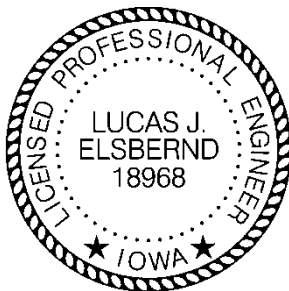


**CONTRACT DOCUMENTS AND  
SUPPLEMENTAL SPECIFICATIONS FOR  
WELL NO. 3 IMPROVEMENTS  
LAWLER, IOWA  
NOVEMBER 2025  
PROJECT NO. 24-289**

Mayor	-	Mark Muetterthies
Council	-	Kurt Croell
	-	Dale King
	-	Cole Roberson
	-	Jeremy Scheidel
	-	Karen Wilson
Water/Sewer Superintendent	-	Jay Uhlenhake
City Clerk	-	Suzette Byrne



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

*Lucas J. Elsbernd*

11/4/2025

Lucas J. Elsbernd, PE

Date

License Number 18968

My license renewal date is December 31, 2025.

Pages covered by this seal: All Sheets

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**NOTICE TO BIDDERS AND  
NOTICE OF PUBLIC HEARING  
JURISDICTION OF CITY OF LAWLER  
WELL NO. 3 IMPROVEMENTS  
PROJECT NO. 24-289**

Time and Place for Filing Sealed Proposals. The City of Lawler will receive and accept bids ONLY through QuestCDN.com via the online electronic bid service (QuestvBid) for the construction of the Well No. 3 Improvements until **November 26, 2025 at 10:00 A.M.**

Time and Place Sealed Proposals Will be Opened and Considered. All bids will be downloaded at **10:00 A.M.** and publicly read aloud during a virtual public meeting that will be held at **10:00 A.M. on November 26, 2025.** All plan holders can access the virtual meeting by using the following Zoom link, ID and passcode.

Join Zoom Meeting

<https://us04web.zoom.us/j/71959660562?pwd=ZLWytEhHbLfahm2bCx8MTNN5xiJQSd.1>

Meeting ID: 719 5966 0562

Passcode: iyv30R

Bids will be considered by the City Council at its regular meeting at 7:00 P.M. on **December 1, 2025, at City Hall, 414 East Grove Street, Lawler, Iowa.** The City of Lawler reserves the right to reject any and all bids.

Time for Commencement and Completion of Work. Work on the improvement may be commenced upon approval of the contract by the Council and be completed as stated below.

Bid Security. Each bidder shall accompany its bid with bid security as security that the successful bidder will enter into a contract for the work bid upon and will furnish after the award of contract a corporate surety bond, in form acceptable to the Jurisdiction, for the faithful performance of the contract, in an amount equal to one hundred percent of the amount of the contract. **The bidder's security shall be in the amount of 5% of the total bid amount including all add alternates and shall be the Jurisdiction's bidder's bond with corporate surety satisfactory to the Jurisdiction. No other type of bid security will be accepted.** The bidder's bond shall contain no condition except as provided in the specifications.

Performance, Payment, and Maintenance Bond. The successful bidder will be required to furnish a construction performance, payment, and maintenance bond in an amount equal to one hundred percent (100%) of the contract price. Said bonds to be issued by a responsible surety approved by the City Council and shall guarantee the faithful performance of the contract and the terms and conditions therein contained and the maintenance of said improvements in good repair from the time of acceptance of the improvements by the City for not less than two (2) years.

Contract Documents. Complete digital project documents are available at **fehrgraham.com/biddingdocuments**. Click on the project and then you may select "View Plan Holders," or "Download Bid Documents" on the next screen. **A contractor may view the contract documents at no cost prior to becoming a plan holder. Input the QuestCDN project number 9936739 on the website's projects search page to download the digital documents for \$0.00.** Contact QuestCDN Customer Support at 952-233-1632 or info@questcdn.com for assistance in membership registration, downloading digital project information and vBid online bid submittal questions. **Project bid documents must be downloaded from QuestCDN which will add your company to the plan holder list and allow**



**access to vBid online bidding for the submittal of your bid (which is required for this project). For this project, bids will be received and accepted via the online electronic bid service through QuestCDN.com.**

Hard copies of the bid documents may also be obtained and examined from the office of the Engineer, 221 East Main Street, Suite 301, Manchester, Iowa 52057 (phone number 563.927.2060, e-mail aries@fehrgraham.com). **There is a one hundred-dollar (\$100.00) deposit for hard copies of the plans and specifications, which will be refunded if returned to the Engineer in reusable condition within fourteen (14) days of the award of the Contract. Downloading the electronic bid documents is required from QuestCDN in order to submit an online bid even if hard copy plans are purchased from the office of the Engineer.**

Public Hearing on Proposed Contract Documents and Estimated Costs for Improvement. A public hearing will be held by the City Council of Lawler on the proposed contract documents (plans, specifications and form of contract) and estimated cost for the improvement at 7:15 P.M. on **December 1, 2025**, at City Hall, Lawler, Iowa.

Preference of Products and Labor. By virtue of statutory authority, preference will be given to products and provisions grown and coal produced within the State of Iowa, and to Iowa domestic labor, to the extent lawfully required under Iowa statutes.

Buy America Build America. This agreement is for services related to a project that is subject to the Build America, Buy America Act (BABA) requirements under Title IX of the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. 117-58. Absent an approved waiver, all iron, steel, manufactured products, and construction materials used in this project must be produced in the United States, as further outlined by the Office of Management and Budget's Memorandum M-24-02, Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure.

Contractor shall include Manufacturer's Certification for BABA requirements for all BABA - covered items to be incorporated into the infrastructure project. Contractor shall comply with BABA requirements, including coordination with manufacturers, distributors, and suppliers to correct deficiencies in any BABA documentation.

For any change orders, Contractor shall provide BABA documentation for any new products or materials required by the change. Contractor shall the designate responsible parties for determining the final classifications for all project items.

Davis Bacon Wage Rates. This project requires federal prevailing wage rates. Davis-Bacon wage rates apply to this project. At a minimum, the awarded contractor will be required to submit each employee's self-certified income (for those working on the project) to the CDBG administrator to meet Section 3 requirements.

General Nature of Public Improvement.

Construction of a new Jordan well and connection of new well to the existing well house, including approximately 100 feet of water main, well house piping, electrical and control modifications, and chemical feed pumps located on West Pitts Street, approximately 280 feet east of South McHugh Street in the City of Lawler, Iowa.

**Contractor shall fully complete the project by October 30, 2026.** Liquidated Damages in the amount of \$1,000.00 per Calendar Day will be assessed for each Calendar Day that any work shall remain uncompleted beyond the specified completion date.

Plan Holders List. The plan holders list and bid results may be viewed at Fehr Graham's website <http://www.fehrgraham.com>.

Taxes. All Contractors and approved Subcontractors will be provided a Sales Tax Exemption Certification to purchase, or withdraw from inventory, materials furnished under this contract. No allowance will be made over the contract sum for any tax claims.

### Section 3 Language for Procurement Documents and Contacts

- A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 75, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 75 regulations.
- C. The contractor agrees to post copies of a notice advising workers of the Contractor's commitments under Section 3 in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to provide written notice of employment and contracting opportunities to all known Section 3 Workers and Section 3 Businesses.
- E. The contractor agrees to employ, to the greatest extent feasible, Section 3 workers or provide written justification to the recipient that is consistent with 24 CFR Part 75, describing why it was unable to meet minimum numerical Section 3 Worker hours goals, despite its efforts to comply with the provisions of this clause.
- F. The contractor agrees to maintain records documenting Section 3 Workers that were hired to work on previous Section 3 covered projects or activities that were retained by the contractor for subsequent Section 3 covered projects or activities.
- G. The contractor agrees to post contract and job opportunities to the Opportunity Portal and will check the Business Registry for businesses located in the project area.
- H. The contractor agrees to include compliance with Section 3 requirements in every subcontract for Section 3 projects as defined in 24 CFR part 75, and agrees to take appropriate action, as provided in an applicable provision of the subcontract upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 75.
- I. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 75 require employment

opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 75.

- J. The contractor will certify that they have followed prioritization of effort in 24 CFR part 75.19 for all employment and training opportunities. The contractor will further certify that it meets or exceeds the applicable Section 3 benchmarks, defined in 24 CFR Part 75.23, and if not, shall describe in detail the qualitative efforts it has taken to pursue low- and very low-income persons for economic opportunities.
- K. Noncompliance with HUD's regulations in 24 CFR part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

Section 3 Business Concerns are encouraged to respond to this proposal. A Section 3 Business Concern is one that satisfies one of the following requirements:

- 1. It is at least 51 percent owned and controlled by low- or very low-income persons;
- 2. Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 Workers\*; or
- 3. It is a business at least 51 percent owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.

\*A Section 3 Worker is defined as any worker who currently fits or when hired within the past five years fit at least one of the following categories, as documented:

- 1. The worker's income for the previous or annualized calendar year is below the applicable income limit established by HUD;
- 2. The worker is employed by a Section 3 business concern; or
- 3. The worker is a YouthBuild participant.

Businesses that believe they meet the Section 3 criteria are encouraged to register as a Section 3 Business through HUD's website: <https://portalapps.hud.gov/Sec3BusReg/BRegistry/RegisterBusiness>

At a minimum, the awarded contractor will be required to submit each employee's self-certified income (for those working on the project) to the CDBG administrator to meet Section 3 requirements.

Postings. This Notice was sent to the following posting locations:

- 1. Master Builders/Construction Update
- 2. Iowa League of Cities
- 3. Quest CDN
- 4. New Hampton Tribune

**INSTRUCTIONS TO BIDDERS**

Project Name: Well No. 3 Improvements  
Project No.: 24-289 Fed/St. Project No.: \_\_\_\_\_

The work comprising the above referenced project shall be constructed in accordance with the 2024 edition of the Urban Standard Specifications for Public Improvements and as further modified by supplemental specifications and special provision included in the contract documents. The terms used in the contract revision of the documents are defined in said Standard Specifications. Before submitting your bid, please review the requirements of Division One, General Provisions and Covenants, in particular the sections regarding proposal requirements, bonding, contract execution and insurance requirements. Please be certain that all documents have been completed properly, as failure to complete and sign all documents and to comply with the requirements listed below can cause your bid not to be read.

I. BID SECURITY

**The bid security must be in the minimum amount of 5% of the total bid amount including all add alternates (do not deduct the amount of deduct alternates). Bid security shall be on the Jurisdiction’s bidder’s bond executed by a corporation authorized to contract as a surety in Iowa or satisfactory to the Jurisdiction. The bid bond must be submitted on the enclosed Bid Bond form as no other bid bond forms are acceptable.** All signatures on the bid bond must be original signatures in ink. A scanned copy shall be submitted at the time of the bid. The bidder shall provide an original bid bond to Fehr Graham, 221 East Main Street, Suite 301, Manchester, Iowa 52057, after the bid opening but before the end of business on the second business day after the bid opening. This bond must be sealed with the Surety’s seal. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety’s seal.

II. SUBMISSION OF THE PROPOSAL AND IDENTITY OF BIDDER

A. Complete sets of the Bidding Documents in the number and for the fee, if any, stated in the Advertisement or Invitation to Bid may be obtained from the Quest CDN.

A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement of Bid or Invitation to Bid, and shall be accompanied by the Bid security and other required documents. Bids will ONLY be received and accepted via the online electronic bid service through QUESTCDN ([www.QuestCDN.com](http://www.QuestCDN.com)). To access the electronic bid form, download the project documents and click the online bidding button at the top of the advertisement. If you need further assistance, please feel free to contact QuestCDN at (952) 233-1632.

B. QuestCDN Vbid system requires BIDDERS to purchase bidding documents from QuestCDN. If bid documents are not purchased through Quest CDN, the Vbid system will not allow Bid submission.

C. Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of

incomplete sets of Bidding Documents. All blanks on the Bid form shall be completed and submitted via QuestvBID.

The following documents, which are proposal attachments, must be completed, attached, and uploaded to QuestCDN:

<b><u>ITEM NO.</u></b>	<b><u>DESCRIPTION OF ATTACHMENT</u></b>
1.	SRF Attachment 2: Statement in Advertisement for Bids on Debarment and Suspension/Certification Regarding Debarment and Suspension Form
2.	SRF Attachment 3: Disadvantaged Business Enterprise Solicitation Form
3.	SRF Attachment 4: DBE Program Subcontractor Performance Form
4.	SRF Attachment 5: DBE Subcontractor Utilization Form
5.	SRF Attachment 10: Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment
6.	Attachment 12: Intent to Comply with Section 3 Requirements

### III. PAYMENT TO CONTRACTOR

Payment to the Contractor will be made in the amount of ninety-five percent (95%) of the project costs completed each month. Partial payment estimates are to be submitted by the Contractor to the Engineer by the 25<sup>th</sup> day of each month for work completed through the 20<sup>th</sup> day of the month. Statements will be acted upon by the City Council at their regular meeting, normally the first Monday of each month. Payment will be made normally within ten (10) days following Council approval. Final payment will be made not less than thirty-one (31) days after acceptance by the City Council, and submittal of closeout paperwork by the contractor. Payment will be made in cash to be derived from the proceeds of the private sale of Warrants, as authorized by Section 384.57 of the Code of Iowa, or Project Notes, as authorized by Section 76.13 of the 1985 Code of Iowa, issued in anticipation of the receipt of proceeds from the sale of Bonds, and/or other cash funds on hand as may be lawfully used for such purpose.

No final payment will be due until the Contractor has certified to the City Clerk that the material, labor, and services involved in each estimate have been paid.

### IV. ADDITIONAL REQUIREMENTS

A. At a minimum, the awarded contractor will be required to submit each employee's self-certified income (for those working on the project) to the CDBG administrator to meet Section 3 requirements.

B. All general/prime contractors and subcontractors are required to obtain a Unique Entity ID number (UEI number) from SAM.gov. Please ensure UEI numbers have been obtained or are in the process of being obtained by the bid submission deadline. A UEI number will be required prior to contract approval and signing. To learn more about UEI numbers, visit: <https://sam.gov/entity-registration>.

**BID BOND**

KNOW ALL BY THESE PRESENTS:

That we \_\_\_\_\_ as Principal and  
\_\_\_\_\_ as Surety, are  
held and firmly bound unto **City of Lawler, Iowa**  
as Obligee (hereinafter referred to as "the Jurisdiction"), in the penal sum of \_\_\_\_\_  
Dollars (\$ \_\_\_\_\_ )  
lawful money of the United States, for which payment said Principal and Surety bind themselves, their  
heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

The condition of the above obligation is such that whereas the Principal has submitted to the Jurisdiction a  
certain proposal, and hereby made a part hereof, to enter into a contract in writing, for the following  
described improvements;

Well No. 3 Improvements, Project No. 24-289

Construction of a new Jordan well and connection of new well to the existing well house,  
including approximately 100 feet of water main, well house piping, electrical and control  
modifications, and chemical feed pumps located on West Pitts Street, approximately 280 feet  
east of South McHugh Street in the City of Lawler, Iowa.

The Surety hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way  
impaired or affected by any extension of the time within which the Jurisdiction may accept such bid or  
execute such Contract; and said Surety does hereby waive notice of any such extension.

In the event that any actions or proceedings are initiated with respect to this Bond, the parties agree that  
the venue thereof shall be Chickasaw County, State of Iowa. If legal action is required by the Jurisdiction  
against the Surety or Principal to enforce the provisions of the bond or to collect the monetary obligation  
incurring to the benefit of the Jurisdiction, the Surety or Principal agrees to pay the Jurisdiction all  
damages, costs, and attorney fees incurred by enforcing any of the provisions of this Bond. All rights,  
powers, and remedies of the Jurisdiction hereunder shall be cumulative and not alternative and shall be in  
addition to all rights, powers and remedies given to the Jurisdiction, by law. The Jurisdiction may proceed  
against Surety for any amount guaranteed hereunder whether action is brought against Principal or  
whether Principal is joined in any such action or actions or not.

NOW, THEREFORE, if said proposal by the Principal be accepted, and the Principal shall enter into a  
contract with Jurisdiction in accordance with the terms of such proposal, including the provision of  
insurance and of a bond as may be specified in the contract documents, with good and sufficient surety for  
the faithful performance of such contract, for the prompt payment of labor and material furnished in the  
prosecution thereof, and for the maintenance of said improvements as may be required therein, then this  
obligation shall become null and void; otherwise, the Principal shall pay to the Jurisdiction the full amount  
of the bid bond, together with court costs, attorney's fees, and any other expense of recovery.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 2025

**SURETY:**

By \_\_\_\_\_  
Surety Company  
\_\_\_\_\_  
Signature Attorney-in-Fact/Officer  
\_\_\_\_\_  
Name of Attorney-in-Fact/Officer  
\_\_\_\_\_  
Company Name  
\_\_\_\_\_  
Company Address  
\_\_\_\_\_  
City, State, Zip Code  
\_\_\_\_\_  
Company Telephone Number

**PRINCIPAL:**

By \_\_\_\_\_  
Bidder  
\_\_\_\_\_  
Signature  
\_\_\_\_\_  
Name (Print/Type)  
\_\_\_\_\_  
Title  
\_\_\_\_\_  
Address  
\_\_\_\_\_  
City, State, Zip Code  
\_\_\_\_\_  
Telephone Number

NOTE: All signatures on this bid bond must be original signatures in ink. This bond must be sealed with the Surety's seal. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety's seal. **A scanned copy shall be submitted at the time of the bid. The bidder shall provide an original bid bond to Fehr Graham, 221 East Main Street, Suite 301, Manchester, Iowa 52057, after the bid opening but before the end of business on the second business day after the bid opening.**

TO: The City Council, City of Lawler, Iowa FROM: \_\_\_\_\_

**PROPOSAL**

**PROPOSAL: PART A – SCOPE**

The City of Lawler, hereinafter called the “Jurisdiction”, has need of a qualified contractor to complete the work comprising the below referenced improvement. The undersigned Bidder hereby proposes to complete the work comprising the below referenced improvement as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the City Clerk, at the prices hereinafter provided in Part C of the Proposal, for the following described improvements:

Well No. 3 Improvements, Project No. 24-289

Construction of a new Jordan well and connection of new well to the existing well house, including approximately 100 feet of water main, well house piping, electrical and control modifications, and chemical feed pumps located on West Pitts Street, approximately 280 feet east of South McHugh Street in the City of Lawler, Iowa.

**PROPOSAL: PART B – ACKNOWLEDGMENT OF ADDENDA**

**The Bidder shall download all addenda through QuestCDN.com. This is required for the submittal of your bid.**

The Bidder also hereby acknowledges that all addenda become a part of the contract documents when issued, and that each such addendum has been received and utilized in the preparation of this bid. The Bidder hereby acknowledges receipt of the following addenda by inserting the number of each addendum in the blanks below:

ADDENDUM NUMBER _____	ADDENDUM NUMBER _____
ADDENDUM NUMBER _____	ADDENDUM NUMBER _____

and certifies that said addenda were utilized in the preparation of this bid.

**PROPOSAL: PART C – BID ITEMS, QUANTITIES AND PRICES**

**UNIT BID PRICE CONTRACTS:** The Bidder must provide the Unit Bid Price, the Total Bid Price, any Alternate Prices and the Total Construction Costs on the Proposal Attachment: Part C – Bid Items, Quantities, and Prices. In case of discrepancy, the Unit Bid Price governs. The quantities shown on the Proposal Attachment: Part C – Bid Items, Quantities and Prices are approximate only, but are considered sufficiently adequate for the purpose of comparing bids. The Total Construction Cost plus any alternates selected by the Jurisdiction shall be used only for comparison of bids. The Total Construction Cost, including any Add-Alternates, shall be used for determining the sufficiency of the bid security.



**PROPOSAL: PART D – GENERAL**

The Bidder hereby acknowledges that the Jurisdiction, in advertising for public bids for this project reserves the right to:

1. Reject any or all bids. Award of the contract, if any, to be to the lowest responsible, responsive bidder; and
2. Reject any or all alternates in determining the items to be included in the contract. Designation of the lowest responsible, responsive bidder to be based on comparison of the total bid plus any selected alternates; and
3. Make such alterations in the contract documents or in the proposal quantities as it determines necessary in accordance with the contract documents after execution of the contract. Such alterations shall not be considered a waiver of any conditions of the contract documents, and shall not invalidate any of the provisions thereof; and

The Bidder hereby agrees to:

1. Enter into a contract, if this proposal is selected, in the form approved by the Jurisdiction, provide proof of registration with the Iowa Division of Labor in accordance with Chapter 91C of the Iowa Code, and furnish a performance, maintenance, and payment bond; and
2. Forfeit bid security, not as a penalty but as liquidated damages, upon failure to enter into such contract and/or to furnish said bond; and
3. Commence the work on this project on or before a date to be specified in a written notice to proceed by the Jurisdiction, and to fully complete the project by **October 30, 2026**; and to pay liquidated damages for noncompliance with said completion provisions at the rate of one thousand dollars (\$1,000) for each calendar day thereafter that the work remains incomplete beyond the specified completion date.

Bid Items, Quantities and Prices:

Bids will be submitted online with required attachments only.

**PROPOSAL: PART E – NON-COLLUSION AFFIDAVIT**

The Bidder hereby certifies:

1. That this proposal is not affected by, contingent on, or dependent on any other proposal submitted for any improvement with the Jurisdiction; and
2. That no individual employed by the Bidder has employed any person to solicit or procure the work on this project, nor will any employee of the Bidder make any payment or agreement for payment of any compensation in connection with the procurement of this project; and
3. That no part of the bid price received by the Bidder was or will be paid to any person, corporation, firm, association, or other organization for soliciting the bid, other than the payment of their normal compensation to persons regularly employed by the Bidder whose services in connection with the construction of the project were in the regular course of their duties for the Bidder; and

4. That this proposal is genuine and not collusive or sham; that the Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to submit a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought, by agreement or collusion, or communication or conference, with any person, to fix the bid price of the Bidder or of any other bidder, and that all statements in this proposal are true; and
5. That the individual(s) executing this proposal have the authority to execute this proposal on behalf of the Bidder.

**PROPOSAL: PART F – ADDITIONAL REQUIREMENTS**

The Bidder hereby agrees to comply with the additional requirements listed below which are included in this proposal and identified as proposal attachments:

<u>ITEM NO.</u>	<u>DESCRIPTION OF ATTACHMENT</u>
1.	SRF Attachment 2: Statement in Advertisement for Bids on Debarment and Suspension/Certification Regarding Debarment and Suspension Form
2.	SRF Attachment 3: Disadvantaged Business Enterprise Certification Form
3.	SRF Attachment 4: DBE Program Subcontractor Performance Form
4.	SRF Attachment 5: DBE Subcontractor Utilization Form
5.	SRF Attachment 10: Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment.
6.	Attachment 12: Intent to Comply with Section 3 Requirements

**INSTRUCTIONS:**

The Contractor shall complete SRF Attachments 2-5, 10; and Attachment 12: Contractor Intent to Comply with Section 3 Requirements listed above and upload to QuestCDN with the Required Document form. SRF Attachments 4 and 5 are not required if no DBE was chosen by the Prime Contractor to be utilized for this project.

**PROPOSAL: PART G – REMINDER**

The Bidder must:

- Download and submit the Proposal found in the Required Docs for Completion.
- List all subcontractors where required at the end of this document.
- Sign the Proposal where required.
- Upload required attachments (Part F).

**PROPOSAL: PART H – IDENTITY OF BIDDER**

The Bidder shall indicate whether the bid is submitted by a/an:

- ☐ Individual,  
Sole Proprietorship
- ☐ Partnership
- ☐ Corporation
- ☐ Limited Liability Company
- ☐ Joint-venture: all parties must join-in  
and  
execute all documents
- ☐ Other

The Bidder shall enter its Public Registration  
Number \_\_\_\_\_ - \_\_\_\_\_ issued  
By the Iowa Commissioner of Labor Pursuant  
Section 91C.5 of the Iowa Code.

The Bidder should contact 515-242-5871 for  
registration information.

Failure to provide said Registration Number  
shall result in the bid being read under  
advisement. A contract will not be executed  
until the Contractor is registered.

By

\_\_\_\_\_  
Bidder

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (Print/Type)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Telephone Number

**Type or print the name and title of the  
company's owner, president, CEO, etc. if  
a different person than entered above.**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

All bidders must submit the following completed form to the governmental body requesting bids per  
875 Iowa Administrative Code Chapter 156.

### Bidder Status Form

#### To be completed by all bidders

#### Part A

Please answer "Yes" or "No" for each of the following:

☐ Yes ☐ No My company is authorized to transact business in Iowa.

*(To help you determine if your company is authorized, please review the worksheet on the next page).*

☐ Yes ☐ No My company has an office to transact business in Iowa.

☐ Yes ☐ No My company's office in Iowa is suitable for more than receiving mail, telephone calls, and e-mail.

☐ Yes ☐ No My company has been conducting business in Iowa for at least 3 years prior to the first request for bids on this project.

☐ Yes ☐ No My company is not a subsidiary of another business entity or my company is a subsidiary of another business entity that would qualify as a resident bidder in Iowa.

If you answered "Yes" for each question above, your company qualifies as a resident bidder. Please complete Parts B and D of this form.

If you answered "No" to one or more questions above, your company is a non-resident bidder. Please complete Parts C and D of this form.

#### To be completed by resident bidders

#### Part B

My company has maintained offices in Iowa during the past 3 years at the following addresses:

Dates: \_\_\_\_\_ to \_\_\_\_\_ Address: \_\_\_\_\_  
(mm/dd/yyyy) City, State, Zip: \_\_\_\_\_

Dates: \_\_\_\_\_ to \_\_\_\_\_ Address: \_\_\_\_\_  
(mm/dd/yyyy) City, State, Zip: \_\_\_\_\_

Dates: \_\_\_\_\_ to \_\_\_\_\_ Address: \_\_\_\_\_  
(mm/dd/yyyy) City, State, Zip: \_\_\_\_\_

*You may attach additional sheet(s) if needed.*

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**To be completed by non-resident bidders****Part C**

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1. Name of home state or foreign country reported to the Iowa Secretary of State:

\_\_\_\_\_

2. Does your company's home state or foreign country offer preferences to bidders who are residents? ☐ Yes ☐ No

3. If you answered "Yes" to question 2, identify each preference offered by your company's home state or foreign country and the appropriate legal citation.

\_\_\_\_\_

\_\_\_\_\_

*You may attach additional sheet(s) if needed.*

---

**To be completed by all bidders****Part D**

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I certify that the statements made on this document are true and complete to the best of my knowledge and I know that my failure to provide accurate and truthful information may be a reason to reject my bid.

Firm Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Worksheet: Authorization to Transact Business**

This worksheet may be used to help complete Part A of the Resident Bidder Status form. If at least one of the following describes your business, you are authorized to transact business in Iowa.

- ☐ Yes ☐ No My business is currently registered as a contractor with the Iowa Division of Labor.
- ☐ Yes ☐ No My business is a sole proprietorship and I am an Iowa resident for Iowa income tax purposes.
- ☐ Yes ☐ No My business is a general partnership or joint venture. More than 50 percent of the general partners or joint venture parties are residents of Iowa for Iowa income tax purposes.
- ☐ Yes ☐ No My business is an active corporation with the Iowa Secretary of State and has paid all fees required by the Secretary of State, has filed its most recent biennial report, and has not filed articles of dissolution.
- ☐ Yes ☐ No My business is a corporation whose articles of incorporation are filed in a state other than Iowa, the corporation has received a certificate of authority from the Iowa Secretary of State, has filed its most recent biennial report with the Secretary of State, and has neither received a certificate of withdrawal from the Secretary of state nor had its authority revoked.
- ☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in this state and the statement has not been canceled.
- ☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in a state other than Iowa, has filed a statement of foreign qualification in Iowa and a statement of cancellation has not been filed.
- ☐ Yes ☐ No My business is a limited partnership or limited liability limited partnership which has filed a certificate of limited partnership in this state, and has not filed a statement of termination.
- ☐ Yes ☐ No My business is a limited partnership or a limited liability limited partnership whose certificate of limited partnership is filed in a state other than Iowa, the limited partnership or limited liability limited partnership has received notification from the Iowa Secretary of state that the application for certificate of authority has been approved and no notice of cancellation has been filed by the limited partnership or the limited liability limited partnership.
- ☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in Iowa and has not filed a statement of termination.
- ☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in a state other than Iowa, has received a certificate of authority to transact business in Iowa and the certificate has not been revoked or canceled.

## PROPOSAL ATTACHMENT: PART C – BID ITEMS, QUANTITIES AND PRICES

This is a UNIT BID PRICE CONTRACT. The bidder must provide the Bid Price(s), any Alternate Price(s), and the Total of the Base Bid plus any Add-Alternates in this proposal attachment: The total of the base bid plus any alternates selected by the Jurisdiction shall be used only for comparison of bids. The total of the Base Bid plus any Add-Alternates shall be used for determining the sufficiency of the bid security.

