address: 214 S. Love Street Job Site City: Lovington Job Site County: Lea

3) Contracting Agency Name (Department or Bureau): City of Lovington Contracting Agency Contact's Name: James Williams Contracting Agency Contact's Phone: (575) 396-2884 Ext. 303

4) Estimated Contract Award Date: 01/30/2018

5) Estimated total project cost: \$506,000.00

a. Are any federal funds involved?: No

b. Does this project involve a building?: Yes - Well house buildings will need to be constructed.

c. Is this part of a larger plan for construction on or appurtenant to the property that is subject to this project?: No

d. Are there any other Public Works Wage Decisions related to this project?: No

e. What is the ultimate purpose or functional use of the construction once it is completed?: To drill.

complete, house, and tie into the existing municipal water distribution system three municipal water wells.

6) Classifications of Construction:

Classification Type and Cost Total	Description	
Heavy Engineering (H)	To drill, complete, house, and tie into the existing municipal water	
Cost: \$506,000.00	distribution system three municipal water wells.	

An Equal Opportunity Employer

Page 1 of 1


STATE OF NEW MEXICO NEW MEXICO DEPARTMENT OF WORKFORCE SOLUTIONS Labor Relations Division 121 Tijeras Ave NE, Suite 3000 Albuquerque, NM 87102 www.dws.state.nm.us

PUBLIC WORKS PROJECT REQUIREMENTS

As a participant in a Public Works project valued at more than \$60,000 in the State of New Mexico, the following list addresses many of the responsibilities that are defined by statute or regulation to each project stakeholder.

Contracting Agency

- Ensure that all Contractors wishing to bid on a Public Works project when the project is \$60,000 or more are actively registered with the Public Works and Apprenticeship Application (PWAA) website: <u>http://www.dws.state.nm.us/pwaa</u> (Contractor Registration) prior to bidding.
- Please submit Notice of Award (NOA) and Subcontractor List(s) to the PWAA website
 promptly after the project is awarded.
- Please update the Subcontractor List(s) on the PWAA website whenever changes occur.

General Contractor

- Provide a complete Subcontractor List and Statements of Intent (SOI) to Pay Prevailing Wages for each Contractor to the Contracting Agency within 3 (three) days of award.
- Ensure that all Subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <u>http://www.dws.state.nm.us/pwaa</u> prior to bidding when their bid will exceed \$60,000.
- Submit bi-weekly certified payrolls to the Contracting Agency.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- Confirm the Wage Rate poster, provided in PWAA, is displayed at the job site in an easily
 accessible place.
- Make sure, when a project has been completed, the Affidavits of Wages Paid (AWP) are sent to the Contracting Agency.

Subcontractor

- Ensure that all Subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <u>http://www.dws.state.nm.us/pwaa</u> prior to bidding when their bid will exceed \$60,000.
- Submit bi-weekly certified payrolls to the General Contractor(s).

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Page 1 of 2



STATE OF NEW MEXICO NEW MEXICO DEPARTMENT OF WORKFORCE SOLUTIONS Labor Relations Division 121 Tijeras Ave NE, Suite 3000 Albuquerque, NM 87102 www.dws.state.nm.us

 Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.

Additional Information

Reference material and forms may be found at New Mexico Department of Workforce Solutions Public Works web pages at: <u>http://www.dws.state.nm.us/new/Labor_Relations/publicworks.html</u>.

CONTACT INFORMATION

Contact the Labor Relations Division for any questions relating to Public Works projects by email at public.works@state.nm.us or call (505) 841-4400.

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Page 2 of 2

Trade Classification	Base Rate	Fringe Rate	Fringe Rate
Asbestos Worker - Heat &			
Frost Insulator	31.26	11.11	0.50
Boilermaker	18.50	3.31	0.50
Bricklayer/Blocklayer/Stone			
Mason	23.46	7.66	0.50
Carpenter/Lather	23.75	8.77	0.50
Millwright/Piledriver	31.00	19.37	0.50
Cement Mason	21.00	9.38	0.50
Electricians			
Outside Classifications			
Groundman	21.81	10.70	0.50
Equipment Operator	31.31	13.08	0.50
Lineman/Tech	36.83	14.45	0.50
Cable Splicer	40.51	15.38	0.50
Inside Classifications			
Wireman/Tech	30.00	10.15	0.50
Cable Splicer	33.00	10.24	0.50
Glazier	20.15	4.35	0.50
Ironworker	26.50	13.68	0.50
Painter (Brush/Roller/Spray)	21.25	6.73	0.50
Plumber/Pipefitter	31.76	11.55	0.50
Roofer	19.56	11.34	0.50
SheetmetalWorker	28.28	15.91	0.50
Operators			
Group I	17.67	6.03	0.50
Group II	18.76	6.03	0.50
Group III	40.44	6.03	0.50
Group IV	19.62	6.03	0.50
Group V	19.68	6.03	0.50
Group VI	19.82	6.03	0.50
Group VII	19.94	6.03	0.50
Group VIII	21.38	6.03	0.50
Group IX	26.45	6.03	0.50
Group X	29.35	6.03	0.50
Laborers			
Group I	18.00	5.05	0.50
Group II	19.18	5.05	0.50
Group III	19.53	5.05	0.50
Group IV	19.94	5.05	0.50
Group V	20.30	5.05	0.50
Group VI	19.03	5.05	0.50
Group VII	19.18	5.05	0.50
Group VIII	19.43	5.05	0.50
Group IX	19.63	5.05	0.50
Group X	20.30	5.05	0.50
Truck Drivers			
Group I	16.00	7.06	0.50
Group II	16.00	7.06	0.50
Group III	16.00	7.06	0.50
Group IV	16.00	7.06	0.50
Group V	16.00	7.06	0.50
Group VI	16.00	7.06	0.50
Group VII	16.00	7.06	0.50
Group VIII	16.06	7.06	0.50
Group IX	16.41	7.06	0.50
NOTE: SUBSISTENCE, ZONE	AND INCENTIVE PAY	Y APPLY ACCORDING TO	THE PARTICULAR
TRADES COLLECTIVE BAR	GAINING AGREEMENT	. DETAILS ARE LOCATED	TAC
WWW.DWS.STATE.NM.US.			

VI. SPECIAL CONDITIONS

- 1. SPECIAL CONDITIONS: These special conditions take precedence over specifications and the GENERAL CONDITIONS.
- 2. ACCEPTANCE OF THE PROJECT: The Owner may accept the project even though the corrections on the final inspection have not been made by the Contractor. In such a case, there will be deductions for the uncompleted or corrected work based on previous provisions of these specifications. Such deductions shall be made from the final payment.
- 3. AS-BUILT PLAN ACCEPTANCE: It will be the responsibility of the Owner to complete an as-built plan for this project. Contractor shall supply to the Owner any additional information needed to complete the plans for As-Built Condition.
- 4. CERTIFIED SCALES: Certified scales are required with a weigh ticket on every load.
- 5. CONTRACT TIME AND PROJECT COMPLETION: See Contract Agreement and Unit Price Proposal for Contracts.
- 6. DISPOSAL OF EXCESS MATERIAL: Excess material taken from the project site shall be disposed of by the Contractor according to his preference, subject to the approval of the Owner.
- 7. DRAWINGS: The data given herein and on the drawings is as exact as could be secured, but extreme accuracy is not guaranteed. Discrepancies occurring between the work covered by this section shall be immediately reported to the Owner, and he will issue written instructions for any changes or any clarifications.
- 8. EXAMINATION OF PLANS, SPECIFICATIONS AND SITE: The offering of a proposal shall serve as prima facie evidence that the proposer has visited the site of the proposed project, and has satisfied himself that the character, quality and quantities of work to be performed, materials to be furnished, and requirements of the proposed contract are reasonably accounted for in his proposal.
- 9. FEES AND CODES: The Contractor shall pay all costs for any and all fees and/or work permits required in connection with the work. All materials supplied and work performed by the Contractor shall be in accordance with all State and local codes and/or ordinances governing such material and work.
- 10. FENCES, BUILDINGS: Where it becomes necessary to work in easements that have been improved with fences, buildings, walks or drives, or where construction, although on public right-of-way, is close enough to cause damage to such structures, on completion of the construction, the Contractor shall replace the fence, buildings, walks, curb and drives at no additional cost to the City, leaving all in the original condition as found.
- 11. FINAL INSPECTION WITH OWNER'S REPRESENTATIVE: The Owner's representative will respond to the notice of completion by the Contractor and shall appear at the given time for a tour of the project with the purpose of making it the final inspection. Any inconsistencies to the

specifications shall be noted by the Owner's representative, and a written copy of corrections shall be given to the Contractor.

- 12. GUARANTEE: Units shall be guaranteed for a period of one year from date of final acceptance against defective workmanship. Upon receipt of notice from the Owner of failure of any part of the guaranteed workmanship, the Contractor shall promptly replace the defective parts at his own expense.
- 13. HAUL: No separate payment or measurement will be made for haul. This shall be incidental to other construction items.
- 14. INSPECTION OF WORK IN PROGRESS: The Owner shall be responsible for inspection of the Contractor's work while such work is in progress. The Owner shall bring to the attention of the Contractor any work which does not meet the specifications of this contract, and the Contractor shall correct such work as brought to his attention.
- 15. INSTALLATION: Materials shall be handled in such a manner as to insure their delivery to the job in sound and original condition.
- 16. IRS MILEAGE RATE: Mileage will be reimbursed at the current federally approved IRS rate for contractors, sub-contractors, and others where mileage is claimed.
- 17. MAINTENANCE OF EXISTING ROADWAYS DURING CONSTRUCTION: The Contractor shall be responsible for maintaining the existing roadway and shoulders as necessary to maintain a satisfactory driving surface, so safe driving conditions are maintained and vehicle damage is avoided. This will consist of pothole patching and edge and shoulder grading during the construction contract time, as required. Cost for this maintenance shall not be paid for separately, but shall be considered incidental to the roadway construction.
- 18. NOTICE OF COMPLETION: When the Contractor is satisfied that work and cleanup is completed, he shall issue the notice of completion to the Owner's authorized representative. The notice of completion shall include the request for final inspection with date and time given.
- 19. ORDER OF WORK: The Contractor shall start the work at such points on the project as the Owner may direct and shall progress from point to point as directed by the Owner. Contractor shall make any reasonable effort required to coordinate his activities with other Contractor's and Owner's staff that may be working in this or adjacent areas.
- 20. OSHA COMPLIANCE: The Contractor will be required to comply with all applicable OSHA standards as part of this project. The Contractor shall assign a Competent Person to the project as defined in OSHA Standard 29 CFR 1926.32(f) and 29 CFR 1926.650(b) Subpart P. The competent person must have had specific training in and be knowledgeable about soil analysis, the use of protective systems, and the requirements of the standards. Documentation of Competent Person Training must be submitted to the Project Manager by the awarded Contractor at the Pre-Construction meeting. The general responsibility of the Competent Person is to ensure that <u>ALL</u> aspects of the excavation process are conducted in a manner consistent with the requirements of the OSHA excavation standard (Subpart P) as well as the

general duty clause of the OSHA Act (5A.1), which requires the employer to provide a safe, healthful workplace, free of known or recognizable hazards. The competent person shall perform daily inspections of the excavations, as described in full detail in 29 CFR 1926.651(k)(1), and 1926.21(b)(1). The City will require copies of the daily inspection logs for trenches that are equal to or greater than 5 feet in depth and shall be submitted to the Project Manager on a weekly basis. Each employee at the job site must also be instructed in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury per CFR 1926.21(b)(2) Subpart C. Documentation of the training of all employees present at the job site must be readily available upon request by the Project Manager.

21. OSHA ENFORCEMENT: City of Lovington will enforce OSHA regulations in the following manner:

1st Violation	_	Verbal Warning and Documentation by the City	
2nd Violation	_	Written Warning to be signed by Competent Person and Contractor	
3rd Violation	_	Written notice and contact OSHA	
4th Violation	-	Termination of Contract	

In assessing violations each applies to a non-complying aspect of the jobsite. In no case shall the workers be permitted to continue construction operations if unsafe conditions are determined by the Project Manager or Inspector as is relates to OSHA requirements.

- 22. PAYMENT TO CONTRACTOR: At a minimum of nineteen days prior to the first Tuesday of each month, the Contractor shall submit all requests for payment to the City of Lovington Road Superintendent for review and processing. Fourteen days prior to the first Tuesday of each month, the Road Superintendent will submit pay request to the Finance Department for payment. All requests for payment will be submitted to the City of Lovington Board of City Commissioners on the first commission meeting of the month for approval or denial. Failure of any part to submit pay request or correct discrepancies in a pay request by each appropriate deadline may result in delay of payment to Contractor.
- 23. PROJECT CLOSEOUT: The following close-out documents are required submittals to receive final payment: Certificate of Substantial Completion, Certification of Project Acceptance and Performance, Labor Standards Certification, Record Drawings and O&M Manual, Consent of Surety Company to Final Payment, Affidavit of Payment and Release of Liens, Letter from Owner Accepting Manuals and Record Drawings, Final Pay Request and Final Adjusting Change Order.
- 24. PUBLIC UTILITIES: The Contractor shall be responsible for the destruction of or damage to, all existing structures, pipelines, conduits and cables; and he shall use all reasonable measures and precautions to protect such properties and maintain or replace them in as good condition as they were prior to the construction operations.
- 25. RIGHT-OF-ENTRY-AND-INSPECTION-OF-WORK: All authorized personnel of City of Lovington and/or their representative shall have the right to visit the site and inspect the work and materials. The Contractor shall furnish reasonable facilities for obtaining such information as necessary to determine the progress and manner of the work and character of materials being used.

- 26. SAFETY: The Contractor shall at all times exercise reasonable precautions for the safety of employees on the work site, bystanders or observers of the project, engineering personnel and inspectors, and shall comply with all applicable provisions of the Occupational Safety & Health Administration (OSHA), State and Municipal Safety Laws, and Building Construction Codes. All machinery and equipment and other physical hazards shall be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America unless such instructions are incompatible with Federal, State or Municipal laws or regulations. The Contractor shall, at his own expense and without further other order provide, erect and maintain at all times during the progress or temporary suspension of work, suitable barricades, fences, signs or other adequate protection and shall provide, keep and maintain such flashing lights, danger signals and watchmen as may be necessary or as may be requested by the Engineer to insure the safety of the public as well as those engaged in connection with the work. All barricades and obstructions shall be kept burning from sunset to sunrise. Barricades shall be of substantial construction and be reflectively sheeted to increase their visibility at night per MUTCD standards.
- 27. SHOP DRAWINGS: Shop drawings and material certifications shall be submitted to the Engineer for review. All such information shall be submitted prior to use. Five copies are required, of which three will be returned and two held for Engineer's files.
- 28. STORAGE OF MATERIALS: The Contractor shall not be permitted to store materials used for construction in the right-of-way or on private property adjacent to the construction site without written approval from all parties involved.
- 29. STORM WATER POLLUTION PREVENTION PLAN (SWPPP): No separate payment will be made for SWPPP Compliance.
- 30. SURVEYING: The Owner will provide control stakes and temporary benchmarks. It is the Contractor's responsibility to protect the stakes and hubs once set. Any stakes or hubs knocked out will be set by the Owner at the Contractor's expense. Blue-tops, flow line pins, cut stakes and all other necessary construction staking will be the responsibility of the Contractor. No separate measurement or payment will be made for the Contractor to provide construction staking.
- 31. TERMINATION OF CONTRACT CLAUSE: The terms of this Agreement are contingent upon sufficient appropriations and authorization by the Legislature of New Mexico for the performance of this Agreement. If sufficient appropriations and authorization are not made by the Legislature, OWNER may immediately terminate this Agreement by giving CONTRACTOR written notice of such termination. The OWNER's decision as to whether sufficient appropriations are available shall be accepted by CONTRACTOR and shall be final. CONTRACTOR hereby waives any rights to assert an impairment of contract claim against the OWNER or the New Mexico Environment Department (NMED), or the State of New Mexico in the event of immediate or early termination of this Agreement by the OWNER or NMED.

This contract is funded in whole or in part by funds made available under a NMED Grant Agreement. Should the NMED early terminate the grant agreement, OWNER may early

terminate this contract by providing CONTRACTOR written notice of such termination. In the event of termination pursuant to this paragraph, OWNER's only liability shall be to pay CONTRACTOR or vendor for acceptable goods delivered and services rendered before the termination date.

- 32. TESTING: The Owner shall provide all compaction testing, asphalt testing, and quality assurance testing. The Owner shall pay for the first test on each material as required. Any retesting due to the initial test failing shall be paid for by the Contractor, whether the retest is passing or failing. The Contractor shall provide the Owner 24 hours' notice of any testing required. Any item installed without being tested or certified shall be removed and replaced at Contractor's expense. Contractor shall notify the Owner before any tests are made, and Owner shall contact the testing firm as necessary. The Contractor is responsible for all costs associated with quality control tests as required by the technical specifications for material furnished by the Contractor and incorporated into the work. The Owner is responsible for all costs associated with quality assurance testing of the material on-site.
- 33. TRAFFIC CONTROL: It is the Contractor's responsibility to provide and maintain all barrels, cones, flashers, barricades and flagmen, as required to conform with the M.U.T.C.D. All cones, barrels, flashers and barricades shall be kept clean and in working order at all times. Any of the above that are, in the opinion of the Engineer, damaged and/or non-functioning shall be removed and replaced. It is also the Contractor's responsibility to maintain at all times access to all sites fronting the work, unless otherwise directed by the Owner. It shall be up to the discretion of the Engineer as to whether or not adequate access has been provided. No separate measurement or payment will be made for traffic control. It will be the Contractors responsibility to develop a traffic control plan and submit it to the Project Manager for approval.
- 34. USE OF PRIVATE PROPERTY FOR STORAGE: Prior to using any private property, Contractor must obtain a written consent form from the property owner and deliver a copy to the City for record purposes.
- 35. UTILITIES: Prior to any work in a specific area, the Contractor shall conduct a utility investigation for the project area. The Contractor shall contact New Mexico One Call (811). Not all municipal utilities owners participate in the New Mexico One Call program. It will be the contractor's responsibility to contact municipal utilities owners.
- 36. WASTE CONTROL: The Contractor shall notify New Mexico Waste Control one week prior to beginning construction within the construction areas and maintain access for Waste Control during the scheduled days of trash pickup in these areas.

VII. GENERAL CONDITIONS

ALPHABETICAL INDEX TO GENERAL CONDITIONS

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SECTION 1--DEFINITIONS AND TERMS

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

1.1 Abbreviations--Wherever the following abbreviations or symbols are used, they are to be construed the same as the respective expressions represented:

AASHTO	American Association of State Highway and Transportation Officials
AB	Aggregate Base
AC	Asphalt Concrete
ACB	Asphalt Concrete Base
ACI	American Concrete Institute
ACNM	Associated Contractors of New Mexico
ACP	Asbestos Cement Pipe
АСРА	American Concrete Pipe Association
AD	Assessment City of Lovington
AGC	Associated General Contractors of America, Inc.
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
Asph	Asphalt
ASTM	American Society for Testing and Materials
AWG	American Wire Gage (Nonferrous Wire)
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BC	Beginning of Curve or Back of Curb
BCR	Beginning of Curb Return or Back of Curb Radius
BM	Bench Mark
BWG	Birmingham Wire Gage (Iron and Steel Wire)
СВ	Catch Basin
C.C. or C/C	Center to Center
Cem.	Cement
CF	Curb Face
CI	Cast Iron
CIP	Cast-iron Pipe
CIPP	Cast-in-Place Pipe
C.L. or CL	Center Line
СМР	Corrugated Metal Pipe
СМРА	Corrugated Metal Pipe Arch
СО	Clean Out

Col	Column
Conc	Concrete
Const	Construct
DF	Douglas Fir
DG	Decomposed Granite
DMH	Drop Manhole
D/W	Driveway
EC	End of Curve
El. or Elev.	Elevation
Ex. or Exist	Existina
F&C	Frame and Cover
FH	Fire Hydrant
FL	Flow Line
FI. EI.	Floor Elevation
FS	Federal Specifications of Finish Surface
FHWA	Federal Highway Administration. Department of Transportation
Galv	Galvanized
GI	Ground Line
Gr	Grade
ы. Н	Height or High
нс	House Connection Sewer
Hor	Horizontal
	Inside Diameter
lov	
ID	livert Iron Pino
	Institute of Traffic Engineers
LL	
Long.	Longitudinar
IVIAX.	Manhala
	Mannole
	inousand Inousand
m Min	meter or middle
Min.	Minutes or Minimum
Mon.	
MID	
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NGS	National Geodetic Survey
NMSA	New Mexico Statutes Annotated1953 Compilation as Amended
NMSHD	New Mexico State Highway Department
OC	On Center
OD	Outside Diameter
PC	Point of Curvature
PCC	Point of Compound Curve or Portland Cement Concrete
PI	Point of Intersection or PlastiCity Index

PL	Property Line or Plastic Limit
РР	Power Pole
ppm	Parts per Million
PRC	Point of Reverse Curve
Prop.	Proposed or Property
psf	Pounds per Square Foot
psi	Pounds per Square Inch
PT	Point of Tangency
Pvmt.	Pavement
PVCP	Polyvinylchloride Pipe
Q	Rate of Flow
R	Radius
RC	Reinforced Concrete
RCP	Reinforced Concrete Pipe
Rdwy.	Roadway
Ret. Wall	Retaining Wall
RGRCP	Rubber Gasket-Reinforced Concrete Pipe
R/W	Right-of-Way
S.	Slope
SAE	Society of Automotive Engineers
San.	Sanitary
SCCP	Steel Cylinder Concrete Pipe
SD	Storm Drain
Sdl.	Saddle
Sect.	Section
Spec.	Specifications
Sp. MH	Special Manhole
San. S	Sanitary Sewer
St.	Street
Sta.	Station
Std.	Standard
Т	Tangent Distance
TH	Test Hole
ТМН	Trap Manhole
UL	Underwriters' Laboratories, Inc.
USA	United States of America Standards Institute, Inc.
V	VeloCity
VC	Vertical Curve
VCP	Vitrified Clay Pipe
VCPI	Vertical Curve Point of Intersection
Vert.	Vertical
W.I.	Wrought Iron

All abbreviations and symbols used on plans for structural steel construction shall conform to those given in the Steel Construction Manual of the American Institute of Steel Construction.

1.2 Definitions/Terms

Agreement shall mean the Construction Services Agreement between the Parties hereto.

Application for Payment--The form furnished by ENGINEER which is to be used by CONTRACTOR in requesting progress payments and which is to include the schedule of values required by paragraph 14.1 and an affidavit of CONTRACTOR that progress payments theretofore received on account of the Work have been applied by CONTRACTOR to discharge in full all of CONTRACTOR'S obligations reflected in prior Applications for Payment.

Proposal--The offer of the Proposer submitted on the prescribed form setting forth the prices for the Work to be performed.

Proposer--Any person, firm, or corporation submitting a Proposal for the Work.

Board--The Governing Body of the OWNER or Contracting Agency.

Bonds--Proposal, performance, and payment bonds and other instruments of security, furnished by CONTRACTOR and his surety in accordance with the Contract Documents.

Change Order--A written order to CONTRACTOR signed by OWNER authorizing an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

Contract--The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Documents are attached to the Contract.

Contract Documents--The Agreement, Addenda (whether issued prior to the opening of Proposals of the execution of the Agreement), Instructions to Proposers, Proposal for Unit Price Contract, the Bonds, the Certificate of Insurance, the Notice of Award, Notice to Proceed, these General Conditions, the New Mexico Standards Specifications for Public Works Construction 1987 Edition, the Special Conditions, the Supplementary Specifications, Plans and Drawings, and all Modifications.

Contract Time--The number of days stated in the Agreement for the completion of the Work, computed as provided in paragraph 17.2. Contracting Agency--(See OWNER.)

Contractor--The person, firm, or corporation with whom OWNER has executed the Agreement. Day--A calendar day of twenty-four hours measured from midnight to the next midnight.

Drawings or Plans--The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents.

ENGINEER--The OWNER'S employee or agent responsible for the engineering design and construction inspection and supervision, acting directly or through duly authorized representatives.

Field Order--A written order issued by ENGINEER which clarifies or interprets the Contract Documents in accordance with paragraph 9.3 or orders minor changes in the Work in accordance with paragraph 10.2.

General Conditions--Conditions which apply to all projects and which can be modified by Special Conditions.

General Provisions--A term having the same meaning as the term General Conditions.

High Point – A specific point along a utility line installed by the CONTRACTOR through this agreement that exhibits a relative peak in elevation when compared to points immediately adjacent to such point.

Modification--(a) A written amendment to the Contract Documents signed by both parties, (b) a Change Order, (c) a written clarification or interpretation issued by ENGINEER in accordance with paragraph 9.3, or (d) a written order for a minor change or alteration in the Work issued by ENGINEER pursuant to paragraph 10.2. A Modification may only be issued after execution of the Agreement.

Notice of Award--The written notice by OWNER to the apparent successful Proposer stating that, upon compliance with the conditions precedent to be fulfilled by him within the time specified, OWNER will execute and deliver the Agreement to him.

Notice to Proceed--A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform his obligations under the Contract Documents.

Owner--A public body or authority or the Contracting Agency for whom the Work is to be performed.

Project--The entire construction to be performed as provided in the Contract Documents.

Reference Specifications, Test Methods, and Applicable Codes--All standard specifications and test methods of any society, association, or organization herein referred to are hereby made a part of these Contract Documents the same as if written in full. (Any reference to a paragraph or subparagraph within a section shall include all general provisions of the section to which reference is made.) Reference to such standards refer to the latest published issues as of the date of the Invitation to Proposal. Reference to local or state codes and laws shall mean the latest adopted and published codes as of the date of the Invitation to Proposal.

Resident Project Representative--The authorized representative of ENGINEER who is assigned to the Project site or any part thereof.

Service Connections--Service Connections shall be construed to mean all or any portion of the pipe, conduit, or duct which connects a utility main or distribution line to a building, home, residence, or property.

Shop Drawings--All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by CONTRACTOR, a Sub-Contractor, manufacturer, supplier, or distributor and which illustrate the equipment, material, or some portion of the Work.

Special Conditions--Conditions which are written for a specific project and which modify any section or paragraph of the General Conditions.

Standard Specifications, also Supplemental Specifications--Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to the Work.

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

Substantial Completion--The date as certified by ENGINEER when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it was intended; or if there be no such certification, the date when final payment is due in accordance with paragraph 14.13.

Supplementary Specifications--Specifications which are written to modify any section or paragraph of the New Mexico Standard Specifications for Public Works Construction, 2006 Edition.

Total Proposal Price-The total monies payable to CONTRACTOR under the Contract Documents less New Mexico Gross Receipts Tax.

Utility--Overhead or underground wires, pipe lines, conduits, ducts, or structures, operated and maintained in or across a public right-of-way or easement or private easement.

A. Public Utility--Owned and operated by a municipality or another political subdivision of the State.

B. Private Utility--Owned and operated by a private company or corporation.

Work--Any and all obligations, duties, and responsibilities necessary to the successful completion of the Project assigned to or undertaken by CONTRACTOR under the Contract Documents, including all labor, materials, equipment, and other incidentals, and the furnishing thereof.

SECTION 2.0--PRELIMINARY MATTERS

Execution of Agreement:

2.1 At least six counterparts of the Contract Documents shall be executed and delivered by CONTRACTOR to OWNER within fifteen days of the Notice of Award; and OWNER will execute and deliver one counterpart to CONTRACTOR within ten days of receipt of the executed Agreement from CONTRACTOR. ENGINEER will identify those portions of the Contract Documents not so signed and such identification will be binding on all parties. OWNER, CONTRACTOR, and ENGINEER shall receive an executed counterpart of the Contract Documents and additional conformed copies as required.

Delivery of Bonds:

2.2 When he delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds and proof of insurance as he may be required to furnish in accordance with Subsection 5.1, 5.1.1, 5.2, and 5.3.

Copies of Documents:

2.3 OWNER shall furnish to CONTRACTOR up to five copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

Contractor's Pre-Start Representations:

2.4 CONTRACTOR represents that he has familiarized himself with and assumes full responsibility for having familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal, state, and local laws, ordinances, rules and regulations that may in any manner affect performance of the Work and represents that he has correlated his study and observations with the requirements of the Contract Documents. CONTRACTOR also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Specifications and made such additional surveys and investigations as he deems necessary for the performance of the Work at the Contract Price in accordance with the requirements of the Contract Documents.

Commencement of Contract Time; Notice to Proceed:

2.5 The Contract Time will commence to run on the thirtieth day after the day on which the executed Agreement is delivered by OWNER to CONTRACTOR or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the ninetieth day after the day of Proposal opening or the thirtieth day after the day on which OWNER delivers the executed Agreement to CONTRACTOR. A Notice to Proceed may be given at any time within thirty days after the day on which OWNER delivers the executed Contract Documents to CONTRACTOR.

Starting the Project:

2.6 CONTRACTOR shall start to perform his obligations under the Contract Documents on the date when the Contract Time commences to run. No Work shall be done at the site prior to the date on which the Contract Time commences to run.

Before Starting Construction:

2.7 Before starting the Work at the site, a preconstruction conference will be held to establish procedures for handling Shop Drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the Project.

SECTION 3.0--CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS

- 3.1 It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between OWNER and CONTRACTOR. They may be altered only by a Modification.
- 3.2 The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If CONTRACTOR finds a conflict, error, or discrepancy in the Contract Documents, he shall call it to ENGINEER'S attention in writing at once and before proceeding with the Work affected thereby; however, he shall not be liable to OWNER or ENGINEER for his failure to discover any conflict, error, or discrepancy in the Specifications or Drawings. In resolving such conflicts, errors, and discrepancies, the documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Special Conditions, Instructions to Proposers, General Conditions, Supplemental Specifications and Drawings. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings. Any Work that may reasonably be inferred from the Specifications or Drawings, as being required to produce the intended result, shall be supplied whether or not it is specifically called for. Work, materials, or equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards.
- 3.3 It is mutually understood and agreed that this contract shall be governed by the laws of the State of New Mexico, both as to interpretation and performance.

SECTION 4.0--AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

Availability of Lands:

4.1 OWNER shall furnish, as indicated in the Contract Documents and not later than the date when needed by CONTRACTOR, the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise specified in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands or easements entitles him to an extension of the Contract Time, he may make a claim therefore as provided in Section 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Physical Conditions--Surveys and Reports:

4.2 The OWNER will, upon request, furnish to the CONTRACTOR copies of all boundary surveys, subsurface tests, and other pertinent reports and material which are available in OWNER'S office.

Unforeseen Physical Conditions:

4.3 CONTRACTOR shall promptly notify OWNER and ENGINEER in writing of any subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents. ENGINEER will promptly investigate those conditions and advise OWNER in writing

if further surveys or subsurface tests are necessary. Promptly thereafter, OWNER shall obtain the necessary additional surveys and tests and furnish copies to ENGINEER and CONTRACTOR. If ENGINEER finds that the results of such surveys or tests indicate that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents and which could not reasonably have been anticipated by CONTRACTOR, a Change Order shall be issued incorporating the necessary revisions.

Reference Points:

4.4 OWNER shall provide engineering surveys for construction to establish reference points which, in his judgment, are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for surveying and laying out the Work (unless otherwise provided in the Special Conditions) and shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. He shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations. CONTRACTOR shall replace and accurately relocate all reference points so lost, destroyed, or moved.

SECTION 5.0--BONDS AND INSURANCE

Performance, Payment and Other Bonds:

5.1 CONTRACTOR shall furnish performance and payment Bonds as security for the faithful performance and payment of all his obligations under the Contract Documents. These Bonds shall be in amounts at least equal to the Contract Price and (except as otherwise provided in the Special Conditions) in such form and with such sureties as are licensed to conduct business in the state where the Project is located and are named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department. The Performance Bond shall also include coverage for the Guarantee Period (see paragraph 13.10). The Surety on the performance bond shall furnish a waiver whereby he consents to the progress or partial payment to the CONTRACTOR of amounts for materials under the provisions of paragraph 14.2 herein, and acknowledges, in accordance with paragraphs 14.10 and 14.15 of said Standard Specifications, that such payment, whether or not in strict compliance with these provisions of said Standard Specifications, shall not preclude or stop the OWNER from showing the true character and quantity of the materials furnished or from recovering from the CONTRACTOR or his sureties such damages as the OWNER may sustain by reason of deficiency in quantity of the materials with respect to which a progress payment was made.

If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located is revoked, CONTRACTOR shall within five days thereafter substitute another Bond and surety, both of which shall be acceptable to OWNER.

5.1.1 <u>Performance Bond Requirements:</u>

The performance bond shall be in an amount equal to no less than the full contract amount. The performance bond must remain in effect throughout the construction and

guarantee period and as otherwise required by Owner. A cashier's check, money order or certified funds as are approved by the City will be considered equivalent to a bond.

As an alternate to this performance bond, security may be provided, at the Proposer's option, by a bank irrevocable letter of credit or other personal surety instrument acceptable to Owner in an amount equal to not less than the full contract amount. This <u>Performance Security Letter of Credit</u> must remain in effect throughout the construction period and as otherwise required by Owner.

The performance bond or letter of credit must be included with the Contract Documents. Any contract which does not include an acceptable performance bond or other surety will not be executed by City of Lovington.

5.1.2 <u>Payment Bond Requirement</u>:

The payment bond shall be in an amount equal to no less than the full contract amount. The payment bond must remain in effect throughout the construction period and up to the time that signed Lien Releases from all major (representing 10% or more of the contract price) suppliers and Subcontractors are delivered to the Owner. A cashier's check, money order or certified funds as are approved by the City will be considered equivalent to a bond.

As an alternate to this payment bond, security may be provided, at the Proposer's option, by a bank irrevocable letter of credit or other personal surety instrument acceptable to Owner in an amount equal to not less than the full contract amount. This <u>Payment</u> <u>Security Letter of Credit</u> must remain in effect throughout the construction period and up to the time that signed Lien Releases from all major suppliers and Subcontractors are delivered to the Owner.

The payment bond or the letter of credit must be included with the contract documents. Any contract which does not include an acceptable payment bond or other surety will not be executed by City of Lovington.

Insurance Coverage:

- 5.2 The Contractor shall obtain, and provide proof thereof, to the Owner the following insurance coverage:
 - 5.2.1 General Liability as follows:

Premises, operations, explosions and collapse hazard, underground hazard, contractual insurance, products with completed operations, broad form property damage, independent Contractors and personal injury. The limits of liability shall be no less than \$1,000,000 combined single limit for bodily injury and property damage.

5.2.2 Automobile Liability as follows:

Owned, hired and non-owned vehicles. The limits of liability shall be no less than \$1,000,000 combined single limit bodily injury and property damage.

The City of Lovington shall be named as an additional insured on all policies provided.

Contractor shall further obtain and provide proof to the Owner of any other insurance coverage required by the statutes of the State of New Mexico or regulations of any agency of the State of New Mexico governing this type of Project.

Workers' Compensation is required along with State statutory employers' liability limits regardless of number of employees.

Contractor covenants, warrants, and agrees that it shall indemnify, defend, save and hold City of Lovington, the Commission of City of Lovington, its individual commissioners, its officers, employees and agents (collectively and individually as "Owner") harmless from any and all liability, damage, expense, cause of action, suits, claims, judgments, losses, costs, expenses, and liens, of every kind and nature, including, but not limited to, those arising from injury to person(s) or damage to property, arising out of, resulting from, or occurring during this project. This indemnification and hold harmless by Contractor to City of Lovington (Owner) shall include, but not be limited to, City of Lovington (Owner's) attorney's fees and costs incurred in defending against the same, and in prosecuting any cross claims or counterclaims required or arising therefrom.

Additional Bonds and Insurance:

5.3 Prior to delivery of the executed Agreement by OWNER to CONTRACTOR, OWNER may require CONTRACTOR to furnish such other Bonds and such additional insurance, in such form and with such sureties or insurers, as OWNER may require. If such other Bonds or such other insurance are specified by written instructions given prior to opening of Proposals, the premiums shall be paid by CONTRACTOR; if subsequent thereto, they shall be paid by OWNER (except as otherwise provided in paragraph 6.7).

SECTION 6.0--CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence:

- 6.1 CONTRACTOR shall supervise and direct the Work efficiently and with his best skill and attention. He shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction; but he shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.
- 6.2 CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER

(Written Notice Only, NOT Consent) except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

Labor, Materials, and Equipment:

- 6.3 CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. He shall at all times maintain good discipline and order at the site.
- 6.4 CONTRACTOR shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities, and all other facilities and incidentals necessary for the execution, testing, initial operation, and completion of the Work.
- 6.5 All materials and equipment shall be new, except as otherwise provided in the Contract Documents. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence as to the kind and quality of materials and equipment.
- 6.6 All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processors, except as otherwise provided in the Contract Documents.

Substitute Materials or Equipment:

6.7 If the Standard Specifications, the Supplemental Specifications, laws, ordinances, or applicable rules or regulations permit CONTRACTOR to furnish or use a substitute that is equal to any material or equipment specified, and if CONTRACTOR wishes to furnish or use a proposed substitute, he shall, prior to the conference called for by paragraph 2.9, make written application to ENGINEER for approval of such a substitute certifying in writing that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified, and be suited to the same use and capable of performing the same function as that specified; stating whether or not its incorporation in or use in connection with the Project is subject to the payment of any license fee or royalty; and identifying all variations of the proposed substitute shall be ordered or installed without the written approval of ENGINEER, who will be the judge of equality and may require CONTRACTOR to furnish such other data about the proposed substitute as he considers pertinent. No substitute shall be ordered or installed without such performance guarantee and bonds as OWNER may require which shall be furnished at CONTRACTOR'S expense.

Concerning Subcontractors:

6.8 CONTRACTOR shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection. A Subcontractor or other person or organization identified in writing to OWNER and ENGINEER by CONTRACTOR

prior to the Notice of Award and not objected to in writing by OWNER or ENGINEER prior to the Notice of Award will be deemed acceptable to OWNER and ENGINEER. Acceptance of any Subcontractor, other person, or organization by OWNER or ENGINEER shall not constitute a waiver of any right of OWNER or ENGINEER to reject defective Work or Work not in conformance with the Contract Documents.

If OWNER or ENGINEER, after due investigation, has reasonable objection to any subcontractor, other person, or organization proposed by CONTRACTOR after the Notice of Award, CONTRACTOR shall submit an acceptable substitute. No change in the contract price shall result from this change of subcontractor due to reasonable objections, and no extra payment will be made to the CONTRACTOR to provide a suitable substitute subcontractor. CONTRACTOR shall not be required to employ any subcontractor, other person, or organization against whom he has a reasonable objection. CONTRACTOR shall not, without the consent of the OWNER and the ENGINEER, make any substitution for any subcontractor, other person, or organization who has been accepted by the OWNER and ENGINEER unless the ENGINEER determines that there is a good cause for doing so.

In the event that the performance of this contract depends upon the Contractor hiring any Subcontractors, Contractor shall not employ or continue to employ any Contractor who is listed on the United States Department of Labor list of Contractors who are barred from working due to violations of the labor law and regulations.

6.9 CONTRACTOR shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any Subcontractor or other person or organization having a direct contract with CONTRACTOR, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any monies due any Subcontractor or other person or organization, except as may otherwise be required by law. OWNER or ENGINEER may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific Work done in accordance with the schedule of values.

Contractor agrees to bind specifically every subcontractor to the applicable terms and conditions of the contract documents for the benefit of Owner.

- 6.10 The sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or delineating the Work to be performed by any specific trade.
- 6.11 CONTRACTOR agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER.
- 6.12 (This paragraph not used).

Patent Fees and Royalties:

6.13 CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of OWNER or ENGINEER, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses, including attorneys' fees, arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents and shall defend all such claims in connection with any alleged infringement of such rights.

Permits:

6.14 CONTRACTOR shall obtain and pay for all construction permits and licenses and shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of his Proposal. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall also pay all public utility charges.

Laws and Regulations:

6.15 CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If CONTRACTOR observes that the Specifications or Drawings are at variance therewith, he shall give ENGINEER prompt written notice thereof; and any necessary changes shall be adjusted by an appropriate Modification. If CONTRACTOR performs any Work knowing it to be contrary to such laws, ordinances, rules, and regulations and without such notice to ENGINEER, he shall bear all costs arising therefrom; however, it shall not be his primary responsibility to make certain that the Specifications and Drawings are in accordance with such laws, ordinances, rules and regulations.

Taxes:

6.16 CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by him in accordance with the law of the place where the Work is to be performed.

The total proposal price as set forth herein shall not include taxes. Taxes shall be added to pay estimates or invoices for work performed for payment at time of billing.

Use of Premises:

- 6.17 CONTRACTOR shall confine his equipment, the storage of materials and equipment, and the operations of his workmen to areas permitted by law, ordinances, permits, or the requirements of the Contract Documents and shall not unreasonably encumber the premises with materials or equipment.
- 6.18 CONTRACTOR shall not load nor permit any part of any structure to be loaded with weights that will endanger the structure, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

Record Drawings:

6.19 CONTRACTOR shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to ENGINEER and shall be delivered to him for OWNER upon completion of the Project.

Safety and Protection:

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

The CONTRACTOR shall conduct his operations in a manner which will minimize interference with the normal use of property adjacent to the construction work and shall give owners of such property at least 24 hour notice of the commencement of Work in the area abutting their property. CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. He shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for its safety and protection. He shall notify owners of adjacent utilities at least 48 hours in advance when prosecution of the Work may affect them. All damage, injury, or loss to any property referred to in subparagraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR, except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR. CONTRACTOR'S duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed

and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that Work is acceptable.

6.21 CONTRACTOR shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be CONTRACTOR'S superintendent, unless otherwise designated in writing by CONTRACTOR to OWNER.

Emergencies:

6.22 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER or OWNER, is obligated to act, at his discretion, to prevent threatened damage, injury, or loss. He shall give ENGINEER prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby; and a Change Order shall thereupon be issued covering the changes and deviations involved. If CONTRACTOR believes that additional work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Price or an extension of the Contract Time, he may make a claim therefore as provided in Sections 11 and 12.

Shop Drawings and Samples:

- 6.23 After checking and verifying all field measurements, CONTRACTOR shall submit to ENGINEER for approval, in accordance with the accepted schedule of Shop Drawings submissions, one reproducible copy of all Shop Drawings which shall have been checked by and stamped with the approval of CONTRACTOR and identified as OWNER may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction, and the like to enable OWNER to review the information as required.
- 6.24 CONTRACTOR shall also submit to ENGINEER for approval, with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and stamped with the approval of CONTRACTOR, identified clearly as to material, manufacturer, and pertinent catalog numbers and the use for which intended.
- 6.25 At the time of each submission, CONTRACTOR shall in writing call ENGINEER'S attention to any deviations that the Shop Drawings may have from the requirements of the Contract Documents.
- 6.26 ENGINEER will review and approve with reasonable promptness Shop Drawings and samples, but his review and approval shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make any corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until approved. CONTRACTOR shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by ENGINEER on previous submissions. CONTRACTOR'S stamp of approval on any Shop Drawing or sample shall constitute a representation to OWNER and ENGINEER that CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or he assumes full responsibility

for doing so and that he has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.

- 6.27 Where a Shop Drawing or sample submission is required by the Specifications, no related Work shall be commenced until the submission has been approved by ENGINEER. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by CONTRACTOR at the site and shall be available to ENGINEER.
- 6.28 ENGINEER'S approval of Shop Drawings shall not relieve CONTRACTOR from his responsibility for any deviations from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER'S attention to such deviation at the time of submission and OWNER has given written approval to the specific deviation, nor shall any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings.

Cleaning:

6.29 CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the Work; and at the completion of the Work, he shall remove all waste materials, rubbish, and debris from and about the premises, as well as all tools, construction equipment and machinery, and surplus materials and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents, unless the completion of the work is directly affected by the item in dispute.

Indemnification:

- 6.30 CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the Work by the CONTRACTOR, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease, or death or injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.
- 6.31 In any and all claims against OWNER or ENGINEER or any of their agents or employees or by any employees of CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.30 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any Subcontractor under workmen's compensation acts, disability benefit acts, or other employee benefit acts.
- 6.32 The obligations of CONTRACTOR under paragraph 6.30 shall not extend to the liability of ENGINEER, his agents, or employees arising out of (a) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs, or specifications or (b) the giving of

or the failure to give directions or instructions by ENGINEER, his agents, or employees provided such giving or failure to give is the primary cause of injury or damage.

SECTION 7.0--WORK BY OTHERS

- 7.1 OWNER may perform additional work related to the Project by himself, or he may let other direct contracts therefore which shall contain General Conditions similar to these. CONTRACTOR shall afford the other Contractors who are parties to such direct contracts (or OWNER, if he is performing the additional work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of work and shall properly connect and coordinate his Work with theirs.
- 7.2 If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other Contractor (or OWNER), CONTRACTOR shall inspect and promptly report to ENGINEER in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results. His failure so to report shall constitute an acceptance of the work as fit and proper for the relationship of his Work except as to defects and deficiencies which may appear in the other work after the execution of his Work.
- 7.3 CONTRACTOR shall do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and of the other Contractors whose work will be affected.
- 7.4 If the performance of additional work by other Contractors or OWNER is not noted in the Contract Documents prior to the execution of the contract, written notice thereof shall be given to CONTRACTOR prior to starting any such additional work. If CONTRACTOR believes that the performance of such additional work by OWNER or others involves him an additional expense or entitles him to an extension of the Contract Time, he may make a claim therefore as provided in Sections 11 and 12.
- 7.5 Work by the CONTRACTOR and work by others should be coordinated and expedited by the OWNER or his representative to prevent time delays and additional cost to the CONTRACTORS. Any extension of time and/or additional costs caused by other Contractors or utility service companies may be claimed as provided for in Sections 11 and 12.

SECTION 8.0--OWNER'S RESPONSIBILITIES

- 8.1 OWNER shall issue all communications to CONTRACTOR through ENGINEER.
- 8.2 In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer against whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER. Any dispute in connection with such appointment shall be subject to arbitration.

- 8.3 OWNER shall furnish the data required of OWNER under the Contract Documents promptly and shall make payments to CONTRACTOR promptly after they are due as provided in paragraphs 14.4 and 14.13.
- 8.4 OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting performance of the Work which have been relied upon by ENGINEER in preparing the Drawings and Specifications.
- 8.5 (This paragraph not used)
- 8.6 In connection with OWNER'S rights to request changes in the Work in accordance with Section 10, OWNER (especially in certain instances as provided in paragraph 10.4) is obligated to execute Change Orders.
- 8.7 OWNER'S responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.
- 8.8 In connection with the OWNER'S right to stop Work, see paragraph 13.8 and 15.1.

SECTION 9.0--ENGINEER'S STATUS DURING CONSTRUCTION

Owner's Representative:

9.1 ENGINEER will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ENGINEER.

Visits to Site:

9.2 ENGINEER will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ENGINEER'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations as an experienced and qualified design professional, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

Clarifications and Interpretations:

9.3 ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine

necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If CONTRACTOR believes that a written clarification or interpretation justifies an increase in the Contract Price or Contract Time, CONTRACTOR may make a claim therefore as provided in Section 11 and Section 12.

Rejecting Defective Work:

9.4 ENGINEER will have authority to disapprove or reject Work which is defective, and will also have authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments:

- 9.5 In connection with ENGINEER'S responsibilities as to Shop Drawings and samples, see paragraph 6.23 through 6.28 inclusive.
- 9.6 In connection with ENGINEER'S responsibilities as to Change Orders see Sections 10, 11, and 12.
- 9.7 In connection with ENGINEER'S responsibilities in respect of Applications for Payment, etc., see Section 14.

Project Representation:

9.8 If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in observing the performance of the Work. The duties, responsibilities and limitations of authority of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions. If OWNER designates another agent to represent him at the site who is not ENGINEER'S agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Supplementary Conditions.

Decisions on Disagreements:

- 9.9 ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work hereunder. Claims, disputes, and other matters relating to the acceptability of the Work of the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the Work shall be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph, which ENGINEER will render in writing within a reasonable time to ascertain more accurate data. In his capacity as interpreter and judge, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.
- 9.10 The rendering of a decision by ENGINEER pursuant to paragraph 9.9 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.16) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or at law in respect of any such claim, dispute, or other matter.

Limitations on Engineer's Responsibilities:

- 9.11 Neither ENGINEER'S authority to act under this article 9 or elsewhere in the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ENGINEER to CONTRACTOR, any Subcontractor, any manufacturer, fabricator, supplier or distributor, or any of their agents or employees or any other person performing any of the Work.
- 9.12 Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used to describe requirement, direction, review or judgment of ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that ENGINEER shall have authority to supervise or direct performance of the Work or authority to undertake responsibility contrary to the provisions of paragraphs 9.13 or 9.14.
- 9.13 ENGINEER will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ENGINEER will not be responsible for CONTRACTOR'S failure to perform the Work in accordance with the Contract Documents.
- 9.14 ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, or of the agents or employees of any CONTRACTOR or Subcontractor, or of any other persons at the site or otherwise performing any of the Work.

SECTION 10.0--CHANGES IN THE WORK

- 10.1 Without invalidating the Agreement, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work; these will be authorized by Change Orders. Upon receipt of a Change Order, CONTRACTOR shall proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Section 11 or Section 12 on the basis of a claim made by either party.
- 10.2 ENGINEER may authorize minor changes in the Work not involving an adjustment in the Contract Price or the Contract Time, which are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and shall be binding on OWNER, and also on CONTRACTOR who shall perform the change promptly. If CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or Contract Time, CONTRACTOR may make a claim therefore as provided in Section 11 or Section 12.
- 10.3 Additional Work performed without authorization of a Change Order will not entitle CONTRACTOR to an increase in the Contract Price or an extension of the Contract Time, except in

the case of an emergency as provided in paragraph 6.22 and except as provided in paragraphs 10.2 and 13.7.

- 10.4 OWNER shall execute appropriate Change Orders prepared by ENGINEER covering changes in the Work which are required by OWNER, or required because of unforeseen physical conditions or emergencies, or because of uncovering Work found not to be defective, or as provided in paragraph 11.9, or because of any other claim of CONTRACTOR for a change in the Contract Time or the Contract Price which is recommended by the ENGINEER and accepted by the OWNER.
- 10.5 If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be CONTRACTOR'S responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. CONTRACTOR shall furnish proof of such adjustment to OWNER.

SECTION 11.0--CHANGE OF CONTRACT PRICE

- 11.1 The Total Proposal Price constitutes the total compensation payable to CONTRACTOR less New Mexico Gross Receipts Tax for performing the Work. All duties, responsibilities, and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.
- 11.2 The Total Proposal Price may only be changed by a Change Order. Any claim for an increase in the Total Proposal Price shall be based on written notice delivered to OWNER and ENGINEER within fifteen days of the occurrence of the event giving rise to the claim. Notice of the amount of the claim with supporting data shall be delivered within forty-five days of such occurrence unless ENGINEER allows an additional period of time to ascertain accurate cost data. All claims for adjustments in the Total Proposal Price shall be determined by ENGINEER if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. Any change in the Total Proposal Price resulting from any such claim shall be incorporated in a Change Order.
- 11.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Total Proposal Price shall be determined in one of the following ways:
 - 11.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
 - 11.3.2 By mutual acceptance of a lump sum or unit prices.
 - 11.3.3 On the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5) plus a Contractor's Fee for overhead and profit (determined as provided in paragraph 11.6).

Cost of the Work:

11.4 The term Cost of the Work means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality

of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.5:

- 11.4.1 Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workmen's compensation, health and retirement benefits, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing work after regular working hours, on Sundays or legal holidays shall be included in the above to the extent authorized by OWNER.
- 11.4.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates, and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER; and CONTRACTOR shall make provisions so that they may be obtained.
- 11.4.3 Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive proposals from Subcontractors acceptable to him and shall deliver such proposals to OWNER who will then determine, with the advice of ENGINEER, which proposals will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Cost of the Work shall be determined in accordance with paragraphs 11.4 and 11.5. All subcontracts shall be subject to the other conditions of the Contract Documents insofar as applicable.
- 11.4.4 Costs of special consultants (including, but not limited to, engineers, architects, testing laboratories, surveyors, lawyers, and accountants) employed for services specifically related to the Work.
- 11.4.5 Supplemental costs including the following:
 - 11.4.5.1 The proportion of necessary transportation, traveling, and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.
 - 11.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site, and hand tools not owned by the workmen, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.
- 11.4.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, installation, dismantling, and removal thereof--all in accordance with terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- 11.4.5.4 Sales, use, or similar taxes related to the Work and for which CONTRACTOR is liable, imposed by any governmental authority.
- 11.4.5.5 Deposits lost for causes other than CONTRACTOR'S negligence, royalty payments, and fees for permits and licenses.
- 11.4.5.6 Losses, damages, and expenses not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the execution of and to the Work, provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's Fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, he shall be paid for his services a fee proportionate to that stated in paragraph 11.6.2.
- 11.4.5.7 The cost of utilities, fuel, and sanitary facilities at the site.
- 11.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, express message and similar petty cash items in connection with the Work.
- 11.4.5.9 Cost of premiums for bonds and insurance which OWNER is required to pay in accordance with paragraph 5.3.
- 11.5 The term Cost of the Work shall not include any of the following:
 - 11.5.1 Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, timekeepers, clerks, and other personnel employed by CONTRACTOR whether at the site or in his principal of a branch office for general administration of the Work and not specifically included in the schedule referred to in paragraph 11.4.1--all of which are to be considered administrative costs covered by the CONTRACTOR'S Fee.
 - 11.5.2 Expenses of CONTRACTOR'S principal and branch offices other than his office at the site.

- 11.5.3 Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payment.
- 11.5.4 Cost of premiums for all bonds and for all insurance policies whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except as otherwise provided in paragraph 11.4.5.9).
- 11.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective work, disposal of materials or equipment wrongly supplied and making good any damage to property.
- 11.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

Contractor's Fee:

- 11.6 The CONTRACTOR'S Fee which shall be allowed to CONTRACTOR for his overhead and profit shall be determined as follows:
 - 11.6.1 A mutually acceptable fixed fee; or if none can be agreed upon,
 - 11.6.2 A fee based on the following percentages of the various portions of the Cost of the Work:
 - 11.6.2.1 For costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR'S Fee shall be ten percent,
 - 11.6.2.2 For costs incurred under paragraph 11.4.3, the CONTRACTOR'S Fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to the Subcontractor as a fee for overhead and profit shall be ten percent, and
 - 11.6.2.3 No fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5, and 11.5.
- 11.7 The amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the combined overhead and profit shall be figured on the basis of the net increase, if any.
- 11.8 Whenever the cost of any Work is to be determined pursuant to paragraphs 11.4 and 11.5, CONTRACTOR will submit in form prescribed by ENGINEER an itemized cost breakdown together with supporting data.

Cash Allowances:

11.9 It is understood that CONTRACTOR has included in the Total Proposal Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such

material men, suppliers, or Subcontractors and for such sums within the limits of the allowances as ENGINEER may approve.

Upon final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. CONTRACTOR agrees that the original Contract Price includes such sums as he deems proper for costs and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be allowed.

SECTION 12.0--CHANGE OF THE CONTRACT TIME

- 12.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to OWNER and ENGINEER within fifteen days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by ENGINEER if OWNER and CONTRACTOR cannot otherwise agree. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.
- 12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if he makes a claim therefore as provided in paragraph 12.1. Such delays shall include, but not be restricted to, acts or neglect by any separate Contractor employed by OWNER, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.
- 12.3 All time limits stated in the Contract Documents are of the essence of the Agreement. The conditions of this Section 12 shall not exclude recovery for damages (including compensation for additional professional services) for delay by either party.

SECTION 13.0--WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

Warranty and Guarantee:

13.1 CONTRACTOR warrants and guarantees to OWNER and ENGINEER that all materials and equipment will be new unless otherwise specified and that all Work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents and of any inspections, tests, or approvals referred to in paragraph 13.2 All unsatisfactory Work, all faulty or defective Work, and all work not conforming to the requirements of the Contract Documents at the time of acceptance thereof or of such inspections, tests, or approvals, shall be considered defective. Prompt notice of all defects shall be given to CONTRACTOR. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Section 13.

Tests and Inspections:

13.2 If the Contract Documents, laws, ordinances, rules and regulations, or orders of any public authority having jurisdiction require any Work to be specifically be inspected, tested, or approved

by some public body, CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith and furnish ENGINEER the required certificates of inspection, testing, or approval. All other inspections, tests, and approvals required by the Contract Documents shall be performed by organizations acceptable to OWNER and CONTRACTOR and the costs thereof shall be borne by OWNER unless otherwise specified.

13.2.1 Laboratory Testing

A. Job Mix Formulae and Design Mixes

The preparation of job mix formulae and design mixes, together with necessary testing as required for this Contract, shall be at CONTRACTOR'S expense. Such testing shall be performed by an approved testing laboratory under the supervision of a New Mexico Registered Professional Engineer. Copies of said formulae and mixes shall be submitted to the Owner for approval prior to beginning work on items on which said mixes will be used.

B. Materials or Manufactured Items

Testing of materials or manufactured items shall be at CONTRACTOR'S expense. Tests for materials or items manufactured within the State of New Mexico shall be certified as meeting contract specifications by an approved testing laboratory under the supervision of a New Mexico Registered Professional Engineer or a testing laboratory under the supervision of a Professional Engineer registered in the state of manufacture or a testing laboratory approved by ENGINEER.

13.2.2 Field Testing

The field testing of all locally processed or produced material directly incorporate into the work, including the establishment of density curves representative of materials to be used in the embankment, subgrade and backfilling operations, and compliance tests will be paid by the OWNER.

13.2.3 General

The City of Lovington shall pay for the first test on each material as required. Any retesting due to the initial test failing shall be paid for by the Contractor, whether the retest is passing or failing the required specifications. If not previously deducted from a progress payment, costs for such tests shall be deducted from the final payment of the Contract.

ENGINEER shall determine the number, type and location of tests.

CONTRACTOR shall furnish, incidental to this Contract, necessary equipment, tools and labor, except testing equipment, to assist the testing agency in the performance of field tests.

Copies of all laboratory and field tests shall be forwarded to ENGINEER and OWNER.

- 13.3 CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all inspections, tests, or approvals. If any such Work required so to be inspected, tested, or approved is covered without written approval of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation; and such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given ENGINEER timely notice of his intention to cover such Work and ENGINEER has not acted with reasonable promptness in response to such notice.
- 13.4 Neither observations by ENGINEER nor inspections, tests, or approvals by persons other than CONTRACTOR shall relieve CONTRACTOR from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

Access to Work:

13.5 ENGINEER and his representatives and other representatives of OWNER will, at reasonable times, have access to the Work. CONTRACTOR shall provide proper and safe facilities for such access and observation of the Work and also for any inspection or testing thereof by others.

Uncovering the Work:

- 13.6 If any Work is covered to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for his observation and replaced at CONTRACTOR'S expense.
- 13.7 If any Work has been covered which ENGINEER has not specifically requested to observe prior to its being covered or if ENGINEER considers it necessary or advisable that covered Work be inspected or tested by others, CONTRACTOR, at ENGINEER'S request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall bear all the expenses of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including compensation for additional professional services and an appropriate deductive Change Order shall be issued. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction if he makes a claim therefore as provided in Sections 11 and 12.

Owner May Stop the Work:

13.8 If the Work is defective or CONTRACTOR fails to supply sufficient skilled workmen or suitable materials or equipment or if CONTRACTOR fails to make prompt payments to Subcontractors or for labor, materials, or equipment, OWNER may order CONTRACTOR to stop the Work or any portion thereof until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

Correction or Removal of Defective Work:

13.9 If required by ENGINEER prior to approval of final payment, CONTRACTOR shall promptly, without cost to OWNER and as specified by ENGINEER, either correct any defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not correct such defective Work or remove and replace such rejected Work within a reasonable time, all as specified in a written notice from ENGINEER, OWNER may have the deficiency corrected or the rejected Work removed and replaced. All direct or indirect costs of such correction or removal and replacement, including compensation for additional professional services, shall be paid by CONTRACTOR and an appropriate deductive Change Order shall be issued. CONTRACTOR shall also bear the expenses of making good all Work of others destroyed or damaged by his correction, removal, or replacement of his defective Work.

One Year Correction Period:

13.10 If, after the approval of final payment and prior to the expiration of one year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER'S written instruction, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, OWNER may have the defective Work corrected or the rejected Work removed and replaced and all direct and indirect cost of such removal and replacement, including compensation for additional professional services, shall be paid by CONTRACTOR.

Acceptance of Defective Work:

13.11 If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to approval of final payment, also ENGINEER) prefers to accept it, he may do so. In such case, if acceptance occurs prior to approval of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price; or, if the acceptance occurs after approval of final payment, an appropriate amount shall be paid by CONTRACTOR to OWNER.

Neglected Work by CONTRACTOR:

13.12 If CONTRACTOR shall fail to prosecute the Work in accordance with the Contract Documents, including any requirements of the progress schedule, OWNER, after seven days' written notice to CONTRACTOR may, without prejudice to any other remedy he may have, make good such deficiencies and the cost thereof (including compensation for additional professional services) shall be charged against CONTRACTOR if ENGINEER approves such action, in which case a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including an appropriate reduction in the Contract Price. If the payments then or thereafter due CONTRACTOR are not sufficient to cover such amount, CONTRACTOR shall pay the difference to OWNER.

SECTION 14.0--PAYMENTS TO CONTRACTOR AND COMPLETION

Schedules:

14.1 At least ten days prior to submitting the first Application for a progress payment, CONTRACTOR shall (except as otherwise specified in the General Requirements) submit to ENGINEER a progress schedule, a final schedule of Shop Drawing submission and where applicable a schedule of values of the Work. These schedules shall be satisfactory in form and substance to ENGINEER. The schedule of values shall include quantities and unit prices aggregating the Contract Price, and shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Upon acceptance of the schedule of values by ENGINEER, it shall be incorporated into a form of Application for Payment acceptable to ENGINEER.

Application for Progress Payment: On or before the 25th day of each month, Contractor shall meet with the Project manager for preparation of a pay estimate, which shall be submitted to the Engineer by the project manager on or before the 26th day of the month for review. After final approval by Engineer, the pay estimate will be submitted to the finance division, payment will be made 15 days after finance division receives pay estimate.

14.2 At least fifteen days before each progress payment falls due (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents and also as ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by such data, satisfactory to OWNER, as will establish OWNER'S title to the material and equipment and protect OWNER'S interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied to discharge in full all of CONTRACTOR'S obligations reflected in prior Applications for Payment. If OWNER fails to make CONTRACTOR a particular progress payment as herein specified, such failure shall not be held to violate or void this Contract.

Contractor's Warranty of Title:

14.3 CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER at the time of payment free and clear of all liens, claims, security interests and encumbrances.

Review of Applications for Progress Payment:

14.4 ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment or present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ENGINEER'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the

Application. OWNER shall, within ten days of presentation to him of the Application for Payment with ENGINEER'S recommendation, pay CONTRACTOR the amount recommended.

- 14.5 ENGINEER'S recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER'S on-site observations of the Work in progress as an experienced and gualified design professional and on ENGINEER'S review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of ENGINEER'S knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in the recommendation; and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment, ENGINEER will not thereby be deemed to have represented the exhaustive or continuous on-site inspections have been made to check the quality of the quantity of the Work, or that the means, methods, techniques, sequences, and procedures of construction have been reviewed or that any examination has been made to ascertain how or for what purpose CONTRACTOR has used the monies paid or to be paid to CONTRACTOR on account of the Contract Price, or that title to any Work, materials or equipment has passed to OWNER free and clear of any Liens.
- 14.6 ENGINEER'S recommendation of final payment will constitute an additional representation by ENGINEER to OWNER that the conditions precedent to CONTRACTOR'S being entitled to final payment as set forth in paragraph 14.13 have been fulfilled.
- 14.7 ENGINEER may refuse to recommend the whole or any part of any payment if, in his opinion, it would be incorrect to make such representations to OWNER. He may also refuse to recommend any such payment, or because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify and such payment previously recommended to such extent as may be necessary in ENGINEER'S opinion to protect OWNER from loss because:
 - 14.7.1 The Work is defective, or completed Work has been damaged requiring correction or replacement,
 - 14.7.2 Written claims have been made against OWNER or Liens have been filed in connection with the Work,
 - 14.7.3 The Contract Price has been reduced because of Modifications,
 - 14.7.4 OWNER has been required to correct defective work or complete the Work in accordance with paragraph 13.12,
 - 14.7.5 CONTRACTOR'S unsatisfactory prosecution of the Work in accordance with the Contract Documents, or
 - 14.7.6 CONTRACTOR'S failure to make payment to Subcontractors, or for labor, materials or equipment.

Substantial Completion:

- 14.8 When CONTRACTOR considers the entire Work ready for its intended use, CONTRACTOR shall, in writing to OWNER and ENGINEER, certify that the entire Work is substantially complete and request that ENGINEER issue a certificate of Substantial Completion (page 52). Within a reasonable time thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving his reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which he may make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within fourteen days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating his reasons therefor. If, after consideration of OWNER'S objections, ENGINEER considers the Work substantially complete, ENGINEER will within said fourteen days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as he believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion, ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities and insurance. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER prior to his issuing the definitive certificate of Substantial Completion, ENGINEER'S aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.
- 14.9 OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

Partial Utilization:

- 14.10 Use by OWNER of completed portion of the Work may be accomplished prior to Substantial Completion of all the Work subject to the following:
 - 14.10.1 OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any part of the Work which OWNER believes to be substantially complete and which may be so used without significant interference with construction of the other parts of the Work. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER and ENGINEER that said part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving his reasons therefor. If ENGINEER considers that part of the Work to be substantially

complete, ENGINEER will execute and deliver to OWNER and CONTRACTOR a certificate to that effect, fixing the date of Substantial Completion as to that part of the Work, attaching thereto a tentative list of items to be completed or corrected before final payment. Prior to issuing a certificate of Substantial Completion as to part of the Work, ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities and insurance for that part of the Work which shall become binding upon OWNER and CONTRACTOR at the time of issuing the definitive certificate of Substantial Completion as to that part of the Work unless OWNER and CONTRACTOR shall have otherwise agreed in writing and so informed ENGINEER. OWNER shall have the right to exclude CONTRACTOR from any part of the Work which ENGINEER has so certified to be substantially complete, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

- 14.10.2 In lieu of the issuance of a certificate of Substantial Completion as to part of the Work, OWNER may take over operation of a facility constituting part of the Work whether or not it is substantially complete if such facility is functionally and separately usable; provided that prior to any such takeover, OWNER and CONTRACTOR have agreed as to the division of responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, correction period, heat, utilities, and insurance with respect to such facility.
- 14.10.3 No occupancy of part of the Work or taking over of operations of a facility will be accomplished prior to compliance with the requirements of Subsection 5.2 with respect to property insurance.

Final Inspection:

14.11 Upon written notice from CONTRACTOR that the Work is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

Final Application for Payment:

14.12 After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents and other documents (Certificate of Receipt of Record Drawings and O & M Manuals, page 58)--all as required by the Contract Documents, and after ENGINEER has indicated that the Work is acceptable (subject to the provisions of paragraph 14.16), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data and schedules as ENGINEER may reasonably require, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and

other indebtedness connected with the Work for which OWNER or his property might in any way be responsible, have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment. If any Subcontractor, manufacturer, fabricator, supplier or distributor fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

Final Payment and Acceptance:

- 14.13 If, on the basis of ENGINEER'S observation of the Work during construction and final inspection, and ENGINEER'S review of the final Application for Payment and accompanying documentationall as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR has fulfilled with all of his obligations under the Contract Documents, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing his recommendation of payment and present the Application to OWNER for payment. Thereupon, ENGINEER will give written notice to OWNER and CONTRACTOR that the Work is acceptable(Certificate of Project Acceptanceand Performance, page 53) subject to the provisions of paragraph 14.16. Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, OWNER shall, within thirty days after receipt thereof, pay CONTRACTOR the amount recommended by ENGINEER.
- 14.14 If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed thereof and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

CONTRACTOR'S Continuing Obligation:

14.15 CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by ENGINEER, nor the issuance of a certificate of Substantial Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.13, nor any correction of defective Work by OWNER shall constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents.

Waiver of Claims:

14.16 The making and acceptance of final payment shall constitute:

14.16.1 a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.11 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it shall not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and

14.16.2 a waiver of all claims by Contractor against OWNER other than those previously made in writing and still unsettled.

14.17 CONTRACTOR will be required to complete the Work specified herein and as shown on the drawings in accordance with the Contract and at the Contract Unit Price established for each of the payment items listed in the Proposal of these Contract Documents. All work which is subsidiary and pertinent to a particular item and is not listed as a separate proposal item shall be completed as a part of the proposal item to which it applies. In case of dispute as to the proposal item to which subsidiary or pertinent work applies, ENGINEER'S decision shall govern.

SECTION 15.0--SUSPENSION OF WORK AND TERMINATION

OWNER May Suspend Work:

15.1 OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER which shall fix the date on which Work shall be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR will be allowed an extension of the Contract Time directly attributable to any suspension if he makes a claim therefore as provided in Section 12.

OWNER May Terminate:

If CONTRACTOR is adjudged bankrupt or insolvent, or if he makes a general assignment for the 15.2 benefit of his creditors, or if a trustee or receiver is appointed for CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act or to reorganize under the bankruptcy or similar laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to Subcontractors or for labor, materials, or equipment, or if he disregards laws, ordinances, rules, regulations, or orders of any public body having jurisdiction, or if he disregards the authority of ENGINEER, or if he otherwise violates any provision of the Contract Documents, then OWNER may, without prejudice to any other right or remedy and after giving CONTRACTOR and his Surety seven days' written notice, terminate the services of CONTRACTOR and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by CONTRACTOR and finish the Work by whatever method he may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to

CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER shall be determined by ENGINEER and incorporated in a Change Order.

- 15.3 Where CONTRACTOR'S services have been so terminated by Owner, said terminations shall not affect any rights of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by OWNER due CONTRACTOR will not release CONTRACTOR from liability.
- 15.4 Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and expense sustained plus a reasonable profit.

Contractor May Stop Work or Terminate:

15.5 If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted, or OWNER fails to pay CONTRACTOR any sum approved by ENGINEER or awarded by arbitrators within thirty days of its approval and presentation, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus a reasonable profit. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may, upon seven days' notice to OWNER and ENGINEER, stop the Work until he has been paid all amounts then due.

SECTION 16.0--BREACH

In the event that the Contractor breaches this contract, then the Contractor shall be liable to the Owner for any and all damages, costs and reasonable attorney's fees the Owner may incur to remedy that breach.

SECTION 17.0--MISCELLANEOUS

Giving Notice:

17.1 Whenever any provision of the Contract Documents requires the giving of written notice, it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended or sent by mail, postage prepaid, to the last business address known to him who give the notice.

Computation of Time:

17.2 When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

General:

- 17.3 CONTRACTOR shall not be entitled to interest on any periodic payment or final payment because of a delay in payment by OWNER.
- 17.4 All Specifications, Drawings, and copies thereof furnished by ENGINEER shall remain his property. They shall not be used on another Project, and with the exception of those sets which have been signed in connection with the execution of the Agreement, shall be returned to him on request upon completion of the Project.
- 17.5 The duties and obligations imposed by these Special Conditions and the rights and remedies available hereunder and, in particular but without limitation, the warranties, guarantees, and obligations imposed upon CONTRACTOR by paragraphs 6.30, 13.1, 13.10, and 14.3 and the rights and remedies available to OWNER and ENGINEER hereunder shall be in addition to and shall not be construed in any way as a limitation of any rights and remedies available to them which are otherwise imposed or available by law, by special guarantee or by other provisions of the Contract Documents.
- 17.6 Should OWNER or CONTRACTOR suffer injury or damage to his person or property because of any error, omission, or act of the other or of any of his employees or agents or others for whose acts he is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage.
- 17.7 The Contract Documents shall be governed by the laws of the State of New Mexico.

Minimum Wages:

17.8 CONTRACTOR and any Subcontractor performing work under this Contract shall comply fully with the "Public Works Minimum Wage Act," Sections 13-4-11 through 13-4-17 NMSA 1978 and all amendments thereto, which provides in part that "the Contractor shall pay all mechanics and laborers employed on the site of the project unconditionally and not less often than once a week, and without subsequent unlawful deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the advertised specifications."

The minimum hourly rate of wage which may be paid to workmen in each trade or occupation required for the work under the contract employed in the performance of the contract either by the CONTRACTOR or Subcontractor or by other persons doing or contracting to do the whole or part of the work contemplated by the contract shall be as set forth in the schedule of Minimum Wage Rates appearing in the Special Conditions, and the workmen employed in the performance of the contract shall be paid not less than the applicable specified minimum hourly rate of wage as such is set forth in said schedule.