No.	Code Number	Item	Quantity	Unit
1	2010-C	CLEARING AND GRUBBING, STUMPS	1	LS
2	2010-D-1	TOPSOIL, ON-SITE	20	CY
3	2010-J-1	SUBBASE, SPECIAL BACKFILL	40	TON
4	2010-999-C	FILL, PROVIDE AND PLACE	20	CY
5	5010-A-1	WATER MAIN, TRENCHED, DIP, 6"	80	LF
6	5010-999-A	CONNECTION TO EXISTING WATER MAIN	1	EA
7	5020-999-A	FLUSHING HYDRANT ASSEMBLY	1	EA
8	7020-B	PAVEMENT, PCC, 6"	45	SY
9	7030-A-3	REMOVAL OF PAVEMENT	65	SY
10	7030-H-1	DRIVEWAY, PAVED, PCC, 6"	20	SY
11	8030-A	TEMPORARY TRAFFIC CONTROL	1	LS
12	9010-A	CONVENTIONAL SEEDING, FERTILIZING, AND MULCHING	0.10	AC
13	9040-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	40	LF
14	9040-N-2	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT	40	LF
15	9040-N-3	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	40	LF
16	11,020-A	MOBILIZATION	1	LS
17	11,050-A	CONCRETE WASHOUT	1	LS
18	012201-1.01-B-1	EROSION AND SEDIMENT CONTROL	1	LS
19	012201-1.01-B-1	DRILL NOMINAL 24" DIA. HOLE	40	VF

No.	Code Number	Item	Quantity	Unit
20	012201-1.01-B-1	FURNISH AND INSTALL 20" DIA. SURFACE CASING	40	VF
21	012201-1.01-B-1	DRILL NOMINAL 17" DIA. HOLE	210	VF
22	012201-1.01-B-1	FURNISH AND INSTALL 14" DIA. SURFACE CASING	250	VF
23	012201-1.01-B-1	DRILL NOMINAL 12" DIA. HOLE	580	VF
24	012201-1.01-B-1	FURNISH AND INSTALL 8" DIA. CASING	830	VF
25	012201-1.01-B-1	EQUIPMENT SETUP FOR GROUTING	1	LS
26	012201-1.01-B-1	FURNISH AND INSTALL NEAT CEMENT GROUT	580	SACK
27	012201-1.01-B-1	DRILL NOMINAL 8" DIA. OPEN HOLE	450	VF
28	012201-1.01-B-1	WELL DEVELOPMENT	2	HR
29	012201-1.01-B-2	TEST PUMP SETUP	1	LS
30	012201-1.01-B-2	TEST PUMP WELL	26	HR
31	012201-1.01-B-3	PLUMBNESS AND ALIGNMENT TEST	1	LS
32	012201-1.01-B-3	WATER QUALITY TESTING	1	LS
33	012201-1.01-B-4	WELL DISINFECTION	1	LS
34	012201-1.01-B-5	SAMPLES AND RECORDS	1	LS
35	012201-1.01-B-6	PITLESS UNIT AND WELL PROTECTION STRUCTURE	1	LS
36	012201-1.01-B-7	FURNISH AND INSTALL WELL PUMP	1	LS
37	012201-1.01-B-8	FURNISH AND INSTALL DROP PIPING	350	VF
38	012201-1.01-C	WELL HOUSE PIPING	1	LS
39	012201-1.01-D	CHEMICAL FEED SYSTEMS	1	LS
40	012201-1.01-E	WATER SYSTEM ELECTRICAL AND CONTROLS	1	LS



All bids shall NOT include Iowa Sales Tax for materials used in the project. Upon award, the successful bidder shall immediately provide a listing of subcontractors and associated Federal ID or Social Security Numbers for both the contractor and subcontractors. The City of Lawler will register the contractor and subcontractors with the Iowa Department of Revenue and will provide appropriate certificates to the contractor for distribution and use.

Contractor must list any subcontractors below that will be utilized for any part of this contract.

<b>Subcontractor Name</b>	<b>Work Supplied</b>

**FORM OF CONTRACT**

THIS CONTRACT, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ **USE DATE AWARDED**  
by and between the City of Lawler, Iowa hereinafter called the "Jurisdiction", and  
\_\_\_\_\_ hereinafter called the "Contractor".

**WITNESSETH:**

The Contractor hereby agrees to complete the work comprising the below referenced improvement as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the City Clerk. This contract includes all contract documents. The work under this contract shall be constructed in accordance with the 2024 Urban Standard Specifications for Public Improvements and as further modified by the supplemental specifications and special provisions included in said contract documents. The Contractor further agrees to complete the work in strict accordance with said contract documents, and to guarantee the work as required by law, for the time required in said contract documents, after its acceptance by the Jurisdiction.

This contract is awarded and executed for completion of the work specified in the contract documents for the bid prices shown on the Contract Attachment: Item 1: Bid Items, Quantities And Prices which were proposed by the Contractor in its proposal submitted in accordance with the Notice to Bidders and Notice of Public Hearing for the following described improvements:

**Well No. 3 Improvements – Project Number 24-289**

Construction of a new Jordan well and connection of new well to the existing well house, including approximately 100 feet of water main, well house piping, electrical and control modifications, and chemical feed pumps located on West Pitts Street, approximately 280 feet east of South McHugh Street in the City of Lawler, Iowa.

**Build America, Buy America**

The Grantee and its Contractors/Subcontractors must comply with the requirements of the Build America, Buy America (BABA) Act, 41 USC 8301 note, and all applicable rules and notices, as may be amended, if applicable to the Grantee's infrastructure project. Pursuant to HUD's Notice, "Public Interest Phased Implementation Waiver for FY 2022 and 2023 of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (88 FR 17001), any funds obligated by HUD on or after the applicable listed effective dates, are subject to BABA requirements, unless excepted by a waiver.

This agreement is for services related to a project that is subject to the Build America, Buy America Act (BABA) requirements under Title IX of the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. 177-58. Absent an approved waiver, all iron, steel, manufactured products, and construction materials used in this project must be produced in the United States, as further outlined by the Office of Management and Budget's Memorandum M-24-02, Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure.

The Contractor agrees to perform said work for and in consideration of the Jurisdiction's payment of the bid amount of \_\_\_\_\_ **DOLLARS**  
 (\$ \_\_\_\_\_ ) which amount shall constitute the required amount of the performance, maintenance, and payment bond. The Contractor hereby agrees to commence work under this contract on or before a date to be specified in a written notice to proceed by the Jurisdiction and to fully complete the project **by October 30, 2026;**  
 and to pay liquidated damages for noncompliance with said completion provisions at the rate of **One Thousand dollars (\$1,000.00)** for each calendar day thereafter that the work remains incomplete beyond the specified completion date.

IN WITNESS WHEREOF, the Parties hereto have executed this instrument, in quadruplicate on the date first shown written.

JURISDICTION

\_\_\_\_\_  
City of Lawler, Iowa

CONTRACTOR

\_\_\_\_\_  
Name of Contractor

By

\_\_\_\_\_  
Name, Mayor

By:

\_\_\_\_\_  
Name, Title\_\_\_\_\_  
Date\_\_\_\_\_  
Date

Federal Tax Identification Number:  
 (If no EIN, use SSN) \_\_\_\_\_

(Seal)  
 ATTEST:

Address:

\_\_\_\_\_  
Street Address/PO Box #\_\_\_\_\_  
City, State, Zip\_\_\_\_\_  
Name, City Clerk

Phone No.: \_\_\_\_\_

\_\_\_\_\_  
Date

CONTRACTOR PUBLIC REGISTRATION INFORMATION To Be Provided By:

1. All Contractors: The Contractor shall enter its Public Registration Number \_\_\_\_ - \_\_\_\_ - issued by the Iowa Commissioner of Labor pursuant to Section 91C.5 of the Iowa Code.
2. Out-of-State Contractors:
  - A. Pursuant to Section 91C.7 of the Iowa Code, an out-of-state contractor, before commencing a contract in excess of five thousand dollars in value in Iowa, shall file a bond with the division of labor services of the department of workforce development. The contractor should contact 515-242-5871 for further information. Prior to contract execution, the City Engineer may forward a copy of this

contract to the Iowa Department of Workforce Development as notification of pending construction work. It is the contractor's responsibility to comply with said Section 91C.7 before commencing this work.

- B. Prior to entering into contract, the designated low bidder, if it be a corporation organized under the laws of a state other than Iowa, shall file with the Jurisdictional Engineer a certificate from the Secretary of the State of Iowa showing that it has complied with all the provisions of Chapter 490 of the Code of Iowa, or as amended, governing foreign corporations. For further information contact the Iowa Secretary of State Office at 515-281-5204.

NOTE: All signatures on this contract must be original signatures in ink; copies or facsimile of any signature will not be accepted.

#### CORPORATE ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
 \_\_\_\_\_ ) SS  
 \_\_\_\_\_ County )

On this \_\_\_\_\_ day of \_\_\_\_\_, 2025, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ to me known, who, being by me duly sworn, did say that he/she is the \_\_\_\_\_ of the corporation executing the foregoing instrument; that (no seal has been procured by) (the seal affixed thereto is the seal of) the corporation; that said instrument was signed (and sealed) on behalf of the corporation by authority of this Board of Directors; that \_\_\_\_\_ acknowledged the execution of the instrument to be a voluntary act and deed of the corporation.

\_\_\_\_\_  
 Notary Public in and for the State of \_\_\_\_\_

My commission expires \_\_\_\_\_, 20\_\_\_\_

#### PARTNERSHIP ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
 \_\_\_\_\_ ) SS  
 \_\_\_\_\_ County )

On this \_\_\_\_\_ day of \_\_\_\_\_, 2025, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ to me personally known, who being by me duly sworn, did say that he/she is one of the partners of \_\_\_\_\_, a partnership, and that the instrument was signed on behalf of the partnership by authority of the partners

and the partner acknowledged the execution of the instrument to be the voluntary act and deed of the partnership by it and by the partner voluntarily executed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_

My commission expires \_\_\_\_\_, 20\_\_\_\_\_

#### INDIVIDUAL ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
\_\_\_\_\_) SS  
\_\_\_\_\_ County )

On this \_\_\_\_\_ day of \_\_\_\_\_, 2025, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_, to me known, to be the identical person named in and who executed the foregoing instrument, and acknowledged that he/she executed the instrument as his/her voluntary act and deed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_

My commission expires \_\_\_\_\_, 20\_\_\_\_\_

#### LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
\_\_\_\_\_) SS  
\_\_\_\_\_ County )

On this \_\_\_\_\_ day of \_\_\_\_\_, 2025, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ to me known, who, being by me duly sworn, did say that he/she is the \_\_\_\_\_ of said LLC, that (no seal has been procured by) (the seal affixed thereto is the seal of) the LLC; that said instrument was signed (and sealed) on behalf of the LLC, by authority of its managers and the said instrument to be a voluntary act and deed of the LLC.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_

My commission expires \_\_\_\_\_, 20\_\_\_\_\_

**CONTRACT ATTACHMENT: ITEM 1: BID ITEMS, QUANTITIES**

THIS CONTRACT IS AWARDED AND EXECUTED FOR COMPLETION OF THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS FOR THE BID PRICES TABULATED BELOW AS PROPOSED BY THE CONTRACTOR IN ITS PROPOSAL SUBMITTED IN ACCORDANCE WITH NOTICE TO BIDDERS AND NOTICE OF PUBLIC HEARING. ALL QUANTITIES ARE SUBJECT TO REVISION BY THE JURISDICTION. QUANTITY CHANGES, REGARDLESS OF THE PERCENTAGE INCREASE OR DECREASE OF THE TOTAL BID, SHALL NOT AFFECT THE UNIT BID PRICE OF THAT ITEM.

No.	Code Number	Item	Quantity	Unit	Unit Price	Total Price
1	2010-C	CLEARING AND GRUBBING, STUMPS	1	LS		
2	2010-D-1	TOPSOIL, ON-SITE	20	CY		
3	2010-J-1	SUBBASE, SPECIAL BACKFILL	40	TON		
4	2010-999-C	FILL, PROVIDE AND PLACE	20	CY		
5	5010-A-1	WATER MAIN, TRENCHED, DIP, 6"	80	LF		
6	5010-999-A	CONNECTION TO EXISTING WATER MAIN	1	EA		
7	5020-999-A	FLUSHING HYDRANT ASSEMBLY	1	EA		
8	7020-B	PAVEMENT, PCC, 6"	45	SY		
9	7030-A-3	REMOVAL OF PAVEMENT	65	SY		
10	7030-H-1	DRIVEWAY, PAVED, PCC, 6"	20	SY		
11	8030-A	TEMPORARY TRAFFIC CONTROL	1	LS		
12	9010-A	CONVENTIONAL SEEDING, FERTILIZING, AND MULCHING	0.10	AC		
13	9040-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	40	LF		
14	9040-N-2	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT	40	LF		
15	9040-N-3	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	40	LF		
16	11,020-A	MOBILIZATION	1	LS		
17	11,050-A	CONCRETE WASHOUT	1	LS		

No.	Code Number	Item	Quantity	Unit	Unit Price	Total Price
18	012201-1.01-B-1	EROSION AND SEDIMENT CONTROL	1	LS		
19	012201-1.01-B-1	DRILL NOMINAL 24" DIA. HOLE	40	VF		
20	012201-1.01-B-1	FURNISH AND INSTALL 20" DIA. SURFACE CASING	40	VF		
21	012201-1.01-B-1	DRILL NOMINAL 17" DIA. HOLE	210	VF		
22	012201-1.01-B-1	FURNISH AND INSTALL 14" DIA. SURFACE CASING	250	VF		
23	012201-1.01-B-1	DRILL NOMINAL 12" DIA. HOLE	580	VF		
24	012201-1.01-B-1	FURNISH AND INSTALL 8" DIA. CASING	830	VF		
25	012201-1.01-B-1	EQUIPMENT SETUP FOR GROUTING	1	LS		
26	012201-1.01-B-1	FURNISH AND INSTALL NEAT CEMENT GROUT	580	SACK		
27	012201-1.01-B-1	DRILL NOMINAL 8" DIA. OPEN HOLE	450	VF		
28	012201-1.01-B-1	WELL DEVELOPMENT	2	HR		
29	012201-1.01-B-2	TEST PUMP SETUP	1	LS		
30	012201-1.01-B-2	TEST PUMP WELL	26	HR		
31	012201-1.01-B-3	PLUMBNESS AND ALIGNMENT TEST	1	LS		
32	012201-1.01-B-3	WATER QUALITY TESTING	1	LS		
33	012201-1.01-B-4	WELL DISINFECTION	1	LS		
34	012201-1.01-B-5	SAMPLES AND RECORDS	1	LS		
35	012201-1.01-B-6	PITLESS UNIT AND WELL PROTECTION STRUCTURE	1	LS		
36	012201-1.01-B-7	FURNISH AND INSTALL WELL PUMP	1	LS		
37	012201-1.01-B-8	FURNISH AND INSTALL DROP PIPING	350	VF		
38	012201-1.01-C	WELL HOUSE PIPING	1	LS		
39	012201-1.01-D	CHEMICAL FEED SYSTEMS	1	LS		
40	012201-1.01-E	WATER SYSTEM ELECTRICAL AND CONTROLS	1	LS		

**TOTAL BID AMOUNT** \_\_\_\_\_

**CONTRACT ATTACHMENT: ITEM 2: REQUIRED CDBG CONTRACT LANGUAGE**

**Access to Maintenance of Records**

The Contractor must maintain records, including supporting documentation, for the greater of three years after the date the Recipient is notified that the State CDBG contract has been closed with HUD.

At any time during normal business hours and as frequently as is deemed necessary, the Contractor shall make available to the Iowa Economic Development Authority, the State Auditor, the General Accounting Office, and the Department of Housing and Urban Development, for their examination, all of its records pertaining to all matters covered by this contract.

**Notice of Awarding Agency Requirements and Regulations Pertaining to Reporting**

The Contractor must provide information as necessary and as requested by the Iowa Economic Development Authority for the purpose of fulfilling all reporting requirements related to the CDBG program.

**Certification regarding government -wide restriction on lobbying**

All contracts utilizing CDBG funds must contain the following certification concerning restriction of lobbying:

The Recipient certifies, to the best of his or her knowledge and belief, that:

i. No Federal appropriated funds have been paid or will be paid, by or on behalf of the Recipient, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

ii. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee, or an employee of a Member of congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Recipient shall complete and submit Standard Form -LLL, "Disclosure Form to Report Federal Lobbying" in accordance with its instruction.

iii. The Recipient shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



**Clean Air and Water Acts (for all contracts < \$100,000)**

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will certify that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the Excluded Party Listing System pursuant to 40 CFR 32.

(2) The Contractor agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 U.S.C. 1857c -8) and Section 308 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

(3) The Contractor agrees that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, Environmental Protection Agency, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the Excluded Party Listing System.

(4) The Contractor agrees that it will include or cause to be included the criteria and requirements in Paragraph (1) through (4) of this section in every nonexempt subcontract and require every subcontractor to take such action as the Government may direct as a means of enforcing such provisions.

**Federal Executive Orders 11246 & 11375 (For all contracts < \$10,000)**

During the performance of this contract, the contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of the Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Contractor's non-compliance with the nondiscrimination clause of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

**Federal Labor Standards (For all contracts < \$2,000)**

During the execution of this agreement, the contractor agrees to comply by all Federal, State and local labor standards in effect, including to but not limited to the following regulations:

- o Davis -Bacon and Related Acts , as amended;
- o Contract Work Hours and Safety Standard Act , as amended;
- o Copeland Anti -kickback Act , as amended;
- o Fair Labor Standards Act , as amended

**Build America, Buy America Requirements**

This agreement is for professional services related to a project that is subject to the Build America, Buy America Act (BABA) requirements under Title IX of the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. 117-58. While professional services are not subject to BABA, the Provider understands that they are responsible for ensuring that, absent a waiver by the Department of Housing and Urban Development, Provider shall not approve for use in this project, any iron, steel, manufactured products, or construction materials unless such materials have been produced in the United States. Provider shall obtain all necessary compliance certificates for work that is within provider's scope of work. Failure to do so shall be a default under this agreement. Guidance on complying with BABA is outlined by Office of Management and Budget's Memorandum M-24-02, Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure.

**Section 3 requirements under 12 U.S.C. § 1701u**

A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD -assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low - and very low -income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 75, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 75 regulations.

C. The Contractor agrees to post copies of a notice advising workers of the Contractor's commitments under Section 3 in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The Contractor agrees to provide written notice of employment and contracting opportunities to all known Section 3 Workers and Section 3 Businesses.

E. The Contractor agrees to employ, to the greatest extent feasible, Section 3 workers or provide written justification to the recipient that is consistent with 24 CFR Part 75, describing why it was unable to meet minimum numerical Section 3 Worker hours goals, despite its efforts to comply with the provisions of this clause.

F. The Contractor agrees to maintain records documenting Section 3 Workers that were hired to work on previous Section 3 covered projects or activities that were retained by the contractor for subsequent Section 3 covered projects or activities.

G. The Contractor agrees to post contract and job opportunities to the Opportunity Portal and will check the Business Registry for businesses located in the project area.

H. The Contractor agrees to include compliance with Section 3 requirements in every subcontract for Section 3 projects as defined in 24 CFR part 75, and agrees to take appropriate action, as provided in an applicable provision of the subcontract upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 75.

I. The Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 75 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 75.

J. The Contractor will certify that they have followed prioritization of effort in 24 CFR part 75.19 for all employment and training opportunities. The contractor will further certify that it meets or exceeds the applicable Section 3 benchmarks, defined in 24 CFR Part 75.23, and if not, shall describe in detail the qualitative efforts it has taken to pursue low - and very low - income persons for economic opportunities.

K. Noncompliance with HUD's regulations in 24 CFR part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

Section 3 Business Concerns are encouraged to respond to this proposal. A Section 3 Business Concern is one that satisfies one of the following requirements:

1. It is at least 51 percent owned and controlled by low - or very low -income persons;
2. Over 75 percent of the labor hours performed for the business over the prior three - month period are performed by Section 3 Workers\*; or
3. It is a business at least 51 percent owned and controlled by current public housing residents or residents who currently live in Section 8- assisted housing.

\* A Section 3 Worker is defined as any worker who currently fits or when hired within the past five years fit at least one of the following categories, as documented:

1. The worker's income for the previous or annualized calendar year is below the applicable income limit established by HUD;
2. The worker is employed by a Section 3 business concern: or
3. The worker is a YouthBuild participant.

Businesses that believe they meet the Section 3 criteria are encouraged to register as a Section 3 Business through HUD's website:

<https://portalapps.hud.gov/Sec3BusReg/BRegistry/RegisterBusiness>

### **Recycled Materials**

The Contractor agrees to comply with all the requirements of Code of Iowa chapter 8A.315-317 and Iowa Administrative Code chapter 11- 117.6(5) — Recycled Product and Content which states:

- When appropriate, specifications shall include requirements for the use of recovered materials and products;
- The specifications shall not restrict the use of alternative materials, exclude recovered materials, or require performance standards that exclude products containing recovered materials unless the subrecipient seeking the product can document that the use of recovered materials will impede the intended use of the product;

**Federal Executive Orders 11063, as amended by Executive Order 12259**

The Contractor agrees to comply with the provisions of Executive Order 11063, as amended by Executive Order 12259, which prohibit discrimination in the sale, leasing, rental, or other disposition of residential property and related facilities financed in whole or in part with federal assistance. The Contractor shall not discriminate against any person on the grounds of race, color, religion, sex, or national origin in the sale, rental, or use of housing or residential property built or rehabilitated with assistance provided under this contract. The Contractor further agrees to:

- Include this provision in all subcontracts or agreements related to this federally assisted construction project;
- Cooperate with the U.S. Department of Housing and Urban Development (HUD) in any enforcement or compliance reviews;
- Maintain and provide records as required to demonstrate compliance with applicable federal requirements.
- Failure to comply with this provision shall be considered a material breach of contract and may result in suspension or termination of this Agreement, in addition to other remedies available under law or regulation.

**Section 109, Housing & Community Development Act of 1974 ( 42 USC 5309)**

The Contractor agrees that no person shall be excluded from participation in, denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with Community Development Block Grant (CDBG) funds on the grounds of: Race, color, national origin, sex, or religion. Additionally, as required by amendments to the Act and related statutes and regulations, the Contractor further agrees not to discriminate on the basis of disability. Accordingly, the Contractor shall:

- Take all necessary and reasonable steps to ensure non- discrimination in employment, service delivery, housing, and access to facilities;
- Include this clause in all subcontracts or agreements funded in whole or in part with CDBG funds;
- Cooperate fully with any compliance or enforcement reviews conducted by the U.S. Department of Housing and Urban Development (HUD) or its designee;
- Maintain and furnish records as necessary to demonstrate compliance;

**Title VI of the Civil Rights Act of 1964 (PL 88 -352, 42 USC ss 200d)**

The Contractor agrees to comply with Title VI of the Civil Rights Act of 1964 (Public Law 88-352, 42 U.S.C. § 2000d et seq.) and all applicable regulations issued pursuant thereto, including those found at 24 CFR Part 1. Under Title VI, no person shall, on the grounds of race, color, or national origin, be excluded from participation in, denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Accordingly, the Contractor shall:

1. Not discriminate against any person in employment, contracting, housing, or service delivery on the basis of race, color, or national origin.
2. Include this clause in every subcontract or purchase order involving the use of federal funds.
3. Maintain and provide access to records sufficient to demonstrate compliance with Title VI upon request of the funding agency or the U.S. Department of Housing and Urban Development (HUD).
4. Cooperate fully in any compliance review or complaint investigation undertaken pursuant to Title VI.

**Title VI II of the Civil Rights Act of 1968 (aka 'Fair Housing Act')**

The Contractor shall comply with the Fair Housing Act (Title VIII of the Civil Rights Act of 1968, as amended, 42 U.S.C. §§ 3601–3619), which prohibits discrimination in housing and housing- related transactions on the basis of: Race, color, religion, sex ( including sexual orientation and gender identity), disability, familial status, or national origin. Accordingly, the Contractor agrees to:

1. Not discriminate in the sale, rental, lease, financing, design, construction, marketing, or provision of services related to any housing or residential facilities constructed or assisted under this contract.
2. Display the Equal Housing Opportunity logo and statement on all housing advertisements and marketing materials associated with the project.
3. Include this provision in all subcontracts related to residential construction, rehabilitation, leasing, or sale of housing units funded in whole or in part with federal funds.
4. Cooperate fully with any investigation, compliance review, or enforcement action conducted by the U.S. Department of Housing and Urban Development (HUD) or other designated entity.

**Section 504 of the Rehabilitation Act of 1973 (PL 93 -112, 29 USC 794)**

The Contractor agrees to comply with Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794), as implemented by HUD regulations at 24 CFR Part 8, which prohibit discrimination on the basis of disability in any program or activity receiving federal financial assistance. Accordingly, the Contractor shall:

1. Not discriminate against any qualified individual with a disability in the provision of services, employment, housing, or access to facilities under this Contract.
2. Ensure that all new construction and alterations funded in whole or in part with federal assistance are designed and constructed to be readily accessible to and usable by individuals with disabilities, as required by applicable accessibility standards (e.g., UFAS or ADA Standards, as applicable).
3. Take appropriate steps to ensure that communications with applicants, beneficiaries, and members of the public with disabilities are as effective as communications with others.
4. Make reasonable accommodations in policies, practices, and procedures when necessary to avoid discrimination, unless such accommodations would impose an undue financial or administrative burden.
5. Include this provision in all applicable subcontracts and agreements."

**Age Discrimination Act of 1975 (42 USC 1601 et seq)**

The Contractor agrees to comply with the Age Discrimination Act of 1975 (42 U.S.C. § 6101 et seq.) and the implementing regulations at 45 CFR Part 90, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance. Accordingly, the Contractor shall:

1. Ensure that no person is excluded from participation in, denied the benefits of, or otherwise subjected to discrimination under this contract or related activities on the basis of age.
2. Not use age as a basis for employment decisions, service delivery, or participation in housing or construction- related benefits funded by this contract.
3. Include this clause in all subcontracts or agreements involving federal funds under this project.
4. Cooperate fully with any compliance review or investigation conducted pursuant to this Act.
5. Maintain and provide records as required to demonstrate compliance with the Age Discrimination Act.

**Americans with Disabilities Act (PM 101- 336, 42 USC 12101-12213)**

The Contractor agrees to comply with the provisions of the Americans with Disabilities Act of 1990 (PL 101- 336, codified at 42 U.S.C. §§ 12101–12213) and all applicable implementing regulations.

Under the ADA, no qualified individual with a disability shall, on the basis of disability, be:

- Excluded from participation in,
- Denied the benefits of, or
- Subjected to discrimination in any program, service, or activity funded in whole or in part under this Contract.

Accordingly, the Contractor shall:

1. Ensure that all employment practices, public facilities, housing, services, and communications related to this project are accessible and non- discriminatory toward individuals with disabilities.
2. Design and construct facilities to meet or exceed applicable accessibility standards, such as the 2010 ADA Standards for Accessible Design or UFAS, where applicable.
3. Make reasonable modifications to policies, practices, and procedures to accommodate individuals with disabilities, unless doing so would result in an undue burden or fundamental alteration.
4. Provide effective communication methods, including auxiliary aids and services, when necessary for equal access.
5. Include this clause in all subcontracts and agreements funded in whole or in part by CDBG or other federal funds.

**Iowa Civil Rights Act of 1965, Chapter 216**

The Contractor agrees to comply with the provisions of the Iowa Civil Rights Act of 1965 (Iowa Code Chapter 216), which prohibits discrimination in employment, housing, public accommodations, education, and credit based on: Race, creed, color, sex, sexual orientation, gender identity, religion, national origin, disability, or age (where applicable), and familial status (in housing). Accordingly, the Contractor shall:

1. Not discriminate in hiring, promotion, layoff, termination, or other employment practices;
2. Provide equal access to housing, services, and facilities without regard to protected characteristics;
3. Make reasonable accommodations for persons with disabilities;
4. Include this clause in all applicable subcontracts and agreements under this contract;
5. Cooperate with any investigation or compliance review conducted by the Iowa Civil Rights Commission (ICRC) or other designated authority.”

**Iowa Code Section ss 19B.7**

The Contractor agrees to comply with Iowa Code Section 19B.7, which requires that all state and local government agencies and their contractors and subcontractors prevent and eliminate discrimination in employment and public contracting. Accordingly, the Contractor shall:

1. Not discriminate against any employee or applicant for employment or any business or individual in the awarding of subcontracts, on the basis of: Race, Color, National origin, Sex, Gender identity, Sexual orientation, Religion, Age, Disability, Creed;
2. Include this nondiscrimination provision in all subcontracts and procurement agreements;

3. Make good faith efforts to encourage the participation of minority -owned and women-owned business enterprises (M/WBEs) in all aspects of the project, including contracting and subcontracting;
4. Provide documentation of such efforts upon request by the local jurisdiction, the Iowa Department of Administrative Services, or other authorized entity.

**Sales and Use Taxes**

Owner is exempt from Iowa state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid.

**The undersigned acknowledges that these requirements are party to the contract / subcontract and the Contractor/Subcontract or agrees to adoption of all requirements upon execution of the agreement:**

Contractor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.



**ADDENDUM XX. SUPPLEMENTAL FEDERAL REQUIREMENTS AND WORKER NOTIFICATIONS**

Current Certified Payroll Form & Certification (DOL WH -347)

<https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf>

Federal Labor Standards Complaint Intake Form:

<https://www.hud.gov/sites/dfiles/OCHCO/documents/4731.pdf>

Record of Employee Interview Form

<https://www.hud.gov/sites/dfiles/OCHCO/documents/11.pdf>

Job Site Posters & Federal Labor Standards Provisions:

WHD 1321 – Employee Rights Poster

English: <https://www.osha.gov/sites/default/files/publications/osha3165.pdf>

Spanish: <https://www.osha.gov/sites/default/files/publications/osha3167.pdf>

OSHA Job Safety & Health

English: [https://www.eeoc.gov/sites/default/files/migrated\\_files/employers/eeoc\\_self\\_print\\_poster.pdf](https://www.eeoc.gov/sites/default/files/migrated_files/employers/eeoc_self_print_poster.pdf)

Spanish: [https://www.eeoc.gov/sites/default/files/migrated\\_files/employers/eeoc\\_self\\_print\\_poster\\_spanish.pdf](https://www.eeoc.gov/sites/default/files/migrated_files/employers/eeoc_self_print_poster_spanish.pdf)

OFCCP Equal Opportunity – Know Your Rights

English: [https://www.eeoc.gov/sites/default/files/2023-06/22-088\\_EEOC\\_KnowYourRights6.12.](https://www.eeoc.gov/sites/default/files/2023-06/22-088_EEOC_KnowYourRights6.12.)

Spanish: [https://www.eeoc.gov/sites/default/files/2023-06/22-088\\_EEOC\\_KnowYourRightsSp6.12.pdf7](https://www.eeoc.gov/sites/default/files/2023-06/22-088_EEOC_KnowYourRightsSp6.12.pdf7)

HUD Form 928.1 Equal Housing Opportunity

English: <https://www.hud.gov/sites/documents/928.1.pdf>

Spanish: <https://www.hud.gov/sites/documents/SPANISH.PDF>

**The undersigned acknowledges that these documents are required to be made available to all workers on the jobsite:**

Contractor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

SURETY BOND NO. \_\_\_\_\_

**PERFORMANCE, PAYMENT AND MAINTENANCE BOND**

KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_ **Contractor** \_\_\_\_\_, as Principal  
 (hereinafter the "Contractor" or "Principal") and  
 as Surety are held and firmly bound unto \_\_\_\_\_ **City of Lawler, Iowa** \_\_\_\_\_, as  
 Obligee (hereinafter referred to as "the Jurisdiction"), and to all persons who may be injured  
 by any breach of any of the conditions of this Bond in the penal sum of \_\_\_\_\_ **Contract** \_\_\_\_\_  
 \_\_\_\_\_ **Amount** \_\_\_\_\_ **DOLLARS** \_\_\_\_\_ **(\$ )** \_\_\_\_\_  
 lawful money of the United States, for the payment of which sum, well and truly to be made, we bind  
 ourselves, our heirs, legal representatives and assigns, jointly or severally, firmly by these presents.