The scale of wages to be paid shall be posted by the CONTRACTOR in a prominent and easily accessible place at the site of the work; and it is further provided that there may be withheld from the CONTRACTOR so much of accrued payments as may be considered necessary by the OWNER to pay to laborers and mechanics employed by the CONTRACTOR or Subcontractor on the Work,

the difference between the rates of wages required by the contract to be paid laborers and mechanics on the Work and the rates of wages received by such laborers and mechanics and not refunded to the CONTRACTOR, Subcontractors, or their agents.

The attention of CONTRACTOR and any Subcontractor performing Work under this Contract is directed to Section 13-4-12 NMSA 1978, which reads in part as follows:

A. As used in Section 13-4-11 NMSA 1978, "wages", "scale of wages", "wage rates", "minimum wages", and "prevailing wages" include:

- (1) The basic hourly rate of pay, and
- (2) The amount of:

(a) The rate of contribution irrevocably made by a CONTRACTOR or Subcontractor to a trustee or a third person pursuant to a fund, plan, or program; and

(b) The rate of costs to a CONTRACTOR or Subcontractor which reasonably may be anticipated in providing benefits to laborers and mechanics pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the laborers and mechanics affected for: 1) medical or hospital care, 2) pensions on retirement or death, 3) compensation for injuries or illness resulting from occupational activity, or 4) insurance to provide for any of the foregoing, and for 5) employment benefits, 6) life insurance, 7) disability and sickness insurance, 8) accident insurance, 9) vacation and holiday pay, 10) costs of apprenticeship or other similar programs, or for 11) other bona fide fringe benefits, but only where the CONTRACTOR or Subcontractor is not required by other federal, state, or local law to provide any of the foregoing or similar benefits.

B. However, the obligation of a CONTRACTOR or Subcontractor to make payment in accordance with the prevailing wage determinations of a State Labor Commissioner, insofar as Section 13-4-11 NMSA 1978 or other sections or legislative acts incorporating Section 13-4-11 NMSA 1978 are concerned, may be discharged by:

(1) The making of payments in cash:

(2) The making of contributions of a type referred to in Subsection A(2a); or

(3) The assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in Subsection A (2b), or any combination thereof, where the aggregate of any payments or contributions and costs therefore is not less than the rate of pay described in Section 13-4-11 NMSA 1978, plus the amount referred to in this section.

In the event it is found by the State Labor Commissioner that any laborer or mechanic employed by the CONTRACTOR or Subcontractor on the site of the Project covered by the contract has been or is being paid as a result of a willful violation of a rate of wages less than the rate of wages required by the contract, the OWNER may, by written notice to the CONTRACTOR and his Subcontractor, if the violation involves the Subcontractor, terminate their right to proceed with the work or such part of the work as to which there has been a willful failure to pay the required wages; and the OWNER may prosecute the work to completion by contract or otherwise, and the CONTRACTOR and his sureties shall be liable to the State of New Mexico for any excess costs occasioned thereby. Any party receiving notice of termination of his contract or subcontract

under the provisions of this section may appeal the finding of the State Labor Commissioner as provided in the Public Works Minimum Wage Act.

There is no representation on the part of the OWNER that labor can be obtained at the hourly rates shown in the General Conditions. It is the responsibility of proposers to inform themselves as to local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed.

The CONTRACTOR and any Subcontractor performing work under this contract shall submit certified copies of weekly payrolls to the State Labor and Industrial Commission not later than five (5) working days after close of the payroll period. Certified copies of payrolls shall also be submitted to the ENGINEER. The scale of wages must be posted by the CONTRACTOR at the project site. The weekly payrolls shall conform to the following:

- (1) Form and Content: Any particular form may be used for CONTRACTOR or Subcontractor payrolls, provided all payrolls contain the following information:
 - (a) The employee's full name, address, and social security number.
 - (i) The employee's full name and social security number need only appear on the first payroll on which his name appears.
 - (ii) The employee's address need be shown only on the first submitted payroll on which his name appears, unless a change of address necessitates an additional submittal to reflect the new address.
 - (b) The employee's classification (or classifications).
 - (c) The employee's hourly wage rate (or rates); and, where applicable, his overtime hourly wage rate (or rates).
 - (d) The daily and weekly hours worked in each classification, including actual overtime hours worked (not adjusted).
 - (e) The itemized deductions made.
 - (f) The net wages paid.
- (2) Numbering Payrolls: All payrolls shall be numbered starting with number one (1) for the first payroll at the beginning of the job and continuing in numerical order until the job is completed.
- (3) Certification of Payrolls: The CONTRACTOR and each of his Subcontractors shall submit a weekly statement of compliance in the following form:

Date

I, _____ do hereby state:

1. That I pay or supervise the payment of the persons employed by ______ on the that during the payroll period commencing on the _____ day of _____, 20____, and ending the day of ______, 20____, 20____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said ______ from the full weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person other than deductions permitted by law.

2. That any payrolls under this contract required to be submitted for the above period are correct and complete, that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

3. That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a state apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor.

17.8.1 Minimum Wages (Federal)

In the event that any work under this contract involved Federal Funds, then the prevailing area Wage Rate Decision listed by the U.S. Department of Labor shall be made a part of this contract. Whenever a conflict exists between the State and Federal Minimum Hourly Wage Rates, the higher of the conflicting wage rates shall govern.

Archeological Salvage and Reports:

17.9 Where objects of historical, archeological, and paleontological value, including ruins, sites, buildings, artifacts, fossils, and other objects of antiquity are encountered within the area on which CONTRACTOR'S operations are performed, CONTRACTOR shall postpone operations in the area, preserve such objects from disturbance or damage, and immediately notify OWNER and ENGINEER of their existence and location.

Upon receipt of such notification, OWNER will arrange for the disposition of the objects or for the recording of data relative thereto and will notify CONTRACTOR when it is proper for him to proceed with the Work in the affected area. In this regard, OWNER may consult the Museum of New Mexico or other appropriate agency as to the nature and disposition of such objects. If CONTRACTOR is directed to perform any work in salvaging said objects, CONTRACTOR shall do so in accordance with the "Changes in the Work" provision of Section 10.

Measurement:

17.10 Measurement of Quantities for Unit Price Work.

Unless otherwise specified, linear or area quantities of work such as grading, landscaping, paving, curb, gutter, walk, or other work of a similar nature shall be determined from measurements or dimensions of such work and computed in horizontal planes. However, linear quantities of underground cable, fencing, piling, and timber shall be considered as being the true length measured along the longitudinal axis thereof. For pipe work, see related sections; but if the method of measurement for pipe work is not stated therein, it shall be measured along the longitudinal axis of the pipe in place from center of manhole to center of manhole. A station when used as a definition or term of measurement will be 100 linear feet.

Volumetric quantities shall be determined by the average end area method.

Method of Measurement:

17.11 Materials and items of work which are to be paid for on the basis of measurement shall be measured in accordance with the methods stipulated in the particular sections herein covering materials or types of work.

When material is to be paid for on a volume basis and it would be impracticable to determine a volume by the specified method of measurement or when requested by the CONTRACTOR and approved by the ENGINEER, the material will be weighed in accordance with the requirements specified for weight measurement and such weights will be converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by ENGINEER and shall be agreed to by OWNER and CONTRACTOR before such a method of measurement of pay quantities will be adopted.

Unless otherwise provided, when mineral aggregate or roadway material is being paid for by weight, deductions from pay quantities will be made for the weight of water in excess of 3% if the material is to be treated with bitumen and 6% if the material is to be water bound.

Units of Measurement:

17.12 Measurements shall be in accordance with U.S. Standard Measures. A pound shall be avoirdupois. A ton shall be 2,000 pounds. The unit of liquid measure shall be the U.S. gallon.

Certified Weights:

17.13 All materials to be paid for at a contract unit price per ton shall be weighed on platform scales furnished by the CONTRACTOR or his supplier of materials at the CONTRACTOR'S expense or such materials may be weighed on certified public scales at the CONTRACTOR'S expense. All scales shall be of adequate size to permit the entire vehicle to rest on the scale platform while being weighed. Scales furnished by the CONTRACTOR shall be installed on beams, piers, or foundations

of sufficient strength and bearing to prevent the weighing mechanism supporting the scale platform from settling.

The weighing facilities shall include a weatherproof scale house with a minimum floor area of thirty-two (32) square feet and equipped with adequate heat and light.

SECTION 18.0--UTILITIES

Policy on the proximity of water and sewer lines:

18.1 Whenever possible, it is desirable to lay parallel water and sewer lines at least ten (10) feet apart horizontally, and the water line should be a higher elevation than the sewer. In cases where it is not practical to maintain a ten (10) foot separation, ENGINEER may allow deviation on a case-by-case basis. Such deviation may allow installation of the sewer line closer to the water line, provided the water line is in a separate trench or on an undisturbed earth shelf located on one side of the sewer at an elevation such that the bottom of the water line is at least eighteen (18) inches above the top of the sewer.

When water and sewer lines cross each other, the water line shall be at least eighteen (18) inches above the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water line joints.

When it is impossible to obtain the horizontal and vertical separations stipulated above, one of the following options may be allowed upon approval of ENGINEER.

- 18.1.1 Where sewer lines parallel water lines and room permits, the water line shall be removed and relocated under direction and approval of ENGINEER and in accordance with Section 801 of the Supplemental Technical Specifications. Where it is not possible to relocate the water line, the sewer line shall be designed and constructed in a manner and of material comparable to that used for water mains, either ductile iron, polyvinyl chloride or polyethylene, and shall be pressure tested in accordance with Section 801.16 of the Technical Specifications. Lines constructed as such shall extend from manhole to manhole. Payment for such water line equivalent sewer line as shown in the Proposal.
- 18.1.2 Where sewer lines and water lines cross, the sewer line shall be encased in concrete ten (10) feet either side of the water line or be designed and constructed in a manner of material comparable to that used for water mains as specified in 18.1.1 above. No separate or additional payment for sewer line/water line crossings shall be made for sections of concrete encasement as required or when the sewer line is constructed equivalent to water line.
- 18.2 Existing House Sewer Lateral or Water Service Connections, and Replacement of Mains
 - 18.2.1 Where house service line connections to existing sewer mains and water mains are encountered, the CONTRACTOR shall insure that the service line will not be disturbed or

damaged. Should any service line connection be broken during the construction of the new line, it shall be replaced by the CONTRACTOR with cast iron soil pipe. There shall be no extra compensation for replacement of disturbed or damaged service lines.

- 18.2.2 When a new sanitary sewer main is required as a replacement for an existing line, the alignment of the new line coincides with the existing line and the grade of the new line is approximately at the same grade as the existing line or lower, then the existing line shall be removed or dealt with as ordered by the ENGINEER. The cost of this work when applicable shall be paid for under the appropriate item in the Proposal. The ENGINEER-INSPECTOR shall determine if it is necessary to pump sewage around the replacement work, or if it is possible to temporarily plug the sewer line during the replacement operation. In the case of by-pass pumping, it will be paid for as indicated in the Proposal.
- 18.3 Operation of the Existing Water System
 - 18.3.1 All shutoffs shall be done by the OWNER. The CONTRACTOR shall notify the OWNER 48 hours prior to the date of required shutoff. The OWNER shall make a "trial shutoff" of the system within the project limits prior to issuance of Notice to Proceed, in order to preclude delay of emergency and required shutoffs. If valves cannot be located or are not in operating condition, the OWNER shall notify the CONTRACTOR as soon as possible. The OWNER'S personnel will locate the valves, make the necessary repairs, or determine an alternate method of making the shutoff.
 - 18.3.2 The OWNER shall notify each household, office, or other water user affected, that a shutoff will be made, giving full details. Notification shall be by personal contact. If the consumer is not available when contact is attempted, the OWNER shall leave a door knob hanger notification. Notifications shall be given at least four hours in advance of a shutoff.
 - 18.3.3 The OWNER shall notify the Fire Department of when fire hydrants are taken out of service and returned to service.
 - 18.3.4 The OWNER shall be responsible for the actual operation of the valves.
 - 18.3.5 EMERGENCY BREAKS. The Water Division shall be notified immediately so that it may perform the shutoff.
- 18.4 Protection and Restoration of Property
 - 18.4.1 The CONTRACTOR shall never unnecessarily interfere with or interrupt the services of any public utility having property within or adjacent to the streets, alleys and easements involved in the work and shall take all necessary precaution and effort to locate and protect all underground conduit, cables, pipes, water mains, sewers, structures, gas lines, trees, monuments, power lines, telephone and telegraph lines, traffic control devices and other structures, both below and above ground. He shall give all Public Utility Companies a reasonable notice in writing, in no event less than forty-eight (48) hours, for any work that he contemplates which would interfere in any way whatsoever with the service of

any existing public utility and City-owned facilities. If such public utility does not cooperate for the protection of its services, the CONTRACTOR shall notify the ENGINEER-INSPECTOR. Utility lines shall be located by the CONTRACTOR far enough in advance of construction work in order that the owner of such lines may raise, lower, realign or remove lines and structures, if necessary, and in order that the ENGINEER may make any line and grade changes necessary should the existing utility lines conflict with the work under construction providing such adjustment do not materially affect the work. The CONTRACTOR shall immediately report any damages to property or plant of public utility companies and City property to the company or owner involved, and to the ENGINEER.

- 18.4.2 CONTRACTOR shall restore at his own expense any public, City-owned, or private property damage, for which he is directly responsible, to a condition equal to that existing before damage. CONTRACTOR shall promptly notify his insurance carrier of the alleged damage, and if he refuses to do so, upon notice, OWNER may cause such restoration and deduct cost from monies due, or which may become due, to the CONTRACTOR.
- 18.4.3 The CONTRACTOR shall not remove, realign, or adjust any official City traffic control device. He shall give the Traffic Engineering Division forty-eight (48) hour notice of any official City traffic control devices that need to be moved. The Traffic Engineering Division shall move all traffic control devices as soon as practical thereafter.
- 18.5 Abandoned Utilities
 - 18.5.1 Unless otherwise specified, the CONTRACTOR shall remove all interfering portions of utilities which are shown on the drawings as "abandoned" or "to be abandoned in place" and which interfere with the construction of the project. All abandoned water mains shown on the drawings as "abandoned or "abandoned in place" or found during construction shall be removed or capped as a minimum, unless otherwise specified. All costs involved in said removals shall be included in the prices proposal for the various items of work. All such abandoned utilities removed by the CONTRACTOR shall be stored on the site where directed and shall remain the property of the owner utility company or Contracting agency as determined by the ENGINEER.
 - 18.5.2 Where utilities are shown on the drawings as "abandoned" or "to be abandoned in place", it shall be the CONTRACTOR'S responsibility to contact the utility company involved within 48 hours prior to excavating around such utilities to ascertain that the abandonment of the utility has been completed.
- 18.6 Location of Existing Utilities
 - 18.6.1 The public utilities shall be responsible to locate their utilities and provide information stating the horizontal and vertical alignments of same. If field verification excavations are required, the public utility will provide same in a timely manner.
 - 18.6.2 Utilities which upon exploration are found to interfere with the permanent project work, or within the trenching prism as defined by OSHA, will be relocated, altered, or reconstructed by others or the ENGINEER may order changes in location, line or grade of

structures being built in order to avoid the utilities. The cost of such changes will be paid for under applicable proposal items.

- 18.7 By the CONTRACTOR or by Others--Unknown Utilities Disclosed During the Contract Work
 - 18.7.1 This project requires the CONTRACTOR to call the State One-Call number and City of Lovington to locate all lines in the work area a minimum of 48 hours prior to digging in any location. Owners of underground pipelines or utilities are required to properly spot their lines within the 48 hour time period. The proposed waterline locations will be determined dependent upon the actual pipeline locations in the right-of-way.
 - 18.7.1.1 If the CONTRACTOR begins trench excavation and an unexpected line is then found, the cost of repair for any damages to the line will be the responsibility of the owner of the line. The waterline location will then be adjusted to a new location at no additional cost other than the cost of materials and labor for install the necessary amount of pipe and fittings at the new location in accordance with the unit prices in the proposal.
 - 18.7.1.2 When any portion of the utility is in close proximity and more or less parallel to a structure or conduit, CONTRACTOR shall advise OWNER thereof, and in cooperation with OWNER, provide and place the necessary support for proper protection to insure continuous and safe operation of the utility structure. All costs for such work shall be borne by CONTRACTOR.
- 18.8 Responsibility of the CONTRACTOR
 - 18.8.1 The CONTRACTOR shall be held responsible for all costs for the repair of any and all damage to the contract work or to any utility (which is previously known and disclosed to him by the utility) as may be caused by his operations. Utilities which are relocated by others in order to avoid interference with structures and which cross the project work shall be maintained in their relocated positions by the CONTRACTOR. All costs for such work shall be absorbed or included in the prices proposal for the various items of work.
- 18.9 Delays Caused by Failure to Relocate Utilities
 - 18.9.1 Where parties other than CONTRACTOR are responsible for the relocation of utilities and a delay in CONTRACTOR'S work is caused by the failure on the part of said parties to remove or relocate such utilities in time to prevent such delay, or by any action or lack of action on the part of OWNER, it shall be understood that CONTRACTOR shall not be entitled, as a result of such delay to his work, to damages or additional payments over and above the Contract Price. If delays in CONTRACTOR'S work are caused by the reasons mentioned herein, CONTRACTOR shall be entitled to an extension of time. The length of such extension of time will be determined by ENGINEER with consideration as to the effect of the delay on the Project as a whole.
 - 18.9.2 In order to minimize delays to CONTRACTOR caused by the failure of other parties to relocate utilities which interfere with structures, CONTRACTOR, upon request to

ENGINEER, may be permitted to temporarily omit the portion of the Work affected by the utility. The portion thus omitted shall be constructed by CONTRACTOR immediately following the relocation of the utility involved.

SECTION 19.0—TRAFFIC

19.1 All signing, barricading and channelization should be required to conform to the New Mexico Manual and Specifications for a Uniform System of Traffic Control Devices for Streets and Highways. All signs, barricades, and channelizing devices used at night shall be reflectorized with enclosed lens sheeting (both orange and white). All advance warning signs used at night shall be equipped with flashing warning lights; all channelizing devices used at night shall be equipped with steady burning warning lights.

SECTION 20.0—OSE PERMITS TO DRILL WELLS 28, 29 30/WELL DRILLER REQUIREMENTS

20.1 OSE Permit Extension Documentation:

MEMORANDUM OF RECOMMENDATION

DATE:	December 19, 2016
FILE:	L-4058-S-29
TO:	Andy Morley, District II Manager
THRU:	Juan Hernandez, Engineering Specialist Supervisor
FROM:	Andrew Dennis, Domestic Well Technician
SUBJECT:	Application for Extension of Time in Which to File Proof of Completion of Well
APPLICANT(S):	City of Lovington
REASON GIVEN:	See Application

Considerations:

Permit Nos. L-4058 thru L-4058-S-12 and L-70 Comb was approved January 17, 19654. Said permit was later modified for a combined total of 3697.14 acre-feet per annum (consumptive use) for municipal purposes from 29 wells. Permits to Supplement L-4058-S-27; L-4058-S-28; L-4058-S-29; L-4058-S-30; l-4058-S-31 were approved January 24, 2008. Proofs of Completion of Wells were due January 31, 2010. Extension of Time approved on May 5, 2016 extended the filing date to January 31, 2016. This is the 4th Extension of Time requested in which to file proof of completion of well on well L-4058-S-29

If approved this extension of time will require the Proof of Completion of Well for well L-4058-S-29 to be filed with the District II office on or before January 31, 2019

RECOMMENDATION:

Approval of the subject Extension of time is recommended.

Ándrew Dennis, Domestic Well Technician

Tom Blaine, P.E. State Engineer



Roswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr: 518762 File Nbr: L 04058

Dec. 19, 2016

CITY OF LOVINGTON WYATT DUNCAN P.O. BOX 1268 LOVINGTON, NM 88260

Greetings:

Enclosed is your copy of Extension of Time for the above numbered permit which has been granted.

Proof of Completion of Well will be due in this office as soon as possible after completion of the well and installation of equipment, but in no event later than 01/31/2019.

This permit will expire, unless proof is filed or an Application for Extension of Time is received in this office on or before 01/31/2019.

Sincerely, r UN

Andrew Dennis (575)622-6521

Encls: Approved Permit

etcwapr

File Number: L-4058-5-2 (For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER 2.37673 APPLICATION FOR EXTENSION OF TIME IN WHICH TO PERFECT AN APPROPRIATION OF UNDERGROUND WATER

1. PERMITTEE

Name:	City of Lovington	Work Phone: 575-704-9171
Contact:	Wyatt Duncan	Home Phone: 575-396-0498
Address:	P.O Box 1268	
City:	Lovington	State: NM Zip: <u>88260</u>

2. HEREBY APPLIES FOR AN EXTENSION OF TIME IN WHICH TO

Drill and Complete Water Well L-4058-S-29

(complete the well, apply water to beneficial use or both)

3. REASON

The period of time is insufficient and additional time is requested for the following reasons (state reasons in detail if desirable or necessary, submit affidavits, photographs, etc., as evidence in support of statement:

The City of Lovington needs to drill additional water wells to supply sufficient water to the citizens of Lovington. We need an Extension of time for our contract to the start on the project and to be completed.

2:3

The State Engineer is hereby requested to extend the time previously granted by extending the limiting date to $\frac{1}{mm/dd/year}$.

Do Not Write Below This Line

File Number: <u>L-4058-5-2</u> Form: wr-13 Trn Number:

page 1 of 2

File Number: L-4058-5-29 (For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER APPLICATION FOR EXTENSION OF TIME IN WHICH TO PERFECT AN APPROPRIATION OF UNDERGROUND WATER

ACKNOWLEDGEMENT

(I, We) Wyatt Duncan				100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100	af:	firm	tha	t the
	(Please	Print)						
foregoing statements are	true to	the best	of (my,	our)	knowledge	e and	d be	lief.
- Ayart In								•
Permittee Signature			Permit	tee Si	gnature			
	ACTION O	F STATE F	NGINEER					
By authority vested in me approved/denied and I do the following dates:	e, this a hereby g	pplicati rant the	on for a permitt	dditic ee an	onal time extentior	is 1 of	time	e to
Complete the well on or)	before	January	lst			/	20	19
Apply Water to Beneficia.	l Use on	or befor	Э				20	
		1	-	-				
		14						
Witness my hand and seal	this <u>1</u>	9 <u>th</u> da	y of <u>De</u>	cember		/	20	16
Tom Blaine, P.E.	, Stat	e Engine	er					
By:	\geq							
Juan Hernandez, Enginee	ring Specia	alist Super	°V1 SOr					
\bigcirc								

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File	Number:	L- 4058-5-29	Trn	Number:	
	Form:	wr-13	page 2 of 2		

Tom Blaine, P.E. State Engineer



Roswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Mbr: 518762 File Nbr: L 04058

Dec. 19, 2016

CITY OF LOVINGTON WYATT DUNCAN P.O. BOX 1268 LOVINGTON, NM 88260

Greetings:

Enclosed is your copy of Extension of Time for the above numbered permit which has been granted.

Proof of Completion of Well will be due in this office as soon as possible after completion of the well and installation of equipment, but in no event later than 01/31/2019.

This permit will expire, unless proof is filed or an Application for Extension of Time is received in this office on or before 01/31/2019.

Sincerely, 2 ne

Andrew Dennis (575)622-6521

Encls: Approved Permit

etcwapr

File Number: L- 4058-5-28 (For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER 2-37 **APPLICATION FOR EXTENSION OF TIME** IN WHICH TO PERFECT AN APPROPRIATION OF UNDERGROUND WATER

1. PERMITTEE

Name:	City of Lovington	Work Phone:	575-704-9171
Contact:	Wyatt Duncan	Home Phone:	575-396-0498
Address:	P.O Box 1268		
City:	Lovington	State: NM Zij	p: 88260

2. HEREBY APPLIES FOR AN EXTENSION OF TIME IN WHICH TO

Drill and Complete Water Well L-4058-S-28 (complete the well, apply water to beneficial use or both)

3. REASON

The period of time is insufficient and additional time is requested for the following reasons (state reasons in detail if desirable or necessary, submit affidavits, photographs, etc., as evidence in support of statement:

The City of Lovington needs to drill additional water wells to supply sufficient water to the citizens of Lovington. We need an Extension of time for our contract to the start on the project and to be completed.

OI AON 910 PH N

41

The State Engineer is hereby requested to extend the time previously granted by extending the limiting date to mm/dd/year

Do Not Write Below This Line

File Number: <u>L- 4058-5-28</u> Form: wr-13

and the second state

Trn Number:

page 1 of 2

File Number: (For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER APPLICATION FOR EXTENSION OF TIME IN WHICH TO PERFECT AN APPROPRIATION OF UNDERGROUND WATER

ACKNOWLEDGEMENT

(I, We) Wyatt Duncan	and the second second			affi	irm that	. the
	(Please Pri	.nt)				
foregoing statements are	e true to the	e best of	(my, our)	knowledge	and bel	ief.
Permittee Signature	2	Pe	ermittee S	ignature		
	ACTION OF S	TATE ENGI	NEER			
By authority vested in m approved/denied and I do the following dates:	ne, this appl hereby grar	ication f	for additi mittee an	onal time i extention	.s of time	to
Complete the well on or	before	January 1	st		_, 20 _	19
Apply Water to Beneficia	al Use on or	before _			_, 20 _	
			*	(41 V		
Witness my hand and sead Tom Blaine, P.E. By:	this 19th , State E	day of ingineer	December		_, 20 10	5
Juan Hernandez, Engin	eering Special	ist Supervi	sor			

Do Not Write Below This Line

File	Number:	L-4058-5-28
	Form:	wr-13

1

Trn Number: _____ page 2 of 2

MEMORANDUM OF RECOMMENDATION

DATE:	December 19, 2016
FILE:	L-4058-S-29
то:	Andy Morley, District II Manager
THRU:	Juan Hernandez, Engineering Specialist Supervisor
FROM:	Andrew Dennis, Domestic Well Technician
SUBJECT:	Application for Extension of Time in Which to File Proof of Completion of Well
APPLICANT(S):	City of Lovington
REASON GIVEN:	See Application

Considerations:

Permit Nos. L-4058 thru L-4058-S-12 and L-70 Comb was approved January 17, 19654. Said permit was later modified for a combined total of 3697.14 acre-feet per annum (consumptive use) for municipal purposes from 29 wells. Permits to Supplement L-4058-S-27; L-4058-S-28; L-4058-S-29; L-4058-S-30; l-4058-S-31 were approved January 24, 2008. Proofs of Completion of Wells were due January 31, 2010. Extension of Time approved on May 5, 2016 extended the filing date to January 31, 2016. This is the 4th Extension of Time requested in which to file proof of completion of well on well L-4058-S-29

If approved this extension of time will require the Proof of Completion of Well for well L-4058-S-29 to be filed with the District II office on or before January 31, 2019

RECOMMENDATION:

Approval of the subject Extension of time is recommended.

Andrew Dennis, Domestic Well Technician

OFFICE OF THE STATE ENGINEER/INTERSTATE STREAM COMMISSION – ROSWELL OFFICE

OFFICIAL RECEIPT	NUMBER: 2 - 376	73 DATE:	11/10/16	FILE NO.:	L-4058-5-29/1	-4058-5-28
TOTAL: \$50	RECEIV	D: Fifty		DOLLARS	CHECK NO .: 51727	CASH:
PAYOR: City	of Lovington	ADDR	ESS: 1. 0. 130x	<u> 400 cr</u>	TY: Lovington	STATE: NM
ZIP: 8824//	RECEIVED BY:	0.1			0	

INSTRUCTIONS: Indicate the number of actions to the left of the appropriate type of filing. Complete the receipt information. **Original** to payor; **pink** copy to Program Support/ASD; and **yellow** copy for Water Rights. If a mistake is made, void the original and all copies and submit to Program Support/ASD as part of your daily deposit.

A. Ground Water Filing Fees

 1.	Change of Ownership of Water Right	\$	2.00
 2.	Application to Appropriate or Supplemen	t	
	Domestic 72-12-1 Well	\$	125.00
 3.	Application to Repair or Deepen		
	72-12-1 Well	\$	75.00
 4.	Application for Replacement		
	72-12-1 Well	\$	75.00
 5.	Application to Change Purpose of Use		
102	72-12-1 Well	\$	75.00
 6.	Application for Stock Well/Temp. Use	\$	5.00
 		_	
 7.	Application to Appropriate Irrigation,		
	Municipal, or Commercial Use	\$	25.00
 8.	Declaration of Water Right	\$	1.00
 9.	Application for Supplemental Non		
	72-12-1 Well	\$	25.00
 10.	Application to Change Place or		
	Purpose of Use Non 72-12-1 Well	\$	25.00
 11.	Application to Change Point of Diversion		
	and Place and/or Purpose of Use from	¢	50.00
12	Application to Change Doint of Diversion	Þ	50.00
 12.	and Place and/or Purpose of Use from		
	Ground Water to Ground Water	¢	50.00
13	Application to Change Point of	φ	50.00
 15.	Diversion of Non 72-12-1 Well	\$	25.00
14	Application to Repair or Deepen	¥	25.00
 1.11	Non 72-12-1 Well	\$	5.00
		Ψ	5.00

	15. Application for Test, Expl. Observ. Well	\$ 5.00
2	16. Application for Extension of Time	\$ 25.00
	17. Proof of Application to Beneficial Use	\$ 25.00
	Notice of Intent to Appropriate	\$ 25.00

B. Surface Water Filing Fees

	1.	Change of Ownership of a Water Right	\$	5.00
	2.	Declaration of Water Right	\$	10.00
	3.	Amended Declaration	\$	25.00
	4.	Application to Change Point of Diversion		
		and Place and/or Purpose of Use from		
		Surface Water to Surface Water	\$	200.00
-	5.	Application to Change Point of Diversion	1	
		and Place and/or Purpose of Use from		
		Ground Water to Surface Water	\$	200.00
	6.	Application to Change Point of		
		Diversion	\$	100.00
	7.	Application to Change Place and/or		
		Purpose of Use	\$	100.00
	8.	Application to Appropriate	\$	25.00
	9.	Notice of Intent to Appropriate	\$	25.00
_	10.	Application for Extension of Time	\$	50.00
	11.	Supplemental Well to a Surface Right	\$	100.00
	12.	Return Flow Credit	\$	100.00
	13.	Proof of Completion of Works	\$	25.00
	14.	Proof of Application of Water to		
		Beneficial Use	\$	25.00
	15.	Water Development Plan	\$	100.00
	16.	Declaration of Livestock Water		
		Impoundment	\$	10.00
	17.	Application for Livestock Water		
		Impoundment	\$	10.00

C. Well Driller Fees

1.	Application for Well Driller's License	\$ 50.00
2.	Driller's License	\$ 50.00
3.	Application to Amend Well Driller's License	\$ 50.00
D. Rep	production of Documents	
@	0.25¢	\$
Ma	p(s)	\$
E. Cer	tification	\$
F. Oth	\$	
G. Cor	nments:	
×	Mail	

All fees are non-refundable.



STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER DISTRICT II OFFICE

TELEPHONE: (575) 622-6521 FAX: (575) 623-8559

TOM BLAINE, P.E. STATE ENGINEER

Mailing Address: 1900 West Second Street Roswell, NM 88201-1712

February 26, 2016

ATTN Wyatt Duncan City of Lovington P.O. Box 1268 Lovington, NM 88260

File: L-4058 Application: C-4058; L-4058-POD26: Change Location of Well (Replacement)

Subject: Emergency Drilling of a Replacement Groundwater Well within 100 Feet of an Existing Well (L-4058-S-30), under Section 72-12-22 NMSA (1978)

Greetings:

This letter acknowledges that the City of Lovington has notified the State Engineer by registered mail of an intention to drill a replacement municipal well within 100 feet of existing failed municipal well L-4058-S-30, under NMSA 72-12-22. The District II Office is also in receipt of a follow-up application to Change a Groundwater Point of Diversion by drilling and using the replacement well, hereby numbered L-4058-POD26. The emergency use of L-4058-POD26 is subject to emergency conditions provided herein.

Please find the enclosed Notice for Publication for said Application for Permit to Change an Existing Water Right, which shall be published at your expense once a week for three (3) consecutive weeks in the **Lovington Daily Leader**, in Lea County. You should see that first publication is made as soon as possible after your receipt of this letter. Publisher's Affidavit of such publication must be filed with the State Engineer within sixty (60) days from the date hereon.

Please take a moment to review the enclosed notice and report any inaccuracies to the State Engineer at the address or phone number on this letterhead. You are encouraged to further review the notice immediately after it appears as an actual publication, and in the event that inaccuracies or flaws are identified at the fault of the publisher, to contact the publisher immediately. The accuracy as to the content of this notice is your responsibility and the State Engineer is not obligated for any additional expense incurred by the necessity of re-advertisement.

Duemp

Bill Duemling Water Resource Allocation Program Water Rights Division

Enclosure cc Santa Fe

NEW MEXICO OFFICE OF THE STATE ENGINEER EMERGENCY AUTHORIZATION TO CHANGE LOCATION OF WELL (REPLACEMENT)

1. The following emergency conditions apply to this replacement well:

File Number: L-4058; L-4058-S-30; L-4058-POD26

SOURCE: Groundwater	
POINTS OF DIVERSION:	
Existing Wells:	

**Wall	<u> </u>			<u>N.M.P.M.</u>
L 52 DOD4	Subdivision	Section	Township	Range
L-53-POD4	NE ¹ /4NE ¹ /4SW ¹ /4	25	16S	36E
L-70	NW1/4SW1/4NE1/4	10	16S	36E
L-70-S	NE ¹ /4SW ¹ /4NE ¹ /4	10	165	36E
L-208-POD3	SW1/4NE1/4NE1/4	9	16S	36E
L-208-POD4	SW1/4SW1/4SE1/4	4	168	36E
L-208-POD5	SE ¹ /4NW ¹ /4NW ¹ /4	10	165	36E
	(PCW Location)			JUL
L-208-POD9	SW1/4NW1/4SE1/4	3	165	36F
L-455-POD2	Lot 9 in N ¹ / ₂	4	165	36E
L-455-POD4	SE ¹ /4NW ¹ /4NW ¹ /4	15	165	36E
L-766-POD2	SE corner of Lot 5 in $N^{1/2}$	4	165	36E
L-1702	Lot 11	4	165	
L-1702-S	NE corner of Lot 5	4	165	
L-1703	Lot 12	3	165	<u>30E</u>
L-1704-POD4	NW1/4NE1/4NW1/4	0	165	<u>30E</u>
L-4058-POD1	NE ¹ /4SE ¹ /4NE ¹ /4	10	105	36E
(originally L-4058-S-12)		10	105	36E
L-4058-POD2	NW ¹ /4NE ¹ /4SE ¹ /4	36	169	265
(originally L-1702, L-1703,	(PCW field check location)	50	103	30E
L-1704-Combined-A)				
L-4058-POD3	NW1/4NE1/4SE1/4	10	165	365
(originally L-70-S-2)		10	105	JUE
L-4058-S-14	SW1/4NE1/4SE1/4	25	165	36F
L-4058-S-15	SW1/4NE1/4NE1/4	36	165	36E
L-4058-S-16	NE ¹ /4NE ¹ /4SE ¹ /4	36	165	36E
L-4058-S-17	SE ¹ /4SW ¹ /4SW ¹ /4	25	165	
L-4058-S-18	SE ¹ /4SW ¹ /4NW ¹ /4	36	165	36E
L-4058-S-19	SE1/4SW1/4SW1/4	36	165	
L-4058-S-20	SE ¹ /4SW ¹ /4SE ¹ /4	26	165	
L-4058-S-21	SE ¹ /4NW ¹ /4NW ¹ /4	36	165	30E
L-4058-S-22	E ¹ /2NW ¹ /4SW ¹ /4	36	165	30E
L-4058-S-23	NE ¹ /4SE ¹ /4NE ¹ /4	36	165	
(remediation well)	(based on well log check)	50	105	36E
L-4058-S-24	NE ¹ /4NW ¹ /4NW ¹ /4	36	165	265
L-4058-S-25	NE ¹ /4SW ¹ /4NW ¹ /4	36	165	26E
L-4058-S-26	SE ¹ /4SE ¹ /4NE ¹ /4	36	165	260
L-4058-S-27	SE ¹ /4SE ¹ /4SE ¹ /4	26	168	26E
L-4058-S-28	NE ¹ /4NW ¹ /4NE ¹ /4	35	169	30E
L-4058-S-29	SEI4NWI4NEI4	35	165	30E
L-4058-S-30 (failed well)	NE ¹ /4SW ¹ /MF ¹ /4	35	165	36E
L-4058-S-31	SF1/SW1/NF1/	- 35	105	36E
	5L/45 W /41NE/4	55	165	36E

** Note: Permits for Well L-4058-S-10 and Well L-4058-S-11 were cancelled or withdrawn, and said wells were never drilled.