The conditions of the above obligations are such that whereas said Contractor entered into a contract with  
 the Jurisdiction, bearing date the \_\_\_\_\_ day of \_\_\_\_\_, 2025 hereinafter the "Contract" wherein said  
 Contractor undertakes and agrees to construct the following described improvements:

Well No. 3 Improvements, Project No. 24-289

Construction of a new Jordan well and connection of new well to the existing well  
 house, including approximately 100 feet of water main, well house piping, electrical  
 and control modifications, and chemical feed pumps located on West Pitts Street,  
 approximately 280 feet east of South McHugh Street in the City of Lawler, Iowa.

and to faithfully perform all the terms and requirements of said Contract within the time therein specified,  
 in a good and workmanlike manner, and in accordance with the Contract Documents. Provided, however,  
 that one year after the date of acceptance as complete of the work under the above referenced Contract,  
 the maintenance portion of this Bond shall continue in force but the penal sum for maintenance shall be  
 reduced to the sum of

\_\_\_\_\_ **Contract Amount** \_\_\_\_\_ **DOLLARS**  
 \_\_\_\_\_ **(\$ )** \_\_\_\_\_ which is the cost associated with those items shown on the proposal and  
 in the Contract which require a maintenance bond period in excess of one year.

It is expressly understood and agreed by the Contractor and Surety in this bond that the following  
 provisions are a part of this Bond and are binding upon said Contractor and Surety, to-wit:

1. **PERFORMANCE:** The Contractor shall well and faithfully observe, perform, fulfill and abide by each and every covenant, condition and part of said Contract and Contract Documents, by reference made a part hereof, for the above referenced improvements, and shall indemnify and save harmless the Jurisdiction from all outlay and expense incurred by the Jurisdiction by reason of the Contractor's default of failure to perform as required. The Contractor shall also be responsible for the default or failure to perform as required under the Contract and Contract Documents by all its subcontractors, suppliers, agents, or employees furnishing materials or providing labor in the performance of the Contract.

2. **PAYMENT:** The Contractor and the Surety on this Bond are hereby agreed to pay all just claims submitted by persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the performance of the Contract on account of which this Bond is given, including but not limited to claims for all amounts due for labor, materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools, consumed or used by the Contractor or any subcontractor, wherein the same are not satisfied out of the portion of the contract price which the Jurisdiction is required to retain until completion of the improvement, but the Contractor and Surety shall not be liable to said persons, firms, or corporations unless the claims of said claimants against said portion of the contract price shall have been established as provided by law. The Contractor and Surety hereby bind themselves to the obligations and conditions set forth in Chapter 573, Code of Iowa, which by this reference is made a part hereof as though fully set out herein.
3. **MAINTENANCE:** The Contractor and the Surety on this Bond hereby agree, at their own expense:
  - A. **To remedy any and all defects that may develop in or result from work to be performed under the Contract within the period of two ( 2 ) years from the date of acceptance of the work under the Contract,** by reason of defects in workmanship or materials used in construction of said work;
  - B. To keep all work in continuous good repair; and
  - C. To pay the Jurisdiction's reasonable costs of monitoring and inspection to assure that any defects are remedied, and to repay the Jurisdiction all outlay and expense incurred as a result of Contractor's and Surety's failure to remedy any defect as required by this section.

Contractor's and Surety's agreement herein made extends to defects in workmanship or materials not discovered or known to the Jurisdiction at the time such work was accepted.

4. **GENERAL:** Every Surety on this Bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:
  - A. To consent without notice to any extension of time to the Contractor in which to perform the Contract;
  - B. To consent without notice to any change in the Contract or Contract Documents, which thereby increases the total contract price and the penal sum of this bond, provided that all such changes do not, in the aggregate, involve an increase of more than twenty percent of the total contract price, and that this bond shall then be released as to such excess increase; and
  - C. To consent without notice that this Bond shall remain in full force and effect until the Contract is completed, whether completed within the specified contract period, within an extension thereof, or within a period of time after the contract period has elapsed and the liquidated damage penalty is being charged against the Contractor.

The Contractor and every Surety on the bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:

- D. That no provision of this Bond or of any other contract shall be valid which limits to less than five years after the acceptance of the work under the Contract the right to sue on this Bond.
- E. That as used herein, the phrase “all outlay and expense” is not to be limited in any way, but shall include the actual and reasonable costs and expenses incurred by the Jurisdiction including interest, benefits and overhead where applicable. Accordingly, “all outlay and expense” would include but not be limited to all contract or employee expense, all equipment usage or rental, materials, testing, outside experts, attorneys fees (including overhead expenses of the Jurisdiction’s staff attorneys), and all costs and expenses of litigation as they are incurred by the Jurisdiction. It is intended the Contractor and Surety will defend and indemnify the Jurisdiction on all claims made against the Jurisdiction on account of Contractor’s failure to perform as required in the Contract and Contract Documents, that all agreements and promises set forth in the Contract and Contract Documents, in approved change orders, and in this Bond will be fulfilled, and that the Jurisdiction will be fully indemnified so that it will be put into the position it would have been in had the Contract been performed in the first instance as required.

In the event the Jurisdiction incurs any “outlay and expense” in defending itself with respect to any claim as to which the Contractor or Surety should have provided the defense, or in the enforcement of the promises given by the Contractor in the Contract, Contract Documents, or approved change orders, or in the enforcement of the promises given by the Contractor and Surety in this Bond, the Contractor and Surety agree that they will make the Jurisdiction whole for all such outlay and expense, provided that the Surety’s obligation under this bond shall not exceed 125% of the penal sum of this bond.

In the event that any actions or proceedings are initiated with respect to this Bond, the parties agree that the venue thereof shall be Chickasaw County, State of Iowa. If legal action is required by the Jurisdiction to enforce the provisions of this Bond or to collect the monetary obligation incurring to the benefit of the Jurisdiction, the Contractor and the Surety agree, jointly and severally, to pay the Jurisdiction all outlay and expense incurred therefore by the Jurisdiction. All rights, powers, and remedies of the Jurisdiction hereunder shall be cumulative and not alternative and shall be in addition to all rights, powers and remedies given to the Jurisdiction, by law. The Jurisdiction may proceed against surety for any amount guaranteed hereunder whether action is brought against the Contractor or whether Contractor is joined in any such action or actions or not.

NOW THEREFORE, the condition of this obligation is such that if said Principal shall faithfully perform all the promises of the Principal, as set forth and provided in the Contract, in the Contract Documents, and in this Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

When a work, term, or phrase is used in this Bond, it shall be interpreted or construed first as defined in this Bond, the Contract, or the Contract Documents; second, if not defined in the Bond, Contract, or Contract Documents, it shall be interpreted or construed as defined in applicable provisions of the Iowa Code; third, if not defined in the Iowa Code, it shall be interpreted or construed according to its generally accepted meaning in the construction industry; and fourth, if it has no generally accepted meaning in the construction industry, it shall be interpreted or construed according to its common or customary usage.

Failure to specify or particularize shall not exclude terms or provisions not mentioned and shall not limit liability hereunder. The Contract and Contract Documents are hereby made a part of this Bond.

Witness our hands, in quadruplicate, this \_\_\_\_\_ day of \_\_\_\_\_, 2025.

Surety Countersigned By:

**PRINCIPAL:**

\_\_\_\_\_  
Signature of Iowa Resident Commission  
Agent as Prescribed by Chapter 515.52-57,  
Iowa Code. (Required only if Attorney-in-  
Fact is not also an Iowa Resident  
Commission Agent).

By

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Resident Commission Agent

\_\_\_\_\_  
Title

\_\_\_\_\_  
Company Name

**SURETY:**

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
City, State, Zip Code

By

\_\_\_\_\_  
Signature Attorney-in-Fact Officer

\_\_\_\_\_  
Company Telephone Number

\_\_\_\_\_  
Name of Attorney-in-Fact Officer

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Company Telephone Number

**NOTE:**

1. All signatures on this performance, payment & maintenance bond must be original signatures in ink; copies or facsimile of any signature will not be accepted.
2. This bond must be sealed with the Surety's seal.
3. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety's seal.
4. The name and signature of the Surety's Attorney-in-Fact/Officer entered on this bond must be exactly as listed on the Certificate or Power of Attorney accompanying this bond.

**NOTICE TO PROCEED**

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_  
Project: Well No. 3 Improvements  
#24-289  
Lawler, Iowa  
\_\_\_\_\_

You are hereby notified to commence work in accordance with the Form of Contract dated \_\_\_\_\_ . You are to complete work by **October 30, 2026**.

Owner: City of Lawler  
\_\_\_\_\_  
By: \_\_\_\_\_  
Mark Mueterthies  
Title: Mayor

**ACCEPTANCE OF NOTICE:**

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

\_\_\_\_\_  
Date

Company Name: \_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_

## SRF Required Front-End Specifications

Attachment 1: -RESERVED-

Attachment 2: Statement in Advertisement for Bids on Debarment and Suspension/Certification Regarding Debarment and Suspension Form *(to be completed and signed by Prime Contractor and submitted with the bid)*

Attachment 3: Disadvantaged Business Enterprise Certification Form (to be completed and signed by Prime Contractor and submitted with the bid)

Attachment 4: DBE Program Subcontractor Performance Form (to be completed and signed by Prime and DBE Subcontractor for each subcontract and submitted with the bid)

**\*If no DBE was chosen by the Prime Contractor to be utilized for this project, then this form is not required to be submitted.**

Attachment 5: DBE Program Subcontractor Utilization Form *(to be completed and signed by Prime and DBE Subcontractor for each subcontract and submitted with the bid)*

**\*If no DBE was chosen by the Prime Contractor to be utilized for this project, then this form is not required to be submitted.**

Attachment 6: -RESERVED-

Attachment 7: Other Federal Requirements Language

- A. -RESERVED-
- B. Federal Labor Standards Provisions (including Davis-Bacon prevailing wage rates\*\*)
- C. -RESERVED
- D. Historical and Archeological Finds
- E. Prohibitions on Procurement from Violating Facilities

Attachment 8: Right of Entry and Records Retention

Attachment 9: American Iron & Steel Requirement

Attachment 10: Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment *(to be completed and signed by Prime Contractor and submitted with the bid)*

**-Attachment 1: RESERVED-**



**Attachment 2: SRF Required Front-End Specifications  
Debarments and Suspensions**

\*This form to be completed by the Prime Contractor and submitted with the bid.

Any bidder or equipment supplier whose firm or affiliate is listed in on the U.S. General Services Administration Excluded Parties List will be prohibited from the bidding process. The excluded parties records search engine is located at the System for Award Management (SAM) website: <https://sam.gov>. Pursuant to 2 CFR Part 180, as supplemented by 2 CFR 1532, any entity submitting a bid while the SAM website lists that entity as having an active exclusion will be determined by the DNR to be a non-responsive bidder and will not be able to receive SRF funding.

United States Environmental Protection Agency Washington, DC 20460

**Certification Regarding Debarment, Suspension,  
and Other Responsibility Matters**

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

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had 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 or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 U SC Sec. 10 01, a false statement may result in a fine or imprisonment, or both.

---

Signature of Authorized Representative

---

Date

---

Printed Name

---

Title

☐ I am unable to certify to the above statements. My explanation is attached.

**Attachment 3: SRF Required Front-End Specifications  
Disadvantaged Business Enterprise (DBE) Solicitation**

\*This form to be completed by Prime Contractor and submitted with the bid.

In Iowa, DBEs must be certified through the Iowa Department of Transportation (IDOT). Information on certification requirements and a list of certified DBEs is on the IDOT website at <https://secure.iowadot.gov/DBE/Home/Index/>.

Prime contractors' DBE requirements for SRF projects include:

- Taking affirmative steps for DBE participation
- Documenting the efforts and the proposed utilization of certified DBEs

**PROJECT INFORMATION**

SRF Applicant: \_\_\_\_\_ Bidder: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

1. At this point in time, has the prime contractor begun to solicit work opportunities to subcontractors for this project?  
☐ Yes    ☐ No    ☐ N/A
2. Do you agree to use the good faith efforts checklist to ensure the DBEs have the opportunity to compete for procurements funded by EPA financial assistance funds?  
☐ Yes    ☐ No
3. If yes, was a DBE chosen by the prime contractor to be utilized for this project?  
☐ Yes    ☐ No

Signature: \_\_\_\_\_

### GOOD FAITH EFFORTS CHECKLIST

Please complete the checklist to determine if you have complied with the requirement to make good faith efforts to ensure that certified DBEs have the opportunity to compete for procurements funded by EPA financial assistance funds. Bidders/offerers must make good faith efforts prior to submission of bids/proposals.

1. Did you ensure that DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities?  
☐ Yes    ☐ No
2. Did you make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process? This includes, whenever possible, posting solicitation for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.  
☐ Yes    ☐ No
3. Did you consider in the contracting process whether firms competing for large contracts could subcontract with DBEs? This will include dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.  
☐ Yes    ☐ No
4. Did you encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually?  
☐ Yes    ☐ No
5. Did you use the services of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce to identify potential subcontractors?  
☐ Yes    ☐ No
6. List the potential DBE subcontractors that were contacted. Only list those that are certified through the Iowa Department of Transportation.

Name	How Contacted (e.g. letter, phone call, fax, e-mail)	Response (e.g. did not respond, not interested, not competitive)

### CONTRACT ADMINISTRATION PROVISIONS

Several contract provisions are required to prevent unfair practices that adversely affect DBEs. These include:

1. Prime Contractor must pay its Subcontractor for satisfactory performance no more than 30 days from the Prime Contractor's receipt of payment from the SRF loan recipient.
2. Prime Contractor must notify the SRF loan recipient in writing prior to termination of a DBE subcontractor for convenience.
3. Prime Contractor must employ the six Good Faith Efforts to solicit a replacement subcontractor if a DBE subcontractor fails to complete work under a subcontract for any reason.

**Attachment 4: SRF Required Front-End Specifications**  
**Disadvantaged Business Enterprise (DBE) Subcontractor Performance Form**

\*This form to be completed by Prime and DBE Subcontractor for each subcontract and submitted with the bid.

\*If a DBE has NOT yet been selected by the Prime Contractor or if no DBEs are needed, then this form is not required to be submitted at this time.

This form is intended to capture the DBE<sup>1</sup> subcontractor's<sup>2</sup> description of work to be performed and the price of the work submitted to the prime contractor. An EPA Financial Assistance Agreement recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

Bid/Proposal No.: \_\_\_\_\_ Assistance Agreement ID No. (if known): \_\_\_\_\_

Point of Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Email: \_\_\_\_\_

Prime Contractor Name: \_\_\_\_\_

Issuing/Funding Entity: \_\_\_\_\_

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above.

\_\_\_\_\_  
Prime Contractor Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

---

Subcontractor Signature

---

Print Name

---

Title

---

Date

<sup>1</sup>A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certification as described in 40 CFR 33.204-33.205. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup>Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Attachment 5: SRF Required Front-End Specifications**  
**Disadvantaged Business Enterprise (DBE) Subcontractor Utilization Form**

\*This form to be completed by Prime and DBE Subcontractor for each subcontract and submitted with the bid.

\*If a DBE has NOT yet been selected by the Prime Contractor or if no DBEs are needed, then this form is not required to be submitted at this time.

This form is intended to capture the prime contractor's actual and/or intended use of identified certified DBE<sup>1</sup> subcontractors<sup>2</sup> and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

Bid/Proposal No.: \_\_\_\_\_ Assistance Agreement ID No. (if known): \_\_\_\_\_

Point of Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Email: \_\_\_\_\_

Issuing/Funding Entity: \_\_\_\_\_

I have identified potential DBE certified subcontractors ☐ Yes ☐ No

If yes, complete the table below. If no, explain: \_\_\_\_\_

Subcontractor Name/ Company Name	Company Address/Phone/Email	Estimated Dollar Amount	Currently DBE Certified?
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above.

\_\_\_\_\_  
Prime Contractor Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

<sup>1</sup>A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certification as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup>Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**-Attachment 6: RESERVED-**



**Attachment 7: SRF Required Front-End Specifications**  
**Other Federal Requirements Language**

**A. -RESERVED-**

**B. Federal Labor Standards Provisions (including Davis-Bacon prevailing wage rates)**

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

**(1) Minimum wages.**

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in Sec. 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.
- (ii) (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
  - (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - (2) The classification is utilized in the area by the construction industry; and
  - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting

officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
  - (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
  - (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
- (2) Withholding. The EPA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the EPA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
- (3) Payrolls and basic records.
- (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
  - (ii) (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/whd/programs/dbra/forms.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and

subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) That the payroll for the payroll period contains the information required to be provided under Sec. 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under Sec. 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
- (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
- (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### (4) Apprentices and trainees

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate)

specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with, 29 CFR part 30.
- (5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- (6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- (7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (and any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
- (10) Certification of eligibility.
  - (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

- (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.
- (b) Contract Work Hours and Safety Standards Act. The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Sec. 5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.
  - (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
  - (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
  - (3) Withholding for unpaid wages and liquidated damages. The loan recipient shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
  - (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.
- (c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in Sec. 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

**C. -RESERVED-**

**D. Historical and Archeological Finds**

Should any cultural, historical, or paleontological resources including but not limited to deposits of charcoal or ash, animal bones, pottery sherds, or stone tools be exposed as part of proposed project activities, the owner shall stop ground-disturbing activities within 100 feet of the discovery and immediately notify the State Revolving Fund Environmental Review Specialist (SRF). No further disturbance of the deposits shall ensue until the SRF determines that the project activities in that area may proceed.

If human remains are accidentally discovered, Iowa burial law [[Iowa Code Sections 263B, 523I.316(6), and 716.5; 685 IAC 11.1] requires that all work in the vicinity of the finding be halted, the remains left in place and protected, local law enforcement officials notified, and the bioarchaeology director at the Office of the State Archaeologist (OSA) contacted immediately (319-384-0740). Photographs are only to be taken at the direction of the bioarchaeology director and must not be shared publicly.

In all cases of inadvertent discovery, the SRF shall determine the applicability of the Protection of Historic Properties regulations of the Advisory Council on Historic Preservation [36 CFR Part 800.13(b)] and, when applicable, shall notify the State Historic Preservation Office (SHPO) and consult with the SHPO, OSA, and other interested parties to determine the proper course of action regarding the discovery.

Compensation to the contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or change order provisions of the specifications.

**E. Prohibitions on Procurement from Violating Facilities (Section 306, Clean Air Act; Section 508, Clean Water Act; Executive Order 11738)**

Both the Clean Water Act and the Clean Air Act prohibit federal agencies from extending assistance by way of loans or contracts to persons who have been convicted of violations of either law. Executive Order 11738 was issued to coordinate enforcement by the U.S. Environmental Protection Agency, which shall designate facilities which have given rise to a conviction for an offense under the criminal provisions of the Clean Air Act and the Clean Water Act.

The Executive Order also prohibits agencies from extending assistance to facilities that are not in compliance with either Act.

SRF assistance recipients may not procure goods, services, or materials from suppliers listed by the EPA as violators.

The Excluded Parties Listing search engine is located at the System for Award Management (SAM) website:

<https://sam.gov>.

**Attachment 8: SRF Required Front-End Specifications**  
**Right of Entry and Records Retention**

The recipient shall provide access at all times for the Department of Natural Resources, the Iowa Finance Authority, the state auditor, and the U.S. EPA Office of the Inspector General to all project records and documents for inspection and audit purposes for a period of three years after the date of last loan payment. The same access to the project site(s) shall be provided for inspection purposes.

567 Iowa Administrative Code paragraph 92.8 (2).e. State inspections. Personnel of the department shall have the right to examine all construction aspects of the project, including materials and equipment delivered and stored on site for use on the project.

## **Attachment 9: SRF Required Front-End Specifications American Iron and Steel Requirements**

H.R. 3547, the “Consolidated Appropriations Act, 2014,” enacted January 17, 2014 by the U.S. Congress, includes “American Iron and Steel” provisions that require Clean Water and Drinking Water State Revolving Fund assistance recipients of these funds to use iron and steel produced in the United States.

H.R. 3547 includes the following language in Division G, Title IV, under the heading, “Use of American Iron and Steel”:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron and steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) find that—

1. Applying subsection (a) would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quantity; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

The final guidance and any published waivers are found at: <https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement>. In particular the contractor should pay attention to the guidance for documentation of compliance. There is also a waiver for incidental items; in order to qualify for this waiver the total materials and costs for the project must be tracked and incidental items identified.

### ***Sample “American Iron and Steel” Contract Language***

In order to fulfill the requirements, the assistance recipient must in good faith design the project and solicit bids for construction with U.S.-made iron and steel. The following information will be included in any contracts resulting from this request for bids:

The Contractor acknowledges to and for the benefit of the City of \_\_\_\_\_ (“Purchaser”) and the State of Iowa (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund and such law contains provisions commonly known as “American Iron and Steel,” that requires all of the iron and steel products



used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contactor pursuant to this Agreement.

The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State.

Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

#### ***Sample Certifications***

As indicated in the contract language, it will be the responsibility of the Contractor to obtain certifications that the products and materials used in the project are U.S.-made. EPA recommends the use of a step certification process for documenting compliance with AIS requirements, similar to one used by the Federal Highway Administration. Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. Each handler (supplier, fabricator, manufacturer, processor, coater, etc.) of the iron and steel products certifies that their step in the process was domestically performed. Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US and providing detailed information on the steps involved.

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead. In this example, there may be multiple letters from different manufacturers if one manufacturer did not perform all of the steps.

Date	Company Letterhead
------	--------------------

Company Name Company Address City, State Zip
--

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)
--

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA’s State Revolving Fund Programs.
---

Item, Products and/or Materials:
----------------------------------

1. Xxxx
---------

2. Xxxx

3. Xxxx

Such process took place at the following location:

\_\_\_\_\_

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

#### ***Covered and Non-Covered Items***

The EPA issued a waiver for De Minimis incidental components of eligible water and wastewater infrastructure projects. Funds used for such De Minimis incidental components cumulatively may comprise no more than a total of 5% of the total cost of the materials used in and incorporated into a project. The cost of an individual incidental item may not exceed 1% of the total cost of the materials used in and incorporated into a project.

De Minimis incidental items include miscellaneous, generally low-cost components that are essential for, but incidental to, the construction and are incorporated into the physical structure of the project. For many of these incidental components, the country of manufacture and the availability of alternatives are not readily or reasonably identifiable prior to procurement in the normal course of business. For others, the country of manufacture may be known but the miscellaneous character in conjunction with the low cost, individually and (in total) as typically procured in bulk, mark them as properly incidental.

Examples of incidental components could include small washers, screws, fasteners (i.e., nuts and bolts), miscellaneous wire, corner bead, ancillary tube, etc. Examples of items that are clearly not incidental include significant process fittings (i.e., tees, elbows, flanges, and brackets), distribution system fittings and valves, force main valves, pipes, treatment and storage tanks, large structural supports, etc.

In consultation with their contractors, assistance recipients should determine the items to be covered by this waiver, and must retain relevant documentation (i.e. invoices) as to those items. Assistance recipients must summarize in the AIS De minimis Product List the types and/or categories of items to which this waiver is applied, the total cost of incidental components for each type or category, and the calculations by which they determined the total cost of materials used in and incorporated into the project.

The successful bidder will fill out the AIS Procurement List and submit it to the assistance recipient to indicate iron and steel items proposed to be procured for the project.

Assistance recipients will complete the AIS De Minimis Waiver Products List for the entire project to demonstrate compliance with the De Minimis Waiver cost requirements outlined above.

Related forms and resources can be found at <https://opportunityiowa.gov/community/water-quality/srf-resources/documents-and-guides>.

### Attachment 10: SRF Required Front-End Specifications

\*This form to be completed by Prime Contractor and submitted with the bid.

#### PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

This term and condition implements 2 CFR 200.216 and is effective for obligations and expenditures of EPA financial assistance funding on or after 8/13/2020. EPA recipients and subrecipients, including borrowers under EPA funded revolving loan fund programs, are prohibited from obligating or expending loan or grant funds to:

- (a) Procure or obtain, extend or renew a contract to procure or obtain;
- (b) Enter into a contract (or extend or renew a contract) to procure; or
- (c) Obtain the equipment, services, or systems that use "covered telecommunications equipment or services"

identified in the regulation as a substantial or essential component of any system, or as critical technology as part of any system.

Certain equipment, systems, or services, including equipment, systems, or services produced or provided by entities subject to the prohibition are recorded in the System for Award Management exclusion list, website: <https://sam.gov>.

- (1) As described in Public Law 115-232, section 889, covered telecommunications equipment or services includes:
  - (i) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
  - (ii) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
  - (iii) Telecommunications or video surveillance services provided by such entities or using such equipment.
  - (iv) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.
- (2) Consistent with 2 CFR 200.471, costs incurred for telecommunications and video surveillance services or equipment such as phones, internet, video surveillance, and cloud servers are allowable except for the following circumstances:
  - (i) Obligating or expending EPA funds for covered telecommunications and video surveillance services or equipment or services to procure (enter into, renew or extend contracts) or obtain the equipment, services, or systems as described in 2 CFR 200.216.

I understand the above prohibitions and certify that the project will be in compliance with all the requirements.

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Signature

---

Date

---

Printed Name

---

Title

### SECTION 3 – CONTRACTOR INTENT TO COMPLY

For Project (insert project name): \_\_\_\_\_

In (Insert City Name): \_\_\_\_\_ IEDA Project Number: \_\_\_\_\_

Contractor Name: \_\_\_\_\_ hereinafter referred to as “CONTRACTOR.”

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

This form is the CONTRACTOR’s official statement acknowledging their understanding that Section 3 requirements are mandatory for the proposed project which is funded in part with funds from the Department of Housing and Urban Development (HUD). The form also signifies the CONTRACTOR’s intent to comply with the Section 3 requirements as outlined in the plans and specifications, including but not limited to, the intent to utilize Section 3 (low to moderate income) workers and subcontractors where possible and complying with all mandatory reporting related to Section 3 HUD guidelines.

In recognition of the intent to comply the CONTRACTOR indicates their compliance with the following certifications:

- ☐ YES                      If awarded a contract for this HUD-funded project, CONTRACTOR is able to determine employee’s hourly wages and addresses.
- ☐ YES                      ☐ NO                      Is this business a registered Section 3 business with the U.S. Department of Housing and Urban Development? You can search for Section 3 Businesses here: <https://hudapps.hud.gov/OpportunityPortal/>
- ☐ YES                      Willing to provide information on the hours worked by all employees, including Section 3 and Targeted Section 3 employees for this job?
- ☐ YES                      If the need to hire new employees during this job occurs, agree to hire Section 3 qualified employees for those job opportunities presuming all other qualifications are equal with qualified non Section 3 applicants?
- ☐ YES                      If the need to subcontract arises, willing to CONSIDER hiring and subcontracting with a Section 3 business registered with HUD. You can search for Section 3 Businesses here: <https://hudapps.hud.gov/OpportunityPortal/>

The CONTRACTOR estimates that the total hours worked on this project by employees of the CONTRACTOR will be \_\_\_\_\_.

The CONTRACTOR recognizes that this contracting opportunity is subject to HUD Section requirements ([24 CFR Part 75](#)). The CONTRACTOR has read and understands the Section 3 requirements as generally described above and presented in the Section 3 contract language included in the procurement documents for this project (plans and specifications, request for qualification, request for proposals, etc.). If awarded a contract, the CONTRACTOR commits to following Section 3 requirements, as they apply to this project. If awarded a contract for this project, the CONTRACTOR agrees to provide reports to the project’s Grant Administrator on a timely basis) regarding Section 3 efforts and accomplishments.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name:

\_\_\_\_\_  
Title:

# Project Construction Sign

White Background

Project Title

Sponsor/Developer

Official(s) or Sponsor Address

Architect or Engineer

(second line)

Contractor

(second line)

Project Financed by:

Community Development Block Grant  
Iowa Economic Development Authority

Kim Reynolds, Governor

Sign Dimensions: 1200mm x 2400mm (approx. 4'x8'x3/4")  
Plywood Panel (APA Rated A-B Grade-Exterior)



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**A. APPLICABILITY**

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

**1. Minimum wages and fringe benefits**

- i. All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in 29 CFR 5.5(d) and (e), the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) of these contract clauses; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under 29 CFR 5.5(a)(1)(iii)) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

**ii. Frequently recurring classifications**

- A.** In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to 29 CFR 5.5(a)(1)(iii), provided that:
1. The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;
  2. The classification is used in the area by the construction industry; and
  3. The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.
- B.** The Administrator will establish wage rates for such classifications in accordance with 29 CFR 5.5(a)(1)(iii)(A)(3). Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

**iii. Conformance**

- A.** The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be

classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination; and
2. The classification is used in the area by the construction industry; and
3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- B. The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.
- C. If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov). The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- D. In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov), refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- E. The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under 29 CFR 5.5 (a)(1)(iii)(C) and (D). The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to 29 CFR 5.5 (a)(1)(iii)(C) or (D) must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

**iv. Fringe benefits not expressed as an hourly rate**

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

**v. Unfunded plans**

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in 29 CFR 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- vi. Interest** In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.



## **2. Withholding**

### **i. Withholding requirements**

The U. S. Department of Housing and Urban Development may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in 29 CFR 5.5(a) for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in 29 CFR 5.5(a)(3)(iv), HUD may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

### **ii. Priority to withheld funds**

The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- A.** A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- B.** A contracting agency for its procurement costs;
- C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- D.** A contractor's assignee(s);
- E.** A contractor's successor(s); or
- F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

## **3. Records and certified payrolls**

### **i. Basic record requirements**

**A. Length of record retention.** All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

**B. Information required** Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

**C. Additional records relating to fringe benefits.** Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(v) that the wages of any laborer or mechanic include the amount of any



costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

**D. Additional records relating to apprenticeship** Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

**ii. Certified payroll requirements**

**A. Frequency and method of submission** The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to HUD if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the certified payrolls to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system

**B. Information required** The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i)(B), except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

**C. Statement of Compliance** Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

1. That the certified payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information and basic records are being maintained under 29 CFR 5.5 (a)(3)(i), and such information and records are correct and complete;
2. That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly

from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.
  - D. **Use of Optional Form WH-347** The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the “Statement of Compliance” required by 29 CFR 5.5(a)(3)(ii)(C).
  - E. **Signature** The signature by the contractor, subcontractor, or the contractor’s or subcontractor’s agent must be an original handwritten signature or a legally valid electronic signature.
  - F. **Falsification** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.
  - G. **Length of certified payroll retention** The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- iii. **Contracts, subcontracts, and related documents** The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- iv **Required disclosures and access**
- A. **Required record disclosures and access to workers** The contractor or subcontractor must make the records required under 29 CFR 5.5(a)(3)(i)–(iii), and any other documents that HUD or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by 29 CFR 5.1, available for inspection, copying, or transcription by authorized representatives of HUD or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.
  - B. **Sanctions for non-compliance with records and worker access requirements** If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to 29 CFR 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.
  - C. **Required information disclosures** Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to HUD if the agency is a party to

the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

#### **4. Apprentices and equal employment opportunity**

##### **i. Apprentices**

- A. Rate of pay** Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- B. Fringe benefits** Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.
- C. Apprenticeship ratio** The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to 29 CFR 5.5(a)(4)(i)(D). Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in 29 CFR 5.5(a)(4)(i)(A), must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.
- D. Reciprocity of ratios and wage rates** Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

- ii Equal employment opportunity** The use of apprentices and journeymen under this part must be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

#### **5 Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6 Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (11), along with the applicable wage determination(s) and such other clauses or contract modifications as the U.S. Department of Housing and Urban Development may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.

**7 Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8 Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9 Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

i. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

ii. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

iii. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

**11 Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

i. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

ii. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

iii. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5; or

iv. Informing any other person about their rights under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5.

**B. Contract Work Hours and Safety Standards Act (CWHSSA)**

The Agency Head must cause or require the contracting officer to insert the following clauses set forth in 29 CFR 5.5(b)(1), (2), (3), (4), and (5) in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must

be inserted in addition to the clauses required by 29 CFR 5.5(a) or 4.6. As used in this paragraph, the terms “laborers and mechanics” include watchpersons and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in 29 CFR 5.5(b)(1) the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in 29 CFR 5.5(b)(1), in the sum of \$31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in 29 CFR 5.5(b)(1).

**3. Withholding for unpaid wages and liquidated damages**

**i. Withholding process** The U.S Department of Housing and Urban Development or the recipient of Federal assistance may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in 29 CFR 5.5(b) on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

**ii Priority to withheld funds** The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- A.** A contractor’s surety(ies), including without limitation performance bond sureties and payment bond sureties;
- B.** A contracting agency for its procurement costs;
- C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor’s bankruptcy estate;
- D.** A contractor’s assignee(s);
- E.** A contractor’s successor(s); or
- F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

**4. Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in 29 CFR 5.5(b)(1) through (5) and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in 29 CFR 5.5(b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss,

due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

- 5 Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- i. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in 29 CFR part 5;
- ii. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or 29 CFR part 5;
- iii. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or 29 CFR part 5; or
- iv. Informing any other person about their rights under CWHSSA or 29 CFR part 5.

- C. CWHSSA required records clause** In addition to the clauses contained in 29 CFR 5.5(b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by 29 CFR 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.

- D. Incorporation of contract clauses and wage determinations by reference** Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.

- E. Incorporation by operation of law** The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations, will be considered to be a part of every prime contract required by the applicable statutes referenced by 29 CFR 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

#### **F. HEALTH AND SAFETY**

The provisions of this paragraph (F) are applicable where the amount of the prime contract exceeds **\$100,000**.

1. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
2. The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
3. The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

**Project Items BABA Status Worksheet**  
**24-289 Lawler, Well No. 3 Improvements**

#	(1) List of BABA Covered Products *	(2) Date Brought to Worksite	(3) Classification	(4) Certification
1	DIP Water Main			
2	Water Main Fittings			
3	Flushing Hydrant			
4	Silt Fence			
5	20" Steel Casing			
6	14" Steel Casing			
7	8" Steel Casing			
8	Neat Cement Grout			
9	Pitless Unit			
10	Well Protection Structure			
11	Well Pump			
12	Drop Piping			
13	Well House Piping			
14	Well House Fittings			
15	Well House Valves			
16	Chemical Feed Pumps			
17	Chemical Feed Day Tank			
18	Chemical Feed Injection Quills			
19	Well Motor Starter Panel			
20	Electrical Conduit			
21	Electrical Wire			
22	Electromagnetic Flow Meter			
23	Pressure Transducer			
24	Electric Boxes			
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

Insert lines as necessary to include all products in the project

\* Information required prior to the start of construction



"General Decision Number: IA20250081 01/03/2025

Superseded General Decision Number: IA20240081

State: Iowa

Construction Types: Heavy and Highway

Counties: Adair, Adams, Allamakee, Appanoose, Audubon, Benton, Black Hawk, Boone, Bremer, Buchanan, Buena Vista, Butler, Calhoun, Carroll, Cass, Cedar, Cerro Gordo, Cherokee, Chickasaw, Clarke, Clay, Clayton, Clinton, Crawford, Dallas, Davis, Decatur, Delaware, Des Moines, Dickinson, Dubuque, Emmet, Fayette, Floyd, Franklin, Fremont, Greene, Grundy, Guthrie, Hamilton, Hancock, Hardin, Harrison, Henry, Howard, Humboldt, Ida, Iowa, Jackson, Jasper, Jefferson, Johnson, Jones, Keokuk, Kossuth, Lee, Linn, Louisa, Lucas, Lyon, Madison, Mahaska, Marion, Marshall, Mills, Mitchell, Monona, Monroe, Montgomery, Muscatine, O'Brien, Osceola, Page, Palo Alto, Plymouth, Pocahontas, Polk, Pottawattamie, Poweshiek, Ringgold, Sac, Shelby, Sioux, Story, Tama, Taylor, Union, Van Buren, Wapello, Warren, Washington, Wayne, Webster, Winnebago, Winneshiek, Woodbury, Worth and Wright Counties in Iowa.

HIGHWAY CONSTRUCTION PROJECTS and HEAVY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on	Executive Order 13658

or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	generally applies to the contract. The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours performing on that contract in 2025.
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The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025

SUIA2023-001 02/01/2023

	Rates	Fringes
BRICKLAYER (BRICKLAYER/STONE MASON)		
ZONE 1.....	\$ 34.00	17.62
ZONE 2.....	\$ 34.00	17.62
ZONE 3.....	\$ 34.00	17.62
ZONE 4.....	\$ 32.75	16.09
ZONE 5.....	\$ 29.65	16.09
Carpenter & Piledrivermen		
ZONE 1.....	\$ 31.27	15.83
ZONE 2.....	\$ 29.80	15.98
ZONE 3.....	\$ 29.68	15.98
ZONE 4.....	\$ 29.20	13.30
ZONE 5**.....	\$ 28.15	11.70
CONCRETE FINISHER		
ZONE 1.....	\$ 29.55	13.10
ZONE 2.....	\$ 29.55	13.10
ZONE 3.....	\$ 29.55	13.10

ZONE 4.....	\$ 27.70	9.20
ZONE 5.....	\$ 26.65	9.20

ELECTRICIAN (STREET AND  
HIGHWAY LIGHTING AND TRAFFIC  
SIGNALS)

ZONE 1, 2, AND 3.....	\$ 36.40	14.80
ZONE 4.....	\$ 35.10	13.80
ZONE 5.....	\$ 33.45	13.05

IRONWORKER (SETTING OF  
STRUCTURAL STEEL)

ZONE 1.....	\$ 32.25	14.85
ZONE 2.....	\$ 30.16	15.30
ZONE 3.....	\$ 30.16	15.45
ZONE 4.....	\$ 28.00	14.50
ZONE 5**.....	\$ 26.15	13.70

LABORER

ZONE 1, 2 AND 3

GROUP A.....	\$ 24.82	12.01
GROUP AA.....	\$ 27.20	12.01
GROUP B.....	\$ 22.97	12.01
GROUP C.....	\$ 19.89	12.01

ZONE 4

GROUP A.....	\$ 23.12	11.32
GROUP AA.....	\$ 25.12	11.32
GROUP B.....	\$ 21.55	11.32
GROUP C.....	\$ 18.92	11.32

ZONE 5

GROUP A.....	\$ 23.52	9.87
GROUP AA.....	\$ 25.52	9.87
GROUP B.....	\$ 20.78	9.87
GROUP C.....	\$ 19.93	9.87

POWER EQUIPMENT OPERATOR

ZONE 1

GROUP A.....	\$ 35.50	16.50
GROUP B.....	\$ 33.95	16.50
GROUP C.....	\$ 31.45	16.50
GROUP D.....	\$ 31.45	16.50

ZONE 2

GROUP A.....	\$ 35.30	16.50
GROUP B.....	\$ 33.70	16.50
GROUP C.....	\$ 31.15	16.50
GROUP D.....	\$ 31.15	16.50

ZONE 3

GROUP A.....	\$ 32.50	28.20
GROUP B.....	\$ 30.70	28.20
GROUP C.....	\$ 29.70	28.20

GROUP D.....	\$ 29.70	28.20
ZONE 4		
GROUP A.....	\$ 32.85	16.95
GROUP B.....	\$ 31.71	16.95
GROUP C.....	\$ 29.63	16.95
GROUP D.....	\$ 29.63	16.95
ZONE 5		
GROUP A.....	\$ 30.87	13.25
GROUP B.....	\$ 29.83	13.25
GROUP C.....	\$ 28.10	13.25
GROUP D.....	\$ 27.10	13.25

TRUCK DRIVER (AND PAVEMENT  
MARKING DRIVER/SWITCHPERSON)

ZONE 1.....	\$ 26.26	12.59
ZONE 2		
.....	\$ 26.26	12.59
ZONE 3.....	\$ 26.26	12.59
ZONE 4.....	\$ 26.26	9.04
ZONE 5		
.....	\$ 24.50	9.04

ZONE DEFINITIONS

ZONE 1 The Counties of Polk, Warren, and Dallas for all Crafts, and Linn County Carpenters only.

ZONE 2 The Counties of Dubuque for all Crafts and Linn County for all Crafts except Carpenters.

ZONE 3 The Cities of Burlington (including West Burlington), Clinton, Fort Madison, Keokuk, and Middleton (including the Iowa Army Ammunition Plant) and Muscatine (and abutting municipalities of any such cities).

ZONE 4 Story, Black Hawk, Cedar, Jasper, Jones, Jackson, Louisa, Madison, and Marion Counties; Clinton County (except the City of Clinton), Johnson County, Muscatine County (except the City of Muscatine), the City of Council Bluffs, Lee County and Des Moines County.

ZONE 5 All areas of the state not listed above.

LABORER CLASSIFICATIONS - ALL ZONES

GROUP AA - Skilled pipelayer (sewer, water, and conduits) and tunnel laborers; asbestos abatement worker

GROUP A - Carpenter tender on bridges and box culverts; CCTV\* sewer inspection operator; curb machine (without a seat); deck hand; diamond & core drills; drill operator on air tracs, wagon drills, and similar drills; form setter/stringman on paving work; gunnite nozzleman; joint sealer kettleman; laser operator; mason tender (brick/stone), powderman tender; powderman/blaster; sign erector; saw operator; {(Zones 4 and 5) Skilled pipelayer

(sewer, water, and conduits); tunnel laborer; asbestos abatement worker}. \*new labor classification (CCTV: closed circuit television)

GROUP B - Air, gas, electric tool operator; barco hammer; carpenter tender; caulker; chain sawman; compressor (under 400 cfm); concrete finisher tender; concrete processing materials and monitors; cutting torch on demolition; drill tender; dumpmen; electric drills; fence erectors; form line expansion joint assembler; form tamper; general laborer; grade checker; handling and placing metal mesh, dowel bars, reinforcing bars and chairs; hot asphalt laborer; installing temporary traffic control devices; jackhammerman; mechanical grouter; painter (all except strippers); paving breaker; planting trees, shrubs and flowers; power broom (not self-propelled); power buggyman; rakers; rodman (tying reinforcing steel); sandblaster; seeding and mulching; sewer utility topman/bottom man; spaders; stressor or stretcherman on pre or post tensioned concrete; stringman on re/surfacing/no grade control; swinging stage, tagline, or block and tackle; tampers; timberman; tool room men and checkers; tree climber; tree groundman; underpinning and shoring caissons over twelve feet deep; vibrators; walk behind trencher; walk behind paint strippers; walk behind vibrating compactor; water pumps (under three inch); work from bosun chair.

GROUP C - Scale weigh person; traffic control/flagger, surveillance or monitor; water carrier.

#### POWER EQUIPMENT OPERATOR CLASSIFICATIONS - ALL ZONES

GROUP A - All terrain (off road) forklift; asphalt breakdown roller (vibratory); asphalt laydown machine; asphalt plant; asphalt screed; bulldozer (finish); central mix plant; concrete pump; crane; crawler tractor pulling scraper; directional drill (60,000 (lbs) pullback and above); dragline and power shovel; dredge engineer; excavator (over cu. yd.); front end loader (4 cy and over); horizontal boring machine; master mechanic; milling machine (over 350 hp); motor grader (finish); push cat; rubber tired backhoe (over cu. yd.); scraper (12 cu. yd. and over or finish); Self-propelled rotary mixer/road reclaimer; sidebroom tractor; slipform portland concrete paver; tow or push boat; trenching machine (Cleveland 80 or similar)

GROUP B - Articulated off road hauler, asphalt heater/planer; asphalt material transfer vehicle; asphalt roller; belt loader or similar loader; bulldozer (rough); churn or rotary drill; concrete curb machine; crawler tractor pulling ripper, disk or roller; deck hand/oiler;

directional drill (less than 60,000 (lbs) pullback); distributor; excavator (1/2 cu. yd. and under); form riding concrete paver; front end loader (2 to less than 4 cu. yd.); group equipment greaser; mechanic; milling machine (350 hp. and less); paving breaker; portland concrete dry batch plant; rubber tired backhoe (1/2 cu. yd. and under); scraper (under 12 cu. yd.); screening, washing and crushing plant (mobile, portable or stationary); shoulder machine; skid loader (1 cu. yd. and over); subgrader or trimmer; trenching machine; water wagon on compaction.

GROUP C - Boom & winch truck; concrete spreader/belt placer; deep wells for dewatering; farm type tractor (over 75 hp.) pulling disc or roller; forklift; front end loader (under 2 cu. yd.); motor grader (rough); pile hammer power unit; pump (greater than three inch diameter); pumps on well points; safety boat; self-propelled roller (other than asphalt); self-propelled sand blaster or shot blaster, water blaster or striping grinder/remover; skid loader (under 1 cu. yd.); truck mounted post driver.

GROUP D - Boiler; compressor; cure and texture machine; dow box; farm type or utility tractor (under 75 hp.) pulling disk, roller or other attachments; group greaser tender; light plants; mechanic tender; mechanical broom; mechanical heaters; oiler; pumps (under three inch diameter); tree chipping machine; truck crane driver/oiler.

\*\* CARPENTERS AND PILEDRIVERMEN, or IRONWORKERS (ZONE 5)  
Setting of structural steel; any welding incidental to bridge or culvert construction; setting concrete beams.

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other

health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

#### State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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## WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to [davisbaconinfo@dol.gov](mailto:davisbaconinfo@dol.gov) or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that

the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210.

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END OF GENERAL DECISION"

## **SECTION 01 00 00 – SUDAS SUPPEMENTAL SPECIFICATIONS**

### **DIVISION 1 - GENERAL PROVISIONS AND COVENANTS**

#### **SECTION 1010**

##### **1.03 – DEFINITIONS AND TERMS**

JURISDICTION: The Jurisdiction is the City of Lawler. Any reference to either shall be considered one in the same.

##### **1.16 – ADDITIONAL REQUIREMENTS**

Positive efforts to utilize Targeted Small Business (TSB) enterprises as contractors or subcontractors, suppliers or participants in the work are required. Efforts shall be made and documented in accordance with the TSB attachments in the Contract Documents. No goal is set for participation.

#### **SECTION 1020**

##### **1.14 – OPENING OF PROPOSALS**

Only bid totals will be made publicly available at and immediately after the bid opening. An itemized bid tabulation will be made publicly available for interested parties after the project has been awarded by the Owner.

#### **SECTION 1030**

##### **1.02 – RELEASE OF BID SECURITY**

- A. The Jurisdiction shall retain the bid security of the lowest three bidders. The bid securities of the three lowest bidders will be released after the Jurisdiction's approval of the contract executed by the lowest responsive, responsible bidder.

#### **SECTION 1040**

##### **1.05 – PLANS**

SUDAS Standard Specifications apply. In addition to section 1040-1.05 the following apply.

- A. Contractor's bids shall be based on the final Plans and any addendum received.
- B. No CAD files or electronic surface information will be available for bidding purposes.
- C. No CAD files or electronic surface information will be available to the Contractor following award of the project.

##### **1.06 – INCREASE OR DECREASE OF WORK**

- B. Quantity change, regardless of the percentage increase or decrease of the total bid, shall not affect the unit bid price of that item.

##### **1.14-MUNICIPAL TERMINATION FOR CONVENIENCE CLAUSE**

The Jurisdiction, by written notice, may terminate this contract, in whole or in part, when it is in the Jurisdiction's interest. If this contract is terminated, the rights, duties, and obligations of the parties, including compensation to the Contractor, shall be as agreed as follows: a reasonable proration compensating contractor for work performed as determined by the Jurisdiction's engineer following the notice and procedure outlined herein: After receipt of a Notice of Termination, and except as otherwise directed by the Jurisdiction, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

- A. Stop work as specified in the notice.
- B. Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.
- C. Terminate all subcontracts to the extent they relate to the work terminated.
- D. Assign to the Jurisdiction, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.
- E. With approval or ratification to the extent required by the Jurisdiction, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.
- F. As directed by the Jurisdiction, transfer title and deliver to the Government—
  - 1. The fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated;
  - 2. The completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.
- G. Complete performance of the work not terminated.
- H. Take any action that may be necessary, or that the Jurisdiction may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Jurisdiction has or may acquire an interest.
- I. Use its best efforts to sell, as directed or authorized by the Jurisdiction, any property of the types referred to in this termination for convenience clause; provided, however, that the Contractor
  - 1. is not required to extend credit to any purchaser
  - 2. may acquire the property under the conditions prescribed by, and at prices approved by, the Jurisdiction. The proceeds of any transfer or disposition will be applied to reduce

any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Jurisdiction.

- J. The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Jurisdiction upon written request of the Contractor within this 120-day period.
- K. After termination, the Contractor shall submit a final termination settlement proposal to the Jurisdiction. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Jurisdiction upon written request of the Contractor within this 1-year period. However, if the Jurisdiction determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Jurisdiction Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.
- L. After receipt of the final termination proposal, the proposal will be reviewed by the Jurisdiction's engineer, and a final determination recommendation by the engineer shall be final and agreed to settlement.
- M. If the termination is partial, the Contractor may file a proposal with the Jurisdiction for an equitable adjustment of the price(s) of the continued portion of the contract. The Jurisdiction shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Jurisdiction.

## SECTION 1050

### 1.03 – COOPERATION BY THE CONTRACTOR - SPECIAL ATTENTION TO THIS SECTION IS REQUESTED OF ALL BIDDING CONTRACTORS

#### 1.10 – LINE AND GRADE STAKES

- A. The Contractor is required to provide minimum of two business days' notice to the Engineer when requesting stakes.

## SECTION 1060

### 1.02 – ALTERNATE PROCESS, EQUIPMENT, OR MATERIALS AND OTHER SUBSTITUTIONS

- B. 1. j. Requests for substitution of materials or equipment must be submitted in writing and include complete documentation showing equivalency, including specifications, product literature, certifications, and test results. Substitutions must be submitted to Architect/Engineer of record no later than [10] days after contract award or within a reasonable time before needed for installation. Approval is at the sole discretion of the Owner or Architect/Engineer, and approved substitutes shall be incorporated at no additional cost or delay to the project.

#### 1.04 – STORAGE OF MATERIALS

City right-of-way and available space near the proposed well may be used for storage of equipment and materials. Contractor shall return area to a condition similar to that prior to construction. This includes, but is not limited to: smoothing any ruts, removing all trash and debris, and reseeding the area. No payment will be made for work or materials required to return staging area to preconstruction condition.

#### 1.08 – SPECIAL BUILD AMERICA, BUY AMERICA REQUIREMENTS

##### A. Build America, Buy America Act (BABA) Certification

1. In accordance with BABA requirements the Owner must maintain documentation of compliance with the BABA requirements. Manufacturer shall supply certifications of compliance for all products subject to BABA requirements. Certification must be dated within 6 months of its submittal to the Owner and include the following:
  - a. Identification of the specific product(s) and quantities to be delivered to the site.
  - b. Identification of where the product(s) was made including the location(s) of foundry/mill/factory where the product(s) was manufactured (City and State).
  - c. Name of the project and the location of the project where the product(s) will be delivered.
  - d. Signature of company representative.
  - e. Specific reference to American Iron and Steel. Reference to Buy America, Made in USA, Buy America Act, or any state domestic preference is not acceptable.
2. BABA Certification must be submitted prior to or upon delivery of the product(s) to the project location.
3. BABA certification must meet the content requirements set forth in this Section.
4. Failure to supply BABA certifications as required will result in delays in progress payments until such time that the BABA requirements are met.
5. Additional BABA information and certification examples are attached to this Specification Section.
6. Contractor to notify Engineer of any products that need to be utilized in the project for which no BABA products are available.

## SECTION 1070

### 2.02 – CONVENIENCE AND SAFETY - SPECIAL ATTENTION TO THIS SECTION IS REQUESTED OF ALL BIDDING CONTRACTORS

- C. Work shall be completed in a manner that will cause the least inconvenience and annoyance to the public and property owners abutting the work area, and shall provide access to the abutting property to the greatest extent practicable. Contractor shall notify property owners a minimum of 48 hours in advance when access will be restricted to their properties.

### 2.06 – TRAFFIC CONTROL

- A. 3. Traffic Control shall be paid for by lump sum as specified in section 8030 and shall include any and all traffic control used on the Project as outlined in section 8030, including but not limited to flaggers, pilot cars, signs, barricades, safety closures, etc., if necessary. The Contractor shall take full responsibility for Traffic Control and hold both the Jurisdiction and the Jurisdictional Engineer harmless.

### 2.13 – BORROW AND WASTE SITES

- A. Contractor shall secure and operate, at its own expense, sites for disposal of class 12 rock excavation, structures, surfacing materials, and rubbish and debris.

### 3.01 – PERFORMANCE, PAYMENT, AND MAINTENANCE BOND

- B. Products and Completed Operations shall be maintained for the duration of the work; and shall be further maintained for a minimum period of two (2) years after final acceptance and payment.

### 3.02 – INSURANCE REQUIREMENTS

- C. 2. j. Not Applicable.
  - 6. Additional Insured Endorsements –
    - c. See Section 1070, Part 3.06 for information on all required endorsements which include naming of the Jurisdiction as an additional insured, cancellation and material change endorsement, and Nonwaiver of Governmental Immunity.

### 3.05 – PROPERTY INSURANCE – NOT APPLICABLE

## SECTION 1080

### 1.02 – CONTRACT TIME

- A. 3. Contractor shall fully complete the project by the date listed in the Contract Documents.

## SECTION 1090

### 1.05 – PROGRESS PAYMENTS

- D. Partial pay estimates shall be submitted by the Contractor to the Engineer by Thursday following the last Saturday of the month for work completed through the last Saturday of the month.

## DIVISION 2 - EARTHWORK

### SECTION 2010

#### 1.03 – SUBMITTALS

- A. The Jurisdictional Engineer hereby requests that all materials to be incorporated into the work have certifications furnished which show that the materials comply with Specifications prior to any construction.

#### 1.08 – MEASUREMENT AND PAYMENT

- J. Subbase:
  - 1. Measurement for subbase will be in ton of subbase material placed for street repair and under PCC drive and sidewalk. Measurement will be from weight tickets. Granular material used as pipe bedding will be incidental to the pipe and not measured. Granular material used as backfill and under the floor for the well house will be incidental to the well house and not measured.
  - 2. Payment will be at the unit price per ton.
- M. Fill, Provide and Place:
  - 1. An estimated 20 CY of fill material (assuming a shrinkage factor of 1.3) is needed around the well. Fill material shall meet SUDAS requirements for Suitable Embankment Materials (2010 – 2.03).
  - 2. Payment will be per plan quantity unless scope of work is adjusted by the Engineer.

## DIVISION 3 – TRENCH AND BACKFILL

### SECTION 3010

#### 1.03 – SUBMITTALS

- B. Results of Standard Proctor and In-Place Density tests will not be required.

#### 1.08 – MEASUREMENT AND PAYMENT

- D. 2. Payment shall be made at the unit bid price per ton. If material on site is suitable, it shall be used before offsite replacement material is used. Authorization for use of offsite replacement material shall be obtained from the Engineer before it is hauled. Any hauling and placement prior to authorization shall be at the Contractor's cost.



- F. No payment shall be made for trench compaction testing, when required. Jurisdictional Engineer or Jurisdiction to require compaction testing only if backfill operations are deemed inappropriate or proof rolling over trenches indicates a deficiency.

#### 2.02 – BEDDING MATERIAL

- A. 1. Use clean stone for pipe envelope in wet trench or as directed by the Engineer. IDOT gradation no. 11, 12 or 31 shall be used for pipe envelope in dry trench unless otherwise directed by the Engineer. Contractor shall note on weigh tickets use of material and shall stockpile separate from Subbase.

#### 3.05 – PIPE BEDDING AND BACKFILL

Pipe Embedment Requirements for Rigid Gravity Pipe:

RCP: No bedding required

RCAP and RCEP: Class R-5

Pipe Embedment Requirements for Flexible Gravity Pipe:

DIP: No bedding required

PVC Truss Pipe and DR18: Class F-2

HDPE Single & Dual Wall, PVC Gravity Pipe (SDR 23.5, 26, 35): Class F-3

Pipe Embedment Requirements for Pressure Pipe:

DIP: Class P-1

PVC DR18: Class P-3

#### 3.07 – DRAINAGE TILE REPAIR

Contractor shall repair any drainage tile damaged by trenching operations. Damaged drainage tile shall be repaired with Schedule 40 PVC of the same nominal interior diameter as the existing drainage tile. A minimum 2' length of pipe on each side of the trench shall be placed on undisturbed ground. PVC repair section shall be abutted to existing tile ends with 1/8" maximum joint spacing and joint wrapped with engineering fabric. Trench backfill below tile repair shall be compacted to 95% standard proctor density. Granular pipe envelope will not be required for tile repair. Drainage tiles shall be replaced so that the former gradient and alignment is restored. Contractor shall furnish all materials. Drainage tile repair shall be incidental for all tile repairs with tile crossing trench perpendicular plus or minus 70 degrees to the trench unless otherwise indicated in the Plans or Contract Documents. Repair of tile crossings within 20 degrees of parallel to the trench shall have a separate payment item.

### DIVISION 5 – WATER MAINS AND APPURTENANCES

#### SECTION 5010

##### 1.03 - SUBMITTALS

- A. The Jurisdictional Engineer hereby requests that all materials to be incorporated into the work have certifications furnished which show that the materials comply with Specifications prior to any construction.

##### 1.08 – MEASUREMENT AND PAYMENT

- C. 2. Payment will be made based on the body weight of Mechanical Joint compact ductile iron fittings for each fitting as listed below. All joint accessories, including thrust blocks and/or mechanical joint restraints, shall be incidental to the bid item.

6" MJ Tee – 60 LBS

6" MJ 90° Bend – 43 LBS

6" MJ 45° Bend – 36 LBS

6" Solid Repair or Cutting-In Sleeve – 28 LBS

3. Weight for any fitting used not included on the Plans will be determined by the Jurisdictional Engineer and use of such fitting shall be preapproved by the Jurisdictional Engineer.

- F. 1. Each properly installed connection made to existing water main shall be counted for payment.
2. Payment will be made at the unit price for each point of connection to the existing water main with the new main.
3. Unit price includes, but is not limited to all excavation, labor, equipment, and incidental materials required to locate the existing location point, shut down water, review proposed connection, cut existing piping, dewater excavation, and make connection.

## 2.02 – BOLTS FOR WATER MAIN AND FITTINGS

- A. Bolts and nuts may be stainless steel or "Cor-blue" per standard specification.
- B. All other bolts and nuts shall be stainless steel.

## 2.03 – FITTINGS

- A. 1. d. Gripping wedge-style restraint glands (EBAA Mega-Lug, Tyler Union Tuf-Grip, etc.) shall not be used on plain-end ductile iron fittings per manufacturer recommendations.
- A. 5. Fittings shall be made in the USA. Fittings include mechanical restrained joints where applicable.
- C. 5. Flange adapters for DIP shall be selected in accordance with manufacturer recommendations based on the DIP thickness being utilized. Note that Tyler Union flange adapters are only rated for thickness class 53 through 56 DIP, while EBAA Series EZ-Flange is rated for thickness class 50 through 56 DIP.

## 2.04 – CONCRETE THRUST BLOCKS

- B. Minimum bearing surface area (Square Feet) shall be as follows against undisturbed soils for test water pressure of 150 lbs./sq.in. If water test pressure is above 150 lbs./sq.in., the thrust bearing area shall be increased based on the actual test pressure.

Main Size (in.)	Tee or Dead End	90° Bend	45° Bend	22.5° Bend	11.25° Bend
4	1.4	1.9	1.0	1.0	1.0
6	2.8	4.0	2.1	1.1	1.0
8	4.8	6.8	3.7	1.9	1.0
10	7.3	10.3	5.6	2.8	1.4
12	10.3	14.5	7.9	4.0	2.0
16	17.8	25.2	13.6	7.0	3.5

The above areas are based upon a soil bearing capacity of 2,000 lbs./sq.ft. If soil bearing strength is less than 2,000 lbs./sq.ft., the thrust bearing area shall be increased based on the actual soil bearing strength. Thrust blocks may be waived for 11.25° bends on mains 8" or less if restrained fittings are used and a minimum of 9 feet of pipe is connected to each side of the fitting.