File Numbers: L-4058; L-4058-S-30; L-4058-POD26

NEW MEXICO OFFICE OF THE STATE ENGINEER EMERGENCY AUTHORIZATION TO CHANGE LOCATION OF WELL (REPLACEMENT)

XX7.11	0.1.11.1.1			$\underline{N.M.P.N}$
weil	Subdivision	Section	Township	Range
2-4058-POD26	NE ¹ /4SW ¹ /4NE ¹ /4	35	165	265
(Replaces L-4058-S-30)		55	105	30E

Purpose & Place of Use: Municipal in City of Lovington Service Area

	N.M.P.M.			
Subdivision	Sections	Township	Range	Acres
Portions of:	3-4, 9-10, 36	165	36E	reces
		100	JUL	

AMOUNT OF WATER: Up to 3,697.14 acre-feet per annum

2. The total diversion of groundwater from wells L-4058-POD26, L-53-POD4, L-70, L-70-S, L-208-POD3, L-208-POD4, L-208-POD5, L-208-POD9, L-455-POD2, L-455-POD4, L-766-POD2,L-1702, L-1702-S, L-1703, L-1704-POD4, L-4058-POD1, L-4058-POD2, L-4058-POD3, L-4058-S-14, L-4058-S-15,L-4058-S-16,L-4058-S-17,L-4058-S-18, L-4058-S-19,L-4058-S-20,L-4058-S-21,L-4058-S-22 L-4058-S-23, L-4058-S-24,L-4058-S-25,L-4058-S-26,L-4058-S-27,L-4058-S-28, L-4058-S-29, and L-4058-S-31, combined under this authorization, shall not exceed 3,697.14 acre-feet per annum (consumptive use), measured at the wells.

3. Replacement well L-4058-POD26 shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12, New Mexico Statutes Annotated.

4. Replacement well L-4058-POD26 shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between geologic zones.

5. Should replacement well L-4058-POD26 encounter artesian conditions, an artesian plan of operations must be submitted to the State Engineer for approval, said well shall be constructed to artesian well specifications, and the State Engineer shall be notified before casing is landed or cemented.

6. Driller's record for well L-4058-POD26 must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.

7. Replaced well L-4058-S-30 shall be plugged by a licensed New Mexico driller, after the State Engineer has approved a plugging plan submitted by said driller. A plugging record shall be filed.

8. Equipped wells shall be fitted with a totalizing meter of a type, location, and installation manner acceptable to the State Engineer. The meter shall be installed before the first branch of the discharge line from each well. The Office of the State Engineer, District II, Roswell, shall be advised in writing of the make, model, serial number, units, date of installation, initial reading, and any recalibration or replacement events for each meter prior to any diversion of water.

File Numbers: L-4058; L-4058-S-30; L-4058-POD26

NEW MEXICO OFFICE OF THE STATE ENGINEER EMERGENCY AUTHORIZATION TO CHANGE LOCATION OF WELL (REPLACEMENT)

9. The emergency well user shall record the meter readings for each well in writing on the first day of January, April, July, and October of each year on a form acceptable to the Office of the State Engineer and submit said readings to the Office of the State Engineer, District II, Roswell, on or before the 10th day of January, April, July, and October of each year.

10. The issuance of this emergency authorization does not relieve the applicant from compliance with other state, federal, and local regulations and standards, including standards maintained by the New Mexico Environment Department Drinking Water Bureau.

11. The emergency well user shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

12. This Emergency Authorization shall not be exercised to the detriment of valid existing water rights, shall not be contrary to the conservation of water within the State of New Mexico, and shall not be detrimental to the public welfare of the State.

13. This Emergency Authorization shall be in effect until such time the State Engineer takes formal action.

14. The issuance of this authorization does not obligate favorable action by the State Engineer on the pending application.

15. The Emergency Authorization will automatically expire and be cancelled if for any reason the application is denied.

16. The State Engineer shall retain jurisdiction over this authorization.

17. Pursuant to Section 72-8-1 NMSA, the water right owner of record shall allow the State Engineer, and his representatives, entry upon private property for the performance of their respective duties, including access to the well for meter reading and water level measurement.

Dated this 26th day of February, A.D., 2016.

Tom Blaine, P.E., State Engineer

BY: Bill Duemling, District II Engineer Specialist Supervisor

3
Affidavit of Publication

STATE OF NEW MEXICO)) ss. COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that she is Advertisting Manager of THE LOVINGTON LEADER, a thrice a week newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled Legal Notice and numbered L-4058 was published in a regular and entire issue of THE LOVINGTON LEADER and not in any supplement thereof, once each week on the same day of the week, for three (3) consecutive weeks, beginning with the issue of March 10, 2016 and ending with the issue of March 24, 2016.

And that the cost of publishing said notice is the sum of \$165.77 which sum has been (Paid) as Court Costs.

Joyce Clemens, Advertising Manager Subscribed and sworn to before me this 5th day of April, 2016.

Mina tort

Gina Fort Notary Public, Lea County, New Mexico My Commission Expires June 30, 2018



LEGAL NOTICE

NOTICE is hereby given that on February 12, 2016, the City of Lovington, c/o Wyatt Duncan, P.O. Box 1268, Lovington, NM, 88260, filed an application with the STATE ENGINEER under File Number L-4058, for a permit to drill a replacement municipal well within 100 feet of an existing failed municipal well, citing an emergency situation under NMSA 72-12-22. The applicant proposes to cease the use of well L-4058-S-30, and drill and construct replacement well L-4058-POD26, both located in the NE/4 SW/4 NE/4 of Section 35, Township 16 South, Range 36 East, N.M.P.M., for the continued diversion of up to 3,697.14 acre-feet per annum (consumptive use) of shallow groundwater, for continued use in municipal purposes within the City of Lovington Service Area, locate in portions of Sections 3, 4, 9, 10, and 36, all in Township 16 South, Range 36 East, N.M.P.M. The new well will be drilled to an approximate depth of 250 feet below land surface, with an outside-diameter casing size of twelve inches.

The new well will join 34 other authorized points of diversion that are licensed or permitted under this water right for municipal use. Replaced well L-4058-S-30 will be plugged.

The existing will and replacement well are located in the Lea County Administrative Basin, approximately 3.50 miles southeast of Lovington, New Mexico.

Any person, firm or corporation or other entity having standing to file objections or protests shall do so in writing (legible, signed, and include the writer's complete name and mailing address). The objection to the approval of the application: (1) if impairment, you must specifically identify your water rights; and/or (2) if public welfare or conservation of water within the State of New Mexico, you must show you will be substantially and specifically affected. The written protest must be filed, in triplicate, with the State Engineer, 1900 West Second Street, Roswell, New Mexico 88201, within 10 days after the date of the last publication of this Notice. Facsimiles (faxes) will be accepted as a valid protest as long as a triplicate hard copy is sent within 24 hours of the facsimile. Mailing postmark will be used to validate the 24-hour period. Protest can be faxed to 575-623-8559. If no valid protest or objection is filed, the State Engineer will evaluate the application in accordance with Sections 72-2-16, 72-5-6 and 72-1.

Published in the Lovington Leader March 10, 17 and 24, 2016

<u>NOTE TO PUBLISHER</u>: Immediately after last publication, publisher is requested to file affidavit of such publication with the State Engineer, 1900 W. Second Street, Roswell, New Mexico 88201.

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20.2 Well Driller Requirements:

Refer to NMAC 19 Chapter 27 Part 4 for Well Driller Licensing; Construction, Repair and Plugging of Wells.

TITLE 19NATURAL RESOURCES AND WILDLIFECHAPTER 27UNDERGROUND WATERPART 4WELL DRILLER LICENSING; CONSTRUCTION, REPAIR AND PLUGGING OF
WELLS

19.27.4.1 ISSUING AGENCY: Office of the State Engineer. [19.27.4.1 NMAC - N, 8-31-2005]

19.27.4.2 SCOPE: The rules for well driller licensing, drill rig supervisor registration, and well drilling within the state of New Mexico. These rules also apply to mine drill holes that encounter water. These rules do not apply to oil wells, gas wells, or cathodic protection wells. [19.27.4.2 NMAC - N, 8-31-2005]

19.27.4.3 STATUTORY AUTHORITY: Section 72-12-1 NMSA provides that the water of underground streams, channels, artesian basins, reservoirs, or lakes having reasonably ascertainable boundaries are declared to be public waters which belong to the public and are subject to appropriation for beneficial use. Section 72-2-8 NMSA gives the state engineer authority to adopt regulations and codes to implement and enforce any provision of any law administered by him. Section 72-12-12 NMSA states that it shall be unlawful for any person, firm, or corporation to drill or to begin the drilling of a well for water from an underground source without a valid, existing license for the drilling of such wells issued by the state engineer of New Mexico. Section 72-12-13 NMSA states any person desiring to engage in the drilling of one or more wells for underground water within the boundaries of any underground source shall file an application with the state engineer for a driller license. Sections 72-12-14 through 72-12-17 NMSA further detail requirements for well drillers in New Mexico. Sections 72-13-1 through 72-13-12 NMSA detail the requirements for the drilling of artesian wells.

[19.27.4.3 NMAC - N, 8-31-2005]

19.27.4.4 DURATION: Permanent. [19.27.4.4 NMAC - N, 8-31-2005]

19.27.4.5 EFFECTIVE DATE: August 31, 2005, unless a later date is cited at the end of a section. [19.27.4.5 NMAC - N, 8-31-2005]

19.27.4.6 OBJECTIVE: To update written rules for well driller licensing, drill rig supervisor registration, and well drilling within the state of New Mexico. [19.27.4.6 NMAC - N, 8-31-2005]

19.27.4.7 DEFINITIONS: Unless defined below or in a specific section of these rules, all other words used herein shall be given their customary and accepted meaning. The use of a masculine pronoun to refer to individuals is for grammatical convenience and is intended to be gender neutral.

A. Artesian well: A well that penetrates a saturated hydrogeologic unit and allows underground water to rise or move appreciably into another geologic unit, or allows underground water to rise to freely flow at the land surface. For regulatory purposes, the determination of whether a well or bore hole is artesian shall be made by the state engineer, taking into consideration the potential for loss of water at the land surface or into another geologic unit.

B. Drill rig supervisor: A person registered by the office of the state engineer who may provide onsite supervision of well drilling activities. A drill rig supervisor shall only provide onsite supervision when he is operating under the direction of a licensed well driller.

C. **Drilling:** see definition for well drilling.

D. Mine drill hole: A deep narrow hole drilled to explore for or delineate deposits or accumulations of ore, mineral, or rock resources.

E. Well: A bore hole, cased or screened bore hole, or other hydraulic structure that is drilled, driven, or dug with the intent of penetrating a saturated geologic unit. The intended use may be for developing a source of water supply, for monitoring water levels, for monitoring water quality, for exploratory purposes, for water remediation, for injection of water, for geothermal purposes, or for other purposes.

F. Well drilling, well drilling activities: The activities associated with the drilling of a well, including, but not limited to, the construction, drilling, completion, repair, deepening, cleaning, plugging, and abandonment of a well.

[19.27.4.7 NMAC - N, 8-31-2005]

19.27.4.8 LICENSE REQUIRED: Any person who engages in the business of well drilling within the state of New Mexico shall obtain a well driller license issued by the state engineer (except, under New Mexico state law, a well driller license is not required for driven wells that do not require the use of a drill rig and which have an outside casing diameter of two and three-eighths (2³/₈) inches or less). A person found engaged in the business of well drilling within the state of New Mexico without a license can be prosecuted in accordance with New Mexico Statutes. A well driller license is not required for work on pumping equipment. [19.27.4.8 NMAC - Rp, SE 66-1, Article 4-1, 8-31-2005]

19.27.4.9 EXISTING WELL DRILLER LICENSE RECOGNIZED: A person holding a valid and current well driller license in the state of New Mexico on August 31, 2005 shall have his license recognized. Any amendment or change to a license shall be made pursuant to the requirements of 19.27.4.16 NMAC and 19.27.4.17 NMAC. A licensed well driller may request that his license be renewed by filing an application with the state engineer prior to the expiration of the current license (see 19.27.4.20 NMAC). A well driller that allows his license to expire and does not reinstate the license within the grace period provided for under 19.27.5.19 NMAC shall apply for a new license in accordance with the requirements of 19.27.4.12 NMAC. [19.27.4.9 NMAC - N, 8-31-2005]

19.27.4.10 - 19.27.4.11 RESERVED

19.27.4.12 APPLICATION FOR A NEW LICENSE: An applicant for a well driller license shall meet the following requirements to be considered for licensure.

- **A. Qualified applicant:** A qualified applicant for a well driller license shall:
 - (1) have passed the national ground water association general exam; and

(2) have passed the appropriate national ground water association methodology exam(s) for each type of drilling method for which the applicant has requested to be licensed (the state engineer shall make the final determination of the test(s) necessary should a question arise regarding applicability of available test(s) to applied method(s) of well construction); and

(3) have at least two (2) years of relevant, on-site experience working under the supervision of a licensed well driller; and

(4) effective July 1, 2006, have passed the New Mexico general drilling exam.

B. Application - form and content: An application for a well driller license shall be completed on a form prescribed by the state engineer. The application shall include the name, address, and the phone number of the applicant, the state of residency of the applicant, three letters of reference (one of which shall be from a well driller licensed in New Mexico, or a state's licensing authority, attesting to the applicant's well drilling ability), documentation of prior well drilling experience, proof of required bonds, proof of required insurances, documentation that applicant has passed the required exams listed in Paragraphs (1), (2) and (4) of Subsection A of 19.27.4.12 NMAC, the name of each registered drill rig supervisor that the applicant plans to supervise, if known, the type of well drilling methods the applicant is applying to be licensed for, and other information deemed necessary by the state engineer. The application must also contain a description of each active drill rig owned or controlled by the applicant. The description of the drill rig shall be on a form prescribed by the state engineer and shall include a side-view photograph of the rig.

C. Filing fee: A fee of fifty dollars (\$50) is required to accompany an application for a new license.

D. Bond requirements: Each applicant for a well driller license shall file a bond in the penal sum of five thousand dollars (\$5,000) on a form acceptable to the state engineer. The surety backing the bond shall be acceptable to the state engineer. A well driller license shall be valid only so long as the bond remains in effect. The bond shall:

(1) be conditioned upon proper compliance with state law and the rules and regulations of the state engineer; and

- (2) be effective for the period of time for which the license is issued; and
- (3) stipulate the obligee as the "office of the state engineer"; and
- (4) not be represented to the public as a performance bond.

E. Insurance requirements: Each applicant for a well driller license shall file with the state engineer proof of general liability insurance in the minimum amount of three hundred thousand dollars (\$300,000) and proof of appropriate insurance under the Workers' Compensation Act. [19.27.4.12 NMAC Rp SE 66-1, Article 4-2, 8-31-2005]

19.27.4.13 NATIONAL GROUND WATER ASSOCIATION EXAMS: The national ground water association exams shall consist of the general drilling exam and the appropriate drilling methodology exam(s) developed and administered by the national ground water association. If an applicant has passed the national ground water association general exam and appropriate methodology exams in another state, the applicant shall provide written proof to the state engineer. The fee to take the national ground water association exams will be established by the national ground water association.

[19.27.4.13 NMAC - N, 8-31-2005]

19.27.4.14 NEW MEXICO GENERAL DRILLING EXAM: This section has an effective date of July 1, 2006. The New Mexico general drilling exam will be offered at least four (4) times a year by the state engineer or his authorized representative.

A. Exam fee: The fee to take the New Mexico general drilling exam will be based on the approximate cost of administering the test.

B. Test - content: The New Mexico general drilling exam may include questions on the following subjects:

(1) New Mexico water law as it pertains to well driller licensing, well drilling and construction, and the administration of underground water;

(2) the state engineer's rules and regulations pertaining well driller licensing, well drilling and construction, and the administration of underground water;

(3) New Mexico environment department's rules, regulations, and guidelines pertaining to set back requirements, well disinfection, sampling of underground water, and water analysis;

- (4) the proper methods and techniques for well drilling;
- (5) geologic formations and proper terminology used in describing underground material types;

(6) basic groundwater geology and the occurrence and movement of underground water;

- (7) legal description of well location, latitude and longitude, and the New Mexico coordinate system;
- (8) global positioning system terminology and receiver operation;

(9) other topics and subjects related to well driller licensing, well construction, and well drilling within the state of New Mexico.

C. Passing the exam: The applicant shall obtain a minimum score of seventy percent (70%) to pass the New Mexico general drilling exam.

D. Re-examination: An applicant who fails to obtain the minimum passing score on the exam may retake the exam.

(1) The fee to retake the New Mexico general drilling exam will be based on the approximate cost of administering the test.

(2) Any applicant found cheating on the exam, as determined by the tester or testing agency, will not be permitted to reapply to take the exam for a period of one (1) year from the date of the transgression. [19.27.4.14 NMAC - N, 7-1-2006]

19.27.4.15 APPLICATION REVIEW AND LICENSING REQUIREMENTS: If the state engineer finds that an applicant has fulfilled the requirements for licensure as set forth in 19.27.4.12 NMAC, the state engineer shall issue a well driller license to the applicant. The license shall set forth the conditions under which the well driller shall operate his well drilling activities within the state of New Mexico. The license shall also state which drilling methods the well driller may engage in.

A. License duration: A license issued by the state engineer will be valid for a period of two (2) years.

B. Driller identification card: The state engineer will issue a well driller identification card to each licensed well driller. When drilling within the state of New Mexico, a well driller shall have his identification card available for inspection upon request.

C. Drill rig marking: The name and license number of the well driller shall be clearly displayed on each drill rig under his control.

D. Oversight of registered drill rig supervisor: A licensed well driller may allow a registered drill rig supervisor to provide onsite supervision of well drilling activities. The licensed well driller is responsible for the actions of each drill rig supervisor that he directs to provide such onsite supervision of well drilling activities. [19.27.4.15 NMAC - Rp, SE 66-1, Articles 4-4 and 4-5, 8-31-2005]

19.27.4.16 CHANGES TO LICENSE: A licensed well driller shall notify the state engineer in writing within 10 days of any change to his current license, including:

- A. change in address or any other contact information; or
- **B.** change in drill rig supervisor; or
- **C.** severing ownership or control of an active drill rig; or

D. acquiring ownership or control of an active drill rig (the description of the drill rig shall be on a form prescribed by the state engineer and shall include a side-view photograph of the rig). [19.27.4.16 NMAC - Rp, SE 66-1, Article 4-9, 8-31-2005]

19.27.4.17 REQUEST TO BE LICENSED IN ADDITIONAL DRILLING METHODOLOGY: A licensed well driller shall apply in accordance with the requirements of 19.27.4.12 NMAC to be licensed in an additional drilling methodology. [19.27.4.17 NMAC - N, 8-31-2005]

19.27.4.18 RESERVED

19.27.4.19 LICENSE EXPIRATION: A well driller license shall expire on the date set out on the license. An application to renew a license shall be filed in accordance with 19.27.4.20 NMAC at least ten (10) days prior to the expiration date. If an application to renew a license is not filed with the state engineer prior to the expiration of the current license, the license shall automatically expire. The state engineer will allow a forty-five (45) day grace period after the expiration of a well driller license during which time a well driller may file an application to renew his well driller license and request to have the expired license reinstated. If an application to renew a well driller license is not filed within this time period, the license shall be considered expired without option for reinstatement. A well driller that allows his license to expire and does not reinstate the license within the forty-five (45) day grace period must apply for a new license in accordance with the requirements of 19.27.4.12 NMAC. [19.27.4.19 NMAC - N, 8-31-2005]

19.27.4.20 LICENSE RENEWAL: A licensed driller may request that his license be renewed by filing an application with the state engineer prior to the expiration of his current license. The application for renewal of a well driller license shall be completed on a form prescribed by the state engineer.

A. Form - content: The application for renewal of a well driller license shall include the name, address, phone number, and license number of the well driller, the state of residency of the well driller, proof of required bonds, proof of required insurances, a list of registered drill rig supervisors that the well driller supervises, evidence of meeting the continuing education requirements, and other information deemed necessary by the state engineer.

B. Filing fee: A fee of fifty dollars (\$50) shall accompany the application.

C. Continuing education requirements: During each two (2) year licensing period, a licensed well driller shall complete a minimum of eight (8) continuing education hours approved by the state engineer. The continuing education hours shall relate to well drilling. At least two (2) hours of the continuing education shall be specific to regulatory requirements regarding well drilling in the state of New Mexico. [19.27.4.20 NMAC - Rp, SE 66-1, Article 4-6, 8-31-2005]

19.27.4.21 REPRIMANDS, SUSPENSION OR REVOCATION OF WELL DRILLER LICENSE: The state engineer may issue a written reprimand, a compliance order issued pursuant to Section 72-2-18 NMSA, or, after notice and hearing held pursuant to 19.25.2 NMAC and 19.25.4 NMAC, suspend or revoke a well driller license if it is found that a well driller:

- A. made a material misstatement of facts in his application for license; or
- **B.** failed to submit or submitted an incomplete well record or well log; or
- C. made a material misstatement of facts in a well record or well log; or
- **D.** drilled a well in any declared underground water basin without a state engineer permit; or
- E. violated the conditions of the state engineer permit under which the well was being drilled; or

F. violated the conditions of his well driller license; or

G. the licensed well driller or his registered drill rig supervisor was not present at the drilling site during well drilling activities; or

H. violated the rules and regulations of the state engineer; or

I. failed to assure the protection of the public safety, health, welfare, and property in the well construction process.

[19.27.4.21 NMAC - Rp, SE 66-1, Article 4-10, 8-31-2005]

19.27.4.22 - 19.27.4.24 RESERVED

19.27.4.25 APPLICATION FOR REGISTRATION AS A DRILL RIG SUPERVISOR: A person

registered by the office of the state engineer as a drill rig supervisor may provide onsite supervision of well drilling activities. A drill rig supervisor shall work under the direction of a licensed well driller. The licensed well driller is responsible for the actions of each drill rig supervisor that he directs to provide onsite supervision of well drilling activities. An applicant for registration as a drill rig supervisor shall meet the following requirements.

A. Qualified applicant: A qualified applicant for a registration as a drill rig supervisor shall:

(1) have at least two (2) years of relevant, on-site experience working under the supervision of a licensed well driller; and

- (2) be at least eighteen (18) years of age; and
- (3) effective July 1, 2006, have passed the New Mexico general drilling exam.

B. Application - form and content: An application for registration as a drill rig supervisor shall be completed on a form prescribed by the state engineer. The application shall include the name, address, and phone number of the applicant, a letter of reference from a well driller licensed in New Mexico, or a state's licensing authority, attesting to applicant's well drilling ability, the license number and contact information of the well driller the applicant plans to work for, if known, documentation of prior well drilling experience, documentation that the applicant has passed the New Mexico general drilling exam, and other information deemed necessary by the state engineer.

C. Filing fee: There is no filing fee for the application. [19.27.4.25 NMAC - N, 8-31-2005]

19.27.4.26 APPLICATION REVIEW AND REGISTRATION REQUIREMENTS FOR DRILL RIG SUPERVISOR: If the state engineer finds that the applicant has fulfilled the requirements for registration as set forth in 19.27.4.25 NMAC, the state engineer shall register the applicant as a drill rig supervisor. The registration shall set forth the conditions under which the drill rig supervisor may provide onsite supervision of well drilling activities within the state of New Mexico.

A. Registration duration: A registration issued by the state engineer will be valid for a period of two (2) years.

B. Identification card: The state engineer will issue a drill rig supervisor identification card with the registration. Each drill rig supervisor, when providing onsite supervision of well drilling activities within the state of New Mexico shall have his identification card available for inspection upon request. [19.27.4.26 NMAC - N, 8-31-2005]

19.27.4.27 RENEWAL OF DRILL RIG SUPERVISOR REGISTRATION: A registered drill rig supervisor may request that his registration be renewed by filing an application with the state engineer prior to the expiration of his current registration.

A. Form - content: The application shall be on a form prescribed by the state engineer and shall include the name, address, phone number, and registration number of the drill rig supervisor, the license number and contact information of the well driller the drill rig supervisor is currently working under, evidence of meeting the continuing education requirements, and other information deemed necessary by the state engineer.

B. Filing fee: There is no filing fee for the application.

C. Continuing education requirements: During each two (2) year registration period, a registered drill rig supervisor shall complete a minimum of eight (8) continuing education hours approved by the state engineer. The continuing education hours shall relate to well drilling. At least two (2) hours of the continuing education shall be specific to regulatory requirements regarding well drilling in the state of New Mexico.

D. New Mexico general drilling exam: Persons registered as drill rig supervisor in the state of New Mexico on or before July 1, 2006 shall be required to pass the New Mexico general drilling exam on or before August 31, 2010.
[19.27.4.27 NMAC - N, 8-31-2005]

[19.27.4.27 NMAC - N, 8-51-2005]

19.27.4.28 RESERVED

19.27.4.29 WELL DRILLING - GENERAL REQUIREMENTS: All wells shall be constructed to prevent contamination, to prevent inter-aquifer exchange of water, to prevent flood waters from contaminating the aquifer, and to prevent infiltration of surface water. A licensed well driller shall ensure that an appropriate well permit or emergency authorization has been granted by the state engineer prior to the well drilling. A licensed well driller shall ensure that the well drilling activities are made in accordance with 19.27.4.30 NMAC, 19.27.4.31 NMAC, and the following requirements:

A. On-site supervision of well drilling: A licensed well driller or registered drill rig supervisor shall be present at the drilling site during well drilling.

B. Materials: Materials used in well drilling shall conform to industry standards acceptable to the state engineer. Acceptable standards include, but are not limited to, standards developed by the American water works association (AWWA), the American standard for testing materials (ASTM), the American petroleum institute (API), and the national sanitation foundation (NSF). The state engineer shall make the final determination of applicability of standards if any of the acceptable standards are different from one another. Materials used in well construction shall be in new or good condition. No materials shall be used that may cause water contamination. Only potable water shall be placed in a well during well drilling.

C. Cleaning of drilling equipment: All down-hole equipment shall be maintained in a clean and sanitary condition to prevent contamination and to protect the public health. To reduce the potential of contaminating a well, equipment shall be disinfected prior to well drilling with a chlorine solution of household chlorine bleach diluted at one part bleach to nine parts water. Adequate contact time shall be allowed for the disinfectant to sanitize the equipment before rinsing (laboratory testing will not be required).

D. Well setbacks: All wells shall be set back a minimum of fifty (50) feet from an existing well of other ownership, unless a variance has been granted by the state engineer. All wells shall be set back from potential sources of contamination in accordance with New Mexico environment department regulations and other applicable ordinances or regulations.

E. Casing height: The top of all well casings shall extend a minimum of eighteen (18) inches above land surface. All vents installed in the well casing shall be protected against the entrance of foreign material by installation of down-turned and screened "U" bends. All other openings in casings shall be sealed to prevent entrance of foreign material and flood waters.

F. Subsurface vault: The completion of a well within a subsurface vault is not recommended due to difficulty in performing well repairs and cleaning. If a well is completed within a subsurface vault, the casing shall extend a minimum of eighteen (18) inches above the floor of the vault.

G. Surface pad: A concrete pad is recommended on all wells. It is recommended that:

- (1) the surface area of the concrete pad be a minimum of four (4) square feet; and
- (2) the concrete pad be centered around the well; and
- (3) the pad be at least four (4) inches in thickness and slope away from the well; and

(4) when surface casing is used, the surface pad should seal the top of the annular space between the production casing and the surface casing.

H. Access for water level monitoring: Every well shall be constructed with a wellhead opening of at least one half $\binom{1}{2}$ inch diameter to allow the water level to be measured. A water-tight removable cap or plug shall be securely placed in the opening. An artesian well that flows at land surface upon completion of the well shall be equipped with a valve to which a pressure gauge may be attached.

I. Requirement to cover or cap wells: During well drilling, a well shall be securely covered or capped unless a licensed well driller or registered drill rig supervisor is on-site attending to the well. A permanent well cap or cover shall be securely affixed to the well casing upon completion. All permanent caps shall have a well access opening in accordance with Subsection H of 19.27.4.29 NMAC.

J. Well identification tag: The state engineer may require that a well be tagged with a well identification tag. If a well tag is required, the well driller shall affix the tag in plain view. The state engineer will provide a well tag when a permit is issued. Replacement well tags will be issued upon request. The permit holder is

responsible for maintaining the well identification tag. A missing, damaged, or illegible well identification tag shall be replaced with a duplicate tag.

K. Well record: The well driller shall keep a record of each well drilling activity as the work progresses.

(1) **Time for filing:** The well driller shall file a complete well record with the state engineer and the permit holder no later than twenty (20) days after completion of the well drilling.

(2) Form - content: The well record shall be on a form prescribed by the state engineer and shall include the name and address of the permittee, the well driller's name and license number, the state engineer file number, the name of each registered drill rig supervisor that supervised well drilling activities, the location of the well (reported in latitude and longitude using a global positioning system (gps) receiver capable of five (5) meters accuracy), the date when drilling or other work began, the date when drilling or other work concluded, the depth of the well, the depth to water first encountered, the depth to water upon completion of the well (measured by a method approved by the state engineer), the estimated well yield, the method used to estimate well yield, the size and type of casing, the location of perforations, the location of the sanitary seal, and other information deemed necessary by the state engineer. The well record shall include a completed well log. The well log shall include detailed information on the depth and thickness of all strata penetrated, including whether each stratum was water bearing.

L. Geologic formation samples: When requested by the state engineer, the well driller shall furnish lithologic samples ("drill cuttings") of the geologic units penetrated during drilling operations. The method of sampling, interval of sampling, and the quantities required will be specified by the state engineer. Lithologic samples shall be placed in sample bags supplied by the state engineer. [19.27.4.29 NMAC - Rp, SE 66-1, Articles 4-11, 4-12, and 4-13, 8-31-2005]

19.27.4.30 WELL DRILLING - NON-ARTESIAN WELL REQUIREMENTS: A licensed well driller shall ensure that the well drilling activities associated with the drilling of non-artesian wells are made in accordance with 19.27.4.29 NMAC and the following requirements:

A. Annular seal: All wells shall be constructed to prevent contaminants from entering the hole from the land surface by sealing the annular space around the outermost casing. When necessary, annular seals will be required to prevent inter-aquifer exchange of water, to prevent the loss of hydraulic head between geologic zones, and to prevent the flow of contaminated or low quality water. Sealing operations shall be made with cement grout or bentonite-based sealing material acceptable to the state engineer. Casings shall be centered in the bore hole so grout or sealing materials may be placed evenly around the casing.

(1) Annular space: The diameter of the hole in which the annular seal is to be placed shall be at least four (4) inches greater than the outside diameter of the outermost casing. The diameter of the hole in which the annular seal is to be placed may be reduced to three (3) inches greater than the outside diameter of the outermost casing if pressure grouting from the bottom up is used for grout placement and the well casing is centralized in the bore hole. If surface casing is used, the inside diameter of the surface casing shall be at least three (3) inches greater than the outside diameter of the production casing.

(2) Annular seal completed to land surface: Annular seals shall extend from land surface to at least twenty (20) feet below land surface. If a well is completed less than twenty (20) feet below land surface, the seal shall be placed from land surface to the bottom of the blank casing used. The annular seal shall extend to land surface unless a pitless adapter is installed. For wells completed with a pitless adapter, the top of the seal shall extend to one (1) foot below the pitless adapter connection. All sealing materials placed deeper than twenty (20) feet below land surface shall be placed by tremie pipe or by pressure-grouting through the well casing and up the annulus.

(3) Annular seals to prevent inter-aquifer exchange of water or loss of hydraulic head between geologic zones: Sufficient annular seal shall be placed to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between geologic zones. Sufficient annular seal shall be placed to prevent loss of hydraulic head between geologic zones. Sufficient annular seal shall be placed to prevent loss of hydraulic head between geologic zones. Sufficient annular seal shall be placed to prevent loss of hydraulic head between geologic zones.

(4) Annular seals to prevent the contamination of potable water: Wells which encounter nonpotable, contaminated, or polluted water at any depth shall have the well annulus sealed and the well properly screened to prevent the commingling of the undesirable water with any potable or uncontaminated water. The use of salt-tolerant sealing materials may be required by the state engineer in wells that encounter highly mineralized water.

(5) Annular seal requirements for community water supply wells: Community water supply wells shall also be completed with annular seals in accordance with New Mexico environment department regulations and other applicable ordinances or regulations.

B. Well casing: The well casing shall have sufficient wall thickness to withstand formation and hydrostatic pressures placed on the casing during installation, well development, and use.

C. Well plugging: A non-artesian well that is abandoned or not properly constructed shall be immediately plugged. A plan for plugging the well shall be filed with - and approved by - the state engineer prior to plugging. The state engineer may require that the plugging process be witnessed by an authorized representative.

(1) **Methods and materials:** To plug a well, the entire well shall be filled from the bottom upwards to land surface using a tremie pipe. The well shall be plugged with neat cement slurry, bentonite based plugging material, or other sealing material approved by the state engineer for use in the plugged by filling the well with drill cuttings or clean native fill to within ten (10) feet of land surface and by plugging the remaining ten (10) feet of the well to land surface with a plug of neat cement slurry, bentonite based plugging material approved by the state engineer.

(2) Contamination indicated: Wells encountering contaminated water or soil may require coordination between the office of the state engineer and the New Mexico environment department (or other authorized agency or department) prior to the plugging of the well. Specialty plugging materials and plugging methods may be required.

(3) **Plugging record:** A licensed well driller shall keep a record of each well plugged as the work progresses. The well driller shall file a complete plugging record with the state engineer and the permit holder no later than twenty (20) days after completion of the plugging. The plugging record shall be on a form prescribed by the state engineer and shall include the name and address of the well owner, the well driller's name and license number, the name of each drill rig supervisor that supervised the well plugging, the state engineer file number for the well, the location of the well (reported in latitude and longitude using a global positioning system (gps) receiver capable of five (5) meters accuracy), the date when plugging began, the date when plugging concluded, the plugging material(s) used, the depth of the well, the size and type of casing, the location of perforations, the location of the sanitary seal, and other information deemed necessary by the state engineer. The plugging record shall include a completed well log. The well log shall include detailed information on the depth and thickness of all strata plugged, including whether each stratum was water bearing.

D. Repair requirements: A well driller license is not required to install or repair pumping equipment.

[19.27.4.30 NMAC - Rp, SE 66-1, Article 4-14, 8-31-2005]

19.27.4.31 WELL DRILLING - ARTESIAN WELL REQUIREMENTS: No artesian well shall be constructed that allows ground water to flow uncontrolled to the land surface or move appreciably between geologic units. For regulatory purposes, the determination of whether a well is artesian shall be made by the state engineer. A licensed well driller shall ensure that well drilling activities associated with the drilling of artesian wells are made in accordance with 19.27.4.29 NMAC and the following requirements:

A. Plan of operations: The permittee or owner of the land upon which the well drilling is planned shall provide a description of the proposed work on a form prescribed by the state engineer. The plan of operations shall list the materials to be used and include the cementing and testing procedures. The plan of operations shall be completed by a licensed well driller. A plan of operations must be approved by the state engineer before the drilling of any artesian well. Drilling of an artesian well shall be made in accordance with a plan of operations approved by the state engineer.

B. Construction inspection: The casing, cementing, plugging, and testing of an artesian well shall be witnessed by an authorized representative of the state engineer.

C. Artesian wells - no prior knowledge of artesian stratum: In the course of drilling a well, if a previously unidentified artesian stratum is encountered, such that underground water is flowing uncontrolled to the land surface or between geologic units, the flow shall be controlled immediately. The state engineer shall be immediately notified that an artesian stratum was encountered, and a plan of operations shall be submitted in accordance with Subsection A of 19.27.4.31 NMAC.

D. Casing and coupling material requirements: Couplings and threaded steel casing used in the construction of an artesian well shall meet minimum American petroleum institute (API) specifications (the API casing specifications are listed in the table below). If the well casing or joint connection proposed in the plan of operations is not listed in the table below, the specifications for the casing and connections shall be approved by the state engineer prior to well drilling. If casing length exceeds one thousand (1,000) feet and the diameter of the casing is thirteen and three-eighths (13³/₈) inch diameter or larger, H-grade or better shall be used. The casing for artesian wells shall be inspected by an authorized representative of the state engineer prior to well construction.