- D. Restrained joints are to be used in addition to thrust blocks. Thrust blocks shall be poured as per Section 5010, 2.04 or shall be a single precast concrete block with integral lift hook(s) of sufficient size (minimum 2'x2'x3' of solid concrete) meeting the bearing area requirement with mechanically compacted soils between block and undisturbed trench wall. If main is to be put back into service immediately, poured thrust blocks shall be of M-4 mix with calcium chloride for rapid setting.

## 2.07 – WATER SERVICE PIPE AND APPURTENANCES

- B. 1. Water service lines shall be ¾" Type K copper unless noted.

## 3.05 – TRACER SYSTEM INSTALLATION

- F. Provide tracer wire access point where shown on the plans. Access point to have cast iron lid installed flush with ground. Access point to be Lite Duty SnakePit as manufactured by Copperhead Industries, or approved equal.
- G. Contractor is required to test tracer system upon completion of construction. Test shall be witnessed by Engineer or Owner.

## 3.10 – WATER SERVICE STUB

- D. If curb stop is installed in a PCC paved area, a PVC sleeve or ½" expansion material shall be placed around top of curb stop to prevent bond.

## SECTION 5020

### 1.08 – MEASUREMENT FOR PAYMENT

#### M. Flushing Hydrant

1. Measurement: Each flushing hydrant will be counted.
2. Payment: Payment will be made at the unit price for each flushing hydrant assembly.
3. Include: Unit price includes, but is not limited to, the flushing hydrant, barrel extensions sufficient to achieve proper bury depth or anchoring pipe and height of flushing hydrant above finished grade, and components to connect the flushing hydrant to the water main, including anchoring pipe, fittings, thrust blocks, pea gravel or porous backfill material, and flushing hydrant gate valve and appurtenances.

### 2.01 – VALVES

#### A. 4. Valves located in well house shall have handwheel operator.

#### E. Swing Check Valves:

1. Swing check valves, 4" through 10" shall have cast iron body, with ANSI 16.5 flanged ends. Flange bolts/nuts shall be stainless steel.
2. Valves shall meet AWWA C508.
3. Valves shall have a bronze-mounted swing clearway or full opening bronze faced disk.
4. Hinges shall be solid bronze with a stainless-steel hinge shaft with outside adjustable weighted lever.
5. Valves shall be rated for 200 psi service.

#### F. Combination Air Release and Vacuum Valves:

1. Conform to AWWA C512 combination air valve.
2. Provide 4-inch and smaller valves of single chamber design.
3. Maximum working pressure of 150 psi.
4. Provide double orifice with anti-shock orifice mechanism to limit transient pressure rise or shock induced by closure to 1.5 times the rated working pressure.
5. Provide O-Ring sealing against single-piece flat face orifice housed in dovetail groove circumferentially around the orifice.
6. Provide in manhole valve chamber.
7. Provide an isolation valve at each air release valve.
8. Provide and connect air release, vacuum relief valves to the main with a tee fitting and isolation valve.

## 2.04 – FLUSHING HYDRANT ASSEMBLY

Post flushing hydrant shall be Eclipse #2 as manufactured by Kupferle Water Solutions, or approved equal. Hydrant shall be self-draining, non-freezing 2" post hydrant with 6.5' bury depth. Hydrant shall have 4" MJ inlet and 2.5" threaded outlet.

## SECTION 5030

### 3.03 – DISINFECTION

- A. 5. Testing shall be responsibility of the Contractor. No additional payment will be made for the testing, as it shall be incidental to the water main in place.
- B. 5. AWWA C651 requires two consecutive sets of acceptable samples, taken at least 24 hours apart, from new main.

## DIVISION 7 – STREETS & RELATED WORK

## SECTION 7030

### 1.08 – MEASUREMENT AND PAYMENT

- H. 1. c. Included: Unit price includes, but is not limited to, excavation, subgrade preparation, 6" of Special Backfill, and jointing.
- I. Contractor will not be required to perform Plastic Concrete testing. Air, Slump, Cylinders, and/or Beams to be completed by the Jurisdictional Engineer. Contractor shall provide materials for these tests with no additional payment.

### 2.01 – PORTLAND CEMENT CONCRETE MIX

- A. Class C, 4,500 psi at 28 days compressive strength required.

### 3.04 – PCC RECREATIONAL TRAILS, SIDEWALKS, AND DRIVEWAYS

- F. 2. b. 3. All transverse contraction joints shall be sawed. Joints may be sawed within 12 hours of placement with a 1/8 inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawed with a hand-held saw.
- 3. b. 2. All longitudinal contraction joints shall be sawed. Joints may be sawed with a 1/8 inch blade to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawed with a hand-held saw.
- 5. b. Sealing of expansion and isolation joints is required. Trim preformed joint material to a depth of 1/2 inch below the concrete surface. Ensure the joint is clean and dry. Install joint sealant per manufacturer's recommendations.

## SECTION 7060

### 1.08 – MEASUREMENT AND PAYMENT

- A. 1. Measurement: Measurement will be in square yards for a double coat of bituminous seal coat applied.

## DIVISION 9 – SITE WORK & LANDSCAPING

### SECTION 9010

#### 1.02 - DESCRIPTION OF WORK

Completed installation shall include preparation of the seedbed, furnishing and installing seed, fertilizer and mulch, maintenance, and guarantee for completed seeded areas.

#### 1.07 – SPECIAL REQUIREMENTS

- A. Warranty is required and is incidental to the seeding bid item. No separate bid item is allowed. Warranty is for only permanent seeding within the dates for each variety specified per Section 9010, 2.02.
- B. Warranty period is two full years from acceptance.

#### 1.08 – MEASUREMENT AND PAYMENT

- A. 1. Seeding for a completed installation shall be measured in acres, of accepted seeding within the contract or easement limits. Seeding item includes supplying and applying proper seed, fertilizer, and mulch. Different payment for method of application will not be allowed. At the Contractor's option, Hydraulic or Pneumatic Seeding may be used, but will not be paid separately.
- 2. Fertilizing shall be incidental to the seeding bid item and will not be paid separately.
- 3. Mulching shall be incidental to the seeding bid item and will not be paid separately.
- E. Warranty for seeding, fertilizing, and mulching is required but is incidental to the seeding bid item. Warranty period shall be for two full years from the date of acceptance. No separate bid item is allowed.

#### 2.02 – SEED MIXTURES

All seeding shall be Type 1 (Permanent Lawn Mixture). All temporary seeding shall be Type 4 (Urban Temporary Erosion Control Mixture). Delete oats in Type 4 as all areas are previously established lawns.

#### 3.08 – RE-SEEDING

- A. When all work related to seeding on an area has been completed but is washed out or damaged prior to final acceptance of the seeding area, the area shall be reseeded, refertilized, and remulched without additional compensation.

#### 3.10 – ACCEPTANCE AND WARRANTY

- B. 1. Required but incidental to the seeding bid item and shall not be paid separately.
- 2. The warranty period is twenty-four months beginning on the date of acceptance.

**END SECTION.**

## SECTION 01 22 01

### MEASUREMENT AND PAYMENT

#### PART 1 – GENERAL

##### 1.01 MEASUREMENT AND PAYMENT

###### A. SUDAS ITEMS

Site and utility work covered by Iowa Statewide Urban Design and Specifications (SUDAS) Standard Specifications Divisions 1 through 11 and related Fehr Graham supplemental specifications shall refer to referenced section of SUDAS for description of measurement and payment.

###### B. NON-SUDAS ITEMS

Work that is not covered by SUDAS as shown on the Plans and covered by Supplemental Specifications Divisions 03, 05, 06, 07, 08, 09, 12, 22, 23, 26, 33, 40, 43, and 46 shall be measured and paid as follows.

###### 1. Well Construction

- a. Erosion and Sediment Control: Lump sum payment for erosion and sediment control shall include all equipment, materials, and labor required to provide erosion and sediment control as well as meet the requirements of General Permit 6 and the water well pollution prevention plan.
- b. Drill Hole: Payment will be per vertical foot for each diameter of hole drilled.
- c. Furnish and Install Casing: Payment will be per vertical foot for each diameter of casing installed.
- d. Equipment Setup for Grouting: Lump sum payment will include all equipment, materials, and labor required to setup for neat cement grouting.
- e. Furnish and Install Neat Cement Grout: Payment will be per sack of neat cement ground installed.
- f. Well Development: Payment per hour shall include all equipment, material, and labor required to develop the well including a measurement weir.

###### 2. Test Pumping

- a. Test pump setup: Lump sum payment shall include all equipment, materials, and labor required to setup and remove test pumping system.
- b. Test pump well: Payment shall be per hour for each hour that the well is test pumped.

###### 3. Testing

- a. Plumbness and Alignment Test: Lump sum payment shall include all equipment, materials, and labor required to perform plumbness and alignment test.
- b. Water Quality Testing: Lump sum payment shall include all equipment, materials, and labor required to sample and perform water quality testing.

4. Disinfection: Lump sum payment for Disinfection shall include all equipment, materials, and labor required to disinfect the well.
  5. Samples and Records: Lump sum payment shall include all equipment, materials, and labor required prepare drilling log and to collect and submit samples.
  6. Pitless Well Unit and Well Protection Structure: Lump sum payment shall include all equipment, materials, and labor required to furnish and install the pitless well unit and well protection structure as shown in the Plans and described in 33 31 00. Shaping finished grade shall be incidental.
  7. Well Pump: Lump sum payment shall include all equipment, materials, and labor required to furnish and install the well pump.
  8. Well Drop Piping: Payment per vertical foot shall include all equipment, material, and labor required to furnish and install the well drop piping. The check valves, air tubing, and installation of pressure transducer shall be incidental.
- C. Well House Piping: Lump sum payment shall include all equipment, materials, and labor required to furnish and install well house piping as shown in the Plans and described in the specifications. Item includes, but is not limited to, pipe, fittings, and valves in well house, air release valve, pipe supports, flow meter, sample tap, installing and painting piping.
- D. Chemical Feed Systems: Lump sum payment shall include all equipment, materials, and labor required to furnish and install a chemical feed pump, tubing, and injection quill for each the sodium hypochlorite and the polyphosphate for Well 3 as shown on the Plans and included in the specifications. The existing bulk and day tanks, secondary containment, scales, and Well 2 chemical feed pumps will remain.
- E. Water System Electrical and Controls: Lump sum payment shall include all equipment, materials, and labor required to furnish and install site electrical and water system controls as shown in the Plans and described in the specifications. Item includes, but is not limited to, new Well 3 motor starter, power to new motor starter and to Well 3, signal wires, chemical feed outlets, and flow meter power and signal wires.

**END SECTION.**



## **SECTION 26 00 10**

### **ELECTRICAL GENERAL PROVISIONS**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Refer to Division 00 - Procurement and Contracting Requirements and Division 01 - General Requirements, which all apply to work under this section.

##### **1.2 DESCRIPTION OF WORK**

- A. Work shall include furnishing of all systems, equipment and material specified in this division and as called for on the electrical drawings, to include supervision, operations, methods and labor for the fabrication, installation, start-up and tests for the complete electrical installation.
- B. All elements of the construction shall be performed by workmen skilled in the particular craft involved, and regularly employed in that particular craft.
- C. All work shall be performed in a neat, workmanlike manner in keeping with the highest standards of the craft.

##### **1.3 CODES AND STANDARDS**

- A. All work shall be done in accordance with the applicable portion of the following codes and standards:
  - 1. National Electrical Code
  - 2. National Fire Protection Association
  - 3. National Electrical Manufacturers Association
  - 4. Standards of Institute of Electrical and Electronic Engineers
  - 5. International Building Code
  - 6. Occupational Safety and Health Act
  - 7. Iowa Administrative Code
  - 8. NECA Standards
  - 9. Americans With Disabilities Act (ADA)
- B. All Contractors shall familiarize themselves with all codes and standards applicable to their work and shall notify Engineer of any discrepancies between the design and applicable code requirements so that any conflicts can be resolved. Where two or more codes or standards are in conflict, that requiring the highest order of workmanship shall take precedence, but such questions shall be referred to Architect/Engineer for final decision.

##### **1.4 REQUIREMENTS & FEES OF REGULATORY AGENCIES**

- A. Contractor shall comply with the rules and regulations of the local utility companies. They shall check with each utility company providing service to this project and determine or verify their requirements regarding incoming services.
- B. Meters for incoming services shall be selected based on the project requirements. Any

questions concerning this shall be referred to Architect/Engineer prior to bidding. Contractor shall provide the appropriate meter and associated materials if not furnished by the utility company.

- C. Secure all required permits and pay for all inspections, licenses and fees required in connection with the electrical work including State of Iowa Electrical Inspections. Contractor shall post all bonds and obtain all licenses required by the State, City, County and Utility.
- D. Contractor shall make all arrangements with each utility company for service upgrade. The Owner will pay for Utility Company service upgrade charges associated with new service.

#### 1.5 ELECTRICAL DRAWINGS

- A. The electrical drawings indicate in general the building arrangement only. Contractor shall examine construction drawings to become familiar with the specific type of building construction, i.e. type of structural system, floors, walls, ceilings, room finishes and elevations.
- B. Drawings for the electrical work are in part diagrammatic, and are intended to convey the scope of the work and to indicate in general the location of equipment.
- C. Contractor shall layout his own work and shall be responsible for determining the exact locations for equipment and rough-ins and the exact routing of conduits and raceway so as to best fit the layout of the work.
- D. Contractor shall take his own field measurements for verifying locations and dimensions; scaling of the drawings will not be sufficient for laying out the work.
- E. Because of the scale of the drawings, certain basic items such as couplings, pull or splice boxes may not be shown, but where such items are required by code or by other sections of the specifications or where they are required for proper installation of the work, such items shall be furnished and installed.

#### 1.6 ACTIVE SERVICES

- A. Contractor shall be responsible for verifying exact locations of all existing services prior to beginning work in that area.
- B. Existing active services, i.e., water, gas, sewer, electric, when encountered, shall be protected against damage. Do not prevent or disturb operation of active services which are to remain.
- C. When active services are encountered which require relocation, Contractor shall make request to authorities with jurisdiction for determination of procedures.
- D. Where existing services are to be abandoned, they shall be terminated in conformance with requirements of the authorities having jurisdiction.

#### 1.7 SITE INSPECTION

- A. Contractor shall inspect the site prior to submitting bid for work to familiarize themselves with the conditions of the site which will affect their work and shall verify points of connection with utilities, routing of outside conduit to include required clearances from any existing structures, trees or other obstacles.
- B. Extra payment will not be allowed for changes in the work required because of

Contractor's failure to make this inspection.

#### 1.8 COORDINATION AND COOPERATION

- A. It shall be Contractor's responsibility to schedule and coordinate their work with the schedule of the General Contractor so as to progress the work expeditiously, and to avoid unnecessary delays.
- B. Contractor shall fully examine the drawings and specifications for other trades and shall coordinate the installation of their work with the work of the other contractors. Contractor shall consult and cooperate with the other contractors for determining space requirements and for determining that adequate clearance is allowed with respect to their equipment, other equipment and the building. The Architect reserves the right to determine space priority of the contractors in the event of interference between piping, conduit, ducts and equipment of the various contractors.
- C. Conflicts between the drawings and the specifications or between the requirements set forth for the various contractors shall be called to the attention of the Architect. If clarification is not asked for prior to the taking of bids, it will be assumed that none is required and that the Contractor is in agreement with the drawings and specifications as issued. If clarification is required after the contract is awarded, such clarification will be made by the Architect and their decision will be final.
- D. Special care shall be taken for protection for all equipment. All equipment and material shall be completely protected from weather elements, painting, plaster, etc., until the project is substantially completed. Damage from rust, paint, scratches, etc., shall be repaired as required to restore equipment to original condition.
- E. Protection of all equipment during the painting of the building shall be the responsibility of the Painting Contractor, but this shall not relieve Contractor of the responsibility for checking to assure that adequate protection is being provided. Refer to Division 09 for painting protection.
- F. Where the final installation or connection of equipment in the building requires the contractor to work in areas previously finished by the General Contractor, the Electrical Contractor shall be responsible that such areas are protected and are not marred, soiled or otherwise damaged during the course of such work. Electrical Contractor shall arrange with the General Contractor for patching and refinishing of such areas which may be damaged in this respect.

#### 1.9 OPENINGS, CUTTING AND PATCHING

- A. Electrical Contractor will coordinate the placing of openings in the new structure as required for the installation of the electrical work with the General Contractor. General Contractor is to provide openings and lintels in the new structure for the electrical construction work.
- B. Electrical Contractor shall furnish to General Contractor the accurate locations and sizes for required openings, but this shall not relieve Electrical Contractor of the responsibility of checking to assure that proper size openings are provided. When additional patching is required due to Electrical Contractor's failure to coordinate this work, then Electrical Contractor shall make arrangements for the patching and painting required to properly close the openings.
- C. Conduits and wireways passing through all fire or smoke rated floors, roofs, walls, and

partitions shall be provided with firestopping. Space between wall/floor and conduits, sleeves and/or wireways, shall be sealed with UL listed intumescent fire barrier material equivalent to rating of wall/floor. Where conduits, sleeves and/or wireways pass through floors, roofs, walls and partitions that are not fire or smoke rated, penetrations shall be sealed with grout or caulk.

- D. For exterior walls below grade, sleeves shall be cast iron. Space between sleeve and conduit shall be sealed with modular mechanical rubber links tightened with bolts as made by Thunderline Corporation, Wayne, Michigan 48184. Waterproofing of conduit penetrations in exterior walls shall be coordinated with waterproofing contractor.

#### 1.10 EXCAVATING AND BACKFILLING

- A. Contractor shall do all excavating necessary for light pole bases, underground wiring, conduit and duct banks, and shall backfill trenches and excavations after work has been inspected. Care shall be taken in excavating that walls and footings and adjacent load bearing soils are not disturbed in any way, except where lines must cross under a wall footing. Where a line must pass under a footing, the crossing shall be made by the smallest possible trench to accommodate the conduit. Excavation shall be kept free from water by pumping if necessary.
- B. Backfill about the structures shall be placed, when practicable, as the work of construction progresses. Backfilling on or against concrete work shall be done only when directed. Backfilling of trenches shall progress as rapidly as the testing and acceptance of the finished sections of the work will permit and shall be carried to a crown approximately six (6) inches above the existing grades. In backfilling trenches, selected material shall be compacted firmly around and to a depth of not less than six (6) inches over the top of work in trench. All fill and backfill and rough grading shall be compacted thoroughly in layers and shall be brought up to within six (6) inches of finished grades. All fill and backfill shall be sand or pit run sand/gravel graded from 1" size downward.

#### 1.11 MATERIALS AND EQUIPMENT

- A. All materials and equipment shall be the standard product of a reputable U.S.A. manufacturer regularly engaged in the manufacture of the specified item unless authorized in writing by Architect/Engineer. Where more than one unit is required of the same system, they shall be furnished by the same manufacturer except where specified otherwise.
- B. All material and equipment shall be installed in strict accordance with the manufacturer's recommendations.
- C. The equipment specifications cannot deal individually with any minute items such as parts, controls, devices, etc., which may be required to produce the equipment performance and function as specified, or as required to meet the equipment guarantees. Such items when required shall be furnished as part of the equipment, whether or not specifically called for.

#### 1.12 SHOP DRAWINGS

- A. Contractor shall furnish, to the Architect, complete sets of shop drawings and other submittal data. Contractor shall review and sign shop drawings before submittal.
- B. Shop drawings shall be bound into sets and cover related items for a complete system as much as practical and shall be identified with symbols or "plan marks" used on

drawings. Incomplete, piecemeal, or unbound submittals will be rejected.

- C. Submittals required by the various sections of the Project Manual include but are not necessarily limited to those identified in the submittal schedule below.
- D. After award of contract, the contractor shall provide a completed submittal schedule including dates that the submittals will be to the Architect for review.
- E. Submit required information on the following items:

SPEC SECTION	EQUIPMENT	DETAIL DWGS	PROD DATA	SAMPLES	INSTALL METHODS	O & M MANUAL	CERTIFICATE OF SYSTEM DEMON-	OTHER (SEE NOTES)
26 05 33	Floor Boxes		X					
26 22 00	Transformers	X	X			X		
26 24 16	Panelboards	X	X			X		
26 27 26	Wiring Devices		X					
26 28 15	Motor Disconnects		X			X		
26 28 16	Circuit Breakers		X			X		
	Fuses		X			X		
26 32 13	Engine Generators	X	X			X	X	
26 36 00	Transfer Switches	X	X			X	X	
26 51 00	Light Fixtures		X			X		

- F. Architect/Engineer will review shop drawings solely to assist contractors in correctly interpreting the plans and specifications.
- G. Contract requirements cannot be changed by shop drawings which differ from contract drawings and specifications.

#### 1.13 OPERATION AND MAINTENANCE MANUALS

- A. Operation and maintenance manuals shall be submitted to the Architect in duplicate upon completion of the job. Manuals shall be bound in a three-ring, hard-backed binder. Front cover and spine of each binder shall have the following lettering done:

OPERATION  
AND  
MAINTENANCE  
MANUAL  
FOR ELECTRICAL SYSTEMS

(PROJECT NAME)  
(LOCATION) (DATE)

SUBMITTED BY  
(NAME AND ADDRESS OF CONTRACTOR)

- B. Provide a master index at the beginning of manual showing items included. Use plastic tab indexes for sections of manual. Each section shall contain the following information

for equipment furnished under this contract:

1. Equipment and system warranties and guarantees.
2. Installation instructions.
3. Operating instructions.
4. Maintenance instructions.
5. Spare parts identification and ordering list.
6. Local service organization, address, contact and phone number.
7. Shop drawings with reviewed stamp of Architect/Engineer and Contractor shall be included, if applicable, along with the items listed above.

C. Items to be included shall be those listed in shop drawing section.

#### 1.14 TESTS AND DEMONSTRATIONS

- A. All systems shall be tested by Contractor and placed in proper working order prior to demonstrating systems to Owner.
- B. Contractor shall test the electrical grounding system resistance in accordance with Specification Section 26 05 26 – Grounding and Bonding for Electrical Systems and submit a report to Engineer stating the results.
- C. Prior to acceptance of the electrical installation, the Contractor shall demonstrate to the Owner, or his designated representatives, all essential features and functions of all systems installed, and shall instruct the Owner in the proper operation and maintenance of such systems. Owner instruction shall be provided for the following systems:

Sections	Description	Hrs. on Site	Hrs. off Site	Presented By	Others Present	Remarks
26 22 00 26 24 16	Electrical Dist. System	4		Contractor		2
26 32 13 26 36 00	Engine Generator Transfer Switches	4		Vendor Contractor		1,2
REMARKS: <ol style="list-style-type: none"><li>1. Perform complete system test at time of instruction.</li><li>2. Any unused hours shall be used at Owner's discretion during the first year of occupancy.</li></ol>						

- D. Contractor shall submit to the Architect a certificate signed by the Owner stating the date, time, and persons instructed and that the instruction has been completed to the Owner's satisfaction. An example of a certificate form is as follows:

### CERTIFICATE OF SYSTEM DEMONSTRATION

This document is to certify that the contractor has demonstrated the hereafter listed systems to the Owner's representatives in accordance with the Contract documents and that the instruction has been completed to the Owner's satisfaction.

- A. Project:  
B. System(s):  
C. Contractor's representatives giving instruction and

demonstration: Contractor: \_\_\_\_\_

NAMES	DATE	HOURS

- D. Owner's representatives receiving instruction:

Owner: \_\_\_\_\_

NAMES	DATE	HOURS

- E. Acknowledgement of demonstration:

Contractor's Representative:

\_\_\_\_\_

signature

\_\_\_\_\_

date

Owner's Representative:

\_\_\_\_\_

signature

\_\_\_\_\_

date

### 1.15 SUBSTITUTIONS

- A. To obtain approval to use unspecified equipment, Bidding Contractors (not equipment supplier, manufacturers, etc.) shall submit written requests to Engineer at least 10 days prior to bid due date. Requests shall clearly describe the equipment for which approval is being requested. Include all data necessary to demonstrate that equipment's capacities, features and performance are equivalent to include a cost comparison between specified equipment and equipment for which approval is being requested. If the equipment is acceptable, Engineer will approve it in an addendum. Architect/Engineer will, under no circumstances, be required to prove that an item proposed for substitution is or is not of equal quality to the specified item.
- B. Where substitutions are approved, Contractor assumes all responsibility for physical dimensions and all other resulting changes. This responsibility extends to cover all extra work necessitated by other trades as a result of the substitution.

### 1.16 ACCEPTABLE MANUFACTURERS

- A. In most cases, equipment specifications are based on a specific manufacturer's type, style, dimensional data, catalog number, etc. Listed with the base specification, either in the manual or on the plan schedules are acceptable manufacturers approved to bid products of equal quality. These manufacturers are encouraged to submit to Engineer at least 8 days prior to the bid due date drawings and catalog numbers of products to be bid as equals.
- B. Manufacturers, who do not submit prior to bidding, run the risk of having the product rejected at time of shop drawing submittal. Extra costs associated with replacing the rejected product shall be the responsibility of the Contractor and/or the manufacturer.
- C. If Contractor chooses to use a manufacturer listed as an equal, it shall be their responsibility to assure that the manufacturer has complied with the requirements in 'A' above. Contractor shall assume all responsibility for physical dimensions, operating characteristics, and all other resulting changes. This responsibility extends to cover all extra work necessitated by other trades as a result of using the alternate manufacturer.
- D. Where a model or catalog number is provided, it may not be inclusive of all product requirements. Refer to additional requirements provided on the plans or in the specifications as required. Similarly, there may be additional requirements included in the model or catalog number that are not specifically stated. These requirements shall also be met.

### 1.17 GUARANTEE

- A. The entire electrical system including all sub-systems shall be guaranteed against defect in materials and installation for a minimum of one year. Any malfunctions which occur within the guarantee period shall be promptly corrected without cost to the Owner. This guarantee shall not limit or void any manufacturer's express or implied warranties.

### 1.18 CHANGES IN THE WORK

- A. A Contract Change Order is a written order to Contractor signed by the Owner and Contractor, issued after the execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Contract Change Order.



- B. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Contract Change Order and shall be performed under the applicable conditions of the Contract Documents.
- C. The cost or credit to the Owner resulting from a change in the Work shall be determined by mutual acceptance of a lump sum properly itemized and supported by sufficient substantial data to permit evaluation. A Change Order in excess of \$300.00 shall be submitted with each item listed individually with a material cost and labor unit extension. Overhead and profit, as mutually agreed upon between Owner and Contractor shall be added to material and labor cost figures.
- D. It shall be the responsibility of the contractor before proceeding with any change to satisfy themselves that the change has been properly authorized in behalf of the Owner.

#### 1.19 COMPLETION

- A. Systems, at time of completion, shall be complete, efficiently operating, non-hazardous and ready for normal use by the Owner.
- B. When all the electrical work is complete Contractor shall thoroughly clean all material and equipment installed as a part of this contract and leave all equipment and material in new condition.
- C. Contractor shall clean up and remove from the site all debris, excess material and equipment left during the progress of this contract at job completion.

#### 1.20 TEMPORARY UTILITIES

- A. Refer to Specification Division 1 for specific requirements concerning temporary utilities.

#### END OF SECTION

## **SECTION 26 05 19**

### **LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES**

#### **PART 1 - GENERAL**

##### **1.01 RELATED WORK**

- A. The requirements of Division 00 - Procurement and Contracting Requirements, Division 01 - General Requirements and Section 26 00 10 - Electrical General Provisions are applicable to work required of this section.

##### **1.02 DESCRIPTION OF WORK**

- A. Contractor shall furnish all material, tools, labor and supervision necessary to install all wiring systems.
- B. This section describes the basic materials and methods of installation for general wiring systems of 600 volts and less. Wiring for a higher voltage rating, if required, shall be as specified in other sections or called for on the drawings.

##### **1.03 QUALITY ASSURANCE**

- A. NEC Compliance: Comply with NEC as applicable to construction and installation of electrical wire, cable and connectors.
- B. UL Compliance: Comply with UL standards pertaining to wire, cable and connectors.
- C. UL Labels: Provide electrical wires, cables and connectors which have been UL-listed and labeled.
- D. NEMA/ICEA Compliance: Comply with applicable portions of NEMA/Insulated Cable Engineers Association standards pertaining to materials, construction and testing of wire and cable.
- E. ANSI/ASTM: Comply with applicable portions of ANSI/ASTM standards pertaining to construction of wire and cable.
- F. The materials used for wiring systems shall be the products of a manufacturer regularly engaged in the manufacturing of the specified material.

#### **PART 2 - PRODUCTS**

##### **2.01 WIRE AND CABLE**

- A. All wire and cable for power, lighting, control and signal circuits shall have copper conductors of not less than 98% conductivity and shall be insulated to 600 V. Conductor sizes #10 AWG and smaller shall be solid, conductor sizes #8 AWG and larger shall be stranded.
- B. Minimum size conductors shall be #12 AWG for power and lighting.
- C. Type of wire and cable for various applications shall be as follows:
  - 1. Type XHHW-2 (90 deg. C) - use for underground circuits, panel and equipment feeders.

2. Type THHN/THWN-2, or XHHW-2 (90 deg. C) - use for branch circuits, panel and equipment feeders in wet or dry locations above grade.
  3. Type MTW, wet and dry locations - use for low voltage signal and control circuits operating at 25 volts or less.
- D. For all vibration type installations (i.e. motors, etc), provide stranded type conductors.

## 2.02 CONDUCTOR COLOR CODING

- A. Wiring systems shall be color coded. Conductor insulation shall be colored in sizes up through #8 AWG, conductors #6 AWG and larger shall have black insulation and shall be phase color coded with one-half inch band of colored tape at all junctions and terminations. Colors shall be assigned to each conductor as described below and carried throughout all main and branch circuit distribution. When necessary to use tape, use colored tape on black wire. Do not use colored tape on colored wire.

	<u>120/208V.Y</u>	<u>277/480V.</u>
Phase 'A' Conductor	Black	Brown
Phase 'B' Conductor	Red	Orange
Phase 'C' Conductor	Blue	Yellow
Neutral Conductor	White	Grey
Grounding Conductor	Green	Green

## 2.03 CONNECTORS

- A. In-line splices and taps for conductor sizes #8 AWG and smaller, use 3M Co. "Scotchlock" vinyl insulated spring connectors, or equal Ideal "wingnut" or Thomas & Betts.
- B. Connectors for conductors No. 6 and larger shall be of compression or split-bolt types, National Electric, Thomas & Betts, Blackburn or Burndy mechanical connectors. Fill connector voids with electrical insulation putty, follow with 3-M Scotch tape #33, minimum 2 layers.

## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Wire shall not be installed in the conduit system until the building is enclosed and masonry work is completed.
- B. Conduit shall be swabbed free of moisture and debris prior to pulling in wiring. Pull mouse through conduits prior to pulling conductors.

### 3.02 INSTALLATION

- A. All cable for major feeders shall be continuous from origin to termination, unless otherwise indicated.
- B. Splices in branch circuit wires shall be made only in accessible junction boxes.
- C. All power feeder cable shall be pulled with the use of approved pulling compound or powder. Compound must not deteriorate conductor or insulation.

- D. Use pulling means, including fish tape, cable or rope which cannot damage raceway.
- E. Install exposed cable, parallel and perpendicular to surfaces or exposed structural members and follow surface contours, where possible.
- F. Keep conductor splices to a minimum.
- G. The continuity of circuit conductors shall not be dependent on service connections such as lamp holders, receptacles, etc., where the removal of such devices would interrupt the continuity.
- H. Provide separate green ground conductor throughout entire electrical system.
- I. All branch circuits shall have dedicated neutrals.

### 3.03 FIELD QUALITY CONTROL

- A. Prior to energization, test cable and wire for continuity of circuitry, and for short circuits. Correct malfunctions when detected.
- B. Subsequent to wire and cable hook-ups, energize circuitry and demonstrate functioning in accordance with requirements.

### END OF SECTION

## SECTION 26 05 26

### GROUNDING AND BONDING

#### PART 1 – GENERAL

##### 1.01 WORK INCLUDES

###### A. Base Bid:

1. Electrical Contractor provides:
  - a. Grounding and Bonding of electrical equipment, materials and accessories as specified herein and as shown on the plan documents.

##### 1.02 RELATED WORK

###### A. Specified Elsewhere:

1. Section 26 27 26 – “Wiring Devices”
2. Section 26 24 16 – “Panelboards”
3. Section 26 28 16 – “Enclosed Safety Switches”
4. Section 26 51 00 – “Interior Lighting”
5. Section 26 56 00 – “Exterior Lighting”

##### 1.03 SUBMITTALS

###### A. Product Data: For each type of product indicated.

##### 1.04 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

#### PART 2 – PRODUCTS

##### 2.01 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
  1. Solid Conductors: ASTM B 3.
  2. Stranded Conductors: ASTM B 8.

##### 2.02 CONNECTORS

- A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.

- B. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
- C. Provide and install bonding type bushings in panelboards and distribution equipment. Provide bonding conductors to and through bushings interior of equipment. Connect to grounding bus of equipment.

#### 2.03 GROUNDING ELECTRODES

- A. Ground Rods: Copper; 3/4 inch by 10 feet in length. (Service Ground Field)
- B. Ground Rods: Copper, 5/8 inch by 8 feet in length. (Lighting pole bases)

### PART 3 – EXECUTION

#### 3.01 APPLICATIONS

- A. Conductors: Install solid conductor for No. 10 AWG and smaller, and stranded conductors for No. 8 AWG and larger, unless otherwise indicated.
- B. Underground Grounding Conductors: Install bare copper conductor, No. 2 AWG minimum. Bury at least 24 inches below grade.
- C. Conductor Terminations and Connections:
  - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
  - 2. Underground Connections: Welded connectors, except at test wells and as otherwise indicated.

#### 3.02 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
  - 1. Feeders and branch circuits.
  - 2. Lighting circuits.
  - 3. Receptacle circuits.
  - 4. Single-phase motor and appliance branch circuits.
  - 5. Three-phase motor and appliance branch circuits.

#### 3.03 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Ground Rods: Drive rods until tops are 12 inches below final grade, unless otherwise indicated.
  - 1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating, if any.
  - 2. For grounding electrode system, install at least one rod and connect to the service grounding electrode conductor (GEC).

- C. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
  - 1. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.

#### 3.04 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections and prepare test reports:
  - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
  - 2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal.
    - a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
    - b. Perform tests by fall-of-potential method according to IEEE 81.
- B. Report measured ground resistances that exceed the following values:
  - 1. Power and Lighting Equipment or System with Capacity 200 kVA and Less: 10 ohms.
- C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect/Engineer promptly and include recommendations to reduce ground resistance.

**END SECTION.**

## SECTION 26 05 29

### HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

#### PART 1 – GENERAL

##### 1.01 WORK INCLUDES

###### A. Electrical Contractor Provide:

1. Electrical supports for complete installation of electric equipment, material, and accessories as specified herein and as shown on the plan documents.

##### 1.02 RELATED WORK

###### A. Specified Elsewhere:

1. Section 26 05 00 – “Basic Materials and Methods”

##### 1.03 SUBMITTALS

###### A. Product Data: Illustrate and indicate style, material, strength, fastening provision, and finish for each type and size of component used.

1. Annotate to indicate application of each product submitted and compliance with requirements.

##### 1.04 QUALITY ASSURANCE

###### A. Comply with requirements in the National Electrical Code (NFPA 70) 2011 Edition unless requirements in this Section are more stringent.

#### PART 2 – PRODUCTS

##### 2.01 MANUFACTURERS

###### A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

##### 2.02 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

###### A. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed under this Project, with a minimum structural safety factor of five times the applied force.

###### B. Steel Slotted Support Systems: Comply with MFMA-3, factory-fabricated components for field assembly, and provide finish suitable for the environment in which installed.

###### 1. Manufacturers:

- a. Cooper B-Line; a division of Cooper Industries.
- b. ERICO International Corporation.
- c. Allied Support Systems; Power-Strut Unit.
- d. GS Metals Corp.



- e. Michigan Hanger Co., Inc.; O-Strut Div.
  - f. National Pipe Hanger Corp.
  - g. Thomas & Betts Corporation.
  - h. Unistrut; Tyco International, Ltd.
  - i. Wesanco, Inc.
2. Channel Dimensions: Selected for structural loading.
- C. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
- E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
- F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
- 1. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
    - a. Manufacturers:
      - 1) Cooper B-Line; a division of Cooper Industries.
      - 2) Empire Tool and Manufacturing Co., Inc.
      - 3) Hilti, Inc.
      - 4) ITW Construction Products.
      - 5) MKT Fastening, LLC.
      - 6) Powers Fasteners.
  - 2. Concrete Inserts: Steel or malleable-iron slotted-support-system units similar to MSS Type 18; complying with MFMA-3 or MSS SP-58.
  - 3. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
  - 4. Through Bolts: Structural type, hex head, high strength. Comply with ASTM A 325.
  - 5. Toggle Bolts: All-steel springhead type.
  - 6. Hanger Rods: Threaded steel.

## 2.03 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

## **PART 3 – EXECUTION**

### **3.01 APPLICATION**

- A. Comply with NFPA 70 for application of hangers and supports for electrical equipment and systems, unless requirements in this Section or applicable Code are stricter.

### **3.02 SUPPORT INSTALLATION**

- A. Comply with NFPA 70 for installation requirements, except as specified in this Article.
- B. Raceway Support Methods: In addition to methods described in, RMC may be supported by openings through structure members, as permitted in NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods, unless otherwise indicated by Code:
  - 1. To Wood: Fasten with lag screws or through bolts.
  - 2. To New Concrete: Bolt to concrete inserts.
  - 3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
  - 4. To Existing Concrete: Expansion anchor fasteners.
  - 5. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
  - 6. To Light Steel: Sheet metal screws.
  - 7. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount on slotted-channel racks attached to substrate.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

### **3.03 INSTALLATION OF FABRICATED METAL SUPPORTS**

- A. Comply with installation requirements in Division 5 for site-fabricated metal supports.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M.

### **3.04 ACCOMMODATION OF DIFFERENTIAL MOTION**

- A. Make flexible connections in runs of raceways, cables, and wireways where they cross expansion and control joints, where they attach to equipment subject to vibration, where adjacent sections or branches are supported by different structural elements, and where they terminate with connection to electrical equipment that is anchored to a different structural element from the one supporting them as they approach equipment.

**END SECTION.**

## SECTION 26 05 33

### RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

#### PART 1 – GENERAL

##### 1.01 RELATED WORK

- A. The requirements of Division 00 - Procurement and Contracting Requirements, Division 01 - General Requirements and Section 26 00 10 - Electrical General Provisions are applicable to work required of this section.

##### 1.02 DESCRIPTION OF WORK

- A. Contractor shall furnish all materials, tools labor and supervision necessary to fabricate and install complete conduit systems.
- B. Conduit systems shall be provided for all wiring, except where the drawings or other sections of the specifications indicate that certain wiring may be installed in cable trays, surface raceway, underfloor raceway, wireways and/or auxiliary gutters.
- C. Types of raceways in this section include the following:
  - 1. Electrical metallic tubing.
  - 2. Flexible metal conduit.
  - 3. Intermediate metal conduit.
  - 4. Liquid-tight flexible metal conduit.
  - 5. Rigid metal conduit.
  - 6. PVC Coated rigid metal conduit.
  - 7. Rigid non-metallic conduit.
- D. Provide factory painted red conduit for fire alarm system.
- E. Contractor shall furnish all material, tools, labor and supervision necessary to install electrical boxes and fittings as required by drawings and specifications.
- F. Types of electrical boxes and fittings in this section include the following:
  - 1. Outlet boxes.
  - 2. Junction boxes.
  - 3. Pull boxes.
- G. Telecommunications Raceway Requirements:
  - 1. The term "telecommunications" includes all low voltage technology systems including voice and data, access control, video surveillance, intrusion detection, audio video, paging, intercom, nurse call, school bells and/or clock systems. The term does not include fire alarm system, which is addressed separately in the plans and specifications.
  - 2. Contractor shall provide and install telecommunications boxes and conduits, including wall sleeves unless otherwise noted.

3. Below grade building entrance conduits within the building footprint shall be schedule 40 electrical PVC unless otherwise noted. Long sweep ninety-degree elbows for under building footprint conduits shall be fiberglass sweeps with PVC schedule 40 conduit connectors built into the ends of the sweeps. Sweeps of 4" diameter shall be 36" minimum radius.
4. Below grade conduits for low voltage system cabling are not acceptable unless specifically directed. Below grade entrance conduits and floor boxes in slab on grade are exceptions to this rule.
5. Underground conduits outside the building footprint shall be continuous orange HDPE (high density polyethylene) with 1250-pound braided mule tape used as pull string unless otherwise noted. Round pull string or other rope is not acceptable for pulling due to risk of raceway damage. HDPE manufacturer approved waterproof couplers shall be used for conduit type transition. HDPE to HDPE connection shall be hot fusion splice.
6. HDPE shall be minimum schedule 40 wall thickness for 2" diameter and smaller. The wall thickness shall be minimum SDR 11 for sizes larger than 2" diameter.
7. All below grade conduits shall be plugged at each end during construction to keep water, mud, rodents, etc., out.
8. All below grade entrance conduits shall be plugged on each end with removable mechanical plugs to keep water from entering the building for the life of the building. These plugs shall be installed inside the building above slab, and at the first hand-hole outside the building (or where the conduits terminate underground). These plugs shall also seal around the utility entrance cables, including in and around all sub-ducts for a complete watertight seal. These mechanical plugs shall be as found on [www.innerduct.com](http://www.innerduct.com) or engineer approved equivalent. Coordinate with the utility to determine size of cables for the plug inserts required. This work shall be completed before the Owner occupies the building.
9. All below grade exterior conduits shall have a tracer wire with adequate slack loop at each end for owner to conveniently connect and trace. All tracer wires shall protrude from closed hand holes so tracing may be accomplished without lifting the hand hole lid.
10. Interior building, above grade conduits and sleeves shall be EMT unless otherwise noted. PVC is never acceptable above grade.
11. All interior conduits shall have bushings installed during conduit installation. Completed individual installations shall have bushings installed same business day.
12. All interior conduits shall have pull strings, except sleeves which are less than 4' long. EMT conduits shall receive standard round cable pull string (multi-strand plastic twine type).
13. Minimum interior conduit size for all information jacks (voice data cabling) shall be 1" unless otherwise noted.
14. Minimum interior conduit size for video surveillance, intrusion detection, audio video, paging, intercom, nurse call, school bells and/or clock systems shall be 3/4" unless otherwise noted.

15. Access control system conduit sizes at the door location shall be per the access control detail found on the drawings. The conduit from the door location to the access control head end which contains all conductors needed for all access control functions at that door (may be individual conductors but is often one large composite cable) shall be minimum 3/4".
16. Boxes for all low voltage systems in stud walls shall be metallic 4"x4"x2.125" with 0.5" mud ring unless otherwise noted.
17. Boxes in stud walls for information jacks shall receive single gang mud rings unless otherwise noted.
18. Boxes in masonry walls shall be minimum 2.5" deep for all low voltage systems.
19. Boxes in masonry walls for information jacks shall be single gang unless otherwise noted.
20. Wiremold surface raceway for all low voltage systems shall be minimum V2400 unless noted otherwise.
21. Wiremold surface boxes for all low voltage shall be minimum 2.5" deep unless otherwise noted.
22. Wiremold surface boxes for information jacks shall be single gang unless otherwise noted.
23. Conduits inside walls which feed the low voltage side of dual compartment Wiremold shall be minimum 1.25"
24. Contractor shall provide and install hand holes for cable pulling in buried raceway at a maximum interval of 500'.

#### 1.03 QUALITY ASSURANCE

- A. NEMA Compliance: Comply with applicable requirements of NEMA standards pertaining to raceways.
- B. UL Compliance and Labeling: Comply with provisions of UL safety standards pertaining to electrical raceway systems; and provide products and components which have been UL-listed and labeled.
- C. NEC Compliance: Comply with requirements as applicable to construction and installation of raceway systems.
- D. The materials used in the fabrication of the raceway system shall be products of a manufacturer regularly engaged in the manufacturing of the specified material.
- E. NEC compliance: Comply with NEC as applicable to construction and installation of electrical wiring boxes and fittings.
- F. UL Compliance: Provide electrical boxes and fittings which have been UL-listed and labeled.
- G. ANSI/NEMA Standards Compliance: Comply with ANSI C 134.1 (NEMA Standards Pub No. OS 1) as applicable to sheet-steel outlet boxes, covers and box supports.

#### 1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's data including specifications, installation instructions and general recommendations, for each type of raceway required. Include data substantiating that materials comply with requirements for the following:
  - 1. Overhead metal raceways.
  - 2. Underfloor metal raceway systems.
- B. Shop Drawings: Submit dimensioned drawings of raceway systems showing layout of raceways and fittings, spatial relationships to associated equipment, and adjoining raceways, if any. Show connections to electrical power panels and feeders.
- C. Product Data: Submit manufacturer's data including specifications, installation instructions and general recommendations for each type of floor box required. Include data substantiating that units comply with requirements.

## **PART 2 – PRODUCTS**

### **2.01 CONDUIT**

- A. General: Provide metal conduit, tubing and fittings of types, grades, sizes and weights (wall thicknesses) for each service indicated. Where types and grades are not indicated, provide proper selection determined by Installer to fulfill wiring requirements, and comply with applicable portions of NEC for raceways.
- B. Rigid Conduit: Full weight, threaded, rigid steel conduit, galvanized inside and out by hot dip or electro galvanized process. Additional protection by electrostatically applied baked coating. Thread protective caps and couplings. Use for all exterior exposed locations, interior process rooms and all locations where conduit is subject to damage.
- C. Rigid Aluminum Conduit: Full weight, threaded, rigid aluminum conduit. Thread protective caps and couplings. May be used above grade at exterior aeration structure where not in contact with concrete or earth. Use above grade at secondary treatment/aeration structure.
- D. PVC Coated Rigid Conduit: Full weight, threaded, rigid steel conduit, galvanized inside and out by hot dip or electro galvanized process with 40 mil PVC coating. Thread protective caps and couplings. Use for interior and exterior penetrations through concrete slab up to 12" above the floor (minimum), hazardous (classified) locations, and where specifically noted.
- E. Electrical Metallic Tubing: Thin wall, electrically welded cold rolled steel conduit, galvanized inside and out by electro galvanized process. Baked clear elastic enamel coating in and out. Use for installations in stud walls, masonry walls, above suspended ceilings and where exposed, but not subject to physical damage. In office, lab, and control room areas only.
- F. Flexible Metal Conduit: Formed of one continuous length of spirally wound electro galvanized steel strip. Use for final connections to all motor operated equipment such as unit heaters, fans, air handling units, generators, generator enclosures and connections to dry type transformer.
- G. Liquidtight Flexible Metal Conduit: Formed of one continuous length of spirally wound steel strip, with water and oil tight neoprene jacket. Use for final connection to pumps and equipment listed in paragraph "E" above when located in all process areas.

- H. Explosion-proof Flexible Metal Conduit: Listed for use in Class I, Division 1 areas, stainless steel braided construction. Copper is not acceptable due to corrosive environment.
- I. PVC Conduit: Conduit shall be Schedule 40, 90 deg.C. Conduit shall be composed of Polyvinyl Chloride and shall conform to NEMA Standards. Conduit, fittings and cement shall be produced by the same manufacturer. May be used where installed in earth fill or under concrete slab and corrosive environments above 12" AFF where specifically indicated on the drawings.
- J. MC and AC cable will not be allowed.

## 2.02 CONDUIT FITTINGS

- A. Rigid Conduit Fittings: Threaded, galvanized malleable iron or heavy steel, water and concrete tight. Grounding type nylon insulated bushings for connectors at cabinets, boxes and gutters. Provide PVC coated fittings where PVC coated rigid steel conduit is specified.
  - 1. Fittings installed in and around hazardous (classified) areas shall be listed for such use.
- B. Metallic Tubing Fittings: Compression type galvanized malleable iron or steel, water and concrete tight where exposed to wet locations or imbedded in concrete. Steel compression type.
- C. Flexible Metal Conduit Fittings: Squeeze type galvanized malleable iron or steel with nylon insulated throats.
- D. Liquidtight Flexible Conduit Fittings: Galvanized malleable iron or steel, with watertight gaskets, "O" ring and retainer, and nylon insulated throats.
- E. Condulet Fittings: Exposed conduit fittings shall be condulet type for all sharp turns, tees, etc. Provide PVC coated fittings where PVC coated rigid steel conduit is specified.
- F. Observe National Electrical Code requirements for insulated bushings on 1-1/4 inch and larger conduits. Double locknuts and fiber bushings with threads fully engaged are required. 1-1/4 inch and larger EMT connectors, if used, must also accommodate insulated bushings with threads fully engaged. T & B "Insuline" or Appleton insulated throat connectors are acceptable in lieu of separate bushings.

## 2.03 WIREWAYS

- A. General: Provide electrical raceways of types, grades, sizes and weights (wall thicknesses), number of channels, for each type service indicated. Provide complete assembly of raceway including, but not necessarily limited to, couplings, offsets, elbows, expansion joints, adapters, hold down straps, end caps, and other components and accessories as needed for complete system. Where types and grades are not indicated, provide proper selection as determined by Installer to fulfill wiring requirements, and comply with applicable provisions of NEC for electrical raceways.
- B. Surface Metal Raceways: Provide surface metal raceways of sizes and channels indicated on plans and constructed of galvanized steel with covers. Provide fittings indicated which match and mate with raceway. Finish with manufacturer's standard baked-on enamel paint.

## 2.04 WALL OUTLET BOXES

- A. General: Boxes shall be Racor, Steel City, Appleton or equal, catalog numbers based on Racor, unless otherwise indicated. In general, the type of boxes shall be as follows:

1. In Stud Walls: For single outlet use 4" square by 1-1/2" deep box #192. Boxes to be provided with raised covers of depth as required for thickness of wall materials.
  2. In Masonry and Poured Concrete Walls: Use 3-3/4" high by 2-1/2" and/or 3-1/2" deep masonry boxes #691 through #699 and/or #960 through #969.
  3. Surface Mounted Wall Outlets in non-process areas: Use 4" square by 1-1/2" deep box
  4. #192 with raised cover.
  5. Suspended Ceiling: Use octagon boxes, depth as required for application, securely fastened to structure.
  6. Switch Outlets in Door Jambs: Use partition boxes #426 and #427 for single and two gang switches.
  7. Outlets Installed Outdoors or in Wet Locations: Use type FD watertight cast boxes.
- B. Process Areas: Use type cast metal FD watertight cast boxes in areas where rigid steel conduit is specified.
- C. Corrosive Process Areas: Use non-metallic type FD water tight cast boxes in areas where PVC conduit is specified.

#### 2.05 PULL AND JUNCTION BOXES

1. Construction, sizes and installation of pull and junction boxes shall comply with NEC, Article 370.
2. Pull and junction boxes not specifically described in NEC, Article 370, shall be fabricated of heavy gauge galvanized steel with screw or hinged covers, and equipped with corrosion resistant screws and hardware.
3. Pull and junction boxes for outdoor installation shall be raintight.

#### 2.06 IN-GROUND HANDHOLES

- A. UL or ETL Listed, polymer concrete construction, open bottom stackable. Quazite PG style or equal.
1. Manufacturer: Subject to compliance with requirements, the following manufacturers are acceptable:
    - a. Quazite
    - b. HiLine
    - c. Armorcast
    - d. New Basis
- B. All stainless steel hardware with two fasteners per lid.
- C. Extra heavy duty covers with non-skid surface, tier 22, 22,500 lb. vertical and 800 lbs/sq. ft. lateral design loads. 'ELECTRIC', 'TELECOMMUNICATIONS', or "CONTROLS' imprinted on the lid as noted.
- D. Minimum size to be 11"x18" unless noted otherwise. Larger handholes may be required at select locations.



## **PART 3 – EXECUTION**

### **3.01 INSTALLATION OF RACEWAY**

- A. In general, all horizontal runs of branch circuit conduit shall be installed in ceiling plenum. Conduit for convenience outlets, wall mounted fixtures and other wall outlets shall be routed overhead and dropped through wall to the outlet. Branch circuit conduit shall not be installed in concrete floor slabs except where conditions will not permit the conduit to be installed overhead.
- B. Feeder conduits to panelboards, motor control centers and other major loads may be installed in fill below concrete slabs on grade.
- C. Conduits that are run in fill below concrete slabs on grade shall be installed so as not to interfere with welded wire mesh (wwm), vapor barrier, or concrete placement.
- D. All conduits and junction boxes installed in hazardous (classified) areas shall be installed in compliance with Article 500 of the NEC. Provide seal-offs as required.
- E. Generally, all conduit shall be concealed, except in crawl spaces, tunnels, shafts, mechanical equipment rooms, and at connection to surface panels and free standing equipment, and as otherwise noted.
- F. Exposed conduit and conduit concealed in ceiling space shall be routed in lines parallel to building construction.
- G. All conduit runs above suspended acoustical ceilings shall be routed so as not to interfere with tile panel removals with 4'0" to 6'0" flexible conduit drops from an independent junction box, accessible from below the ceiling to ceiling mounted equipment.
- H. Minimum size conduit shall be 1/2" trade size except all home runs to panels shall be minimum 3/4". Where specified size is not called for on drawings or in the specifications, conduit shall be sized per NEC.
- I. Install the conduit system mechanically and electrically continuous from outlet to outlet and to all cabinets, junction or pull boxes. Conduit shall enter and be secured to all cabinets and boxes in such a manner that all parts of the system will have electrical continuity.
- J. Installation of PVC conduit shall comply with the NEC with regard to grounding.
- K. PVC conduit shall not be installed above grade unless noted otherwise.
- L. Unless noted otherwise, all flush mounted panelboard enclosures shall have three 3/4" and one 1-1/4" empty conduits stubbed out to an accessible area.
- M. Support conduit raceway systems in accordance with requirements as set forth in the National Electric Code.

### **3.02 INSTALLATION OF BOXES AND FITTINGS**

- A. Install electrical boxes and fittings where indicated, complying with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in compliance with recognized industry practices to ensure that products fulfill requirements.
- B. Coordinate installation of electrical boxes and fittings with wire/cable and raceway installation work.

### **3.03 OUTLET BOX INSTALLATION**

- A. Outlet boxes shall be installed for all fixtures, switches, receptacles, and other devices.
- B. Approximate locations of outlets are shown on the plans, but each outlet location as shown shall be checked by Contractor before installing the outlet box.
- C. Wall boxes installed flush in common wall shall not be back-to-back or through-wall type. Boxes located on opposite sides of a common wall that are closely connected by conduit shall have the conduit openings plugged with duct seal.
- D. Install boxes and conduit bodies in those locations to ensure ready accessibility of electrical wiring.
- E. Outlet boxes shall be installed plumb and square with wall face and with front of box or cover located within 1/8" of face of finish wall. Boxes in masonry shall be set with bottom of the box tight to the masonry unit.

#### 3.04 IN-GROUND HANDHOLE INSTALLATION

- A. Install all handholes flush with surrounding grade. Adjust handholes as required for finished grade.
- B. Do not install handholes at low grade points. Install at locations to allow drainage away from box.
- C. Provide 1" clean compacted fill beneath handholes for drainage. Clean fill shall extend 8" beyond the sides of the handhole enclosure, and a minimum of 12" deep.

#### 3.05 PULL AND JUNCTION BOX INSTALLATION

- A. Install pull boxes, junction boxes and auxiliary wiring gutters where indicated on drawings and where required to facilitate installation of the wiring.
- B. For concealed conduit, install boxes flush with ceiling or wall, with covers accessible and easily removable. Where flush boxes are installed in finish ceilings or walls, provide cover which shall exceed the box face dimensions by a sufficient amount to allow no gap between box and finished material.
- C. Boxes shall not be located in finished, occupied rooms, without prior approval of Engineer.

**END SECTION.**

## **SECTION 26 05 53**

### **ELECTRICAL IDENTIFICATION**

#### **PART 1 – GENERAL**

##### **1.01 WORK INCLUDES**

###### **A. Base Bid:**

###### **1. Electrical Contractor Provide:**

- a. Electrical Identification of equipment, material, and accessories as specified herein and as shown on the plan documents.

##### **1.02 RELATED WORK**

###### **A. Specified Elsewhere:**

###### **1. Section 26 05 00 – “Basic Materials and Methods”**

##### **1.03 QUALITY ASSURANCE**

###### **A. Comply with ANSI A13.1.**

##### **1.04 COORDINATION**

- A. Coordinate identification names, abbreviations, colors, and other features with requirements in the Contract Documents, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual, and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.

#### **PART 2 – PRODUCTS**

##### **2.01 CONDUCTOR / RACEWAY IDENTIFICATION MATERIALS**

- A. Conductor Marker Tape: Vinyl or plastic, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process. Label all conductors neatly in equipment enclosures.
- B. Buried Raceway Marker / Danger Tape: Yellow with Black lettering polyethylene tape at least 6” wide, integral tracer / detection wire #12 AWG, with standard “CAUTION – BURIED ELECTRIC LINE” imprinted on each side. Install marker / danger tape in trench at 6” below grade or as indicated on drawings.
- C. Conduit Marking Label: Vinyl or thermoplastic strip type label indicating the type of system conductors enclosed. Provide labeling of concealed conduits within 2 ft. of equipment enclosures, junction and pull boxes. Provide label every 10ft on run of EMT type raceways both concealed and exposed.
  - 1. Marking Label is not required on underground raceways, or surface raceways.

##### **2.02 EQUIPMENT IDENTIFICATION MATERIALS**

- A. Equipment Labels: Thermoplastic, heavy gauge, self-adhesive type, with equipment name or identification tag machine engraved by micro-mill or equivalent process.

1. Provide custom labels for all newly installed panels, enclosures, power supplies, and special system assembly cabinets.

### **PART 3 – EXECUTION**

#### **3.01 APPLICATION**

##### **A. Auxiliary Electrical Systems Conductor and Cable Identification:**

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and cable pull points. Identify by system and circuit designation.
2. Use system of designations that is uniform and consistent with system used by manufacturer for factory-installed connections.

#### **3.02 INSTALLATION**

##### **A. Verify identity of each item before installing identification products.**

##### **B. Location: Install identification materials and devices at locations for most convenient viewing or interception without interference with operation and maintenance of equipment or supporting electrical devices.**

##### **C. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.**

##### **D. Color-Coding for Phase and Voltage Level Identification, 600 V and Less: Use the colors listed below for ungrounded branch-circuit conductors.**

1. Color shall be factory applied.
2. Colors for 120/208-V Branch Circuits:
  - a. Phase: Black / Red / Blue.
  - b. Neutral: White.
  - c. Ground: Green.
3. Colors for 277/480-V Branch Circuits:
  - a. Phase: Brown / Orange / Yellow.
  - b. Neutral: Grey.
  - c. Ground: Green.

**END SECTION.**

## SECTION 26 24 16

### PANELBOARDS

#### PART 1 – GENERAL

##### 1.01 WORK INCLUDES

- a. Electrical branch-circuit panelboard.

##### 1.02 RELATED WORK

- A. Specified Elsewhere:
  1. Section 26 05 00 – Basic Materials and Methods
  2. Section 26 05 53 – Electrical Identification

##### 1.03 DEFINITIONS

- A. EMI: Electromagnetic interference.
- B. GFCI: Ground-fault circuit interrupter.
- C. RFI: Radio-frequency interference.
- D. RMS: Root mean square.
- E. SPDT: Single pole, double throw.
- F. TVSS: Transient Voltage Surge Suppressor.

##### 1.04 SUBMITTALS

- A. Product Data: For each type of panelboard, overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
- B. Shop Drawings: For each panelboard and related equipment.
  1. Dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings. Include the following:
    - a. Enclosure types and details for types other than NEMA 250, Type 1.
    - b. Bus configuration, current, and voltage ratings.
    - c. Short-circuit current rating of panelboards and overcurrent protective devices.
- C. Field quality-control test reports including the following:
  1. Test procedures used.
  2. Test results that comply with requirements.
  3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- D. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.

1. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals.

#### 1.05 QUALITY ASSURANCE

- A. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories through one source from a single manufacturer.
- B. Product Options: Drawings indicate size, profiles, and dimensional requirements of panelboards and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. Comply with NEMA PB 1.
- E. Comply with NFPA 70.

#### 1.06 PROJECT CONDITIONS

- A. Environmental Limitations: Rate equipment for continuous operation under the following conditions, unless otherwise indicated:
  1. Ambient Temperature: Not exceeding 104 deg F (40 deg C).
- B. Service Conditions: NEMA PB 1, usual service conditions, as follows:
  1. Ambient temperatures within limits specified.
- C. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:
  1. Notify Construction Manager no fewer than two days in advance of proposed interruption of electrical service.