Outside	Weight with	Wall	Coupling	Coupling	Threada nor	Minimum
Diameter	Couplings	Thickness	O.D.	Length	Inch	Grade of
(inches)	(lbs/ft)	(inches)	(inches)	(inches)	men	Casing
41/2	9.50	.205	5.000	5	8	F-25
51/2	13.00	.225	6.050	63/4	8	F-25
6	15.00	.233	6.625	7	8	F-25
65/8	17.00	.245	7.390	71/4	8	F-25
7	17.00	.231	7.656	71/4	8	F-25
75/8	20.00	.250	8.500	71/2	8	F-25
85/8	24.00	.264	9.625	73⁄4	8	F-25
95/8	29.30	.281	10.625	73⁄4	8	F-25
10¾	32.75	.279	11.750	8	8	F-25
113⁄4	38.00	.300	12.750	8	8	F-25
133/8	48.00	.330	14.375	8	8	F-25
16	55.00	.312	17.000	9	8	F-25
20	94.00	.438	21.000	9	8	F-25

E. Casing installation requirements: The casing shall be centered within the bore hole so grout may be evenly placed around the casing. A commercially made float shoe shall be installed on the lowermost joint of casing to be landed unless an alternate method for cementing has been approved by the state engineer. The casing shall be un-perforated and the well shall be designed in a manner to prevent the commingling of water from the artesian stratum with water in an overlying or underlying geologic unit.

F. Annular space: The diameter of the hole in which the cement seal shall be placed shall be at least four (4) inches greater than the outside diameter of the casing set through the confining formation overlying the artesian aquifer. The diameter of the hole in which the cement seal shall be placed may be reduced to three (3) inches greater than the outside diameter of the casing set through the confining formation overlying the artesian aquifer if pressure grouting from the bottom up is used for grout placement and the well casing is centralized in the bore hole. If surface casing is used, the inside diameter of the surface casing shall be at least three (3) inches greater than the outside diameter of the production casing.

G. Annular space cementing requirements: The annular seal shall consist of a neat cement slurry acceptable to the state engineer. The cement seal shall originate within the artesian stratum and shall be continuously placed to land surface. The cementing process shall be witnessed by an authorized representative of the state engineer. When necessary, sufficient annular seal shall be placed to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between geologic zones.

H. Annular space - cement placement: The cement slurry shall be placed in the annular space by one of the following methods:

(1) **Tremie method:** The neat cement slurry shall be pumped using a tremie pipe to fill the annular space of the well from the origin of the seal within the artesian stratum to land surface. Flow of undiluted cement out of the top of the annular space shall be established with the tremie pipe suspended in the annulus. The lower end of the tremie shall remain immersed in the cement slurry for the duration of pumping. The tremie pipe may be gradually removed as cement level in the annulus rises.

(2) **Pressure grout method:** The neat cement slurry shall be pumped down the inside of the casing, through the float shoe, and up the annular space until undiluted cement slurry circulates out of the annulus at land surface. Excess cement may be displaced out of the casing from behind with drilling fluid, but the drilling fluid shall not be pumped entirely to the level of the float shoe except to lodge a drillable plug at the bottom of the casing. Should undiluted cement slurry not be displaced out the top of the annulus in a continuous pressure grouting operation, the cementing job may be completed by the use of the tremie method. If the tremie method is employed, a tremie pipe shall be suspended in the annulus to the approximate level of the competent cement grout. The neat cement slurry shall be pumped to fill the annular space of the well from the top of the competent cement grout to land surface.

I. Sealing off formations: The compressive strength of neat cement shall be five hundred (500) psi or more before well drilling is resumed. Cement must be allowed to set a minimum of forty-eight (48) hours before well drilling is resumed. Shorter set times may be requested if approved accelerants are used. Sealing off of the formations shall be checked by a method acceptable to the state engineer. In the case of remediation of

unanticipated artesian bore holes, the compressive strength of neat cement shall be one thousand (1,000) psi or more before artesian head is shut-in at the wellhead.

Repair requirements: When an artesian well is in need of repair, the permittee or owner of the J. land upon which the well is located shall provide a plan of operations to the state engineer. The plan of operations shall be prepared in accordance with Subsection A of 19.27.4.31 NMAC. Before repairs are made to an artesian well, the well shall first be inspected by an authorized representative of the state engineer to determine if the condition of the well is such that it may be repaired. When a leak in the casing is found and the casing and well are otherwise in good condition, the state engineer may allow the well to be repaired. A packer or bridge plug may be required to complete necessary well repairs. The use of a lead packer is prohibited. An inspection shall be made at the completion of the work to determine if the repair is satisfactory. During an inspection, the well shall be open to allow for the entrance of equipment for testing and inspection.

Plugging requirements: An artesian well that is abandoned or not properly constructed shall be K. immediately plugged. Plugging of an artesian well shall require submittal of a plan of operations in accordance with Subsection A of 19.27.4.31 NMAC. The well shall be plugged from the bottom upwards with a neat cement slurry. The well plugging shall be witnessed by an authorized representative of the state engineer.

Well plugging, contamination indicated: Wells encountering contaminated water or soil may (1) require coordination between the office of the state engineer and the New Mexico environment department (or other authorized agency or department) prior to the plugging of the well. Specialty plugging materials and plugging methods may be required.

(2) **Plugging record:** A licensed well driller shall keep a record of each well plugged as the work progresses. A plugging record shall be filed in accordance with Paragraph 3 of Subsection C of 19.27.4.30 NMAC. [19.27.4.31 NMAC - Rp, SE 66-1, Articles 4-15, 4-16, 4-17, 4-18, and 4-19, 8-31-2005]

19.27.4.32 - 19.27.4.35 RESERVED

REQUIREMENTS FOR MINE DRILL HOLES THAT ENCOUNTER WATER: Any 19.27.4.36 person drilling a mine drill hole that encounters a water bearing stratum shall plug that hole in accordance with Subsection C of 19.27.4.30 NMAC or Subsection K of 19.27.4.31 NMAC within 30 days of encountering the water bearing stratum.

A. Well record required: Within thirty (30) days after the date of the discovery of water, a well record shall be filed in accordance with Subsection K of 19.27.4.29 NMAC.

Artesian water encountered: If artesian water is encountered in the process of drilling a mine В. drill hole, the drill hole shall be constructed or plugged in accordance with 19.27.4.31 NMAC. [19.27.4.36 NMAC - Rp, SE 66-1, Article 4-21, 8-31-2005]

REOUEST FOR VARIANCE: The rules in 19.27.4.29 NMAC, 19.27.4.30 NMAC, and 19.27.4.37 19.27.4.31 NMAC are not intended to cover every situation encountered during well drilling. Geologic conditions vary across the state, and may warrant the need to deviate from the rules contained in 19.27.4.29 NMAC, 19.27.4.30 NMAC, or 19.27.4.31 NMAC. A request for a variance to a rule in 19.27.4 NMAC shall be submitted in writing by an qualified applicant, permit holder, or licensed well driller. It is recommended that a request for variance be prepared by a licensed well driller. The request shall include a detailed justification for the variance and shall demonstrate that such a variance is necessary to preclude unreasonable hardship or that application of a rule in 19.27.4 NMAC would not be practicable. The state engineer may grant the variance if he finds the request to be reasonable and just. The state engineer shall respond in writing to the request for variance and, if the variance if granted, the state engineer may impose terms and conditions.

[19.27.4.37 NMAC - Rp, SE 66-1, Article 4-22, 8/31/2005]

19.27.4.38 **LIBERAL CONSTRUCTION:** This part shall be liberally construed to carry out its purpose. [19.27.4.38 NMAC - N, 8/31/2005]

SEVERABILITY: If any portion of this part is found to be invalid, the remaining portion of this 19.27.4.39 part shall remain in force and not be affected. [19.27.4.39 NMAC - N, 8-31-2005]

HISTORY OF 19.27.4 NMAC:

Pre NMAC History: The material in this part was derived from that previously filed with the State Records Center and Archives.

SE-66-1, Rules and Regulations Governing Drilling of Wells and Appropriation and Use of Ground Water in New Mexico, Article 4, Well Drillers Licensing, Construction, Repair and Plugging Of Wells, originally filed with the Supreme Court Law Library 11/1/66. Filed with the State Records Center 6/27/91.

History of Repealed Material:

SE-66-1, Rules and Regulations Governing Drilling of Wells and Appropriation and Use of Ground Water in New Mexico, Article 4, Well Drillers Licensing, Construction, Repair and Plugging of Wells - Repealed 8/31/2005.

SECTION 21.0— PROJECT CLOSE-OUT FORMS

21.1 The following forms shall be completed and submitted as specified:

Certificate of Substantial Completion Certification of Project Acceptance and Performance Labor Standards Certification Consent of Surety Company to Final Payment Affidavit of Payment and Release of Liens Final Contract Change Order Record Drawings and O & M Manuals

CERTIFICATE OF SUBSTANTIAL COMPLETION

Name of Project:	Contractor:
CPB Project #: Phase	
Project:	- Address.
Location:	_
	Contract No.:
SUBSTANTIAL COMPLETION DATE:	Contract Work:
Complete Partial -	

Substantial Completion and warranty time periods affected are defined in the General Conditions of the Contract. All parties listed below have reviewed the work under this Contract and recommend issuance of the substantial completion. The ______ (Owner) concurs with NMED's acceptance of the A/E's certification, will assume full possession and responsibility for the project or designated area, less punch list items, on the above listed Date. All warranties will start the day of substantial completion, with the exception of those items on the punch list, which will start on the date of Final Acceptance. The responsibility of the Contractor for heat, light, other utilities and Builders' Risk Insurance required by the Contract ceases at Substantial Completion. Other required insurance remains the Contractor's responsibility until the Certificate of Final Acceptance is issued.

PUNCH LIST: N/A

A list of items to be completed or corrected, prepared by the Architect/Engineer, checked and augmented as required by the Prime Contractor or Construction Manager is appended hereto. The failure to include any item on such list does not relieve the Contractor of the responsibility to complete all work in accordance with the Contract documents.

The Contractor shall complete or correct the work on the punch list appended hereto by	/ <u>/</u> .	The
punch list consists of items.	Mo. Day Year	

Contractor	Representative	Date
Coordinating Contractor	Representative	Date
Architect/Engineer	Representative	Date
Community Name	Representative	Date
Attachments:	CPB Project Manager	Date

Punch List

Certification of Project Acceptance and Performance

Local Authority (Grantee):

Address: _____

Project Number:

I, _____, of the firm of _____ a Registered Professional Engineer in the State of New Mexico, and project engineer for the above referenced local authority, for certain improvements consisting of _____ improvements do hereby certify that I have inspected the project and to the best of my knowledge it was substantially completed according to plans and specifications and/ or duly authorized change orders.

The Contractor on this job is _____

I DO HEREBY CERTIFY SUBSTANTIAL COMPLETION OF THE ABOVE REFERRED TO IMPROVEMENTS AND RECOMMEND ACCEPTANCE.

Dated this ____ day of ____, 20__.

(Signature and stamp) P.E.

ACCEPTANCE AND CERTIFICATION OF PERFORMANCE BY LOCAL AUTHORITY:

I DO HEREBY CERTIFY THAT THE PROJECT HAS BEEN COMPLETED AND IS OPERATIONAL AND HAS BEEN ACCEPTED BY THE GRANTEE.

Dated this _____ day of _____, 20___.

(Signature and Title, Grantee Authorized Representative)

General Conditions-55

LABOR STANDARDS CERTIFICATION

Local Authority: Insert Name of Grantee/Loanee

Address: Insert Owner Address

Project Name: Insert Project Name

Project Number: Insert grant/loan number

Contractor Name:

Contractor Address:

Total Contract Amount:

By this letter, we certify that the New Mexico Public Works Minimum Wage Act, §13-4-11 NMSA 1978, has been complied with for all construction contracts in excess of \$60,000 for the referenced project. Weekly payroll records are available to the New Mexico Department of Labor – Labor and Industry Division, demonstrating compliance with the minimum wage rate determinations and wage scales were posted in a prominent location at the job site. The Contractor filed the required Notification of Award (NOA) and a Statement of Intent to Pay Prevailing Wages form as well as the Affidavit of Wages Paid form and supplied a copy to the owner to demonstrate compliance with these requirements.

Name ¹	
Signature	Date
Name2	
Signature	Date

¹ Signed by the Grantee Representative or Signatory Authority

² Signed by Contractor's Representative

	2.1			
Project Name:				
Location:				
A/E#:				
		TO (Owner):		
Addres	s:			
City/ State/ Zip	o:			
Contractor:			Contract Date:	
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				,ou.org company,
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AFFIDAVIT OF PAYMENT AND RELEASE OF LIENS

To All Whom It May Concern, To The Following I Do Solemnly Swear And Affirm:

WHEREAS, the undersigned has been employed by *Person or Firm*³ to furnish <u>labor and materials</u> for <u>nature</u> <u>and extent of work</u>⁴ work, under a contract <u>Identify contract(s)</u>⁵ for improvement of the premises described as <u>improvements and location</u>⁶ in the <u>Name of Community</u>⁷, County of <u>Name of County</u>, State of New Mexico of which, <u>Name of Owner</u> is the Owner.

NOW, THEREFORE, this <u>0 day of Month, 2004</u>, for and in consideration of the sum of <u>\$0.00</u>⁸ Dollars paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the undersigned does hereby waive and release any lien rights to, or claim of lien with respect to and on said above described premises, and the improvements thereon, and on the monies or other considerations due or to become due from the Owner, on account of labor, services, materials, fixtures, apparatus or machinery heretofore or which may hereafter be furnished by the undersigned to or for the above described premises by virtue of said contract.

The undersigned, as Contractor for the above named Contract pursuant to the Conditions of the Contract hereby certifies that, except as listed below, he/she has paid in full or has otherwise satisfied all obligations for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or his/her property might in any way be held responsible.

The undersigned hereby certifies that all work required to be done under terms of the above-described Contract has been fully performed and completed in conformance with the Contract and that applicable provisions of the New Mexico Public Works Minimum Wage Act (§ 13-4-11 NMSA 1978) have been met.

EXCEPTIONS: Insert Exceptions⁹

Name of sole ownership, corporation or partnership¹⁰

Name of Authorized Representative

Signature of Authorized Representative

Date

Title

INSTRUCTIONS:

- 4 Fill in the nature and extent of work; strike the word labor or the materials if not in the contract.
- 5 Identify contract(s) by number, description, and extent of work.
- 6 Describe improvements and location of the premises to exclude all others.
- 7 Name community, such as City of _____, Village of _____, or Unincorporated Area known as ____
- 8 Amount shown should be the amount actually received and equal to the total adjusted contract.
- 9 If none, write "None". If required by Owner, Contractor shall furnish bond satisfactory to Owner for each exception.
- 10 If waiver is for a corporation, corporate name should be used, corporate seal affixed and title of officer signing affidavit should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate as partner.

³ Person or firm with whom you agreed to furnish either labor, or services, or materials, or both.

CONTRACT CHANGE ORDER				
CONTRACTOR:	CHANGE ORDER No. PROJECT: PROJECT No.			
OWNER:	ENGINEER:			
DATE OF ISSUE:	EFFECTIVE DATE:			
The Contractor is hereby directed to make the follow	ring changes in the Contract Documents.			
Description:				
Reason for Change Order:				
Attachments: (List documents supporting change and jus	tifying cost and time)			
CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:			
Original Contract Price: \$	Original Contract Times: (calendar days or dates)			
Net changes from previous C. O.'s No to \$	Net changes from previous C. O.'s No to (<i>calendar days</i>)			
Contract Price Prior to this Change Order:	Contract Times prior to this Change Order: (calendar days or dates)			
Net Increase (decrease) of this Change Order:	Net Increase (decrease) of this Change Order: (<i>calendar days</i>)			
Contract Price with all Approved Change Orders: \$	Contract Times with all Approved Change Orders: (<i>calendar days or dates</i>)			
RECOMMENDED: (Engineer)	APPROVED: (Owner)			
By: Date:	By: Date:			
ACCEPTED: (Contractor)	REVIEWED: (Funding Agency)			
By: Date:	By: Date:			

RECORD DRAWINGS & O&M MANUALS

Local Authority:

Address:

Project Name:

Project Number:

This letter confirms that ______has received a full set of reproducible record drawings for the referenced project as required by the grant/loan agreement. The Drawings of Record do not differ substantially from the plans approved for construction and have been accepted by the ______. The Drawings of Record are on file at ______and available for review by NMED. We also confirm that we have received an acceptable, complete set of Operation & Maintenance Manuals for equipment installed with this project.

-**O**R-

This letter will confirm that we have received a full set of reproducible record drawings for the referenced project as required by the grant/loan agreement. The Drawings of Record differ substantially from the plans approved for construction as noted on the attached sheets¹¹. The Drawings of Record have been accepted by the ______, are on file at

_____and available for review by NMED. We also confirm that we have received an acceptable, complete set of Operation & Maintenance Manuals for equipment installed with this project.

Name¹²

Signature

Date

¹¹ Attach Changes Only

¹² Signed by the Grantee Representative or Signatory Authority

SUPPLEMENTAL TECHNICAL SPECIFICATIONS

The following revisions and/or additions to the Technical Specifications of the Standard Specifications are hereby made a part of the Contract Documents. The New Mexico Standard Specifications for Public Works construction, 2006 Edition, as amended with updates are incorporated here by reference and shall govern the construction of this project except where revised, amended, or supplemented by these Supplemental Technical Specifications. The use of brand name is for the purpose of describing the standard of quality, performance and characteristics required, but is not intended to limit or restrict competition.

DIVISIONS 1 THRU 14 - GENERAL / ARCHITECTURAL & CIVIL

- 1. Section 01010, Summary of Work
- 2. Section 01300, Submittals
- 3. Section 01650 Starting of Systems
- 4. Section 01780 Contract Closeout
- 5. Section 02211 Rough Grading
- 6. Section 02221, Trenching, Excavation, and Backfill
- 7. Section 02316 Fill and Backfill
- 8. Section 02670, Well Drilling
- 9. Section 02680, Plugging and Abandoning Existing Well
- 10. Section 03200, Concrete Reinforcement
- 11. Section 03300, Cast-in-Place Concrete
- 12. Section 05120, Structural Steel
- 13. Section 05500, Metal Fabrications
- 14. Section 07900, Joint Sealers
- 15. Section 08110, Steel Doors and Frames
- 16. Section 08710, Door Hardware
- 17. Section 09900, Painting
- 18. Section 13121, Pre-Engineered Buildings
- 19. Section 13621, Telemetry Equipment

DIVISION 15 - MECHANICAL

- 20. Section 15010, Mechanical General
- 21. Section 15056, Well Pumps and Accessories
- 22. Section 15060, Pipe, Pipe Fittings, and Yard Piping
- 23. Section 15080, Piping Specialties
- 24. Section 15100, Valves

DIVISION 16 - ELECTRICAL

- 25. Section 16100, General Electrical Provisions
- 26. Section 16220, Grounding and Bonding
- 27. Section 16230, Supports and Hangers
- 28. Section 16240, Equipment Wiring, Disconnect and Protection
- 29. Section 16304, Fuses
- 30. Section 16310, Raceway Systems
- 31. Section 16320, Outlets
- 32. Section 16321, Wiring Devices and Plates
- 33. Section 16330, Wire and Cable
- 34. Section 16341, Panel Boards
- 35. Section 16355, Dry-Type Transformers
- 36. Section 16361, Lighting Equipment
- 37. Section 16900, Completion



SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 PROJECT/WORK IDENTIFICATION

- A. The Project consists of the construction of a total of three (3) new City of Lovington Wells within the existing Lovington south well field. Each well is intended to be completed with deep submersible well pumps, discharge piping, valves and a constructed well pump house to provide water supply and to be connected to the existing well field discharge piping.
- B. Project is separated into divisions by both Bid Lots and by Base Bid and Additive Alternates. Contractor, (or multiple contractors, subcontractors and suppliers/manufacturers from all Bid Lots) shall each be required to coordinate directly with each of the other entities from the other bid lots. Overall review and enforcement of coordination proceedures shall be directed by the Owner. Also, final decisions concerning all conflicts shall be determined by the Owner.
- C. In Specific, the work for each individual well (total of three, named wells # 30, # 29 and # 28) includes the well drilling and completion, and pump development and testing to determine well characteristics, with all appurtenances. Installation of well pumps shall be provided, either as Base Bid or by Additive Alternates. Temporary and above-ground piping & assembly shall be utilized, both for specified well capacity testing, and for final pump testing after installation of the selected well pumping unit. Part of the Base Bid for well # 30 includes furnishing, installing and final testing the new well pump, with all well pump appurtenances, including riser discharge pipe, check valves and temporary discharge elbow, motor cable and supply of a new motor starter and pump control panel.
- D. The pump house and related discharge piping are separated into additional Bid Lots as part of the building construction. Related discharge water piping appurtenances within the new pump house shall include, but not be limited to the discharge piping, check valve, meter, pump main line isolation valve, side waste line and valve, and underground piping, all for the connection of a new water well to the existing well field. Each completed well and well discharge piping shall be housed within a Pump House building of 15 feet-6 inches by 10 feet-6 inches, or approximately 164 square feet; and which consists of a pre-engineered metal building with reinforced concrete floor, and HVAC, lighting and other appurtenances.
- E. Electric and control elements are separated into another set of Bid Lots, and include all wiring and cabling and connections for new motor starter, pump control panel, the installation of electrical disconnects, and all building-related electrical devices, lighting and security connections, connections of owner-directed SCADA Units and local conduit. Electrical power from Lea County Electrical Co-op is expected to be available for the project, including test of each final pumping unit at each well house location, but Electrical Contractor(s) shall be involved in coordination, to assure that the work is provided in a timely manner.

- F. Construction Limits for each well, pump house building and surrounding piping, grading and associated appurtenances that are to be constructed under this project are indicated on the plans. Added piping and connections to the existing well field and all associated work shall be the responsibility of the City of Lovington, except for added coordination by the contractors for the electrical supply and connections.
- G. The list of drawings is as follows:

Sheet G-001	Cover Sheet
Sheet G-002	General Notes
Sheet G-003	General Abbreviations and Legend
Sheet G-004	Quantity Summaries
Sheet G-005	Quantity Summaries
Sheet G-101	Overall Site Layout Plan
Sheet C-101	Well Site Piping Plans
Sheet C-301	Well and Pump Sections and Details
Sheet C-501	Typical Civil Details
Sheet S-101	Well House Foundation Plan, Section and Details
Sheet A-101	Well House Building Plans, Details and Elevations
Sheet D-101	Well House Piping Plan and Sections
Sheet C-101	Well House Piping Details
Sheet M-101	Well House HVAC Plan
Sheet E-101	Electrical General Information and Plans
Sheet E-102	Electrical Site Plans
Sheet E-501	Electrical Diagrams and Schedules

1.02 CONSTRUCTION CONDITIONS

- A. Limited Access: The three individual Well sites [Designated as Wells L-4058-S-28, (AKA Well # 28) L-4058-S-29 (AKA Well # 29) and L-4058-S-30 (AKA Well # 30) by the NMOSE] are located in the existing Lovington East (South) well field, approximately 4 miles SSE of Lovington, as identified in the Plan drawings. The individual well sites are currently under-developed, but under this construction, are to be developed as added wells to the existing water system well field site. The surrounding land is primarily vacant, and access is through an existing dirt access road to the individual sites. The extended access road is currently not improved. Road improvements shall be completed by the City of Lovington separately from this contract.
- B. <u>Tests</u>: Provide all testing required. Any required On-site testing shall be done by a testing laboratory regularly engaged to perform the tests required and shall be approved by the Owner prior to performance of any testing.
- C. <u>Temporary Construction and Utilities Facilities</u>: No utility or temporary construction facilities are available for use by the Contractor for storage or office, at the site. Provide all temporary facilities required to perform the Work at no additional cost to the Owner, but not intrusive to surrounding lands. Such facilities will include but not be limited to sanitary facilities, access to telephone, electricity, and water. Water for construction purposes, and land for temporary sanitary facilities may be available from the City of Lovington, if arrangements are made prior to construction. Temporary power or other utilities shall not be taken from any adjacent private

landowners without specific written authorization from the respective property Owners.

- D. <u>Traffic Control and Barriers:</u> Provide barricades, warning devices and traffic control only as may be required by the General Conditions and site circumstances.
- E. <u>Environmental Protection</u>: The Contractor and his subcontractors shall comply with applicable federal, state and local laws and regulations concerning environmental pollution control, sediment runoff control and abatement. The Contractor will be required to maintain all Well discharge ponds, drilling mud ponds, and other excavations, embankments, stockpiles, haul roads, plant sites, waste areas, borrow areas and all other work areas free from dust which would cause a hazard or nuisance to others. Methods of soil stabilization shall be approved by the Engineer or his representative. Additional requirements may be detailed in the General Construction Notes in the Plan Drawing set.

1.03 WORK SEQUENCE

- Α. Prepare each new well site in succession, and drill and install the new well and concrete pad. Pilot holes shall be drilled for each well in sequence before proceeding on completing any of the wells. The City, the Engineer and geotechnical/hydrological sub-consultant shall then have 12 days (after receipt from the contractor) to review drilling logs, sand sieve analysis, gravel pack availability and screen data to determine final screen selection, gravel pack length, depth and proposed pump placement recommendations for each of the three well completions. Based upon decisions on modifying and completing each of the three wells, proceed with completing the underground portion of each well, starting with well # 30. Under the Base Bid, each of the wells shall be drilled, and casing, screens, gravel pack and other appurtenances shall be installed and completed below ground before the separate Building-related above-ground work is started. The contractor then shall develop and pump-test each well. Based upon well pumping tests, the City and the engineering team shall review the results and make the necessary pump modifications (if any) before proceeding. For well testing, excavate as necessary the well top at building and any required well sedimentation basins, as required. Develop and pump test each well, and arrange for water quality sampling. Submit findings to the City of Lovington and the Engineer within seven (7) days of completion of testing.
- B. As noted above, the City, the Engineer and geotechnical/hydrological sub-consultant may decide, upon consultation with the contractor, and based upon the pilot hole logs, to modify the well screen length or opening size, or the gravel Pack, or both prior to completing each of the wells.
- C. Also, the City, the Engineer and geotechnical/hydrological sub-consultant may decide, upon consultation with the contractor, and based upon pumping test and well drilling logs; to modify or change the final well pump selection, including capacity and settings, depending upon the findings of pumping tests and well drilling report. The decision shall be made within a period of an additional 10 days, after receipt of pump test results.
- D. Under the Base Bid, Including all Bid Lots, construct well # 30, Well House, and all

associated appurtenances, electrical, mechanical and civil items required. Install new pump and equipment, pump pad, discharge elbow, all valves, meter, piping and instruments as required. Install electric equipment, controls and other equipment, wiring and conduit runs as required. Startup and test installed pump and checkout all equipment. Startup shall be for a period of not less than three (3) days for each well, to show proper installation and hookup prior to closeout.

- E. Alternate A Bid, including the remaining associated Bid Lots, consists of completing the well # 29 Well House, including all associated appurtenances, electrical, mechanical and civil items required, including but not limited to those described under 1.03.D above.
- F. Alternate B Bid, including the remaining associated Bid Lots, consists of completing the well # 28 Well House, including all associated appurtenances, electrical, mechanical and civil items required, including but not limited to those described under 1.03.D above.
- G. During construction, maintain coordination with the City of Lovington concerning the use of the existing adjacent facilities, in operation as much as possible, with complete coordination with the City of Lovington Public Works Department.
- H. Provide any required adjacent protection from construction activities in accordance with Nationwide Permit Requirements by NMED, EPA and USCOE
- I. Clean and clear site, and leave in same as existing condition, in accordance with Permit Conditions and City of Lovington requirements.

1.04 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish at all times.
- B. Remove waste materials at least bi-weekly and dispose off-site.

1.05 RECORD DOCUMENTS

- A. Well Drilling, Building and Electrical Contractors or subcontractors shall combine drawings and coordinate with Each Other to Maintain on site, one set of the following Record Documents; and record actual revisions to the Work:
 - 1. Well Drilling Permit and progress well logs.
 - 2. Contract Drawings (As-Built)
 - 3. Specifications
 - 4. Addenda
 - 5. Change Orders and other modifications to the Contract
 - 6. Reviewed Shop Drawings, product data, and samples.

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- 7. Any & all other permits as required
- B. Store Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress.
- D. Submit documents to Engineer prior to request for final inspection of the Work.

1.06 COORDINATION AND MEETINGS

- A. Preconstruction Conference
 - 1. Owner/ Engineer will schedule a conference after Notice of Award has been issued. Attendance by Contractors in charge of each set of Bid Lots is mandatory.
 - 2. Agenda will include:
 - a. Execution of Agreement, if not already complete.
 - b. Submission of executed bonds and insurance certificates.
 - c. Distribution of additional Contract Documents if requested.
 - d. Submission of list of Subcontractors and Preliminary Construction Schedule.
 - e. Designation of personnel representing the parties in Contract
 - f. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal requests, Change Orders, and Contract closeout procedures.
 - g. Scheduling of Work.

1.07 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in triplicate within 15 days after date of all Owner-Contractor Agreements for review and approval by the Engineer.
 - 1. Submit a horizontal bar chart with separate line for each major section of work or operation identifying first workday of each week.
 - 2. Other formats of charts may be acceptable by means of Engineer's approval prior to submission.
 - 3. Submit in accordance with Section 01300.
 - 4. Revise and resubmit as required.
- B. Submit revised schedules with each Application for Payment, identifying changes since previous version. Identify new version for each schedule submitted. Indicate estimated percentage of completion for each item of Work at each submission.
- C. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicated the early and late start, early and late finish, float dates, and duration.
- D. Indicate submittal dates required for Shop Drawings, product data, samples, product delivery dates, including those furnished by Owner.

1.08 VIDEO AND PHOTOGRAPHIC DOCUMENTATION

- A. The Contractor shall provide videotape or DVD documentation of pre-construction conditions at site of proposed construction. Video Record is intended to provide records of all site conditions prior to construction activities in order to identify requirements for post construction site restoration. Any site restoration claims by Owner or public regarding site conditions supported by pre-construction video r4ecords shall be considered valid and appropriate restoration shall be required by the Contractor at no cost to the Owner. If the pre-construction video record does not provide sufficient documentation to determine the issues in question, or does not cover the locations involved, it shall not be used to determine the validity of a claim.
- B. Provide photographic documentation, with digital-electronic camera of activities at construction site showing progress of Work.
 - 1. Photographs shall be taken by an experienced construction photographer acceptable to the Engineer.
 - 2. Submit two sets of color printout, 5 x 7 minimum, 8.5 x 11 preferred, representative of construction activities at site. Bind initial submittals in 3-ring binders of sufficient size to bind all prints eventually submitted. Include electronic files in one of the sets.
 - 3. Identify each with description affixed to each printout and in file description to the electronic file photos themselves. Label shall provide a description of the view, name of the project, name of the Contractor, and date of photography.
 - 4. Photo printouts shall depict the progress of the work from beginning of construction through and including the finished project.

1.09 PROJECT CLOSEOUT

- A. Closeout Procedures
 - 1. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for inspection by Engineer.
 - 2. Provide all submittals to Engineer that are required by Contract Documents and governing and other authorities, including Record Documents, Warranties, video inspection logs, installation logs, and other submittals as specified.
 - 3. Submit final Application for Payment identifying total adjusted Contract Price.
- B. Final Cleaning
 - 1. Execute final cleaning prior to final inspection.

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- C. The project closeout requirements include, but are not limited to:
 - 1. Inspection requirements.
 - 2. Project record document submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. Submittal of warranties.
 - 5. Final cleaning.

PART 2 - PRODUCTS/MATERIALS --- Not Used

PART 3 - EXECUTION --- Not Used

PART 4 - MEASUREMENT AND PAYMENT --- Not Used

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. <u>General</u>: This section specifies procedural requirements for submittals including shop drawings, product data, samples and other miscellaneous work-related submittals. Shop drawings, product data, samples and other work related submittals are required to amplify, expand and coordinate the information contained in the Contract Documents.
 - 1. Refer to other Division 1 Sections and other specifications sections or the contract documents for specifications on administrative, non-work related submittals. Such submittals may include, but are not limited to, any of the following items:
 - a. Record Drawings
 - b. Video and Photographic Documentation
 - c. Construction Progress Schedules
- B. Shop Drawings are technical drawings and data that have been specially prepared for this project, including but not limited to, the following items:
 - 1. Fabrication and installation drawings.
 - 2. Setting diagrams.
 - 3. Shopwork manufacturing instructions.
 - 4. Templates.
 - 5. Patterns.
 - 6. Coordination drawings (for use on-site).
 - 7. Schedules.
 - 8. Design mix formulas.
 - 9. Contractor's engineering calculations.
- C. Standard information prepared without specific reference to a project is not considered to be shop drawings.
- D. Product Data include standard printed information on manufactured projects that have not been specially prepared for this project, including but not limited to, the following items:
 - 1. Manufacturer's product specifications and installation instructions.
 - 2. Instructions.
 - 3. Standard color charts.
 - 4. Catalog cuts.
 - 5. Roughing-in diagram and templates.

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Submittals

- 6. Standard wiring diagrams.
- 7. Printed performance curves.
- 8. Operational range of diagrams.
- 9. Mill reports.
- 10. Standard Product operating and maintenance manuals.
- E. Samples are physical examples of work, including but not limited to, the following items:
 - 1. Partial sections of manufactured or fabricated work.
 - 2. Small cuts or containers of materials.
 - 3. Complete units of repetitively-used materials.
 - 4. Swatches showing color, texture and pattern.
 - 5. Color range sets.
 - 6. Units of work to be used for independent inspection and testing.
- F. Miscellaneous Submittals are work-related submittals that do not fit in the three previous categories, including but not limited to, the following:
 - 1. Specially prepared and standard printed warranties.
 - 2. Testing and certification reports.
 - 3. Record Drawings.
 - 4. Field measurement data.
 - 5. Operating and maintenance manuals.
 - 6. Keys and other security protection devices.
 - 7. Maintenance tools and spare parts.
 - 8. Overrun stock.
 - 9. Video or Photographic records of construction.

1.02 SUBMITTAL PROCEDURES

- A. <u>General</u>: Refer to the General Conditions for basic procedures for submittal handling.
- B. <u>Coordination</u>: Coordinate the preparation and processing of submittals with the performance of the work. Coordinate each separate submittal with other submittals and related activities such as testing, purchasing, fabrication, delivery and similar activities that require sequential activity.
- C. <u>Preparation:</u>
 - 1. Provide a permanent label or stamp on each submittal for identification. Identify each submittal with a separate identification number.
 - 2. Provide space within or adjacent to the label to record Contractor review and approval of the submittal. Submittal shall bear the

City of Lovington Water Well Project Submittals

Contractor's certification that he has reviewed, checked, and approved the submittal and that it is in conformance with the Contract Documents. Submittals not approved by the Contractor shall be returned unprocessed.

- 3. Provide a blank space adjacent to Contractor certification for Engineer's certification stamp, minimum 3 inches x 3 inches.
- 4. Submittal shall include transmittal cover page.

1.03 SPECIFIC SUBMITTAL REQUIREMENTS

- A. <u>General</u>: Specific submittal requirements for individual units of work are specified in the applicable specification section. Except as otherwise indicated in the individual specification sections, comply with the requirements specified herein for each type of submittal.
- B. <u>Shop Drawings</u>: Information required on shop drawings includes dimensions, identification of specific products and materials which are included in the work, compliance with specified standards and notations of coordination requirements with other work. Provide special notation of dimensions that have been established by field measurement. Highlight, encircle or otherwise indicate deviations from the contract documents on the shop drawings.
 - 1. <u>Coordination Drawings</u>: Provide coordination drawings where required for the integration of the work, including work first shown in detail on shop drawings or product data. Show sequencing and relationship of separate units of work; which must interface in a restricted manner to fit in the space provided, or function as indicated. Coordination drawings are considered shop drawings and must be definitive in nature.
 - 2. <u>Preparation</u>: Submit newly prepared information, drawing to accurate scale. Indicate the name of the firm that prepared each shop drawing and provide appropriate project identification in the title block.
 - 3. Do not reproduce contract documents or copy standard printed information as the basis of shop drawings. Submittals of this type shall be returned without action.
- C. <u>Product Data</u>: General information required specifically as product data includes manufacturer's standard printed recommendations for application and use, compliance with recognized standards of trade associations and testing agencies, and the application of their labels and seals (if any), special notation

of dimensions which have been verified by way of field measurement, and special coordination requirements for interfacing the materials, product or system with other work.