#### 1.07 COORDINATION

- A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, and encumbrances to workspace clearance requirements.

#### 1.08 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  1. Keys: Six spares for each type of panelboard cabinet lock.

### PART 2 – PRODUCTS

#### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Panelboards, Overcurrent Protective Devices, Controllers, Contactors, and Accessories:
  - a. Eaton Corporation; Cutler-Hammer Products.
  - b. General Electric Co.; Electrical Distribution & Protection Div.
  - c. Siemens Energy & Automation, Inc.
  - d. Square D / Group Schneider. (Basis of Design Product)

## 2.02 MANUFACTURED UNITS

- A. Enclosures: Flush- and surface-mounted cabinets. NEMA PB 1, Type 1.
  1. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
  2. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
  3. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
  4. Finish: Manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat.
  5. Directory Card: With transparent protective cover, mounted in metal frame, inside panelboard door.
- B. Phase and Ground Buses:
  1. Material:
    - a. Hard-drawn copper, 98 percent conductivity – Distribution and Branch Panelboards.
  2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors; bonded to box.
- C. Conductor Connectors: Suitable for use with conductor material.
  1. Main and Neutral Lugs: Mechanical type.
  2. Ground Lugs and Bus Configured Terminators: Mechanical type.
- D. Future Devices: Mounting brackets, bus connections, and necessary appurtenances required for future installation of devices.

## 2.03 SURGE PROTECTION DEVICES (TVSS)

- A. SPDs: Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 1449, Type 1.
- B. Features and Accessories:
  1. Integral disconnect switch.
  2. Internal thermal protection that disconnects the SPD before damaging internal suppressor components.
  3. Indicator light display for protection status.

4. Form-C contacts rated at 5 A and 250-V ac, one normally open and one normally closed, for remote monitoring of protection status. Contacts shall reverse on failure of any surge diversion module or on opening of any current-limiting device. Coordinate with building power monitoring and control system.
  5. Surge counter.
  - C. Peak Surge Current Rating: The minimum single-pulse surge current withstand rating per phase shall not be less than 200 kA. The peak surge current rating shall be the arithmetic sum of the ratings of the individual MOVs in a given mode.
  - D. Protection modes and UL 1449 VPR for grounded wye circuits with 480Y/277 V, three-phase, four-wire circuits shall not exceed the following:
    1. Line to Neutral: 1200 V for 480Y/277 V.
    2. Line to Ground: 1200 V for 480Y/277 V.
    3. Line to Line: 2000 V for 480Y/277 V.
  - E. SCCR: Equal or exceed 100 kA.
- 2.04 PANELBOARD SHORT-CIRCUIT RATING
- A. Fully rated to interrupt symmetrical short-circuit current available at terminals.
    1. Rated 10 kA.
- 2.05 DISTRIBUTION AND BRANCH-CIRCUIT PANELBOARDS
- A. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
  - B. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.
- 2.06 OVERCURRENT PROTECTIVE DEVICES
- A. Molded-Case Circuit-Breaker Features and Accessories: Standard frame sizes, trip ratings, and number of poles.
    1. Lugs: Compression style, suitable for number, size, trip ratings, and conductor materials.
    2. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air-conditioning, and refrigerating equipment.
    3. Multipole units enclosed in a single housing or factory-assembled to operate as a single unit.
    4. Main Breaker: See Schedule for requirements.
    5. Connection to Bus: Bolt-on type.

### **PART 3 – EXECUTION**

#### **3.01 INSTALLATION**

- A. Install panelboards and accessories according to NEMA PB 1.1.
- B. Comply with mounting and anchoring requirements specified in Division 26, Section 260500.



- C. Mount top of trim 74 inches above finished floor, unless otherwise indicated.
- D. Mount plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.
- E. Install overcurrent protective devices and controllers.
- F. Install filler plates in unused spaces.
- G. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.

### 3.02 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs as specified in Division 26, Section 26 05 53 - Electrical Identification.
- B. Create a directory to indicate installed circuit loads after balancing panelboard loads. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- C. Panelboard Nameplates: Label each panelboard with engraved metal or laminated-plastic nameplate mounted with corrosion-resistant screws.

### 3.03 CONNECTIONS

- A. Connect wiring according to Division 26, Section 26 05 00 - Basic Materials and Methods.

### 3.04 FIELD QUALITY CONTROL

- A. Prepare for acceptance tests as follows:
  - 1. Test continuity of each circuit.
  - 2. Test functionality of breaker on-off / make-break.
  - 3. Visually inspect all breakers for loose parts or manufacturing discrepancies.
- B. Perform the following field tests and inspections and prepare test reports:
  - 1. Perform each electrical test and visual and mechanical inspection. Certify compliance with test parameters.
  - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

### 3.05 CLEANING

- A. On completion of installation, inspect interior and exterior of panelboards and load centers. Remove paint splatters and other spots. Vacuum dirt and debris; do not use compressed air to assist in cleaning. Repair exposed surfaces to match original finish.

**END SECTION.**

## **SECTION 26 27 26**

### **WIRING DEVICES**

#### **PART 1 – GENERAL**

##### **1.01 WORK INCLUDES**

- A. Electrical Contractor Provide, as indicated in the Plans:
  - 1. Receptacles, receptacles with integral GFCI, and associated device plates.
  - 2. Snap switches.
  - 3. Communications outlets.

##### **1.02 DEFINITIONS**

- A. EMI: Electromagnetic interference.
- B. GFCI: Ground-fault circuit interrupter.
- C. Pigtail: Short lead used to connect a device to a branch-circuit conductor.
- D. RFI: Radio-frequency interference.
- E. UTP: Unshielded twisted pair.

##### **1.03 SUBMITTALS**

- A. Product Data: For each type of product indicated.
- B. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

##### **1.04 QUALITY ASSURANCE**

- A. Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all wiring devices and associated wall plates from a single manufacturer and one source.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Comply with NFPA 70.

#### **PART 2 – PRODUCTS**

##### **2.01 MANUFACTURERS**

- A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
  - 1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
  - 2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
  - 3. Leviton Mfg. Company Inc. (Leviton).
  - 4. Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).

## 2.02 STRAIGHT BLADE RECEPTACLES

- A. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - 2. Products: Subject to compliance with requirements, provide one of the following:
    - a. Cooper; 5352 (duplex).
    - b. Hubbell; CR5352 (duplex).
    - c. Leviton; 5352 (duplex).
    - d. Pass & Seymour; 5352 (duplex).

## 2.03 GFCI RECEPTACLES

- A. General Description: Straight blade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.
- B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - 2. Products: Subject to compliance with requirements, provide one of the following:
    - a. Cooper; GF20.
    - b. Hubbell; GFR5252.
    - c. Leviton; 8898.
    - d. Pass & Seymour; 2084.
  - 3. Description: Straight blade, 125 V, 20 A; NEMA WD 6 configuration 5-20R.
  - 4. WP Exterior Locations: Provide units labeled and rated as "Weather Resistant" type.

## 2.04 SNAP SWITCHES

- A. Comply with NEMA WD 1 and UL 20.
- B. Switches, Industrial Grade, 120/277 V, 20 A, Single Pole, 3-way and 4-way:
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Cooper; AH1200 Series
    - b. Hubbell; HBL1220 Series
    - c. Leviton; 1220 Series
    - d. Pass & Seymour; PS20 Series

## 2.05 INDOOR OCCUPANCY SENSORS

- A. Basis of Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:
  - 1. Hubbell Lighting.

2. Levitron Mfg. Company, Inc.
  3. Lithonia Lighting; Acuity Lighting Group, Inc.
  4. Novitas, Inc.
  5. RAB Lighting, Inc.
  6. Sensor Switch.
  7. Watt Stopper (The).
- B. General Description: Wall or Ceiling mounted, solid-state device with integral or separate relay unit. Basis of Design: Watt Stopper.
1. Operation: Unless otherwise indicated, turn lights on when covered area is occupied and off when unoccupied; within a time delay for turning lights off, adjustable over a minimum range of 15 seconds to 15 minutes.
  2. Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Sensor shall be powered from the relay unit.
  3. Relay Unit: Dry contacts rated for 20-A ballast load at 120 - V and 277 - V ac, for 13-A tungsten at 120 - V ac, and for 1 hp at 120 – V ac. Power supply to sensor shall be 24 – V dc, 150 – mA, Class 2 power source as defined by NFPA 70.
  4. Mounting:
    - a. Sensor: Suitable for mounting in any position on a standard outlet box.
    - b. Relay/Power Supply: Externally mounted through a ½ inch knockout in a standard electrical enclosure.
    - c. Time Delay and Sensitivity Adjustments: Recessed and concealed behind hinged door.
  5. Indicator: LED, to show when motion is being detected during testing and normal operation of the sensor.
  6. Detection Coverage (Room): Detect occupancy anywhere in a circular area of 1000 sq. ft. when mounted on a 96-inch-high ceiling.
  7. Product:
    - a. Wall Sensor: Sensor Switch # WSX-PDT.

## 2.06 COMMUNICATIONS OUTLETS

### A. Phone / Data Outlets:

1. Security Jack: Description: Single RJ-31X jacks for 100-ohm, balanced, four-pair UTP; TIA/EIA-568-B.1; complying with Category 6; Comply with UL 1863.
2. Combination Phone / Data Outlets: Dual RJ-45 jacks, keystone style, mounted to single gang plate matching other wiring devices. Provide final connections and complete install.
3. CATV Jack: Single type “F” coaxial connector on single gang plate matching other wiring devices.

## 2.07 WALL PLATES

- A. Single and combination types to match corresponding wiring devices.
  - 1. Plate-Securing Screws: Metal with head color to match plate finish.
  - 2. Material for Finished and Unfinished Spaces: 0.035-inch- thick, satin-finished stainless steel.
  - 3. Material for Industrial / Process locations: Galvanized.
- B. Wet-Location, Weatherproof / Weather resistant Cover Plates: NEMA 250, complying with type 3R weather-resistant thermoplastic with lockable cover, In-use type.

## 2.08 FINISHES

- A. Color: Wiring device catalog numbers in Section Text do not designate device color.
  - 1. Wiring Devices Connected to Normal Power System: Ivory, unless otherwise indicated or required by NFPA 70 or device listing.

## PART 3 – EXECUTION

### 3.01 INSTALLATION

- A. Comply with plans, including the mounting heights listed, unless otherwise noted.
- B. Coordination with Other Trades:
  - 1. Take steps to ensure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
  - 2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
  - 3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
  - 4. Install wiring devices after all wall preparation, including painting, is complete.
- C. Conductors:
  - 1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
  - 2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
  - 3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
  - 4. Existing Conductors:
    - a. Cut back and pigtail or replace all damaged conductors.
    - b. Straighten conductors that remain and remove corrosion and foreign matter.
    - c. Pigtail existing conductors is permitted provided the outlet box is large enough.
- D. Device Installation:

1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
  2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
  3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
  4. Connect devices to branch circuits using pigtails that are not less than 6 inches in length.
  5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
  6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
  7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
  8. Tighten unused terminal screws on the device.
  9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.
- E. Receptacle Orientation:
1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.
- F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.
- G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on bottom. Group adjacent switches under single, multigang wall plates.
- H. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

### 3.02 FIELD QUALITY CONTROL

- A. Tests for Convenience Receptacles:
1. Line Voltage: Acceptable range is 105 to 132 V.
  2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is not acceptable.
  3. Ground Impedance: Values of up to 2 ohms are acceptable.
  4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
  5. Using the test plug, verify that the device and its outlet box are securely mounted.
  6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or

similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

**END SECTION.**

## **SECTION 33 21 00**

### **PUBLIC WATER SUPPLY WELLS**

#### **PART 1 – GENERAL**

##### **1.01 GENERAL**

- A. Work in general involves construction of a new public water supply well.

##### **1.02 SUBMITTALS**

- A. The Jurisdictional Engineer hereby requests that all materials to be incorporated into the work have certifications furnished which show that the materials comply with Specifications prior to any construction.

##### **1.03 CODES AND STANDARDS**

- A. The following apply for this project:
  - 1. ASTM designations directly or indirectly specified, latest edition
  - 2. API designations directly or indirectly specified, latest edition
  - 3. AWWA designations directly or indirectly specified, latest edition

##### **1.04 WELL CONSTRUCTION**

- A. Erosion and Sediment Control
  - 1. Contractor is responsible for any erosion and sediment control measures required to minimize sediment in runoff water resulting from well construction, including drilling fluid, water produced during drilling operations, water produced during well development, and water produced during test pumping of the well. Contractor shall meet requirements of General Permit 6 and the well water pollution prevention plan.
- B. Drill Nominal 24" Diameter Hole
  - 1. Contractor shall drill a nominal 24" diameter hole to a depth of 40 feet. Diameter shall be of sufficient size to accommodate the surface casing.
- C. Furnish and Install 20" Dia. Surface Casing
  - 1. Contractor shall furnish and install a 20" diameter structural grade surface casing from existing ground to the bottom of the 24" diameter hole. The casing shall be of structural grade and of quality to provide satisfactory performance. Casing may be removed during grouting operations, or may shall be grouted with neat cement grout.
- D. Drill Nominal 17" Diameter Hole
  - 1. Contractor shall drill a nominal 17" diameter hole from the bottom of the 24" hole to an estimated depth of 250 feet. The 17" diameter hole shall extend a minimum of 10 feet into the bedrock which is a Bernard Shale formation.
- E. Furnish and Install 14" Diameter Steel Casing
  - 1. Contractor shall furnish and install a 14" OD structural grade surface casing from existing ground to the bottom of the 17" diameter hole. The casing shall have a wall thickness of 0.375". The casing shall be new single steel casing pipe meeting AWWA Standard A-100, ASTM or API specifications for water well construction. Casing shall



have full circumferential welds at joints. The casing shall be provided with sufficient guides welded to the casing to center the casing in the drill hole, prevent displacement of the casing and still permit unobstructed flow and uniform thickness of grout. Casing shall be grouted with neat cement grout.

F. Drill Nominal 12" Diameter Hole

1. Contractor shall drill a nominal 12" diameter hole from the bottom of the 17" hole to an estimated depth of 835 feet. The 12" diameter hole shall extend a minimum of 10 feet into the Willow River formation (completely casing out the St. Peter Sandstone formation).

G. Furnish and Install 8" Diameter Steel Casing

1. Contractor shall furnish and install an 8" ID structural steel casing. The casing shall be new single steel casing pipe meeting AWWA Standard A-100, ASTM or API specifications for water well construction. Casing shall have a minimum 0.365" wall thickness. The casing shall extend from the existing ground to the bottom of the 12" hole. Casing shall have full circumferential welds at joints. The casing shall be provided with sufficient guides welded to the casing to center the casing in the drill hole, prevent displacement of the casing and still permit unobstructed flow and uniform thickness of grout.

H. Grout Equipment Setup

1. All work involved for preparation to place grout for the surface casing and 10" permanent casing, including the grout shoe, shall be included in this item.

I. Furnish and Install Neat Cement Grout

1. Contractor shall furnish and place neat cement grout in the annular space outside the 14" surface casing from the bottom of the casing to existing ground level. Contractor shall secure Engineer's approval of the method proposed for grout placement. No method will be approved that does not specify the forcing of grout from the bottom of the space to be grouted towards the surface with a grout pump. A cement retainer, packer, or plug shall be provided at the bottom of the casing so that grout will not leak into the bottom of the well casing. The grouting shall be done continuously and in such a manner as will insure the entire filling of the annular space in one operation. No drilling operations or other work in the well will be permitted within 72 hours after the grouting of the casing. The grout pipe shall be entirely removed from the hole immediately after grouting is complete. Neat cement used for grout shall conform to ASTM C150. Contractor shall use not more than six gallons of water per sack (94 pounds) of cement.
2. Contractor shall furnish and place neat cement grout in the annular space outside the permanent casing from the bottom of the permanent casing to existing ground level. Contractor shall secure Engineer's approval of the method proposed for grout placement. No method will be approved that does not specify the forcing of grout from the bottom of the space to be grouted towards the surface with a grout pump. A cement retainer, packer, or plug shall be provided at the bottom of the inner casing so that grout will not leak into the bottom of the well casing. The grouting shall be done continuously and in such a manner as will insure the entire filling of the annular space in one operation. No drilling operations or other work in the well will be permitted within 72 hours after the grouting of the casing. The grout pipe shall be entirely

removed from the hole immediately after grouting is complete. Neat cement used for grout shall conform to ASTM C150. Contractor shall use not more than six gallons of water per sack (94 pounds) of cement.

J. Drill Nominal 8" Diameter Open Hole

1. Contractor shall drill an 8" diameter hole from the bottom of the permanent casing to the bottom of the well (estimated 1280' deep). Well depth will be field determined based on water production. Consult with Engineer as drilling progresses.

1.05 WELL DEVELOPMENT

- A. Upon completion of well construction, Contractor shall develop the well to remove native silts, clays, and drilling mud. Development should continue until the maximum specific capacity is obtained from the completed well. Approved methods shall be used as necessary to produce a well with the maximum yield of water per foot of drawdown. Methods used shall extract from the water bearing formation any materials which, during the life of the well, may be drawn from the formation when the well is pumped under maximum conditions of drawdown. Contractor shall set up weir or other device to measure flow from the well during development.

1.06 TEST PUMPING

- A. Contractor shall furnish and setup test pump, discharge piping, and all measuring equipment. Owner will not provide a power source for use in test pumping. This shall be the Contractor's full responsibility. Pump shall be capable of pumping to the discharge point with a discharge of at least 300 gpm without interruption for a minimum of 24 hours. Records of the test pump capacity and head characteristics, static water level, depth of test pump setting, and time of starting and stopping of each test cycle shall be provided by the Contractor.
- B. Contractor shall test pump the well to obtain yield and drawdown results according to AWWA A100, Section 5.1. Contractor shall operate the pumping unit at such rates of discharge and for such periods of time as directed, except that the final test shall be run for a period of no less than 24 hours unless the drawdown remains stable for no less than 6 hours. Accidental interruptions may, if so agreed upon between the Contractor and Engineer, be compensated for by correspondingly extending the time of the completion of the test run. A 2 hour recover period must follow the yield drawdown test pumping, and will be incidental to test pumping.
- C. Pumping rate, pumping water level, drawdown, and time measurements shall be recorded during test pumping at intervals of 1 reading per minute during the first 10 minutes, then 1 reading per 15 minutes or less for the next 2 hours, then 1 reading per hour until conclusion of test pumping. Recovery drawdown time measurements shall be taken in accordance with the above schedule for 2 hours or until water level returns to beginning static level or other stable elevation. A graphical evaluation of the test pumping results as well as the tabular records shall be submitted to the Engineer. Time stated for duration of the final test is only approximate, and the Engineer may require the Contractor to shorten or extend such period of test or to make additional tests.
- D. After the completion of the final test, the Contractor shall remove by bailing, sand pumping, or other methods any sand, stones, or other foreign material that may have become deposited in the well. A copy of all yield-drawdown test records shall be submitted to the Engineer and the IDNR.

- E. Contractor must provide necessary erosion control and repair to original condition any damage caused by test pumping discharge.
- F. After test pumping the well, Contractor shall have water samples collected and sent to a certified laboratory for testing.

#### 1.07 TESTING

##### A. Plumbness and Alignment Test

- 1. Contractor shall perform a plumbness and alignment test as outlined in AWWA A100-20 prior to acceptance of the well. The test shall be performed on the permanent casing and open hole. Contractor may perform test at other times of construction, however, no payment will be made for multiple tests. Any unacceptable deviation of plumbness and alignment shall be corrected by the Contractor at no expense to the Owner. Failure to correct any deficiencies in plumbness and alignment will be cause for refusal of well acceptance.

##### B. Water Quality Testing

- 1. Contractor shall collect samples after test pumping of the well (with the exception of the bacteriological monitoring, which shall be collected and tested after disinfection) and send samples to a certified laboratory. Samples shall be analyzed for all appropriate contaminants specified in Iowa Administrative Code (IAC) 567 Chapter 41 and IAC 567 Chapter 43, Section 43.3 (7) C.2. These water quality parameter include: total coliform bacteria, nitrate and nitrite, alkalinity, manganese, ammonia, magnesium, pH, calcium, chloride, copper, hardness, iron, VOCs and SOCs, radionuclides, and IOCs.

#### 1.08 DISINFECTION

- A. After the well has been completely constructed, it shall be thoroughly cleaned of all foreign substances and then be disinfected with a chlorine solution as required in Section 4.9 of AWWA A100-20. Chlorine solution shall be prepared and applied in accordance with the directions of and to the satisfaction of the Engineer and shall remain in the well for a period of at least 24 hours. After 24 hours, the chlorine shall be flushed from the well and a water sample collected, sent to a certified laboratory, and tested for bacteriological activity according to the Iowa Administrative Code procedure.
- B. Satisfactory results shall be obtained and reported to IDNR prior to acceptance of well. Any chlorinated pumped water shall be dechlorinated to prevent damage to above ground life forms. Dechlorination methods shall be approved by Engineer.

#### 1.09 CAPPING OF WELL

- A. Contractor shall place a temporary cap consisting of a threaded cap, wood plug, or welded cap meeting approval of Engineer at all times during well construction when the Contractor is not on site or when other work is being performed. This is to provide protection to the well construction from outside sources as well as protection to the general public.
- B. Any contamination resulting from Contractor's negligence during construction and prior to acceptance of the well shall be the full responsibility of the Contractor to correct. No separate payment will be made for the above described work.

1.10 WELL ABANDONMENT

- A. Should the Contractor fail to sink the well to the depth specified or to such lesser depth as agreed upon by the Engineer, or should he abandon the well because of loss of tools or for any other cause, he shall, if requested and as approved by the Engineer, properly fill and abandon the hole, and if possible, remove the casing. Abandonment shall be per AWWA A100-20 procedures and meet IDNR requirements. No separate payment will be made for any work associated with well abandonment.

1.11 SAMPLES AND RECORDS

- A. Contractor shall keep an accurate record of the location of the top and bottom of each stratum penetrated and shall save and deliver to the Iowa Geological Survey a sample of material taken from each 5 feet of drilling and at every change of formation. Drilling log shall be submitted to Iowa Geological Survey, IDNR, and Engineer and shall include all information required by Iowa Administrative Code.
- B. Contractor shall also keep an accurate record as assembled of the order, number, size, and lengths of the individual pieces of pipe installed in the well. A daily work report shall be submitted to Engineer describing the nature of material encountered, work done during each day, including the items of work accomplished, such as depth drilled, casing set, water level in the well at the beginning and end of each shift, and any other pertinent data.

1.12 PITLESS WELL UNIT

- A. See Section 33 31 00.

1.13 WELL PUMP

- A. See Section 43 25 13.

1.14 WELL PIPING

- A. See Section 43 25 13.

**END SECTION.**

## **SECTION 33 31 00**

### **PITLESS UNIT SYSTEM**

#### **PART 1 – GENERAL**

##### **1.01 GENERAL**

- A. Work in general involves:
  - 1. Complete assembled Pitless Unit including well cap, lift-out bail, hold down hooks, lift out pipe, discharge body with support ring, and flowing well spool.
  - 2. Protective well enclosure and concrete slab.

##### **1.02 SUBMITTALS**

- A. The Jurisdictional Engineer hereby requests that all materials to be incorporated into the work have certifications furnished which show that the materials comply with Specifications prior to any construction.

#### **PART 2 – PRODUCTS**

##### **2.01 PITLESS UNIT**

- A. 8" ID Standard Industrial Pitless Unit manufactured by Baker Manufacturing Company, Monitor Division, or approved equal.
- B. The unit should be factory assembled, before shipping to the site. The pitless unit must conform to the Recommended Standards for Water Works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers, Health Education Services, Albany, NY., and/or Water Systems Council PAS-97 (04).
- C. The unit shall be NSF 61 Certified.
- D. Well Cap: The Watertight Cap shall be secured to the pitless casing with a compression gasket. The top of the cap can be removed without affecting the sealed conduit or wiring. The heavy-duty watertight cap will have a separate protected downward facing stainless steel screened well vent with pipe nipple. Construction of the cap and well vent will be of heavy-duty gray cast iron and painted with a green enamel finish.
- E. Upper Casing: The Upper Casing is factory assembled to the discharge body, and the lift out and hold down mechanism are factory assembled to the spool. Upper casing thickness must conform to the Recommended Standards for Water Works and be coated with a rust protective coating. The upper casing must provide a watertight connection from the discharge body to the well cap. The discharge port center line to be 7 feet below grade, and the pitless upper casing to extend 24-inches above grade.
- F. Spool: The spool shall include 4" NPT per ANSI B 1.20.1 male or female drop pipe connection and shall be constructed of lead-free galvanized heavy duty gray cast iron, ductile iron, or steel with a lead-free galvanized plating on the wetted surface of over 0.010 inches thick. The spool will have o-ring grooves machined into the spool retaining the o-rings when setting or pulling the system. The positive pressure o-ring seals shall be constructed of neoprene or equivalent. Spool shall be designed to accommodate probe tubes or water samplers and NPT ports for discharge pressure taps. O-ring protection

should be provided to prevent the seals from dragging on the upper casing when the pump is installed or removed.

- G. Discharge Body: The Discharge Body shall be constructed of lead-free galvanized ductile iron or lead-free galvanized steel. O-ring seat to be designed to prevent crevice and galvanic corrosion, dissimilar metals should be avoided. Discharge body designed to be strong enough to prevent distortion due to vertical movement of discharge pipe thereby allowing spool to bind in the discharge body. Minimum I.D. of the discharge body to be equal to or greater than I.D. of the well casing for ease in well servicing.
- H. Hold-Down Mechanism: The Pitless Unit spool should have a hold down mechanism, factory assembled to spool and capable of preventing rotation of the pitless spool relative to the discharge body, at full rated locked rotor torque of the submersible pump motor. The spool must also have a factory assembled lift out pipe and bail, or spider capable of 30,000 lbs. rated load, to allow lifting a water filled drop pipe and pump out of the well for service. Components to be constructed of ductile iron or steel with a corrosion resistant coating.

## 2.02 WELL PROTECTIVE ENCLOSURE

- A. Faux rock well protective enclosure, Model 104 manufactured by Dekorra, or approved equal. Enclosure to have screened vent. Owner to select color from standard color options.

## PART 3 - EXECUTION

### 3.01 INSTALLATION

- A. Pitless unit: install per manufacturer's recommendations. Full circumference weld pitless unit to well casing.
- B. Well protective enclosure: install per manufacturer's recommendations. Pour 8" thick concrete slab and secure enclosure to slab with stainless steel concrete anchors.

**END SECTION.**

## SECTION 40 71 13

### ELECTROMAGNETIC FLOW METERING SYSTEMS

#### PART 1 – GENERAL

##### 1.01 SUMMARY

- A. This section describes the requirements for an electromagnetic flow meter for Well 3.
- B. Under this item, the contractor shall furnish and install the flow measurement equipment and accessories as indicated on the plans and as herein specified.

##### 1.02 QUALITY ASSURANCE

- A. Referenced Standards and Guidelines - Complies with applicable portions of ANSI/AWWA Standards and NSF/ANSI Standard 61, Annex G. There are currently no AWWA standards that specifically address electromagnetic metering.
  - 1. Flow measurement function complies with Industry Standards
    - a. ANSI B16.5 Class 150 RF
    - b. AWWA Class B
    - c. DIN EN 1092-1 (Flanges)
    - d. NEMA 4X/6P (IEC 60529 IP67)
    - e. CE

##### 1.03 SUBMITTALS

- A. Submit product data for the items specified in this section, including:
  - 1. Shop drawings, certified by the manufacturer, showing all important details of the equipment's construction and installation, including specific step-by-step installation procedures for the units and locations, and dimensional information regarding the unit layout.
  - 2. Descriptive literature, bulletins, and catalogs of the equipment.
  - 3. A complete installation manual detailing the assembly procedures and practices to be used by the Contractor in order to assure a complete and satisfactory operation. Installation instructions shall include explicit details on the proper placement of the ultrasonic tube in the installation specific to this project.
  - 4. Provide a copy of the manufacturers' warranty and information about the nature and location of parts, service crews, and repair facilities for all components.
  - 5. Information confirming the manufacturer's compliance with the electrical and process performance requirements of this section.
  - 6. Wiring schematics and electrical wiring diagrams, as applicable.
- B. Operation and Maintenance Manual
  - 1. Submit operation and instruction manuals for the equipment being supplied. In addition, the manuals shall include a listing of the nearest sales representative, and a troubleshooting guide.

1.04 PRODUCT HANDLING AND STORAGE

- A. All parts shipped to the jobsite shall be properly protected from rain and wind, such that no damage or deterioration shall occur during any prolonged delay from the time of delivery until the installation is completed and the units are placed into operation.

1.05 WARRANTY

- A. Provide documentation of manufacturer standard warranty.

**PART 2 – PRODUCTS**

2.01 ACCEPTABLE MANUFACTURER

- A. M2000 Electromagnetic Flow Meter manufactured by Badger Meter, Inc.
- B. Approved Equal

2.02 GENERAL

- A. Provide magnetic flowmeters as shown on the Drawings and as specified herein. The magnetic flowmeter shall utilize Faraday's Law, where the sensor converts the liquid flow through the sensor into electrical voltage proportional to the velocity of the flow.
- B. The meters shall be designed for and compatible with handling potable water.

2.03 OPERATING CONDITIONS

A. System Components

1. Metering Tube (Detector)

- a. Consists of stainless steel tube lined with a non-conductive material. Energized detector coils around tube create a magnetic field across the diameter of the pipe. As a conductive fluid flows through the magnetic field, a voltage is induced across two electrodes; this voltage is proportional to the average flow velocity of the fluid.

2. Signal Amplifier

- a. Consists of unit which receives, amplifies, and processes the detector's analog signal. Signal is converted to both analog and digital signals that are used to display rate of flow and totalization. Processor controls zero-flow stability, analog and frequency outputs, serial communications and a variety of other parameters. Integrated LCD display indicates rate of flow, forward and reverse totalizers and diagnostic messages. Display guides user through programmable routines.