- 1. <u>Preparation</u>: Collect required product data into a single submittal for each unit of work or system. Mark each copy to show which items are applicable to the project. Where product data has been printed to include information on several similar products, some of which are now required for use on the project, or are not included in this submittal, mark the copies to show clearly that such information is not applicable. Where product data must be specifically prepared for required products, materials or systems, because standard printed data are not suitable for USA submit data as "shop drawings" and not as "product data."
- D. <u>Samples</u>: Submit samples for the Engineer visual review of general generic kind, color, pattern, and texture, and for a final check of the coordination of these characteristics with other related elements of the work. Samples are also submitted for quality control comparison of these characteristics between the final sample submittal and the actual work as it is delivered and installed.
 - 1. <u>Preparation</u>: Where possible provide samples that are physically identical with the proposed material or product to be incorporated in the work; provide full scale, fully fabricated samples cured and finished in the manner specified. Where variations in color, pattern, or texture are inherent in the material or product represented by the sample, submit multiple units of the sample (not less than 3 units), which show the approximate limits of variations. Where samples are specified for the Engineer's selection of color, texture or pattern, submit a full set of available choices for the material or product. Mount, display, or package samples in the manner specified to facilitate the review of indicated qualities. Prepare samples to match the Engineer's sample where so indicated.

E. <u>Miscellaneous Submittals</u>:

- 1. <u>Inspection and Test Reports</u>: Classify each inspection and test report as being either "shop drawings" or "product data" depending on whether the report is specially prepared for the project, or a standard publication of workmanship control testing at the point to production. Process inspection and test reports accordingly.
- 2. <u>Standard</u>: Where submittal of a copy of standards is indicated, and except where copies of standards are specified as an integral part of a "Product Data" submittal, submit a single copy of standards for the Engineer's use. Where workmanship, whether at the project site or

Submittals
elsewhere is governed by a standard, furnish additional copies of the standard to fabricators, installers and others involved in the performance of the work.

3. <u>Lead and Asbestos Containing Materials</u>: Any products which contain lead or asbestos that are proposed for the Work must be approved by the Engineer prior to installation. The Contractor shall submit manufacturer's data sheets identifying type(s) and amount(s) of lead or asbestos present.

1.04 ENGINEER ACTIONS

- A. Review required submittals with reasonable promptness and in accord with schedule, only for general conformance to design concept of Project and compliance with information given in Contract Documents. Review shall not extend to means, methods, sequences, techniques, or procedures of construction or to safety precautions or program incident thereto. Review of a separate item as such will not indicate approval of assembly in which item functions.
- B. Affix stamp and initials or signature, and indicate requirements for resubmittal, or review of submittal. Engineer's specific action on submittals is classified as follows:
 - 1. <u>Approved</u>: Submittal has been reviewed and appears to be in conformance to design concept of Project and Contract Documents. Contractor may proceed with fabrication/installation of Work detailed in submittal. Approval does not authorize changes to Contract sum or time
 - 2. <u>Approved as corrected</u>: Submittal has been reviewed and appears to be in conformance to design concept of Project and Contract Documents, except as noted by Engineer. Contractor may proceed with fabrication of Work detailed in submittal with the marked modifications and corrections as indicated by Engineer.
 - 3. <u>Revise and Resubmit</u>: Submittal has been reviewed and appears not to be in conformance to design concept of Project or Contract Documents. Contractor MAY NOT proceed with fabrication/ installation. Contractor shall instead make any marked or written corrections required by Engineer and resubmit for review.
 - 4. <u>Rejected</u>: Submittal has been reviewed and appears not to be in conformance to design concept of Project or Contract Documents. Contractor shall not proceed with fabrication of Work detailed in

City of Lovington Water Well Project

Submittals

submittal. Equipment, materials or methods are not acceptable.

- 5. <u>No Action Taken</u>: Submittal has not been reviewed because not required for this item or because it is provided for information only. If submittal is required by Contract Documents, Contractor shall follow contract requirements in all cases.
- C. Return submittals to Contractor.
- D. Engineer's review of submittals shall not relieve Contractor from responsibility for any variation from Contract Documents unless Contractor has, in writing, called Engineer's attention to such variation at the time of submission, and Engineer has given specific written concurrence pursuant to Contract Documents to specific variation, nor shall any concurrence by Engineer relieve Contractor from responsibility for errors or omissions in submittals.

PART 2 - PRODUCTS/MATERIALS --- Not Used

PART 3 - EXECUTION --- Not Used

PART 4 - MEASUREMENT AND PAYMENT --- Not Used

END OF SECTION

SECTION 01650

STARTING OF SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Starting systems.
- B. Demonstration and instructions.

1.2 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems. Each well pump, motor and all associated systems shall be sequentially started up, so that all systems may be checked out for each well house as required.
- B. Schedule Startup of systems with at least 14 days advanced notice to all parties. Notify the City of Lovington Utility Manager a minimum of twenty-One (21) days prior to start-up of combined systems.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested prior to testing.
- F. Execute startup under supervision of responsible manufacturer's representative in accordance with manufacturers' instructions. Contractor /manufacturer /supplier shall provide a minimum of seven (7) days of start-up, with a minimum of three (3) days required of demonstrated continuous successful operation of all major systems. Additional time may or may not be required, because of equipment, wiring or coordination issues, and shall be performed at no cost to the Owner or Engineer. Contractor /manufacturer / supplier shall also provide a minimum of eight (8) hours of instruction / training on systems and equipment, which may be performed during this time.
- G. Also, when specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to startup, and to supervise placing equipment or system in operation.
 - H. Submit a written report in accordance with Section 01300 that equipment or system has been properly installed and is functioning correctly.
 - I. Manufacturer's representative shall remain on site to observe operation of equipment and further advise plant personnel the minimum number of days specified in each Section, or as required under 1.2.F above.

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Starting of Systems

1.3 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel two weeks prior to date of final inspection.
- B. Demonstrate Project equipment by a qualified manufacturers' representative who is knowledgeable about the Project.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- D. Utilize <u>operation and maintenance manuals</u> as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time at project site location.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.
- PART 2 PRODUCTS Not Used
- PART 3 EXECUTION Not Used

END OF SECTION

Starting of Systems

SECTION 01780

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Spare parts and maintenance Products.
- G. Warranties and bonds.
- H. Maintenance service.

1.2 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for City of Lovington and Engineer review.
- B. Provide submittals that are required by governing or other authorities to City of Lovington Project Manager.
- C. Submit final Application for Payment identifying total adjusted Contract Sum/Prices, previous payments, and amount remaining due.

1.3 FINAL CLEANING

- A. Contractor provide final cleaning after final acceptance.
- B. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, and polish transparent and glossy surfaces.
- C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- D. Clean or replace filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.

- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.4 ADJUSTING

A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store Record Documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract Drawings.
- G. Submit documents to City of Lovington Project Manager with claim for final Application for Payment.
 - 1. Submittal shall include the following:
 - a. One complete set of record drawings
 - b. Record Specifications
 - c. Close-out documentation, including:
 - 1. All previously approved change orders, in sequential order
 - 2. Listing of approved shop drawings
 - 3. Consent of Surety form, provided by surety
 - 4. Certificate and Release of Lien Form

City of Lovington Water Well Project Contract Closeout

5. Affidavit of Wages Paid.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit two copies of preliminary draft of proposed formats and outlines of contents before start of Work. Owner will distribute draft for review and return one copy with comments.
- B. Submit data bound in 8-1/2 x 11-inch text pages, three D side ring binders with durable plastic covers.
- C. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUC-TIONS, Lovington Well Project – No. SAP-16-A4045-STB and SAP-4046-STB."
- D. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- E. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, typed on 24 pound white paper, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop Drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Photocopies of warranties and bonds.
- F. Submit one draft copy of completed volumes in final form 30 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Owner/Engineer comments. Revise content of documents as required prior to final submission.
- G. Submit Three (3) sets of final volumes revised, within ten (10) days of receipt of Owner/Engineer comments.

1.7 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra Products in quantities specified in individual Specification sections.
- B. Deliver to Project site and place in location as directed by the Owner; obtain receipt prior to final payment.

1.8 MISCELLANEOUS KEYS

A. Provide all loose keys for water stops, hose bibbs, adjustment keys and wrenches for door closers and panic hardware, keys for electric switches, electrical panels, etc.

1.9 WARRANTIES AND BONDS

- A. Provide duplicate notarized copies.
- B. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- D. Submit prior to final Application for Payment.
- E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.10 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in specification sections during the warranty period.
- B. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- D. Maintenance services shall not be assigned or transferred to any agent or Subcontractor without prior written consent of the Owner.
- PART 2 PRODUCTS Not Used
- PART 3 EXECUTION Not Used

END OF SECTION

SECTION 02211

ROUGH GRADING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Removing topsoil and stockpiling for later reuse.
- B. Grading and rough contouring site.

1.2 PROJECT RECORD DOCUMENTS

- A. Submit documents under provisions of Section 01780.
- B. Accurately record location of utilities remaining, rerouted utilities, new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 PRODUCTS

2.1 MATERIALS

A. Topsoil: Excavated material, graded free of roots, rocks larger than one inch, subsoil, debris, and large weeds.

PART 3 EXECUTION

3.1 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Identify known below grade utilities. Stake and flag locations.
- C. Identify and flag above grade utilities.
- D. Maintain and protect existing utilities remaining which pass through work area.
- E. Notify utility company to remove and relocate utilities.
- F. Upon discovery of unknown utility or concealed conditions, discontinue affected work, notify Owner.

3.2 PROTECTION

A. Protect trees, shrubs, lawns, rock outcropping, and other features remaining as portion of final landscaping.

- B. Protect bench marks.
- C. Protect above or below grade utilities which are to remain.
- D. Repair damage.

3.3 TOPSOIL EXCAVATION

- A. Excavate topsoil to depth indicated in Drawings from marked areas and stockpile in area designated on site.
- C. Stockpile topsoil to depth not exceeding 8 feet.

3.4 SUBSOIL EXCAVATION

- A. Excavate subsoil from marked areas and stockpile in area designated on site.
- B. Do not excavate wet subsoil.
- C. Stockpile subsoil to depth not exceeding 8 feet.
- D. When excavation through roots is necessary, perform work by hand and cut roots with a sharp axe.

3.5 TOLERANCES

A. Top Surface of Subgrade: Plus or minus 1 inch.

END OF SECTION

SECTION 02221

TRENCHING, EXCAVATION, AND BACKFILL

PART 1 - GENERAL

1.01 SUMMARY

A. Trench excavation and backfill for water lines, sanitary sewer, storm sewer, electrical or communications conduits and appurtenances shall conform to these specifications unless modified by Standard Specifications or drawings.

1.02 REFERENCES

- A. ASTM D 422, D 1557, D 2321, D 2487, and D 4318
- B. The Unified Soil Classification System (USCS) in ASTM D 2487 shall be utilized for the purpose of material classifications. See Table 1 below for a listing of referenced soil classes.

Soil Class	Soil Type	Description of Material Classification	
Class I Soils*		Manufactured angular, granular material, 1/4 to 1-1/2 inches (6 to 40 mm) size, including materials having regional significance such as crushed stone or rock, broken coral. Crushed slag, cinders, or crushed shells.	
Class II Soils**	GW	Well-graded gravels and gravel-sand mixtures, little or no fines. 50% or more of coarse fraction retained on #4 sieve. More than 95% retained on #200 sieve. Clean.	
	GP	Poorly graded gravels and gravel-sand mixtures, little or no fines. 50% or more of coarse fraction retained on #4 sieve. More than 95% retained on #200 sieve. Clean.	
	SW	Well-graded sands and gravelly sands, little or no fines. More than 50% of coarse fraction passes #4 sieve. More than 95% retained on #200 sieve. Clean.	
	SP	Poorly graded gravels and gravelly sands, little or no fines. More than 50% of coarse fraction passes #4 sieve. More than 95% retained on #200 sieve. Clean.	
Class III Soils***	GM	Silty gravels, gravel-sand-silt mixtures. 50% or more of coarse fraction retained on #4 sieve. More than 50% retained on #200 sieve.	
	I.		

 Table 1:
 Description of Embedment Material Classification

	GC	Clayey gravels, gravel-sand-clay mixtures. 50% or more of coarse fraction retained on #4 sieve. More than 50% retained on #200 sieve.
	SM	Silty sands, sand-silt mixtures. More than 50% of coarse fraction passes #4 sieve. More than 50% retained on #200 sieve.
	SC	Clayey sands, sand-clay mixtures. More than 50% of coarse fraction passes #4 sieve. More than 50% retained on #200 sieve.
Class IV Soils	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. Liquid limit 50% or less. 50% or more passes #200 sieve.
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays. Liquid limit 50% or less. 50% or more passes #200 sieve.
	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts. Liquid limit greater than 50%. 50% or more passes #200 sieve.
	СН	Inorganic clays of high plasticity, fat clays. Liquid limit greater than 50%. 50% or more passes #200 sieve.
Class V Soils	OL	Organic silts and organic silty clays of low plasticity. Liquid limit 50% or less. 50% or more passes #200 sieve.
	ОН	Organic clays of medium to high plasticity. Liquid limit greater than 50%. 50% or more passes #200 sieve.
	РТ	Peat, muck, and other highly organic soils.

- * Soils are as defined in ASTM D2487, except for Class I material which is defined in ASTM D2321.
- ** In accordance with ASTM D2487, less than 5% pass #200 sieve.
- *** In accordance with ASTM D2487, soils with 5% to 12% passing #200 sieve fall in a borderline classification that is more characteristic of Class II than of Class III
- 1.03 TERMINOLOGY
 - A. For the purposes of these specifications in this section, the descriptive terms "flexible," "plastic," and "non-rigid" are similarly interchangeable as utilized in these specifications and appurtenant reference material.
 - B. The detail drawings show the trench cross sections which identify the meaning and limits of terminology used in these specifications for the terms

"foundation," "bedding," "haunching," "initial backfill," "final backfill," "embedment," "pipe zone," "cover," "springline," and "pipe width."

PART 2 - PRODUCTS/MATERIALS

2.01 RIGID PIPE

A. Rigid pipe shall be reinforced concrete, concrete cylinder, and vitrified clay pipes.

2.02 FLEXIBLE PIPE

A. Flexible pipe shall be polyvinyl chloride (PVC), polyethylene (HDPE), ductile iron, and corrugated metal pipes.

2.03 ELECTRICAL CONDUITS

A. Electrical conduits shall meet the requirements of NEC and Division 16 of these specifications.

PART 3 - EXECUTION

3.01 NOTIFICATION OF FORTHCOMING WORK

- A. To assure that the construction work progresses in a timely manner and that good public relations are maintained with the property owners, the following actions are considered essential:
 - 1. Prior to the start of the construction, the Contractor shall assist the Engineer in notifying the public as to when construction will start, the estimated completion date, who to contact as a problem arises, and any anticipated access blockages.
 - 2. Prior to the start of trenching operations, including pavement cutting and removal, the Contractor should coordinate with the Engineer any problem areas involving traffic control, access to private properties, stockpiling of excavated materials, and other utility conflicts.
 - 3. The Contractor shall provide the Engineer with name and the telephone number of at least 2 contact persons during non-working hours.

3.02 TRENCH SAFETY

A. The Contractor shall be responsible for maintaining all trenches in a safe condition; thereby protecting the workers and the general public. Trench slopes and other protection shall be in accordance with applicable regulations.

3.03 BRACING EXCAVATIONS

- A. Excavation for pipe shall normally be by open unsupported trenches unless local conditions warrant trench bracing.
- B. Excavations shall be braced and sheeted to provide complete safety to persons working therein and bracing shall comply with applicable Federal (OSHA), State, and local laws and ordinances. Support systems for trenches in excess of 20 feet deep and adjacent to existing improvements or subject to vibrations or ground water shall be in accordance with OSHA regulations. The Contractor shall be fully responsible for sufficiency and adequacy of bracing excavations with respect to work under construction and to adjacent utility lines and private property.
- C. If the soil conditions within the trench area require support, the Contractor may elect to use tight sheeting, skeleton sheeting, stay bracing, trench jacks, or a movable trench shield to support the trench during pipe laying operations, such as: bedding preparation; pipe laying; and backfilling of haunches and initial zone.
- D. No sheeting shall be permitted to remain in the trench except when, in the opinion of the Engineer, field conditions or type of sheeting or methods of construction used by the Contractor, warrant the supports must remain. The Engineer may opt to have the lower portion (within the pipe zone) of the sheeting to remain. If the Contractor plans on removing the sheeting, he shall submit a method to the Engineer for approval to treat the void created by the removal of the sheeting within the pipe zone and below.
- E. When a movable trench shield is used, the trailing half of the shield should be notched to the height of the top of the pipe. This will allow the haunch area of the pipe to be compacted properly to the wall of the trench. If the trench shield is not notched, a subtrench shall be excavated for pipe installation such that the bottom of the trench shield does not enter the pipe zone.

3.04 DEWATERING

A. Trenching and pipe laying operations may encounter standing water or ground water, which would preclude the proper placing of bedding, backfilling, and laying pipe. The water shall be removed by pumps and associated equipment, such as well points, to lower the water level. Dewatering shall continue for a minimum of 24 hours after placement of any concrete.

- B. Dewatering operations shall remove the water to achieve a stable foundation for pipe embedment and backfilling. The Engineer shall determine if adequate foundation has been attained. The ground water shall be lowered to a minimum depth of 6 inches below pipe grades. Should over excavation be necessary due to unsuitable foundation conditions, the ground water shall be additionally lowered as necessary.
- C. The Contractor shall submit a plan for approval by the Engineer as to how and where the waste water will be disposed. Waste water will not be discharged into traffic and pedestrian lanes or onto private properties.
- D. The Contractor shall obtain a permit from the New Mexico State Engineer prior to commencing dewatering operations.
- E. The Contractor shall also be responsible for any adverse effect his dewatering operation has to private property, including providing temporary water to residences and/or businesses necessitated by the effect on private wells.
- F. The Contractor shall arrange his dewatering operation in a neat and orderly manner such that access to adjacent properties is maintained, the discharge system does not leak, and that any power generation complies with applicable noise limit regulations.

3.05 REMOVAL OF EXISTING PAVEMENT, SIDEWALK, AND DRIVEWAY

- A. Existing concrete pavement, sidewalk, or driveway removed in connection with construction shall be replaced to neatly sawed edges. Cuts shall be neat and to true straight lines with no shatter outside the removal area. If a saw cut would fall within 30 inches of a construction joint, cold joint, expansion joint, or edge, the concrete shall be removed and replaced to the joint or edge. Concrete sidewalk and/or driveway may be removed so that a minimum of 30-inch square is replaced. If the saw cut would fall within 12 inches of a score mark, the concrete shall be removed and replaced to the score mark.
- B. Existing bituminous pavement removed in connection with construction shall be cut with a saw, pavement breaker, cutting wheel, or other suitable tool approved by the Engineer. Care shall be taken to assure that the edge of the removed pavement does vary from a straight line more than 2 inches from the mean.
- C. Saw cutting shall be 1-1/2 inches in depth or 1/4 the thickness of the pavement, sidewalk, or driveway, whichever is greater. All saw cuts or other scoring shall be made perpendicular to the surface of the material to be cut.

- D. Any unnecessarily irregular breakage or cracking caused by the Contractor shall be removed and replaced by the Contractor without added expense to the Owner.
- E. The Contractor shall be responsible for the disposal of removed materials.
- F. Saw cutting is required on all concrete or asphalt paving on State numbered streets or roads.
- G. Paving cuts for manholes and valve boxes and other utility appurtenances shall be square and at dimensions specified on the detail drawings or on the construction plans.

3.06 MAXIMUM LENGTH OF OPEN TRENCH

- A. In developed areas, no more than 300 feet of trench shall be opened in advance of pipe laying operations. This distance may be reduced due to traffic control considerations. Backfilling shall begin as soon as pipe is laid and inspected and shall keep pace with pipe laying.
- B. In advance of trenching operations in undeveloped areas, the Contractor shall submit in writing or on the plans for the Engineer's approval, the maximum length of trench that will be open at any one time. Except by permission of the Engineer, the maximum length of open trench in any one location where concrete structures are cast in place will be that which is necessary to permit uninterrupted progress.
- C. Construction shall be pursued as follows: excavation; formwork; setting of reinforcing steel; and placing of floor slab, walls, and cover slab or arch shall follow each other without any one of these operations preceding the next nearest operation by more than 200 feet. Failure by the Contractor to comply with the limitations specified herein or as may be specifically authorized by the Engineer may result in a written order from the Engineer to halt progress of the work until such time as compliance with this paragraph has been achieved and the work can be proceeded in an orderly sequence of operation.

3.07 WIDTH OF TRENCHES

- A. Trench widths will vary according to the type of pipe used, size of pipe, depth of trench, and soil conditions. The minimum width requirements, indicated below, are for proper laying, aligning and jointing of pipe as well as trench grading, bedding preparation, and backfilling.
- B. Trench Width for Rigid Pipe Materials
 - 1. Trench widths from bottom of pipe to a point 12 inches above the top of the pipe shall be kept to the practical minimum required for properly

laying, aligning, grading, jointing, and backfilling of the pipe, but no less width than pipe outside diameter plus 16 inches. For stable soils which will stand a vertical cut, the maximum trench width at a point 12 inches above the top of pipe or at a point 5 feet above the bottom of the trench, whichever is less, shall be as follows:

- a. The pipe outside diameter plus 2 feet for pipes 27 inches in diameter and smaller.
- b. 1.6 times the nominal diameter for pipes 30 inches in diameter or larger.
- c. When soil will not stand vertical, the trench sides shall be sloped to provide not less than the outside diameter plus 16 inches at the pipe invert.
- C. Trench Widths for Non-rigid Pipes (And Electrical Conduit)
 - 1. The minimum clear width of the trench measured at the spring line of the pipe should be 1 foot greater than the outside diameter of the pipe. The maximum clear width of the trench at a point 1 foot above the top of the pipe will be equal to the pipe outside diameter plus 2 feet. If the maximum recommended trench width must be exceeded or if the pipe is installed in a compacted embankment, then pipe embedment should be compacted to point of at least 2-1/2 pipe diameters from the side of the pipe to the trench walls.

3.08 ROCK EXCAVATION

- A. Rock is defined as material which cannot be excavated without drilling or blasting. All stone or boulders less than 8 cubic feet in volume will be classified as earth; all larger boulders shall be classified as rock. If blasting is necessary to excavate such materials as shale, hardpan, soft sandstone, cemented gravel, caliche, or loose rock which normally can be classified as earth excavation, then this excavation shall be classified as rock excavation. Whenever a ledge of solid rock encountered with earth below it or where alternate layers of solid rock and earth occur, the earth shall be included in the allowance for rock when the thickness of the layer of earth is less than 12 inches, thus requiring it to be removed blasting along with the ledges of rock. Blasting will be considered necessary when the soil and rock cannot be excavated at a rate of 50 cubic yards per hour by a competent operator with a back-hoe that has a minimum bucket curling force of 25,000 pounds (John Deere 690 or equivalent).
- B. Whenever rock is encountered in the trench or elsewhere in any excavation required to be made, it shall be excavated to the line and grade as shown on the

plans and within the limits described therein, unless otherwise directed by the Engineer.

- C. For trenches, rock shall be excavated to a depth of 6 inches minimum below the outside bottom of the conduit except at points of rock and earth transitions at which points the rock shall be excavated to a minimum of 12 inches below the outside bottom of the conduit as shown on the detail sheets for trench cuts and backfill of rock. Any depression in the bottom of the trench caused by overshoot and/or excavating and being 6 inches or greater in depth from a theoretical bottom of trench grade shall be filled to the theoretical bottom of the trench with material outlined in the appropriate bid item. The trench shall be backfilled with select backfill material to a point 1 foot above the top of the conduit. The remainder of the trench shall be backfilled as specified herein. The complete trench backfill from the bottom of the through the top of the subgrade shall meet the compaction and/or moisture requirements as specified herein.
- D. Blasting
 - 1. Suitable weighted covering or mats shall be provided to confine all materials lifted by the blasting within the limits of the trench and to prevent injury of persons or damage to property. Blasting shall be under the supervision of a person qualified and experienced in the use and handling of explosives. All blasting operations shall be done in accordance with applicable local, state, and federal laws, ordinances, and codes regulating the transportation, storage, and use of explosives. Forty-eight (48) hours prior to blasting operations, the Contractor shall notify the local Utility Locator Service and the local Police Department.

3.09 FOUNDATION

- A. All pipe shall be bedded on a stable foundation in a trench which is completely free of water. The Engineer shall determine the adequacy of the foundation. Foundation material consisting of Class V soils shall be considered unstable in all cases.
- B. Where an unstable foundation condition is encountered, it must be stabilized before laying pipe or alternative foundation methods utilized. The Contractor will be paid for foundation stabilization when required by the Engineer. Failure to notify the Engineer of an obvious unstable foundation condition prior to proceeding with placement of the pipe shall result in complete removal of the affected pipe, foundation stabilization, and replacement of the pipe at the Contractor's expense.
- C. Should the trench be inadvertently over-excavated below the foundation, the area of over-excavation shall be filled with embedment material in 6 inch lifts

and compacted to a density of not less than 95 percent of maximum density, as determined by ASTM D 1557.

D. Unless specifically approved in writing by the Engineer, the Contractor shall not proceed with pipe embedment in a trench where water is present or the foundation is saturated. Adequate dewatering as specified in Subsection 3.04 of this section shall be utilized.

3.10 PIPE EMBEDMENT

A. General

- 1. The minimum class of bedding for all water or sewer pipes shall be Class A or Class B bedding. Electrical conduit shall have the same bedding
- 2. The bedding shall be a minimum of 4 inches in depth below pipe for pipe sizes 27 inches and smaller, or as shown on Plan Drawings. The bedding depth for pipe sizes greater than 27 inches shall be a minimum of 1/8 of the pipe outside diameter, or as shown on Plan Drawings. Additional bedding of 8" (for a total of 12") shall be provided in rock excavated areas.
- 3. The bedding shall be properly graded to conform with the required slope and invert elevations. The bedding shall provide uniform support for the entire pipe barrel. The bedding shall be properly excavated to accommodate pipe bells and couplings.
- 4. After placement of each joint of pipe on the bedding, the pipe shall be adequately secured by placing and compacting bedding material up to the spring line or as necessary to prevent any movement of the pipe during placement of subsequent pipe joints.
- 5. All material in the trench embedment zone shall be homogeneous unless otherwise specified in the Contract Documents or directed in writing by the Engineer.
- B. Rigid Pipe Embedment
 - 1. The trenches shall be excavated in conformance with the trench width requirements in Subsection 3.07 of this section.
 - 2. Unless otherwise specified, only pipe bedding (granular material) shall be acceptable trench backfill materials, to 12" above the top of pipe.
 - 3. All material in the embedment zone shall be placed in lifts not exceeding 8 inches in un-compacted depth, except that material along

the side of the pipe shall not be placed above the spring line until the haunch area of the pipe is adequately filled such that no voids remain.

- 4. All material shall be compacted to density not less than 95 percent of maximum density, as determined by ASTM D 1557. The Contractor shall take care to assure that the pipe is not damaged or misaligned during compaction of the embedment.
- C. Flexible Pipe Embedment
 - 1. Proper placement of material in the embedment zone is extremely important in achieving a satisfactory installation of flexible pipe. The Contractor shall be aware that the soil classes have differing requirements relative to embedment. There are also differing requirements for embedment in dry and wet conditions (wet conditions meaning that the embedment zone will be subject to ground water).
 - 2. Under no circumstances shall Class IV or V soils be utilized for embedment of flexible pipe.
 - 3. Embedment materials shall be placed in lifts not exceeding 8 inches loose depth. The haunch shall be properly compacted by hand tampers utilizing due caution such that the pipe is not damaged or misaligned. Mechanical tampers shall not be utilized directly over the pipe in the embedment zone.
 - 4. The Contractor may utilize acceptable granular native material in the embedment area in conformance with these specifications.
 - 5. Class I material shall be manufactured angular graded stone with a maximum particle size of 1-1/2 inches. The Contractor shall submit to the Engineer the gradation of Class I material for approval prior to use. In wet conditions or where migration of fines from native materials is possible, the Class I material shall be more finely graded to reduce the voids and/or it shall be completely enclosed in an approved filter fabric material. In general, Class I material requires only minimal compactive effort, but density of not less than 95 percent compaction shall be required.
 - 6. Class II and III materials shall be compacted to a density of not less than 95 percent of maximum density, as determined by ASTM D 1557. The moisture content shall not exceed 5 percent above the optimum.

3.11 FINAL BACKFILL

A. Final backfill in non-street areas shall consist of homogeneous native materials except that boulders, frozen clumps, rubble, and Class V soils are excluded.

- B. Final backfill shall be compacted to a density of not less than 90 percent of maximum density, as determined by ASTM D 1557 unless otherwise specified in the Contract Documents.
- C. The upper portion of the final backfill in street areas shall require specific materials and compaction of 95 percent in order to provide a suitable foundation for pavements, curb and gutter, sidewalk, or other type of structure.

3.12 COMPACTION METHODS

- A. The Contractor shall be responsible for the compaction method utilized during foundation preparation, embedment placement, and final backfill except as otherwise specified herein or in these Specifications.
- B. The use of mechanical vibratory compactors directly over the pipe is prohibited in the embedment area. Extreme care shall be taken when utilizing mechanical compactors in the haunch and initial backfill area in order to avoid damage to or misalignment of the pipe. The Engineer shall examine and damaged pipe and has the authority to direct that it be replaced with new pipe at no additional cost to the Owner.
- C. Flooding or jetting shall be allowed only if the backfill material is compatible to its usage. It shall not be used for the compaction of embedment material for flexible pipe. The Contractor shall take any necessary precautions to avoid flotation of the pipe.
- D. The Contractor shall, at the direction of the Engineer, excavate the compacted fill as necessary for the purpose of determining the adequacy of the compaction.

3.13 PAVEMENT

- A. Either new street construction or pavement replacements shall satisfy the following design and construction requirements:
 - 1. Unless permanent pavement is specified to be placed immediately, a temporary dust-free patch shall be placed wherever excavation is made through existing pavements, sidewalks, or driveways. The patch shall be placed, rolled, and maintained by the Contractor to provide a smooth surface for traffic until a permanent pavement is constructed within the time frame specified by the Engineer.
 - 2. Material thickness for all pavement replacements within residential or arterial streets shall conform to the detail drawings.

- 3. Pavement cuts of 8 feet or more in width and 100 feet or more in length shall be paved with a laydown machine.
- 4. When authorized by the Engineer, asphalt concrete base course may be used to replace surface course thickness requirements on streets that are scheduled for overlay.
- 5. The edges of all trenches at the base course level shall be neatly trimmed before beginning any paving replacement. All edges of the existing pavement adjacent to the trench cut shall be inspected. Undermined, broken, cracked, or unevenly cut portions shall be removed and the pavement edges retrimmed prior to pavement replacement. All vertical edges of the existing asphalt pavement adjacent to the trench cut and all surface areas for a width of at least 4 inches and no greater than 8 inches, shall be thoroughly cleaned and a tack coat applied prior to placing any hot mix asphalt. The finished surface of the pavement replacement shall be graded to conform to the existing contour both in cross section and profile.
- 6. Concrete pavement to replace cuts made in concrete paved streets, arterials, etc., shall conform to the detail drawings for concrete pavement in accordance with New Mexico State Highway Department requirements where applicable.
- 7. When more than ½ of the surface area of a manhole, lamphole, or valve box is found to extend into the area to receive a permanent asphaltic hot-mix surfacing and/or base pavement replacement, the existing pavement surrounding the manhole, lamphole, or valve box shall be removed to within those limits which will permit a permanent pavement replacement to be made in accordance with the construction details as shown on the approved plans.
- 8. Asphaltic hot-mix shall not be placed upon the concrete collar, nor shall traffic be permitted upon the collar for at least 24 hours, or longer, if so directed by the Engineer. A tack coat of asphaltic emulsion may be applied after the concrete has taken its final set. During this time, adequate barricading of the area shall be maintained by the Contractor.
- 9. If in the course of a pavement removal, a manhole, lamphole, and/or valve box is encountered and has a concrete collar about it and the collar is performing adequately, no special construction need be made in the permanent pavement replacement.
- 10. The Contractor shall make any small grade or alignment adjustment to the manhole, lamphole, and/or valve box encountered that is necessary to pride a smooth riding surface between the existing pavement and the patch and/or within the patch itself.

11. Tests will made as ordered by the Engineer for the purpose of testing the adequacy of subgrade compaction, bearing value, density of the subbase and for the purpose of testing the adequacy of the asphalt paving mix and aggregate.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT AND PAYMENT OF TRENCHING, BACKFILLING, AND COMPACTION

A. Trenching, backfilling, and compaction shall be combined into one unit and shall not be separately measured and paid for, and shall be included in the unit price bids for pipeline work included with the Base Bid or Alternate attributable to the associated work.

4.02 MEASUREMENT AND PAYMENT FOR PAVEMENT

A. Permanent resurfacing or permanent surface patching will not be separately measured or paid for, and shall be included in the lump sum for work included with the Base Bid or Alternate attributable to the work.

4.03 MEASUREMENT AND PAYMENT FOR ITEMS OVER AND ABOVE PIPELINE CONSTRUCTION

A. No separate payment shall be made for any construction included under this section. This also includes any rock excavation required for pipeline or conduit excavation.

END OF SECTION

SECTION 02316

FILL AND BACKFILL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Filling, backfilling, and compacting for footings, slabs-on-grade, paving, site structures, and utilities.
- B. Backfilling and compacting for utilities outside the building to utility main connections by others.

1.2 RELATED SECTIONS

A. Geotechnical Report not provided. Utilize existing well drilling reports

1.3 REFERENCES

- A. ASTM D 1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; latest edition.
- B. ASTM D 1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); latest edition.
- C. ASTM D 2167 Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; latest edition.
- D. ASTM D 2922 Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); latest edition.
- E. ASTM D 3017 Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); latest edition.

1.4 DEFINITIONS

- A. Finish Grade Elevations: Indicated on drawings.
- B. Rough Grading of site for each building

1.5 SUBMITTALS

- A. See Section 01300 for submittal procedures.
- B. Compaction Density Test Reports.

1.6 PROJECT CONDITIONS

A. Provide sufficient quantities of fill to meet project schedule and requirements. When necessary, store materials on site in advance of need.

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- B. When fill materials need to be stored on site, locate stockpiles where designated.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.
- C. Verify that survey bench marks and intended elevations for the Work are as indicated.

PART 2 PRODUCTS

2.1 FILL MATERIALS

- A. General Fill: Subsoil excavated near-surface on-site.
 - 1. Graded.
 - 2. Free of lumps, rocks or roots larger than 2 inches and free of all miscellaneous debris.

2.2 EMBANKMENT

- A. General: The embankment shall consist of a controlled fill constructed in the areas indicated on the grading plans.
- B. Embankment Materials: Embankment material shall consist of soils that conform to the following physical characteristics:

Sieve Size (sq. opening)	<u>% Passing (by wt.)</u>
12 inch	100
No. 4	40-100
No. 200	10-50

- C. The plasticity index of the materials as determined in accordance with ASTM D-423 and D-424, shall not be more than 10.
- D. The fill material shall be free from roots, grass, other vegetation matter, clay lumps, or other deleterious materials. Nesting of large cobbles should be avoided.
- E. Site soils from the cuts may be used for fill, provided they meet the requirements above in Paragraph B of EMBANKMENT. Blending of soils may be required to meet specifications.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Identify required lines, levels, contours, and datum locations.

3.2 PREPARATION

A. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.3 FILL AND COMPACTION

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Fill up to subgrade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density. The moisture content at the time of compaction shall be 2 percent below optimum or higher.
- F. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth, watered as necessary.
- G. Compaction shall be as required by the Geotechnical Report, if one is available.
- H. Embankments outside the building pad shall be compacted to 90 percent of maximum density.
- I. Native soils beneath fills or in cuts shall be compacted to the density specified for fills in that area in accordance with the Geotechnical Report..
- J. Optimum moisture and maximum density for each soil used shall be determined in accordance with ASTM D-1557.
- K. Slope grade away from building minimum 4 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- L. Correct areas that are over-excavated.
 - 1. Load-bearing foundation surfaces: Use structural fill, flush to required elevation, within 3% of optimum moisture compacted to 95 percent of maximum dry density. 8" lifts maximum.
 - 2. Other areas: Use general fill, flush to required elevation, compacted to minimum 90 percent of maximum dry density.
- M. Compaction Density Unless Otherwise Specified or Indicated:
 - 1. Under paving, slabs-on-grade, and similar construction: 95 percent of maximum dry density.
 - 2. At other locations: 90 percent of maximum dry density.

3.4 TOLERANCES

- A. Top Surface of General Filling: Plus or minus 1 inch from required elevations.
- B. Top Surface of Filling Under Paved Areas: Plus or minus 1 inch from required elevations.

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3.5 FIELD QUALITY CONTROL

- A. The Contractor shall employ the services of an independent registered licensed soils engineer to observe and test all controlled earthwork. The soils engineer shall provide continuous on-site inspection by experienced personnel during construction of controlled earthwork.
- B. The contractor shall notify the Owner at least 2 working days in advance of any field operations of the controlled earthwork, or of any resumption of operations after stoppages.
- C. Perform compaction density testing on compacted fill in accordance with ASTM D1556, ASTM D2167, ASTM D2922, or ASTM D3017.
- D. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 1557 ("modified Proctor").
- E. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- F. Frequency of Tests:
 - 1. One field density test per each 100 square yards of original ground surface prior to placing fill or in cut areas.
 - 2. One field density test per each 350 cubic yards of fill placed, or each layer of fill for each work area, whichever is greater.
 - 3. One moisture-density curve for each type of material used, as indicated by sieve analysis and plasticity index.
 - 4. Trench Backfill: In each compacted backfill layer, perform at least one field in-place density test for each 300 lineal feet or less of trench at intervals no greater than 2' vertical, but no fewer than two tests, to 95% compaction.
- G. Proof roll compacted fill at surfaces that will be under slabs-on-grade and paving.

3.6 CLEAN-UP

- A. Remove unused stockpiled materials; leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- B. Leave borrow areas in a clean and neat condition. Grade away from buildings to prevent standing surface water.

END OF SECTION

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Fill and Backfill

SECTION 02670

WELL DRILLING

PART 1 GENERAL

1.01 LOCATION AND GENERAL GEOLOGY

A total of three (3) wells are to be drilled within the existing Lovington East (South) well field, which is located approximately 4 miles SSE of Lovington, as identified on the plan drawings. The newest well sites [Designated as wells L-4058-S-28, L-4058-S-29 and L-4058-S-30] are currently within the well field, but currently under-developed. The surrounding land is primarily vacant, and access is through an existing dirt access road to the individual sites. The access road is currently not improved. The approximate well locations and nearby wells are shown on Sheets G-101 and C-101 of the plan drawings.

The surrounding Lovington South well field is located within the Ogalalla Aquifer. The local Geology consists of "Red Bed" sand formations above the Chinle Shale. The primary deposits evidenced within the well field consist of consolidated sandstones, and consolidated and unconsolidated layers of fine to very fine sands, with occasional layers or lenses of silt or clay overlaid by occasional Caliche beds to 60 feet Below Ground Level (BGL), and underlain by the Shale, at 250 to 350 feet BGL. Water-bearing sand deposits may exist from 100 feet depth BGL to approximately 250 feet BGL.

Contractor shall first conduct a Pilot hole for each well, and then, based upon results of the pilot hole drill log and water-bearing limits, may, in consultation with the Engineer, Owner and Geotechnical subconsultant, adjust or modify the proposed limits of well screen, gravel-pack, etcetera prior to completing the well. The boreholes will be drilled through the sand sediments, and to approximately 250 feet BGL. It is anticipated that the sediments will consist of interbedded layers of poorly to moderately consolidated, sand, gravel, and sandstone. Well records from numerous of the nearby wells are also available for inspection, although not attached to these contract documents. The Owner does not guarantee the subsurface conditions, and the Contractor shall satisfy himself as to actual site and subsurface conditions.

1.02 GENERAL DESCRIPTION

- A. The Contractor shall not enter on or occupy with men, tools, equipment, or material, any ground outside the general construction area without approval of the Owner. Other contractors, employees, or agents of the Owner may, for business purposes, enter the work site and premises used by the Contractor. The Contractor shall not impede any work being done by others on or adjacent to the well site unless necessary as determined by the Project Representative.
- B. The Contractor shall prevent damage to all structures, roads, or other operations during the progress of his work and shall remove from the location all cuttings, debris, and unused

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materials. Upon completion of the work, the Contractor shall restore the site to a condition as near to the original condition of the site as possible.

- C. The Contractor shall be responsible for disposing of all debris, including but not limited to drilling fluid and water produced by test pumping or other operations, by such methods and to such locations that damage to, or interference with structures, roads, or utilities, or with other construction projects will not occur. All costs incurred in connection with the disposal of drilling fluid, cuttings, and water shall be incidental to the Contract and shall be included in the contract price.
- D. The specifications herein provide for each well completion with 12.75-inch (O.D.) diameter blank casing and stainless steel wire-wound well screen. Well completion shall be included as part of the Contractors bid.

1.03 PERMITTING

- A. The well will be drilled under a well permit that has been acquired by the Owner. The Owner will provide a copy of the well permit to the Contractor upon issuing notice to proceed.
- B. The Contractor shall be responsible for filing a Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under a NPDES Permit and obtaining permit coverage under the EPA's Stormwater Construction General Permit. The NOI can be filled out electronically on the EPA website epa.gov/npdes.

1.04 SCOPE OF WORK

- A. The work includes the furnishing of all labor, material, transportation, tools, supplies, plant, equipment, and appurtenances necessary to complete the well drilling work. The work consists of the satisfactory pilot-hole drilling, record keeping, geophysical logging, reaming, installation of blank and perforated well casing, gravel packing, annular seal installation, well disinfection, development, and testing of one gravel-packed well. The work shall be completed in strict accordance with the specifications and drawings.
- B. The well shall be drilled at the location and to the depth indicated on the drawings, unless otherwise directed by the Owners Representative. The well shall be of the gravel-pack type. The construction and overall diameter of the well shall be as shown on the drawings and specified herein. The Owners Representative may order drilling to depths shallower or deeper than herein specified or as shown on the drawings. If quantity of borehole drilled, or reamed, or quantity of materials actually incorporated in well construction change, unit bid prices shall prevail.
- C. Drilling method shall be one of the following:
 - 1. Reverse mud-rotary method
 - 2. Direct mud-rotary method

- a. Contractors contemplating using direct-mud rotary method shall provide evidence that they have performed development using reverse air-lift pumping and swabbing methods as specified.
- D. <u>Base Bid:</u> The work required for the well construction FOR EACH of the three (3) wells includes but is not limited to the following:
 - 1. Drill 26-inch diameter borehole to 50 feet and install 22-inch diameter by 3/8 thickness (minimum) conductor casing, cement in place.
 - 2. Drill -6-inch minimum to 7-7/8-inch maximum diameter pilot hole and collect drill cuttings to the total depth.
 - 3. Maintain drilling-time and formation logs, and daily drilling reports.
 - 4. Conduct geophysical-log surveys of the pilot hole as specified.
 - 5. Determine advisability of proceeding, limits of blank casing and well screen, final depth of well, concurrently with Owner, Engineer, and Geotechnical subconsultant.
 - 6. Ream the pilot hole to 20-inch diameter from the bottom of the conductor casing to total depth.
 - 7. Install 12-3/4-inch (I.D.) blank casing and wire-wound Stainless Steel well screen, with installation of gage line in proper lengths to full depth as directed
 - 8. Condition the hole for gravel packing by thinning the drilling fluid with clear water as specified.
 - 9. Install gravel pack in the annulus through tubing from total depth as determined by pilot hole directions to a depth approximately 90 ft or less below ground surface. Disinfect gravel during installation, as specified.
 - 10. Provide Annular Seal above Gravel Pack, consisting of bentonite clay material for a thickness of 20 feet, then cement grout above.
 - 11. Develop the well by swabbing and zone air-lift development.
 - 12. Develop the well by swabbing and bailing.
 - 13. Disinfect the well as specified.
 - 14. Install the test pump and continue well development by pumping.
 - 15. Conduct pumping test of the well as specified.
 - 16. Collect water-quality samples as specified.
 - 17. Complete wellhead as specified.
 - 18. Perform video survey as specified.
 - 19. Cover well casing with 3/8-inch steel plate secured by welding, secure gage line and gravel-feed line with threaded caps, and weld tabs to caps to prevent caps from being unscrewed, prior to permanent pump installation.
 - 20. Clean up and restore well site to as near original condition as possible.
- E. The Contractor must provide for continuous operations, except as noted in paragraph 1.03, Section A, from the time drilling is commenced until completion of development by swabbing and bailing, and during test pumping. <u>No unnecessary delays or work stoppages</u> <u>will be tolerated</u>.

1.05 WELLHEAD PROTECTION

- A. Drilling methods shall be consistent with standard practices generally in accordance with AWWA specifications for construction of gravel packed wells. The well site and wellhead shall be protected from entry of undesirable fluids and materials at all times. Equipment shall be clean, and fuel and lubricant leaks repaired whenever discovered. Plastic liners, minimum 8-mil thickness, shall be placed beneath all machinery and fuel tanks. Soiled liners shall be disposed of and replaced as needed.
- B. Any time the well site is unoccupied by the Contractor, the well shall be covered and secured against tampering in a manner acceptable to the Project Representative. For the cased well, this shall require a 3/8-inch thick steel plate welded to the top of the casing, and the gravel-feed line and gage lines shall, at a minimum, require threaded caps or plugs secured with welded straps to prevent unauthorized access.

1.06 NOISE CONTROL REQUIREMENTS

- A. The site is relatively remote and noise control, such as sound blankets or reduced working hours, will not be required.
- B. The Contractor shall have in place high efficiency mufflers on all engines used on the drilling rig and ancillary equipment including, but not limited to, air compressors, light plants, generators, and pumps.
- C. Noise-control requirements are incidental to the project, and no separate payment will be made for noise-control measures.

1.07 WATER SUPPLY AND WATER DISCHARGE

- A. Water required for drilling-fluid makeup, disinfection, flushing activities, and dust control may be obtained from a nearby well within the existing well field, subject to agreement with the City of Lovington. The Contractor shall provide, install and maintain, at his expense, all water-supply connections and piping for construction use. The Contractor shall install temporary meter and "Reduced-Pressure Principle" backflow preventer. Water use shall be carefully conserved. Upon completion, temporary connections and piping installed by the Contractor shall be removed.
- B. Water produced by well development and test pumping shall be temporarily disposed of, within the area within lands designated for this overall project. The Contractor shall take appropriate measures to limit the potential for erosion of the ground surface to occur. Disposal of produced water shall be by such methods and to such locations that damage to the environment, structures, roads, utilities, or interference with construction shall be prevented. As the project water disposal has no opportunity to drain to any stream system within the basin, it may also be directly discharged onto the ground, subject to agreement by the owner. The Contractor shall submit plans for disposal of water to the Project Representative within two (2) weeks after receiving notice to proceed.

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C. In order to meet New Mexico Water Quality Control Commission (NMWQCC) Standards for turbidity, any water discharged from the well as the fluid in the borehole is thinned prior to and during gravel packing procedures shall be buried at an approved location, or hauled off-site. Fluid may be hauled by an approved contract hauler to the City or other adjacent Landfills, or located around the site, with prior approval from the City of Lovington. Contractor may choose to haul the fluid to another approved New Mexico Environment Department (NMED) permitted facility.

1.08 HEALTH AND SAFETY

- A. The Contractor is encouraged to conduct regular "tail gate" safety meetings to remind workers of potential hazards and safe working practices. All personnel shall have and wear appropriate personal protective equipment including items listed below and other items that may be required by the Contractor. Contractor's personnel shall have appropriate health and safety training per applicable OSHA, and other Federal and State requirements.
 - 1. hard hat
 - 2. safety glasses
 - 3. steel-toed shoes
 - 4. ear plugs
 - 5. gloves
 - 6. respirators as necessary during gravel packing
 - 7. chemical resistant gloves and splash suits as necessary during disinfection
- B. At least 48 hours prior to any on-site excavation, or beginning drilling, the Contractor shall contact New Mexico One Call (260-1990) for spotting of underground utilities. The Contractor shall also be familiar with the location of all overhead utilities prior to moving equipment on-site.

1.09 SECURITY

- A. The Contractor shall be responsible for site security of materials, equipment, and protection of the borehole and well. The Owner cannot be held responsible for security.
- B. The Contractor must protect the borehole and well from the entry of undesirable fluids and materials at all times. Any time the site is unoccupied by the Contractor, the borehole or well shall be covered and secured against tampering. For the cased well, this shall require a 3/8-inch thick steel plate to be welded to the top of the casing, gravel-feed line, and gage line with continuous welds.

1.10 SUBMITTALS

A. For any combination of bid lots, including the Base Bid or any Alternates, the Contractor shall, within ten (10) days after the delivery of the executed Agreement by the Owner to the Contractor, submit to the Project Representative a schedule of work in CPM format, presenting proposed completion dates of the activities listed under paragraph 1.04.D above. The methods or combination of methods to be utilized shall be adequate, as

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determined by the Project Representative, to meet the completion schedule for the work (Section 2.01.C).

- 1. Complete list of equipment and methods that are proposed for the work (Section 2.01.A and B).
- 2. Name of the manufacturer and model number of development rig and air compressor (Section 2.01.D).
- 3. List of key personnel and reference information.
- 4. List of relevant projects and reference information.
- B. The Contractor shall also submit to the Project Representative (or other as noted) during the course of the project the following items:
 - 1. EPA's determination of the NOI (Section 1.03.B).
 - 2. Daily Drilling Report upon request of the Project Representative (Section 3.02.C).
 - 3. One cutting sample to laboratory per well-site geologist (Section 3.04).
 - 4. Results of sieve analyses (Section 3.04.B).
 - 5. Drilling-rate recorder charts to the Project Representative upon request (Section 3.05).
 - 6. Deviation Survey Records (Section 3.06 and 3.08).
 - 7. Plumbness and survey records (Section 3.09).
 - 8. Five (5) copies of each geophysical logs and digital log records (Section 3.10.D).
 - 9. Certificate of quality and gradation for the gravel packing (Section 2.11).
 - 10. Certificate of quality for blank and perforated casing. (Sections 2.05 and 2.06)
 - 11. Field test pumping results and digital copy of test data (Section 3.22.G).
 - 12. Water-quality testing results (Section 3.23.D and E).
 - 13. Disinfection and bacteriological testing results (Section 3.23.D and 3.24).
 - 14. Original video DVD(s) and four (4) copies of each original DVD of the well inspection (Section 3.30.B).

1.11 SPECIFIC WELL COMPLETION

- A. The Design parameters shall require completing the well with 12-3/4-inch (nominal) diameter blank casing and Stainless Steel well screen. All materials, methods, and requirements for the 12-3/4 inch diameter well completion as identified within the bidding documents and drilling specifications shall be adhered to in the event the Owner elects to complete the well with the exceptions listed below.
 - 1. Borehole for surface casing shall be 26-inch diameter.
 - 2. Conductor casing shall be 22-inch diameter.
 - 3. Initial Pilot hole for production casing shall be 6-inch minimum and 7-7/8-inch maximum diameter.
 - 4. Final Borehole shall be 20 inch diameter
 - 5. Blank production casing shall be 12.75-inch nominal outside diameter, or equal.
 - 6. Stainless Steel screen for production shall be 12.75-inch nominal outside diameter, or equal.

- 7. Filter gravel shall be Daniels Industrial sand, or approved equal, having a 10-16 gradation.
- 8. Screen Slot size shall be 40 slot (or 0.040 inches preliminary).

PART 2 PRODUCTS

2.01 CONTRACTOR'S EQUIPMENT, METHODS, AND KEY PERSONNEL

A. The Contractor shall drill the pilot hole and perform all reaming by the reverse-circulation mud rotary method. With his bid, the Contractor shall submit a complete list of equipment that he proposes to use on the work, together with a description of the methods by which he proposes to drill, develop, and test the well. If the Contractor fails to submit, or if the equipment and methods he proposes to use do not meet the Project Representative's approval, the Owner reserves the right to reject his bid as non-responsive. Other methods, equipment, or instruments shall not be substituted for the approved methods and equipment. The Contractor using the equipment per the list submitted shall drill both the pilot hole and the production borehole. All equipment and components shall be capable of performing the work as specified. The listed equipment shall be available for the work when scheduled. The equipment shall meet the following minimum requirements:

Drilling Rig

- 1. rated hook load and safe load for substructure (recommended capacity of at least 64,000 lb). Mud pump capacity and circulation rate shall be sufficient for drilling a 20-inch diameter borehole.
- 2. mast height
- 3. available rotary table horsepower
- 4. available draw works horsepower
- 5. rated air-compressor capacity
- 6. drilling fluid circulating rate
- 7. total available rig horsepower
- B. The rig shall be equipped with the following accessory equipment:
 - 1. weight indicator
 - 2. approved equipment for measuring drilling fluid properties
 - 3. shale shaker (or other approved equipment for separation of cuttings)
 - 4. drilling-rate recorder
 - 5. deviation-survey tool (3 degree)
- C. The Contractor shall also submit his proposed drilling program and schedule, including the following:
 - 1. type(s) of bits
 - 2. number, diameters, lengths, and weights of drill collars
 - 3. size and weight of drill pipe
 - 4. expected rotary RPM

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- D. The Contractor shall submit a description of the manufacturer and model number of the development rig used for swabbing (if different from drilling rig), and air compressor used for well development, and capacities of the equipment.
 - 1. available horsepower of development rig
 - 2. minimum spooling capacity of development rig of 300 to 500 feet/minute
 - 3. rated mast capacity
 - E. Accessory well-development equipment:
 - 1. compressor for air-lift pumping (minimum 900 cfm @ 350 psi)
 - F. The description of the test pump equipment and instruments shall include the following:
 - 1. column, shaft, and tubing sizes
 - 2. bowl capacity and RPM at maximum lift
 - 3. number of bowl stages required at maximum lift
 - 4. type and horsepower of drive unit
 - 5. type, size, flow range, and accuracy range of flow meters
 - 6. sizes of discharge pipe
 - 7. number and size of orifice plates
 - 8. manufacturer of pressure transducer, capabilities of transducer, and data logger type and capacity
 - G. The Contractor shall employ only competent workers for the execution of the work, which shall be under the direct supervision of an experienced drilling superintendent (tool-pusher). The tool-pusher must be on-site daily (at least 8 hours/day) during all work. The Contractor shall provide the following for key personnel at the site, including tool-pushers and drillers that will be available for the project.
 - 1. Name
 - 2. years of experience
 - 3. references including project information, name of reference, phone number, and contact address for at least 3 projects which were drilled using reverse circulation mud-rotary methods within the last 3 years
 - H. The Contractor shall provide at least 3 references for similar projects drilled using reverse circulation mud-rotary methods within the last 2 years. Include contact information listed below.
 - 1. References including project information, depth of borehole, casing size, depth of well, name of reference, phone number, and contact address.

2.02 SCHEDULE

A. Within 5 days after award of contract, submit to Project Representative a schedule of work, presenting proposed completion dates of activities listed in Section 1.04 SCOPE OF

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WORK. The methods or combination of methods to be utilized shall be adequate, as determined by the Project Representative, to meet the completion schedules for the work.

- B. No unnecessary delays or work stoppages will be tolerated. The Contractor will be held responsible for unnecessary delays in the progress of the project including reimbursing the Owner for excess time spent in the field by the Project Representative.
- C. The Contractor shall be held responsible and payment will be withheld for damages to the well due to any act of omission, error, or faulty operation by the Contractor or his employees or agents. Resulting repairs shall be completed by the Contractor to the satisfaction of the Owner, or a replacement well drilled at no additional cost to the Owner, and without claim against the Owner, Project Representative, or agents.

2.03 DRILLING FLUID

- A. Drilling fluid shall consist of a mixture of water and high yield bentonite gel, with additives as approved by the Project Representative. All Drilling fluid and additives shall be approved by NSF for use in water supply wells, and be such that they do not impart any toxic substances to the well or promote bacterial contamination. The drilling fluid is to contain a minimum of drilled clay and sand in order to deposit a thin, soft, easily removable filter cake on the face of the aquifers. If there is a conflict between the drilling fluid requirements for ease in drilling, and the drilling fluid requirements for protection of the aquifers, then the drilling fluid requirements for aquifer protection shall govern.
- B. Acceptable drilling fluid constituents include bentonite, synthetic polymers, inorganic phosphate thinning agents, and drilling detergents and foaming agents. Lost-circulation materials shall not be used without approval of the Project Representative, and except in extreme conditions, shall be limited to acid wool. Use of polymer mud without bentonite to contribute to wall cake development will not be allowed.

2.04 CEMENT GROUT

- A. Neat Cement Grout: Grout shall consist of a mixture of Portland cement meeting the requirements of ASTM C150, Type II, and water in the ratio of 5.2 gallons of water per 94 lb sack. Grout density shall be approximately 15.6 lb/gal (117 lb/cubic ft). A maximum of 2 percent by weight of calcium chloride may be added.
- B. Sand Cement Grout: Grout shall consist of a mixture of Portland cement meeting the requirements of ASTM C150, Type II, sand and water. Proportions shall not exceed 2 parts by weight of sand to 1 part of cement, with not more than 6 gallons of water per 94-lb sack of cement.

2.05 CASING

A. Conductor casing shall be new and free of rust, pits, or other defects. The 22-inch conductor casing shall be manufactured in accordance with ASTM A-53 Grade B specifications. Wall thickness shall be 3/8 inch.

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- B. Blank well casing shall be new and free of rust, pits, or other defects and shall conform to ASTM A-139 Grade B, and the steel from which the casing is manufactured shall be ASTM A 606 Type 4, referred to by Roscoe Moss as high-strength low-alloy (HSLA). Blank well casing shall be 12-3/4-inch outside diameter, spiral weld, Roscoe Moss, pipe having a wall thickness of 5/16 inch. The casing shall be factory assembled in not less than 20-ft sections with welding collars attached.
- C. Welded collars, of the same thickness and having the same chemical and physical properties as the casing, shall be utilized with plain faced end casing. The collars shall be a minimum of 5 inches in width. Three alignment holes shall be provided for plumbing the casing prior to welding. Steel plugs shall be provided, and shall be welded into alignment holes after the welding of each casing joint. The sections shall be machined flat, perpendicular to the axis of the casing and shall not vary more than 0.010 inch at any point from a true plane at right angles to the axis of the casing. A dissimilar-metal adaptor shall be utilized between the blank casing and the well screen, at each point where required.

2.06 WELL SCREEN

- A. Well Screen shall be new Type 316 Stainless Steel-wire-wound type and free of pits or other defects and shall conform to the requirements of AWWA A-100, Latest Edition, and shall be capable of welding to the steel from which the casing is manufactured. Well Screen for the Base Bid shall be 12.75-inch outside diameter (OD), with initial design slot size of 40 (0.040 inches).
- B. The Well Screen shall be factory assembled in not less than 10-ft sections with welding collars attached. A dissimilar-metal adaptor shall be utilized between the blank casing and the well screen, at each point where required. Stainless Steel Well screen shall be as manufactured by Johnson Well Screens, Rosco-Moss or equal.
- C. Part of one joint of well screen shall be left as required for the gage-line connections. See Sections 2.08 and 3.15, GAGE LINES and drawings. The final selection of screen slot opening shall be made by the Project Representative based on geophysical logs, and sieveanalysis results furnished by the Contractor prior to the ordering of well screen.

2.07 CENTERING GUIDES

A. Centralizers shall be installed at intervals of no greater than every 30 feet along the entire stainless steel well screen string. The guides shall consist of four 1/4-inch by 2-inch rigid steel guides welded at top and bottom, with not less than 2-1/2 inches standoff from the casing.

2.08 GAGE LINES

A. Gage lines shall be installed alongside the casing string for each well. The gage line shall be provided for each well. Each shall be 2 inch outside diameter schedule 80 black steel pipe, weighing 7.66 pounds per foot. Gage line joints shall be a minimum of 21 feet long, or matching casing joints, and may be joined together with either: threaded and coupled connections using API couplings or weld coupling connections. The gage lines should be welded to the outer surface of the 12-3/4-inch casing at appropriate intervals. A dissimilar-metal adaptor shall be utilized for transition between the gage line and the well screen, at the entrance point, or points where required.

2.09 GRAVEL LINE

A. The gravel-feed line shall be made from schedule 40 black steel pipe with an outside diameter of 3.5 inches with a weight of 12.51 pounds per foot. Pipe ends shall be beveled for welding.

2.10 CASING CLAMP

A. The casing shall be suspended at all times during construction. A steel landing clamp shall be used to land the casing string. The clamp shall be the appropriate minimum to handle 12-3/4 inches wide inner casing and be 1 inch thick minimum with appropriate bolts and spacers as manufactured by Roscoe Moss Company or approved equal. The clamp shall be bolted to the casing and welded to the casing around the circumference, top, and bottom. The clamp shall be wide enough to also be set into notches cut in the top of the 22-inch conductor casing and welded, with the casing string kept in suspension at all times.

2.11 FILTER GRAVEL

A. The filter gravel shall be supplied by Daniels Industrial Sand, Inc. or approved equal. The grains shall be both round and spherical with a cumulative composition of not less than 97 percent silica (Si0₂). The filter gravel shall be composed of sound, durable, well-rounded particles, free from organic matter, silt, clay, or other deleterious materials. The gravel shall be washed, dried, and packaged at the production facility. The Contractor shall submit a certificate of quality and gradation to the Project Representative. The anticipated gravel gradation is 10-16; however, final gravel gradation will be determined after sieve analysis of the well pilot hole cutting samples has been analyzed.

2.12 STEEL CAP PLATE

A. The cap between the 22-inch conductor casing and 12-3/4-inch production casing shall be steel plate, ¹/₂ inch thickness.

2.13 METAL CAP FOR WELL CASING TOP (AND BOTTOM)

A. The caps shall be steel plate, 3/8-inch minimum thickness.

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PART 3 EXECUTION

3.01 DRILLING METHODS

- A. Drilling method shall be consistent with standard practices generally in accordance with AWWA specifications for construction of gravel packed wells. The Contractor may drill and ream the borehole for the conductor casing using either direct or reverse mud-rotary methods. In either case, drilling fluid shall conform to the requirements of Section 2.02 DRILLING FLUID. Conductor casing must be installed prior to drilling the pilot hole below 50 feet.
- B. The Contractor shall drill the pilot hole and perform all reaming, either by the reversecirculation mud rotary method, or the direct-circulation mud rotary method. Strict control of drilling fluid properties shall be maintained at all times as specified. Drilling fluid shall consist of a bentonite based mud with approved additives for ease of drilling, filtrate control, and protection of the aquifer.

3.02 DRILLER'S LOG AND RECORDS

- A. Daily Drilling Report: The Contractor shall keep an accurate, up-to-date log of operations at all times; this shall be in the form of a Daily Drilling Report, and shall include the following items of information at a minimum:
 - 1. bit number, size, type, and depth-in
 - 2. in-hole drilling assembly, including bit, hole-opener(s), subs, collars, and drill pipe: including lengths to the nearest 0.01 foot, and diameters
 - 3. rotary RPM
 - 4. string weight and weight on bit
 - 5. drilling-fluid density, funnel viscosity, and water loss
 - 6. record of deviation surveys
 - 7. time devoted to each activity
 - 8. description of formation drilled, and depth at each change noted, including type, character, and thickness of strata
 - 9. lost circulation and volume of fluid lost
 - 10. water-meter readings for drilling water source
 - 11. lengths, diameters, and types of casing and perforated casing run
 - 12. volume of gravel placed
 - 13. volume of cement placed
- B. The depth reference of each depth given in the report shall be denoted as "KB" (Kelly bushing), "DF" (drilling floor), or "GL" (ground level), and the distance from ground-level to the drilling floor and to the Kelly bushing shall be measured and included in the report. The depth datum for geophysical logs shall be ground level.
- C. One copy of each Daily Drilling Report shall be furnished to the Project Representative upon request. Upon completion of the drilling, four complete sets of copies of the Daily Drilling Report shall be furnished to the Project Representative. Any and all signatures

City of Lovington Water Well Project provided by the Project Representative are only to acknowledge receipt of the report or form, and is not approval of the materials used or placed, hours worked, etcetera.

3.03 PIPE TALLIES

A. An accurate record of all drill-pipe, tubing, casing, and well screen on location and in the borehole shall be maintained at all times.

3.04 SAMPLE COLLECTION

- A. Collect two sets of cuttings samples at 10 intervals from ground surface to total depth. Additional samples shall be collected at formation changes as directed by the Project Representative. Samples shall be placed in cloth oil-field type sample bags approved by the Project Representative. Each bag shall be labeled with permanent identification consisting of the well name and number, date collected, and the depth interval represented by the sample. Do not attempt to correct sample depth for lag time.
- B. Contractor shall submit one set of samples to a laboratory approved by the Project Representative, for sieve analysis as directed by the Project Representative. Sieve analyses, selected by the Project Representative, shall be performed and the reports furnished to the Project Representative prior to well-perforated casing slot size and gravel-pack gradation selection by the Project Representative.

3.05 DRILLING-RATE RECORDER CHARTS

A. A drilling-rate recorder approved by the Project Representative shall be in operation during all drilling operations. The driller shall mark the depth at each connection on the charts. One copy of each chart shall be furnished to the Project Representative upon request.

3.06 DEVIATION SURVEY RECORDS

A. Results of deviation surveys must be recorded in the Daily Drilling Report. All targets will be furnished to the Project Representative.

3.07 PILOT HOLE

- A. The pilot hole shall be drilled for the purpose of determining the thickness and characteristics of all materials from ground surface to the bottom of the hole, location of water-bearing strata, and other geologic and hydrologic information.
- B. The pilot hole shall be a minimum of 6 inches or maximum of 7-7/8 inches in diameter. It shall be drilled from below the surface casing to 250 feet, or as directed by the Project Representative.

- C. To obtain accurate depth determination, representative cutting samples, and a straight and plumb hole, the Contractor shall comply with the following:
 - 1. Maintain relatively slow rate of drilling with reasonably constant rotary speed.
 - 2. Maintain reasonably constant weight on bit.
 - 3. Maintain reasonably constant properties of drilling fluid.
 - 4. Maintain adequate facilities for the collection of representative cutting samples.
 - 5. Measure and record the rate of bit penetration by the use of a drilling rate recorder.
 - 6. Equip the drill string with drill collars of appropriate diameter, weight, and length. Drill collar diameter shall be of the maximum size allowable without interference with fluid circulation.

3.08 DEVIATION SURVEYS

- A. The Contractor shall make deviation surveys at intervals of not more than 60 feet during drilling, between ground surface and the total depth of the pilot hole, and again at intervals of 60 feet during reaming. Surveys shall be made with an Eastman Self-checking Mechanical Drift Indicator, or approved equal, with a maximum range of 3 degrees. From ground level to a depth of 240 ft (the anticipated maximum pump setting depth), the hole shall not deviate from the vertical by more than 10 inches per 100 ft of depth (0.50 degrees).
 No alternate that calls for deviation surveys at longer intervals, calls for a tool with a maximum range greater than 3 degrees, or that does not call for deviation surveys during drilling of the pilot hole, or later during reaming, will be approved. No separate payment shall be made for deviation surveys. In the event that any deviation survey exceeds 0.50 degrees, the Contractor shall take immediate action to correct the problem and shall not drill deeper until the borehole meets the deviation requirements.
- B. During drilling of the pilot hole, or upon completion of the well, any discrepancies, questions, or disagreements as to the validity or accuracy of the Totco surveys shall require verification with a final gyroscopic survey at the expense of the Contractor.

3.09 PLUMBNESS AND ALIGNMENT

A. The completed well shall be sufficiently straight and plumb for the free installation and operation of a submersible pump. The maximum anticipated pump intake setting depth is 234 ft to 240 ft below ground level. The well shall also be sufficiently straight and plumb to allow the casing alignment as specified in Section 3.08.

3.10 GEOPHYSICAL LOGS

- A. Upon completion of drilling the pilot hole, the bore shall be surveyed for its entire depth by means of calibrated geophysical well-log apparatus. The logs shall be as follows:
 - 1. Temperature (logged down, first and last log run)
 - 2. Mud resistivity (logged down, first log run)
 - 3. Spontaneous potential
 - 4. Resistivity; (8, 16, 32 and 64-inch)

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- 5. Caliper (3-arm)
- 6. Full-wave sonic
- 7. Neutron
- 8. Gamma-ray
- B. The well logs shall have appended to them such information as the well location, type, weight, resistivity, and temperature of drilling fluid, filtrate, and any other information necessary for proper interpretation of the logs.
- C. In addition to the pilot-hole logs, a caliper log of the reamed hole shall be made. The caliper-log tool shall be capable of measuring to 36 inches in diameter. The volume of the reamed hole and the annular volume outside the casing to be installed shall be calculated and shown as part of the log presentation.
- D. Five (5) copies of each log shall be furnished to the Project Representative.
- E. Digital log records shall be provided to the Project Representative on a CD.

3.11 HYDRAULIC ROTARY METHOD REQUIREMENTS

- A. The Contractor shall either excavate mud pits or use portable steel pits. If excavated pits are used, the Contractor shall construct two mud pits, each with a minimum size of 1,800 cubic ft and an 8-foot minimum depth. Mud pits shall not be constructed in areas of future facilities. The drilling fluid shall discharge into the first pit for settling of drill cuttings, then flow through a narrow, shallow channel into the second pit, in order to decant the drilling fluid before recirculating into the well. The properties of the drilling fluid shall be such that fine drill cuttings will settle in the first mud pit. Pits shall be cleaned daily, or as directed by the Project Representative.
- B. If portable pits are used, the Contractor shall provide two portable steel circulating pits with a volume of not less than 1,200 cubic ft each. The pits shall be equipped with one or more baffles to trap cuttings so that no cuttings or fine sand are allowed to recirculate into the hole. Pits shall be cleaned daily, or more often as directed by the Project Representative.
- C. The Contractor shall consult with a certified drilling-fluid Engineer agreed to by the Contractor, Project Representative, and Owner regarding the proposed drilling fluid program. The drilling fluid Project Representative shall be available on a regular basis to monitor the drilling fluid properties.
- D. The drilling fluid shall have the properties listed below. In the event that the following properties cannot be attained, the drilling fluid shall be replaced.
 - 1. Weight: Drilling fluid weights below 10 lb/gal (75 lb/cubic ft) are recommended to speed drilling, minimize lost circulation, and prevent tight hole.

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- 2. Funnel Viscosity: Normal viscosities of 30-40 seconds per quart with are recommended to adequately clean the pilot hole. Viscosities of 40 to 60 may be needed for reaming.
- 3. Thirty-Minute Water Loss: Filtrate values below 10 cc should be maintained while drilling the pilot hole. Filtrate control should be maintained at 13 cc or below while reaming.
- 4. Filter Cake: Filter cake thickness shall be maintained at 3/32-inch maximum.
- 5. Sand content of fluid entering the hole should not exceed 2 percent by volume.

3.12 DRILLING FLUID TESTS

- A. The Contractor shall maintain careful drilling fluid control and have, on-site, the equipment necessary to measure and log the following drilling-fluid properties. Drilling fluid properties shall be monitored at minimum of 3 times per day, and at other intervals as requested by the Project Representative. Drilling-fluid samples shall be collected at the flow line or point of discharge from the hole.
 - 1. weight, in lbs/gal
 - 2. funnel viscosity, in seconds
 - 3. thirty-minute water loss
 - 4. filter-cake thickness
 - 5. sand content

3.13 SOLIDS CONTROL

- A. Drilling fluid discharged from the borehole shall flow across a shale shaker equipped with appropriately sized screens to remove all but the finest sand, silt, and clay particles from the drilling fluid before it is circulated in the hole.
- 3.14 WELL CONSTRUCTION
 - A. The borehole for the conductor pipe shall be drilled to the depth and diameter specified and as shown on the drawings. The conductor pipe shall then be installed, and the annulus between the conductor pipe and the hole shall be cemented with neat cement grout or sand cement grout placed by tremie. The cement shall be staged in if necessary to prevent the casing from collapsing. The cement seal shall extend from the base of the borehole to a minimum of 10 feet below ground surface, or to match the eventual building concrete. The grout shall be allowed to set for a minimum period of 24 hours before continuing drilling operations.
 - B. The borehole shall be reamed to 20-inch diameter from the bottom of the conductor pipe to the approximate depth as shown on the drawings or as directed by the Project Representative. A caliper log of the reamed hole shall be made, and hole-volume and annular volume calculated; refer to paragraph 3.10.C, GEOPHYSICAL LOGS.
 - C. Casing and SS screen installation shall be handled by methods that will ensure no damage. Installation of casing and screen shall not begin until all required materials are on-site. The

City of Lovington Water Well Project casing shall be suspended above the bottom of the hole a sufficient distance to assure that none of the casing is supported from the bottom. The weight-indicator shall be monitored continuously while the casing-string is being lowered; at no time shall the casing-string be placed in compression.

- D. The Stainless Steel screen shall be fitted with approved centering guides installed at intervals no greater than 40 feet apart, starting with the lowest joint of screen. Centering guides will not be required on the blank casing, but should be considered.
- E. The casing shall be suspended at all times. A sufficient diameter by 1-inch steel clamp shall be placed in such a manner that it rests in notches in the conductor casing as described in this specification section. Weld the clamp, top and bottom, to the casing circumference and to the conductor casing prior to beginning the placement of any annular materials.

3.15 GAGE LINES

- A. Install as detailed earlier in this specification section, 2-inch (nominal) gage line, welded or attached to the outer surface of the production casing. Gage lines shall utilize either threaded or welded couplings. No joint compound will be allowed on the connections. The Contractor shall take measures to ensure that cutting oil is not present on the inside of the gage line, including, but not limited to steam cleaning the inside of the pipe if necessary.
- B. Gage line termination points will be located in an area of the casing containing no screen for a minimum distance of 2.5 feet above and below the termination points. The top of the gage line shall be provided with a threaded cap and finished as detailed by the project representative. Welded strap will be provided on the cap to prevent unauthorized removal of the cap from the gage line.
- C. Before final acceptance of the well, the Contractor shall demonstrate to the satisfaction of the Project Representative that the entire length of each gage line is free of obstructions by lowering a 0.75-inch diameter by 1-ft long sinker bar through it to its total depth.

3.16 GRAVEL-FEED LINE

A. Install as shown on the drawings, one 3.5-inch OD welded joint gravel-feed line. The gravel-feed line shall be placed at least 90 degrees away from the gage line. The gravel-feed line shall extend to a depth of 90 feet below ground surface. The gravel-feed line shall be landed by welding to the 22-inch conductor casing. Provide threaded cap and weld straps on the cap to prevent unauthorized removal of the cap from the gravel-feed line.

3.17 FILTER GRAVEL INSTALLATION

A. The annular space between the borehole and the casing shall be filled with select gravel from the bottom of the hole to a depth approximately 90 feet below ground surface.

- B. After the assembled casing and stainless steel screen is centered in the borehole, tubing or drill pipe shall be inserted into the casing to total depth. The drilling fluid shall be thinned by introducing a steady stream of clear water to the settling pit at the well discharge trench as fluid is circulated through the hole. While clear water is being added, heavy fluid shall be pumped to storage from the lower part of the pit. The fluid shall be circulated through the tubing or drill pipe inside the casing until the drilling fluid has been thinned back to funnel viscosity of 28 to 30 seconds per quart.
- C. The gravel shall be placed by pumping through a tremie line (minimum ID of 2-inch), installed either before or after the casing and well screen are installed, at the Contractor's option. Make adequate preparations to ensure that circulation will be continuous from the time that watering-back of the drilling fluid begins until the time the gravel pack is completely in place.
- D. Disinfect gravel pack during installation with a solution of sodium hypochlorite and water, so that the circulating fluid has a minimum free chlorine concentration of 50 mg/l. Disinfection of gravel pack shall begin immediately following thinning of drilling fluids and prior to starting of gravel pack placement.
- E. Gravel shall be placed until the annulus is filled to approximately 90 feet below ground surface. The Contractor shall provide means of measuring the volume of gravel as it is installed, and continual checks must be made to ensure against voids or bridging of the gravel pack. The minimum amount of gravel introduced in the hole shall be not less than the computed amount based on the caliper log of the reamed borehole as calculated by the Project Representative. Any amount placed that is less than the computed amount required shall be deemed a sign of voids or bridging, and corrective measures shall be undertaken by the Contractor at no additional cost to the Owner.
- F. After installing filter gravel, the Contractor shall continue to guard against the entry of unwanted objects and contaminants from entering the well casing or annulus.

3.18 ANNULAR SEAL

- A. Immediately after completing filter gravel installation, the Contractor shall place a bentonite plug composed of medium to coarse grained bentonite chips above the gravel pack by means of pouring slowly from the surface without a tremie. The bentonite plug shall be approximately 20 ft thick and shall serve to prevent invasion of the gravel pack by the cement seal. Immediately after the bentonite plug is in place, the Contractor shall proceed with installation of the annular cement seal. The first cement stage shall not exceed 2 cubic yards in volume.
- B. The annular seal shall be placed by pumping through tremie tubing and shall completely fill the annular space between the production casing and the 20-inch borehole and 22-inch conductor casing from the bentonite plug above the gravel pack to approximate ground surface.

City of Lovington Water Well Project C. The grout plug shall be pumped through the tremie pipe into the annulus and in stages so as to not exceed the collapse strength of the casing. A minimum of 12 hours set time shall be observed between stages. In any case, the first stage shall not exceed 2 cubic yards in volume. A minimum of 48 hours set time shall be observed prior to any work being performed in the well.

3.19 DEVELOPMENT BY ZONED AIR-LIFT PUMPING

- A. Develop the well screen portion of the well by zoned air-lift pumping, in contiguous 20-ft sections, from the bottom of the screen to the top of the screen. It is possible that the upper portion of screen may not be able to be developed by swabbing and reverse air-lift pumping due to a lack of submergence. In that event, the upper portion of the screen will be developed by swabbing and bailing.
- B. The air-lift pumping device for isolating the air-lift pump zones shall consist of a 20-ft length of 6-inch pipe with a size as required of double disc rubber washers, which fit tightly to the inside of the casing or Stainless steel screen, placed at each end, with an end cap on the lower end. The design of the rubber washers shall be such that they will fold over if they become sanded in. One-hundred twenty 3/4-inch holes shall be evenly placed around the circumference of the pipe between the discs. The air-lift pumping device shall be run on 6-inch or larger column pipe or drill pipe. Tool joints on pipe shall have a minimum ID of 5.0 inches.
- C. Install 2-inch diameter air induction pipe into the column pipe to provide the air source. The air compressor used for the air-lift shall be rated at not less than 900 cfm at 350 psi discharge pressure. The air-line range shall be 1.5 to 2.0-inch ID. Maintain air-line submergence to the greatest amount possible to maximize production.
- D. The general procedure to be used during the air-lift pumping development for each zone shall be as follows:
 - 1. Air-lift for 15 minutes.
 - 2. Swab 3 to 4 times after 15 minutes (air does not need to be shut off).
 - 3. Air-lift additional 15 minutes.
 - 4. Move air-lift tool up 20 ft to next zone.
- E. The Contractor shall measure and record the pumping rate, the appearance and the sand content of the produced water, and the time required for the water to clear, for each period of pumping. Contractor shall provide a weir or flume to measure production.
- F. Variation of the procedure, and additional time for development of each zone, shall be as directed by the Project Representative. Additional development time shall be paid for at the unit bid price. After completing one pass of the perforated section, the Contractor shall return the air-lift tool to the bottom of the well and make a second pass.
- G. After the entire stainless steel screen portion of the well has been developed by zoned airlift pumping, additional gravel shall be added to the annulus so that the gravel pack in the City of Lovington 02670-19 Well Drilling
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fill tube is at least within 10 feet below ground surface. The Contractor shall record the volume of gravel added.

H. After the air-lift pumping has been completed, the tool shall be withdrawn from the well. The well shall be sounded, and accumulated fill shall be bailed from the well to within 2 ft of the bottom of the casing.

3.20 DEVELOPMENT BY SWABBING AND BAILING

- A. Upon completion of air-lift development, swab and bail the upper portion of the screen if development was not possible using air-lifting. Bailing speeds shall be between 300 and 500 feet/minute. Payment shall not be made for periods of time when minimum bailing speeds are not performed. The general procedure shall be to run the bailer to the lower-most screen section and retrieve the bailer and discharge the water at the ground surface. The time estimated for development by bailing is 20 hours.
- B. Bailer shall have a minimum outside diameter of 10.75 inches and shall be at least 20 feet long. A rubber swab shall be attached to the outside of the bailer and shall fit snugly to the inside of the production casing. The bailer shall be run with a cable-tool type rig with sufficient horsepower to permit the uninterrupted hoisting of bailer.
- C. After the swabbing and bailing has been completed, the well shall be sounded, and accumulated fill shall be bailed from the well to within 2 ft of the bottom of the casing.

3.21 DEVELOPMENT PUMPING

- A. The Contractor shall furnish, install, operate, and remove a pump for developing the well. Development pumping shall be initiated within seven days after air-lift development is complete. The pump and prime mover for development and test pumping shall have a full capacity of not less than 600 gpm at a pumping-water level of maximum 150 ft BGL with an overall initial pump setting of 240 ft. If the Contractor elects to use a submersible pump for the development work, the check valve shall be left out of the pump to allow for development by surging.
- B. Furnish and install discharge piping of sufficient size and length to conduct water to within a basin located about 200 feet from the well, with gate valve, in-line flow meter with instantaneous and totalizing capabilities, orifice plate and manometer for instantaneousflow measurement, with a Rossum Sand Tester, or approved equal. Water levels shall be measured by an electric line probe calibrated to 0.01 ft increments provided by the Contractor. The in-line flow meter shall be located at least 8 feet upstream from the gate valve, and at least 8 feet downstream from the well or any other bends or joint connections.
- C. The manometer must be at least 8 feet downstream of the gate valve or any other pipe joint. The manometer must be installed 24 inches upstream from the inner face of the orifice plate. The manometer must be calibrated in inches. Pumped water shall be discharged from the piping at the end of the orifice plate into a pit or tank located not more than 50 feet from the well, from which water can then be conducted to the discharge point.

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- D. The well test pump and appurtenances shall be disinfected in accordance with Section 3.24, DISINFECTION, prior to or during installation of the test pump.
- E. The initial pumping rate shall be restricted and, as the water clears, shall be gradually increased until the maximum rate as determined by project representative is reached. The maximum rate will be determined by the Project Representative after consideration of the well drawdown and discharge characteristics, but shall not be greater than 400 gpm. At proper intervals the pump shall be stopped and the water in the pump column shall be allowed to surge back through the pump and through the screen area.
- F. The cycle of pumping and surging shall be repeated until the discharged water is clean of sand, silt, and mud based on the criteria listed below. The Contractor shall continue development until, in the Project Representative's opinion, the following conditions have been met:
 - 1. Sand production shall be less than 15 ppm within 20 minutes after commencement of pumping at the maximum rate as determined by the Project Representative.
 - Average sand production shall not exceed 5 ppm for a two-hour cycle after commencement of pumping at the maximum rate as determined by the Project Representative. Sand production shall be measured by a centrifugal sand separating meter as described in Journal of American Water Works Association, Vol. 26, No. 2, February 1954 (Rossum sand sampler).
 - 3. Specific capacity of the well is essentially stable during at least 2 hours of continuous pumping and surging.
- G. After the specified development criteria have been met and the Project Representative has determined zone development is complete, the pump shall be stopped for a minimum of 12 hours prior to starting step-test pumping.

3.22 TEST PUMPING

- A. Perform a pumping test consisting of a 300 minute step-drawdown test (five 60-minute steps), Duration of constant rate test is to be 1000 minutes, unless otherwise adjusted by the Project Representative, with associated recovery tests. The Contractor shall be responsible for collecting all flow and water-level measurements during the testing per the schedule outlined below.
- B. Contractor shall furnish necessary equipment as identified in Section 3.21 DEVELOPMENT PUMPING. Contractor shall also furnish a pressure transducer and data logger for collecting water levels in the well. This equipment shall be available before the completion of development pumping such that it can be installed and tested to ensure it is working correctly. The pressure transducer shall be set at an approximate depth of 245 feet below ground surface. The anticipated non-pumping water level is about 95-100 feet below ground surface Therefore, the minimum rating for the pressure transducer shall be

100 psi. In the event the non-pumping water level is higher than anticipated, the Contractor shall provide a pressure transducer capable of being set at pressures exceeding 120 psi. The pressure transducer shall be equipped with a direct-read cable such that water levels can be monitored at the surface during testing, and data periodically downloaded during testing.

- C. Upon completion of development pumping, a step pumping test shall be conducted. The test shall not begin until the well has been shut down for 24 hours. Water level shall be recorded every 20 minutes for 2 hours prior to commencing the step test. Timing of the test will commence at the time the pump is started, be measured in minutes, and follow the schedule below without interruption. (T = time, in minutes, since pumping commenced). Water levels shall be recorded at 10-minute intervals during all pumping and recovery portions of the testing.
 - 1. T = 0: Pumping shall be commenced at a rate approximately one-fifth of the full production rate directed by the Project Representative for the test.
 - 2. T = 60: The pumping rate shall be increased to approximately two-fifths of the full production rate.
 - 3. T = 120: The pumping rate shall be increased to three-fifths of the full production rate.
 - 4. T = 180: The pumping rate shall be increased to four-fifths of the full production rate.
 - 5. T = 240: The pumping rate shall be increased to full production rate.
 - 6. At T = 300, the pump shall be stopped. Water-level recovery measurements shall be recorded at 10-minute intervals for the next 600 minutes.
- D. Upon completion of the 600 minute recovery period after the step-pumping test, duration of constant rate test is to be 1000 minutes, unless otherwise adjusted by the Project Representative, followed by a 1,000-minute recovery period. Water levels shall be recorded at 10-minute intervals during all pumping and recovery portions of the testing.
- E. At T = 1000 minutes, the pump shall be stopped and recovery measurements commenced for the next 1,000 minutes at 10-minute intervals.
- F. If the pump is shut off for any reason during the pumping portion of the test, it shall remain shut off for 24 hours and the complete test shall be re-run at no additional cost to the Owner. In the event that the Contractor's water-level measuring or flow measuring equipment does not collect the required data or is not operating correctly, the Contractor shall re-run the tests at no additional cost to the Owner.
- G. Upon completion of the test, results shall be turned over immediately to the Project Representative for analysis.

3.23 WATER-QUALITY TESTING

- A. Water Quality Testing: WATER UTILITY DEPARTMENT PERSONNEL Shall Collect and properly preserve water samples from the well for total chemical analysis and bacteriological testing. Residual chlorine must be non-detectable. Water quality analysis shall include all requirements for the well, including water chemical, organic and nonorganic constituents and bacteriological testing. Water quality analysis shall be performed by a NM Certified Drinking Water Quality Laboratory.
- B. Bacteriological testing shall be performed and approved results received prior to the completion of the pumping.
- C. Bacteriological tests shall include the following:
 - 1. Total coliform
 - 2. Fecal coliform
- D. The water shall be deemed unacceptable if coliform bacteria are present. The new standard for water quality passing is zero coliforms. It is the <u>Contractor's responsibility</u> to see that the well is so tested, and if results are unacceptable, to continue to disinfect the well. Additional bacteriological samples shall be submitted to the laboratory as necessary to verify effectiveness of disinfection.
- E. Constituent Sampling: WATER UTILITY DEPARTMENT PERSONNEL shall be notified a minimum of 48 hours in advance, by Contractor, so that they may collect and properly preserve water-quality samples in containers provided by a laboratory approved by the WATER DEPARTMENT and the Project Representative. Samples shall be collected in the presence of the Project Representative and shall be collected during the constant-rate pumping test. The Contractor, acting in concert with the WATER UTILITY DEPARTMENT PERSONNEL, shall make all necessary arrangements with the laboratory for the delivery of the samples to the laboratory such that all required holding times are met. Results shall be turned over to the Project Representative, and the WATER UTILITY.
 - Samples shall be collected and analyzed for all Primary and Secondary constituents per the NMED Drinking Water Regulations (Title 20, Chapter 7, Part 10), which are essentially the same drinking water standards promulgated by the Environmental Protection Agency for primary and secondary standards.
 - 2. Additional protocols for sampling are to be followed, in concert with additional sampling, only as required by the WATER UTILITY. Additional samples which may be taken as required: Arsenic, Speciation of Arsenic ((III) and (V)), Vanadium, Phosphate (PO₄), Chromium, Selenium, Antimony, and Copper, for specific treatment applications.
 - 3. Sample bottles, with appropriate preservatives, shall be provided by the WATER UTILITY or by the laboratory that will perform the analytical work. Standard chain-of-custody protocol must be followed.

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3.24 DISINFECTION

- A. Follow well disinfection procedures outlined below. Chlorine used for all disinfection subsequent to gravel-pack installation shall be at least 65 percent HTH granular calcium hypochlorite. Disinfection with sodium hypochlorite will not be allowed except during the installation of the filter gravel.
- B. Gravel-pack Disinfection:
 - 1. The gravel-pack material shall be disinfected during installation with a solution of sodium hypochlorite and water so that the circulating fluid has a minimum free chlorine concentration of 50 mg/l. Chlorination of gravel pack shall begin immediately following thinning of drilling fluids and in concert with installation of gravel-pack.
- C. Disinfection should occur immediately after development by air-lifting and swabbing and bailing:
 - 1. Distribute granular calcium hypochlorite throughout the water column with a chlorine basket. The chlorine basket shall have a fine wire mesh exterior and be of such design that it can be run to the bottom of the well on a wire line. The basket shall be capable of holding a minimum of 30 pounds of granular calcium hypochlorite.
 - 2. The total quantity of HTH shall equal to 2 pounds of 65 percent HTH per 100 ft of water in the casing. The chlorine basket shall be slowly raised and lowered through the water column in the well until the chlorine has dissolved. The quantity added shall be sufficient to produce an initial chlorine concentration of at least 150 mg/l.
 - 3. The gage lines and casing above the water level shall be disinfected by washing with a 100 mg/l chlorine (HTH) solution. The casing shall be disinfected by flushing from the surface with 500 gallons of the chlorine solution. The gage line shall each be washed with 100 gallons of the solution. The casing and gage line shall each be flushed with 100 gallons of water having a chlorine concentration between 1 and 10 mg/l, 2 hours following disinfection.
 - 4. As the test pump, column pipe, and shaft tubing are lowered into the well, all interior and exterior surfaces of the pump and column pipe and exterior of shaft tubing shall be disinfected with a 100 mg/l chlorine solution.
- D. Disinfection after development and test pumping:
 - 1. If bacteriological test results indicate that the well contains unacceptable concentrations of coliform bacteria, the Contractor shall disinfect the well again by introducing a chlorine solution having a chlorine concentration of at least 100 mg/l, from the surface, or by another method acceptable to the Project Representative. The Contractor will be required to disinfect the well repeatedly, at his own expense, until bacteriological test results indicate unacceptable concentrations of bacteria are not present in the water produced from the well.

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3.25 WELDING

A. All welding shall be done by competent and experienced workmen with adequate equipment, using the metal arc welding process. Welders employed for field assembly of all casing and pipe shall be qualified in accordance with the latest revision of the section title "Welding Procedures" of the ASME Boiler Construction Code, or by the AWS Standard Qualification Procedures.

3.26 DISPOSAL OF WATER, DRILLING MUD, AND CUTTINGS

- A. Water produced by test pumping or other well drilling operations may be pumped to a location about 200 feet from the site, but not near (within 200 feet) of other wells. Disposal of water will be by such methods and to such locations that damage to structures, roads, or utilities or interference with other construction projects will be prevented.
- B. Drilling mud shall be removed from the site and hauled to an accepting landfill, as directed by the OWNER and the Project Representative. As an option, drilling fluid may be discharged to other locations of the adjacent land surface, but only with the permission of the OWNER and the Project Representative, and within applicable environmental guidelines. The Contractor shall be responsible for transporting the material in a manner to prevent leaks and spills, and control dust.
- C. Drill cuttings may be stored near the perimeter of the well field property. Contractor shall take measures, such as building berms and the like, to ensure that the cuttings do not impact adjacent properties or enter drainages. Cuttings may be spread across the site at the end of the project in a layer not to exceed 2 inches thick. Mud pits shall be thoroughly cleaned and backfilled with granular material upon completion of work.
- D. Contractor shall be responsible for all costs related to disposal of water, drilling mud, and cuttings.

3.27 STEEL CAP PLATE

A. The 1/2-inch steel cap plate, covering the space between the 12-3/4-inch (nominal) casing and the conductor pipe shall be of the size required, and shall be installed as required by AWWA A-100. All welds shall be continuous.

3.28 METAL CAP FOR CASING

A. The top of the inner casing shall be provided with a metal cap securely welded to the casing to cover and protect the well until the permanent pump installation has begun. If the well is not to be immediately completed with a pumping system, the cap shall remain until such time as the well pumping system and pump house is constructed. The 3/8-inch minimum steel cap shall be jointed to the casing with a continuous weld.

City of Lovington Water Well Project B. A metal cap as specified above shall be welded to the casing at all times during which there are no members of the contractor's crew present at the well site.

3.29 CLEANING UP

A. After the work is completed, the Contractor shall remove all debris, tools, equipment, supplies, and excess material from the site and shall restore the site to its original condition as approved by the Project Representative.

3.30 VIDEO INSPECTION

- A. The Contractor shall make a closed-circuit color video inspection of the entire depth of the well upon completion of all construction and immediately before sealing and capping of the well. The Project Representative must be present for observation of video monitoring and to determine where side scanning will be required. The well water shall be sufficiently clear to allow examination of the entire hole during the video. If not, the Contractor shall be required to clear the water at his own expense to allow examination of the entire hole in subsequent videos. The camera equipment shall have a wide-angle (fish-eye) lens directed downward, and shall also include right-angle (side-scan) capability. The camera depth, in feet below ground surface, shall be displayed on the tape at all times. The data shall be transferred to DVD, and shall be labelled with the following information:
 - 1. Name of the Owner
 - 2. Name and number of well
 - 3. Date
 - 4. Depths
 - 5. Notations requested by the Project Representative
- B. The original DVD(s) and four (4) copies of each original shall be furnished to the Project Representative for delivery to the Owner.

PART 4 PAYMENT

4.01 MEASUREMENT AND PAYMENT

- A. All measurements and payments will be based on completed work performed in strict accordance with the drawings and specifications and in accordance with contract unit prices. Incidental work and items not listed in the contract unit price schedule will not be paid for separately, but will be included in the payment for the listed item or items to which such incidental work applied.
- B. Measurement:

- 1. <u>Mobilization and Demobilization</u>: Mobilization and demobilization will include, but is not limited to, site preparation, bringing well drilling and development equipment to the site from the point of origin, setting up equipment, demobilization of equipment, disposal of excess materials, cleanout and backfilling of mud pits, and cleaning up after completion of the work. Mobilization and demobilization will be measured on a lump sum basis.
- 2. <u>Drilling Pilot Hole</u>: Drilling of the 6- inch to 7-7/8-inch pilot hole will be measured by linear foot from ground level to the depth that the pilot hole is acceptably logged with geophysical logging tools.
- 3. <u>Reaming 26-Inch Hole</u>: Reaming of the pilot hole to receive the conductor pipe will be measured per linear foot from the top of the reamed hole to the bottom of the cased hole.
- 4. <u>Conductor Pipe</u>: Conductor pipe, 22-inch diameter, will be measured by linear foot from end of pipe to end of pipe acceptably installed and cemented in place.
- 5. <u>Geophysical Logs</u>: Geophysical logs will be measured on a lump sum basis for logs acceptably performed.
- 6. <u>Reaming Pilot Hole to 20-Inch Diameter</u>: Reaming of the pilot hole to receive the well casing will be measured per linear foot from base of the conductor pipe to the bottom of the cased hole.
- 7. <u>Caliper Survey</u>: The caliper survey of the reamed borehole shall be measured on a lump sump basis for log acceptably performed.
- 8. <u>Blank Well Casing</u>: Blank well casing will be measured per linear foot from end of blank casing to end of blank casing acceptably installed.
- 9. <u>Well Screen</u>: Well Screen will be measured per linear foot from end of section to end of section per each joint of well screen acceptably installed.
- 10. <u>Gage Lines</u>: Gage lines will be NOT be measured per linear foot from end of pipe to end of pipe acceptably installed, but shall be considered incidental to well casing.
- 11. <u>Gravel-feed Line</u>: Gravel-feed line will NOT be measured per linear foot from end of pipe to end of pipe acceptably installed, but shall be considered incidental to well casing.
- 12. <u>Filter Gravel</u>: Filter gravel will be measured per cubic feet acceptably installed. Disinfection of gravel pack will be considered incidental to gravel placement.
- 13. <u>Annular Seal</u>: Annular seals above the filter gravel will be measured per cubic feet acceptably installed.

- 14. <u>Development by Zoned Air-lift Pumping</u>: Development will be measured per hour for the air-lift development work acceptably performed exclusive of breakdown time. Setting and pulling air-lift tools and equipment in the well shall be considered incidental to development.
- 15. <u>Development by Swabbing and Bailing</u>: Development will be measured per hour for the swabbing and bailing work acceptably performed exclusive of breakdown time. Setting and pulling air-lift equipment in the well shall be considered incidental to development.
- 16. <u>Well Disinfection</u>: Disinfection of well prior to and during pump installation shall be measured on a lump sum basis for disinfection acceptably performed. No measurement shall be made for additional disinfection procedures that may be required in the event of unacceptable bacteriological results.
- 17. <u>Furnish, Install, and Remove Development/Test Pump</u>: Furnishing, setting and pulling the test pump, discharge piping, and related equipment and appurtenances will be measured on a lump sum basis. (Furnishing and installing the permanent pumping unit is specified in another section)
- 18. <u>Development Pumping</u>: Development pumping will be measured per hour for pumping work actually performed, but will be exclusive of pump setting or removal time or breakdown time. No measurement for recovery time will be made.
- 19. <u>Test Pumping</u>: Test pumping will be measured per hour for pumping work actually performed, but will be exclusive of pump setting or removal time or breakdown time. No measurement time for recovery will be made.
- 20. <u>Water-Quality Testing</u>: Water-quality testing will be measured on a lump-sum basis for laboratory results acceptably analyzed, as described.
- 21. <u>Cleanout and Bailing</u>: Cleanout and bailing will be considered incidental to well construction, and no measurement will be made.
- 22. <u>Video Inspection</u>: Video inspection will be measured on a lump sum basis for video/DVD's examination acceptably provided. Disinfection of video equipment will be considered incidental to video examination.
- 23. <u>Site Cleanup</u>: Site cleanup shall be considered incidental to the project and no measurement shall be made.

C. Payment:

1. <u>Mobilization and Demobilization</u>: Payment for mobilization and demobilization will be distributed 50 percent on first pay estimate and 50 percent on final pay estimate for work acceptably performed. One lump sum will be provided for each well successfully completed under the base bid work.

- 2 <u>Drilling Pilot Hole</u>: Payment will be made at the same contract price per linear foot for drilling pilot hole measured, whether for one, two or three wells.
- 3. <u>Reaming 26-Inch Hole</u>: Payment will be made at the same contract unit price per lineal foot of 26-inch reamed hole measured, whether for one, two or three wells.
- 4. <u>Conductor Pipe</u>: Payment will be made at the same contract unit price per linear foot for the 22-inch conductor pipe furnished and acceptably installed and cemented in place, whether for one, two or three wells.
- 5. <u>Geophysical Logs</u>: Payment will be made at the lump sum contract price for well geophysical logs, but shall be for each individual well as completed.
- 6. <u>Reaming 20-inch Hole:</u> Payment will be made at the same contract unit price per linear foot of 20-inch reamed hole measured, whether for one, two or three wells.
- 7. <u>Caliper Survey</u>: Payment will be made at the lump sum contract price for caliper survey acceptably measured, but shall be for each individual well as completed.
- 8. <u>Blank Well Casing</u>: Payment will be made at the same contract unit price per linear foot for the blank well casing measured, whether for one, two or three wells.
- 9. <u>Well Screen</u>: Payment will be made at the same contract unit price per linear foot for the well screen measured, whether for one, two or three wells.
- 10. <u>Gage Lines</u>: Payment will NOT be made but shall be considered incidental to well casing.
- 11. <u>Gravel-feed Line</u>: Payment will NOT be made but shall be considered incidental to well casing.
- 12. <u>Filter Gravel</u>: Payment will be made at the same contract price per cubic feet for filter gravel measured, which price shall include all cost for furnishing and placing the material, including disinfection, whether for one, two or three wells.
- 13. <u>Annular Seal</u>: Payment for annular seal above the filter gravel will be made at the same contract price per cubic feet measured, which shall include all cost for furnishing and placing the material, whether for one, two or three wells.
- 14. <u>Development by Zoned Air-lift Pumping</u>: Development by air-lift pumping will be paid for at the same contract per hour price for the work acceptably measured. Setting and pulling air-lift equipment and tools will be considered incidental and no separate payment will be made, whether for one, two or three wells.
- 15. <u>Development by Swabbing and Bailing</u>: Development will be paid for at the same contract price per hour for the swabbing and bailing development work acceptably

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measured. Preparing equipment to begin the work will be considered incidental, and no separate payment will be made, whether for one, two or three wells.

- 16. <u>Well Disinfection</u>: Disinfection of well prior to and during pump installation shall be paid on a lump sum basis for disinfection acceptably measured, but shall be for each individual well as completed. No payment shall be made for additional disinfection procedures that may be required in the event of unacceptable bacteriological results.
- 17. Furnish, Install, and Remove Development/Test Pump: Payment for furnishing, setting and pulling the test pump, discharge piping, and related equipment and appurtenances will be made on a lump sum basis for work measured, but shall be for each individual well as completed.
- 18. <u>Development Pumping</u>: Payment for development pumping will be made at the same contract per hour price for pumping work measured, whether for one, two or three wells.
- 19. <u>Test Pumping</u>: Payment will be made at the contract per hour price for pumping work measured, whether for one, two or three wells.
- 20. <u>Water-Quality Testing</u>: Water-quality testing will be paid on a lump-sum basis for laboratory results acceptably measured, as described, IF A PRIVATE LABORATORY is used, whether for one, two or three wells.
- 21. <u>Cleanout and Bailing</u>: Cleanout and bailing will be considered incidental to well construction and no payment will be made.
- 22. <u>Video Inspection</u>: Payment will be made at the lump sum contract price for video examination and DVD's acceptably provided, whether for one, two or three wells.
- 23. <u>Site Cleanup</u>: Site cleanup shall be considered incidental to the project, and no payment shall be made.
- D. EQUAL PRICES PROVIDED FOR EQUAL BID ITEMS
 - 1. TO SUMMARIZE: ALL Unit Prices or Lump Sums for the same BID ITEMS, whether under the same number or not, for each well, (Well # 30, Well # 29 or Well #28), <u>SHALL BE bid and priced</u> by the contractor at the same bid price. The only exceptions are dissimilar circumstances, such as that for Mobilization / Demobilization, or plugging and abandoning an adjacent existing well.

END OF SECTION

SECTION 02680

PLUGGING & ABANDONING EXISTING WELL # 30

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Plugging and Abandoning existing Well # 30 (NMOSE # L-4058-S-30). (See also Section 02670-Well Drilling).

1.2 PLUGGING AND ABANDONING PROCEDURES

- A. Prior to Drilling the new replacement well # 30 (NMOSE # L-4068-POD26), the existing well shall be plugged and abandoned. Plugging and abandonment shall use neat cement grout as specified in Technical Section 02670. Well shall be plugged at least seven (7) days prior to beginning any drilling of the adjacent new well # 30 below the conductor casing. Plugging proceedures, materials and methods shall be in accordance with NM Statute 19.27.4 NMAC; Subsection 19.27.4.30.C.
- B. The Contractor shall develop a plugging plan in accordance with NMOSE Requirements and for review and approval of the Engineer. Once the plan is approved by the Engineer, the Contractor shall then submit the plugging plan to the NMOSE for approval. Any changes the NMOSE may suggest or require shall be presented to the OWNER and Engineer prior to the contractor performing the work.
- C. The Contractor shall run a tremie pipe to the bottom of the well and pump the neat cement grout into the well using positive displacement methods. Once pumping starts the tremie pipe may be slowly withdrawn, but the tremie pipe shall not be pulled up above the theoretical level of cement in the well hole at any time during the operation. The well shall be filled with cement to within two (2) feet of the ground surface. Any existing concrete pad shall also be removed at this time. The concrete-filled casing shall then be cut off at two (2) feet below ground level, and a steel plate having a minimum thickness of 3/8-in. shall be welded on top of the remaining casing. The wellhead shall be covered with soil to the original ground surface.
- D. Contractor shall prepare a plugging record (Report) and submit to NMOSE no later than 20 days after completion of the plugging of the well.

PART 2 PRODUCTS - Not Used

- PART 3 EXECUTION- Not Used
- PART 4 PAYMENT

4.1 MEASUREMENT AND PAYMENT

A. No separate measurement or payment shall be made for this work, and the same shall be made incidental to Mobilization and Demobilization-Bid Item1 under Bid Lot 1 for new Well # 30 (NMOSE # L-4068-POD26).

END OF SECTION

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 SUMMARY

A. This section specifies furnishing and placing of concrete reinforcing steel of the size and quantity shown on the Drawings.

1.02 REFERENCES

- A. The following publications are a part of these specifications and are referenced by designation elsewhere in this Section:
 - 1. American Concrete Institute (ACI) Publications:
 - a. ACI 315 "Details and Detailing of Concrete Reinforcement, Latest Edition"
 - b. ACI 318 "Building Code Requirements for Reinforced Concrete, Latest edition"
 - 2. American Society of Testing and Materials (ASTM) Standards:
 - a. ASTM A 82, Cold-Drawn Steel Wire for Concrete Reinforcement.
 - b. ASTM A 185, Welded Steel Wire Fabric for Concrete Reinforcement.
 - c. ASTM A 325, Carbon Steel Externally and Internally Threaded Standard Fasteners High Strength.
 - d. ASTM A 615, "Deformed and Plain Billet-Steel Bars for Concrete Reinforcement."
 - e. ASTM A 706, "Deformed Low Alloy Steel Bars for Concrete Reinforcement."
 - 3. Concrete Reinforcing Steel Institute (CRSI), Manual of Standard Practice for Reinforcing Concrete Construction.

Concrete Reinforcement

1.03 SUBMITTALS

- A. Shop drawings for reinforcement detailing fabrication, bending, and placing concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, bent bar diagrams, and arrangement of concrete reinforcement. Include special reinforcing for openings through concrete structures.
- B. <u>Certificates</u>: Submit a notarized certificate that the reinforcement conforms to the appropriate ASTM Standards and/or ACI Publications.

1.04 QUALITY ASSURANCE

A. All work covered by this Section shall conform to ACI Publications and ASTM Standards referenced except as modified by this Section.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. <u>Reinforcement:</u> Protect reinforcement from excessive rusting and fouling with grease, oil, dirt, or other objectionable materials which would reduce or destroy bond with the concrete.
- B. Identify bundles of reinforcing steel with stamped metal tags wired to steel.

PART 2 - PRODUCTS

2.01 REINFORCEMENT AND ANCHOR BOLTS

- A. Reinforcing Steel:
 - 1. <u>Steel Reinforcing Bars</u>: ASTM A 615, Grade 60, deformed.
 - 2. <u>Wire:</u> ASTM A 82, plain, cold-drawn, steel.
 - 3. <u>Plain Welded Wire Fabric</u>: ASTM A 185, welded steel wire fabric.
 - 4. Deformed Reinforcing Wire: ASTM A 496.
- B. <u>Reinforcing Accessories:</u> Bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications.
 - 1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
- C. Anchor Bolts: ASTM A 325

2.02 FABRICATION

- A. <u>General</u>: Perform bending of steel reinforcement by the cold bending method.
 - 1. Do not use bars with kinks or bends not indicated on Drawings.
 - 2. Perform bar shape fabricating in a manner that will not injure the material or lessen the member strength.
 - 3. Use a designed bending machine, either hand or power-operated.
 - 4. Bend bars in accordance with Chapter 7, ACI 318 except do not field bend bars partially embedded in concrete unless approved by the Engineer.
- B. Welded wire fabric shall be fabricated in sheets or mats only. Roll-type is not acceptable.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Notify the Engineer 48 hours before placing concrete so that the Engineer can inspect placement of steel reinforcement.
- B. Verify that items to be embedded in concrete are secured in place as required prior to pouring concrete.

3.02 PLACING REINFORCEMENT

- A. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars," for details and methods of reinforcement placement and supports, and as herein specified.
 - 1. Avoid cutting or puncturing vapor retarder/barrier during reinforcement placement operations. Repair damages before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.
- C. Accurately position, support and secure reinforcement against displacement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as approved by the Engineer.

- D. Place reinforcement to maintain minimum covers as indicated for concrete protection. Arrange, space and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not towards exposed concrete surfaces. Unless otherwise specifically required by drawings, maintain the following cover:
 - 1. 3/4" for all slabs.
 - 2. 1-1/2" for other faces exposed to interior.
 - 3. 2" for faces exposed to exterior or vertical faces in contact with earth.
 - 4. 3" for horizontal faces of concrete deposited against ground.
- E. Install welded wire fabric in longest practicable lengths. Lap adjoining pieces at least one full mesh and lace splices with wire. Offset end laps in adjacent widths to prevent continuous laps in either direction.
- F. Lap splices of reinforcing bars in accordance with ACI 318.
- G. Welding of crossing bars (tack welding) is not permitted.

3.03 INSTALLATION OF EMBEDDED ITEMS

A. Set and build into work anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete. Use setting drawings, diagrams, instructions and directions provided by suppliers of items to be attached. Secure in place to prevent movement during concrete pours.

END OF SECTION