B. Operational Requirements

1. Electromagnetic Flow Meter

- a. Detector Housing Material: Carbon Steel
- b. Amplifier Housing Material: Powder-coated aluminum die cast
- c. Liner Material: Hard Rubber or PTFE – NSF 61 Certified
- d. Electrodes Material: Hastelloy C
- e. Grounding Rings: Stainless Steel
- f. Meter Size: 4 inch



- g. Minimum Flow Range: 20...1000 GPM
  - h. Accuracy:  $\pm 0.2\%$  m.v.,  $\pm 1$  mm/s
  - i. Repeatability:  $\pm 0.1\%$
  - j. Maximum Fluid Temperature: 178° F (80° C)
  - k. Ambient Temperature Range: -4...140° F (-20...60° C)
  - l. Nominal Pressure: Up to 232 psi (16 bar)
  - m. Conductivity: Minimum 5 $\mu$ S/cm (20  $\mu$ S/cm for demineralized water)
  - n. Humidity: 90% R.H. maximum
  - o. Analog Output: 0/4-20 mA
  - p. Pulse Output
    - 1) 2 open collectors
    - 2) Passive 32V DS
    - 3) 0...100 Hz 100 mA
    - 4) 100...10,000 Hz 20 mA
  - q. Frequency Output: Maximum 10 kHz (open collector)
  - r. Communication
    - 1) RS232
    - 2) RS422
    - 3) RS485 Modbus RTU
  - s. Empty pipe Detection: Field-tunable for optimum performance
  - t. Min-Max Flow Alarm: Programmable outputs 1...100% of flow
  - u. Low Flow Cutoff: Programmable 0...10% of maximum flow
  - v. Galvanic Separation: Functional 500 Volts
  - w. Pulse Width: Programmable 5...2000 ms
  - x. Coil Power: Pulsed DC
  - y. Power Supply: 92-275V AC (50/60 Hz) <13 VA
  - z. Process Connection: Flange, ANSI B16.1 class 125
2. Flow display: Instantaneous and total flow shall be displayed on an integral transmitter as well as output to the control panel for display at the control panel.

### **PART 3 – EXECUTION**

#### **3.01 INSTALLATION**

- A. The Contractor shall install magnetic flow meter systems in accordance with the manufacturer requirements.

#### **3.02 MANUFACTURER'S WARRANTY**

- A. The manufacturer of the above specified equipment shall guarantee for two (2) years from date of installation; or two (2) years and six (6) months after the date of shipment that the equipment shall be free from defects in design, workmanship or materials.

**END SECTION.**

## **SECTION 40 72 43**

### **PRESSURE TRANSDUCERS**

#### **PART 1 – GENERAL**

##### **1.01 SUMMARY**

###### **A. Section includes:**

1. Submersible pressure transducers and transmitters for use in well level measurement.

##### **1.02 SUBMITTALS**

###### **A. Shop Drawings**

1. Submit product data, catalog literature, and ISA Standard Specification sheets for all products.
2. Submit drawings showing dimensions, and interconnections between equipment necessary to providing complete system.
3. Submit manufacturer's installation and use recommendations.

###### **B. Operation and Maintenance Data**

1. Submit operation and maintenance data for each product.
2. Submit Manufacturer's calibration certification data.

##### **1.03 DELIVERY, STORAGE, AND HANDLING**

###### **A. General**

1. Deliver product to site. Perform receipt inspection including calibration check of all instrumentation.
2. Store and protect product.
3. After physical installation; protect from all other construction activity and potential damage.
4. Handle in accordance with manufacturer's recommendations.

##### **1.04 QUALITY ASSURANCE**

- A. To ensure quality, conformance, and reliability with regard to the manufacturing and production of the equipment, the manufacturer shall meet all requirements listed herein.
- B. As per Article 11 of Section 00 21 13, no item of material or equipment will be considered by Engineer as an "or- equal" or substitute until after the Effective Date of the Contract.

#### **PART 2 – PRODUCTS**

##### **2.01 SUBMERSIBLE PRESSURE TRANSDUCER**

###### **A. Description**

1. The submersible pressure transducer sensor shall convert the movement of a flexible diaphragm into a pressure proportional 4-20mA signal that is linear to the water level above the sensor.
  2. Wetted materials shall be 316SS.
  3. Sensor diameter: 0.75-inches.
  4. Pressure Range – 0 to 150 ft
  5. Static Accuracy -  $\pm 0.25\%$ FSO
  6. Output – 4-20 mA
  7. Vented sensor style. Provide bellows on vent line.
  8. Temperature Range – 0 - 50° C
  9. Protection Rating – IP68, NEMA 6P
- B. Mounting
1. Install along with Well 3 pump and drop pipe. Place sensor near well pump and secure sensor cable to drop pipe every 10 feet the entire depth. Provide NEMA 4X stainless steel junction box near Well 2 for vent tube bellows and wire connections or provide adequate cable length to install bellows for vent tube in the control panel in the Well House.
- C. Acceptable Manufacturer
1. KPSI Series 320
  2. Or Equal

**PART 3 – EXECUTION – NOT USED**

**END SECTION.**

## **SECTION 40 80 00**

### **START UP AND COMMISSIONING**

#### **PART 1 – GENERAL**

##### **1.01 SUMMARY**

###### **A. Section Includes**

1. Provide supervision, specialized personnel, labor, coordination, tools, material, equipment, and services required to prepare for start-up of each respective item of equipment and systems and to completely commission equipment and systems provided as a part of this Contract.
2. Start-up shall refer to start-up of entire plant, and to individual systems start-up for checkout prior to main plant start-up.
3. After the installation of the monitoring systems and primary devices has been completed, the control systems shall be tested under normal operating conditions in the presence of the Engineer and Owner's representatives.
4. Leaks, grounds, or other imperfections found upon testing shall be repaired to the satisfaction of the Owner.
5. Start-up and Commissioning shall be considered complete when all equipment and systems function individually and collectively to achieve the design intent of the facility.

##### **1.02 EQUIPMENT AND DOCUMENTATION**

- ###### **A.**
- The Contractor shall be responsible for familiarizing himself with all of the equipment and components to be calibrated and with any special procedures that may be required for its commissioning. Contractor shall be totally familiar with documentation package provided by him, particularly that pertaining to instrumentation such as loop sheets, installation details, wiring diagrams, etc. The Contractor shall obtain manufacturer's installation instruction manuals well in advance of performing installation.

##### **1.03 TEST PLAN**

- ###### **A.**
- Test plans for each system shall be submitted to the Engineer for review prior to beginning of checkout. Test plans shall include documentation, forms, procedures, and schedules.

##### **1.04 PURPOSE**

- ###### **A.**
- Calibration of individual instruments and testing of complete systems shall be performed to assure that the control systems are functioning as designed, under simulated operating conditions, prior to and during start-up of the process equipment. Handling of instruments after calibration and testing shall be kept to a minimum to ensure that the calibration is not changed before start-up.

##### **1.05 AUTHORIZATION**

- ###### **A.**
- The Owner shall be notified of the completion of any portion of the system which is ready for checkout. Systems or items SHALL NOT BE PRESSURIZED NOR ENERGIZED until the installations is ready for calibration and testing.

## **PART 2 – PRODUCTS**

### **2.01 SUPPORT MATERIALS AND SUPPLIES**

- A. Owner shall provide all non-potable and potable water supplies. Contractor shall provide necessary pumps, hoses, and/or storage tanks to facilitate start-up and commissioning.
- B. Owner shall allow the use of all plant power supplies. Contractor shall provide all temporary electrical gear, wiring, conduit, etc. to facilitate start-up and commissioning.
- C. Contractor shall provide all other materials and supplies necessary to facilitate start-up and commissioning.

## **PART 3 – EXECUTION**

### **3.01 CHECK-OUT**

- A. Remove shipping, packing, tags, and stops from instruments before starting with procedures specified. Contractor shall have instruction manuals available, and shall install miscellaneous components as integral parts of the equipment.
- B. Follow manufacturer's printed recommendations for calibrating or checking calibration of instruments.
- C. Following installation, check-out and final adjustment of all panels, instruments, meters, monitoring, and control devices, a performance check shall be made on each. Meters shall be tested as specified. All status and alarm switches, and all monitoring and control functions shall also be checked. Each device shall be signed-off by the manufacturer's technician and be accepted by the Owner. Testing shall be done from the signal source to the final element or device including all field wiring.
- D. If deficiencies are found during testing, the Contractor shall make such adjustments or alterations as are necessary to bring equipment up to specification performance. Following such adjustment, the tests shall be repeated for all specified points to ensure compliance.

### **3.02 CONTROLS AND INSTRUMENTATION SYSTEMS**

- A. Check out controls and instruments prior to start-up to assure in situ performance in accordance with Contract Documents under simulated operating conditions. Contractor shall determine initial start-up conditions.
- B. For instruments that contain small supply pressure gauges or output pressure gauges. calibration of such gauges shall not be required. However, if gauge is found to be defective, instrument involved shall be immediately called to attention of Owner and replaced by the new instrument at no cost to the Owner.
- C. If an instrument cannot be properly adjusted, it shall be immediately called to attention of Owner's representative and be replaced at no cost to the Owner.
- D. Instrument Check:
  - 1. Verify data on nameplate with respect to conditions of range, operating temperature, specific gravity, and components as stated on unit specifications.
  - 2. Any discrepancies shall be immediately called to attention of Owner and report of its condition confirmed in writing.

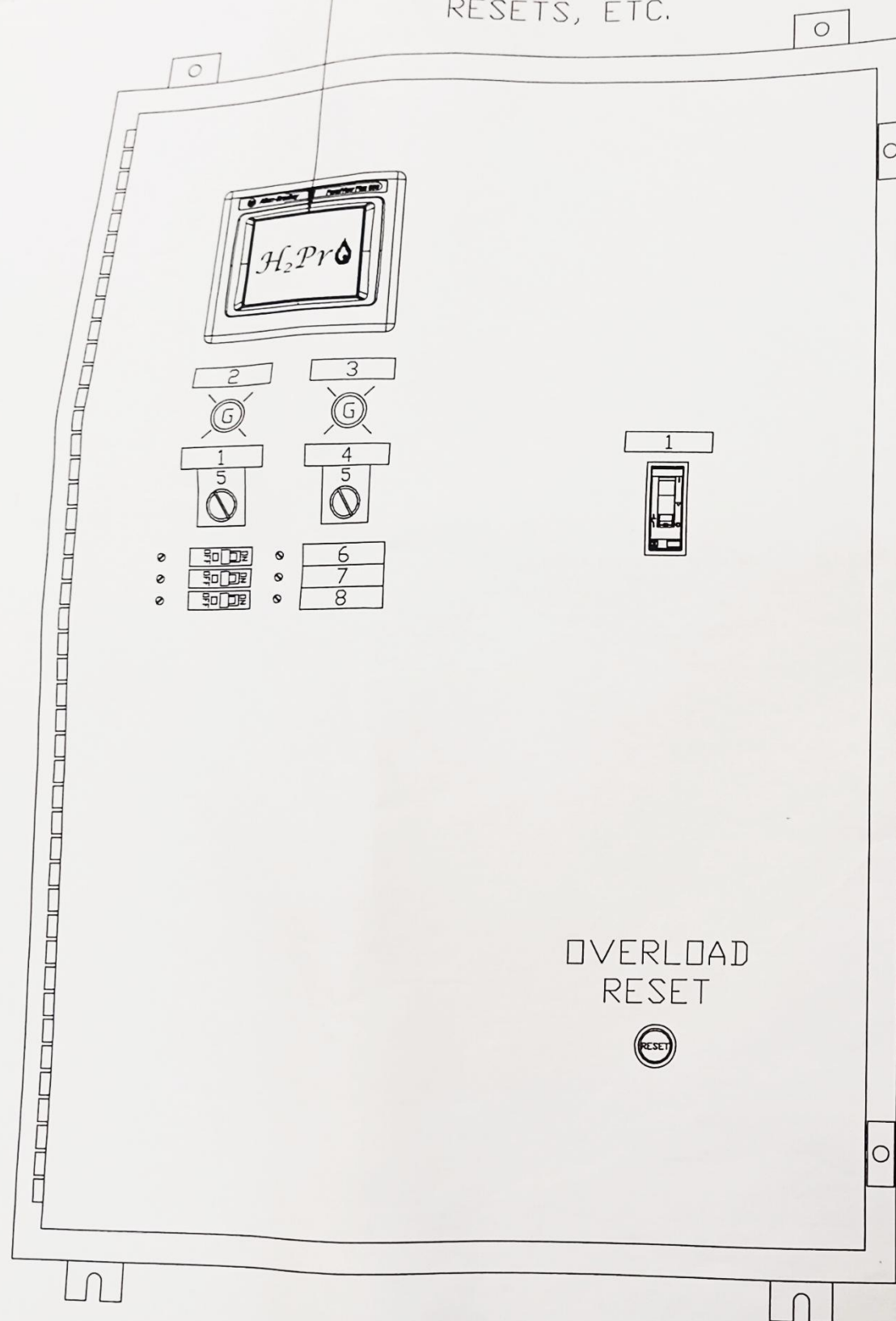
- E. Verify that control valve seats are free of foreign material, and properly positioned for intended service.
- F. Test Procedures:
  - 1. Check control wiring for proper operation of pushbuttons, hand switches, pilot lights, and other control devices.
  - 2. Place equipment installed or wired under this Contract in initial operation following instructions and recommendations of equipment manufacturers.
    - a. After energizing and prior to start-up, check control circuits and programs for proper sequence of operation and interlocking functions.
    - b. Any wiring changes required as a result of such checks shall be properly identified by changing terminal strip and/or wiring markers.
  - 3. Provide necessary construction labor to make equipment final adjustment necessary to place plant in good operating condition and furnish labor to assist in solving instrument or control problems.
  - 4. Calibrate instruments and components in accordance with manufacturer's calibration data over full operational range, prove instruments to be within published specifications, accuracy, and affix calibration sticker. Instruments shall be calibrated individually and where applicable, as system (i.e., control loop transmitter, controller, and valve). Components which have adjustable features shall be carefully set for specific conditions and applications of this Project. Each calibration sticker shall be signed by Contractor's representative witnessing test.
  - 5. Calibration sticker shall contain the following information: equipment identification tag number, range of calibration, and date and name of person performing calibration.
  - 6. Pressure gauges shall be checked at 10 percent, 50 percent, and 90 percent of ranges for linearity within manufacturer's stated specifications. Gauges not meeting manufacturer's specifications shall be repaired or replaced to the satisfaction of the Owner's representative.
  - 7. Thermometers not meeting manufacturer's specifications shall be repaired or replaced to the satisfaction of the Owner's representative.
  - 8. Temperature Switches: Calibrate in accordance with manufacturer's specifications.
  - 9. Valves and Operators:
    - a. Valve Action: Check valve action for conformance to specifications (open or closed on air failure).
    - b. Valve Positioner: Check for conformance to specifications relative to spring action and input range (particularly for split range applications), valve action, and length of stroke. If valve positioner is fitted with standard characterized cam, check to see if proper cam is mounted. If specifications call for specially cut cam, refer this item in writing to Engineer and Owner for handling. Do not cut or modify standard cam.
  - 10. Panel Mounted Instruments:

- a. Receiver Instruments: Check zero and span at 10 percent, 50 percent, and 90 percent of range by impressing measured signal into input or signal connections or instrument.
- b. Controllers (Panel or Control Room Mounted):
  - 1) Check for proper operation and adjust in accordance with manufacturer's instructions. Vary process input signal and check output signal for either indirect or direct action.
  - 2) Set initial proportional band, reset rate, and rate time as recommended by manufacturer. It shall be necessary to determine process dynamics in actual operation before settings can be made.
  - 3) Control loops shall be observed for operability and conformance to specifications by impressing simulated input signal at primary element and checking response of final control element.
- c. Integrators, Ratio Relays and others: Check in conformance to manufacturer's recommendations. Receiver integrators shall be calibrated for proper operation and multiplication factor by feeding maximum input signal (16 psig, 20 mA, etc.) for specified period of time with stopwatch. Check in conformance to manufacturer's recommendations. Ratio signals shall be simulated to check proper ratio settings and output.
- d. Graphics Panel: If possible, trip each alarm actuator (field device) in sequence and observe graphics. Check "acknowledge" and "test" pushbuttons.
- e. Annunciator: Check each window by tripping its respective interlock or trip point.

**END SECTION.**



RUN TIME METERS,  
ALARM LIGHTS, ALARM  
RESETS, ETC.



NEMA 1 ENCLOSURE  
42"H X 30"W X 8"DP

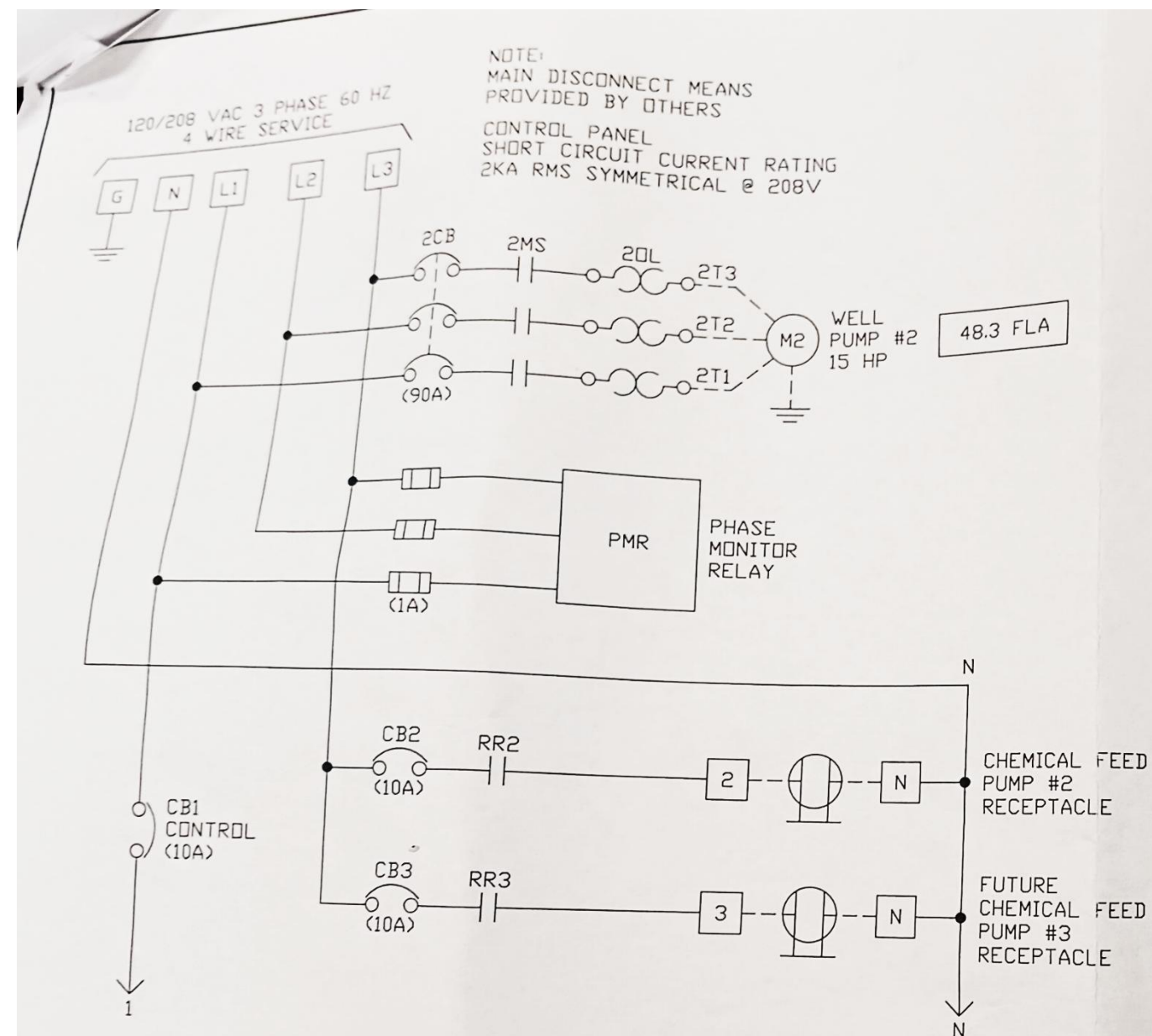
### NAMEPLATE LEGEND

1. WELL PUMP 2
2. WELL PUMP 2 RUN
3. WELL PUMP 3 RUN
4. WELL PUMP 3
5. HAND OFF AUTO
6. CONTROL
7. CHEMICAL FEED PUMP 2
8. CHEMICAL FEED PUMP 3

### NOTE:

FUTURE WELL PUMP 3 CIRCUIT BREAKER  
AND MOTOR STARTER ARE REMOTE MOUNTED.

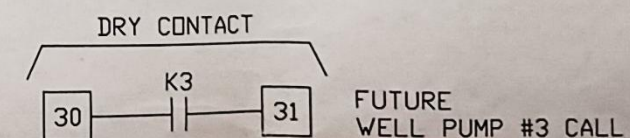
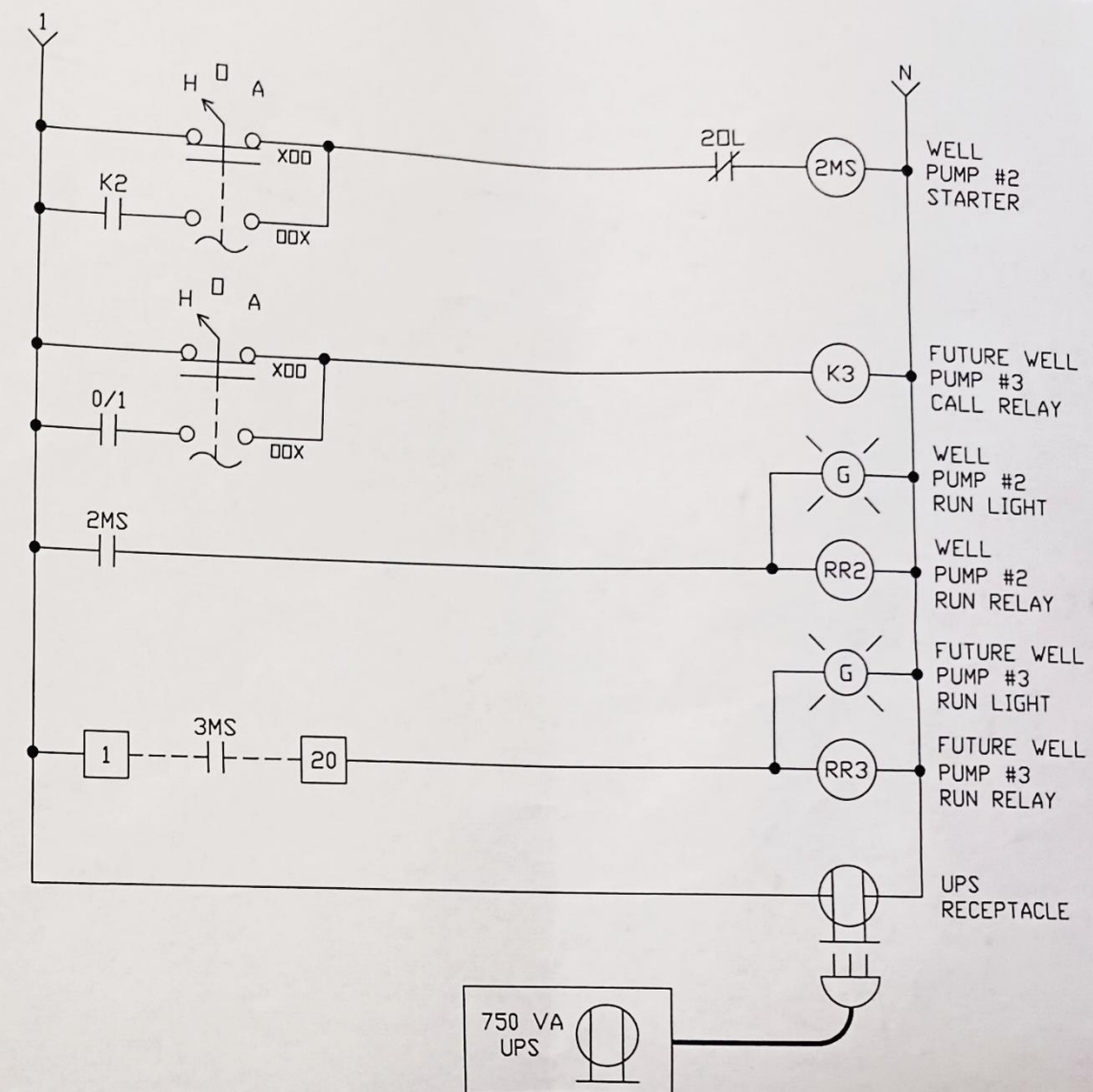
REV. NO.	REVISION	BY	DATE	DESIGNED BY	DATE	<b>USEMCO</b> USEMCO INCORPORATED P.O. BOX 550 (608) 372-5911 TOMAH WL 54660 DESCRIPTION LAWLER, IA
		CHK'D		NB	7/17	
				DRAWN BY	DATE	
				NB	15	
				CHECKED BY	DATE	
				SCALE		DWG. NO. PNL 18586
						JOB NO.



COLOR CODING	
BLACK	- LINE AND LOAD
RED	- AC CONTROL
BLUE	- DC CONTROL
WHITE	- NEUTRAL
GREEN	- GROUND
YELLOW	- INTERCONNECTING
LT. BLUE	- INTRINSICALLY SAFE

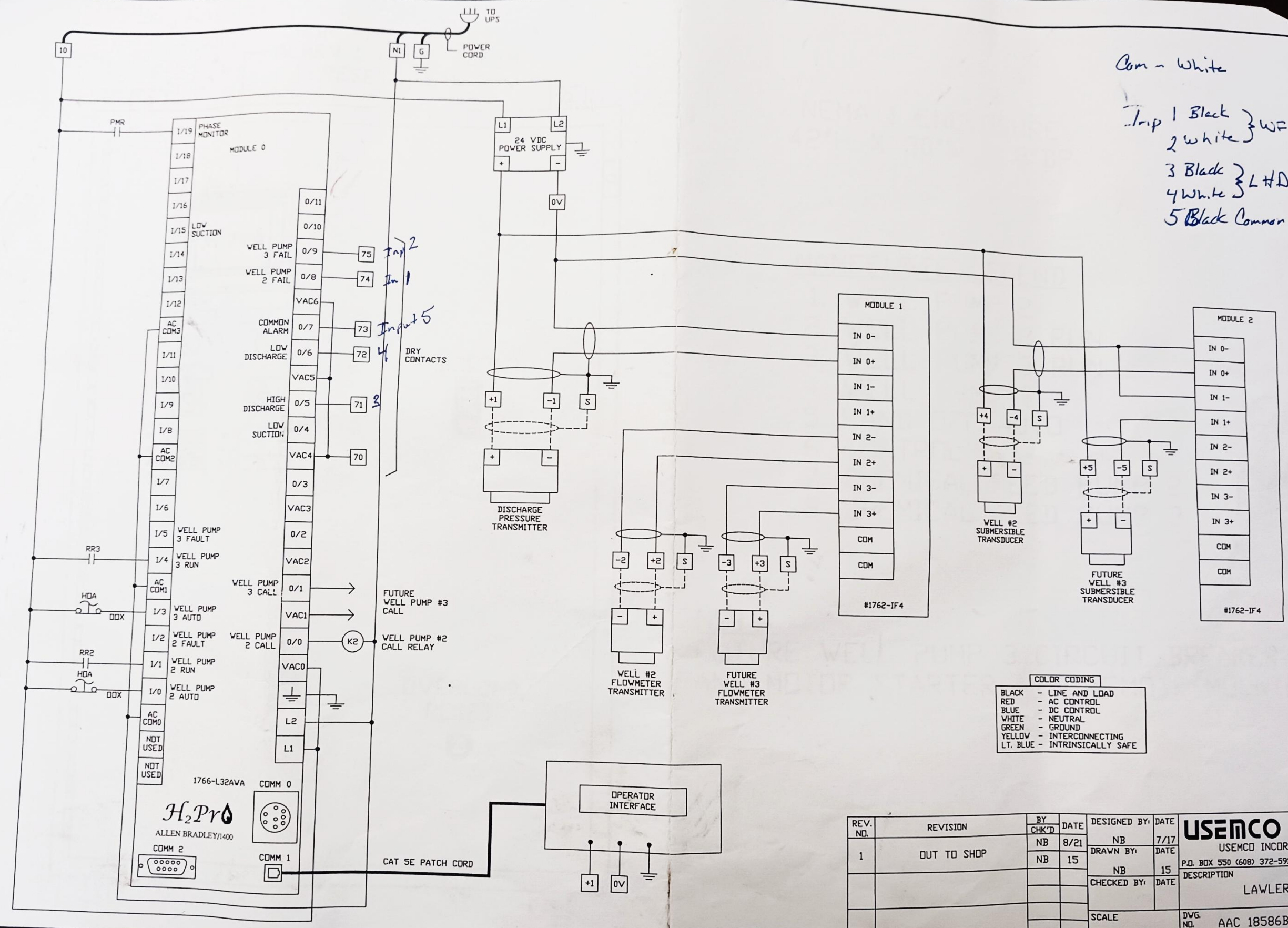
NOTES:

- CONTROL WIRE #14 MTW.
- PLC WIRE #16 MTW.



REV. NO.	REVISION	BY	CHK'D	DATE	DESIGNED BY	DATE	USEMCO USEMCO INCORPORATED P.O. BOX 550 (608) 372-5911 TOMAH VIL 54660	
1	OUT TO SHOP	NB		8/21	NB	7/17		
		NB		15			DESCRIPTION LAWLER, IA	
							SCALE	
							DWG. NO.	AAC 18586A
							JOB NO.	





REV. NO.	REVISION	BY	CHK'D	DATE	DESIGNED BY	DATE	USEMCO
1	OUT TO SHOP	NB		8/21	NB	7/17	USEMCO INCORPORATED
		NB		15			P.O. BOX 550 (608) 372-5911 TOMAH WI 54660
							DESCRIPTION
							LAWLER, IA
							DWG. NO. AAC 18586B
							JOB NO.

## SECTION 40 90 00

### PROCESS INSTRUMENTATION AND CONTROLS

#### PART 1 – GENERAL

##### 1.01 SUMMARY

- A. The work specified in this section includes furnishing, installing, start up, testing and adjusting of all required equipment, including instruments, equipment, hardware, software, wiring, accessory equipment, and training to provide a completely operational process instrumentation and control system. Existing Water System Control Panel by USEMCO is programmed to operate existing Well 2 and proposed Well 3. This system shall include:
  - 1. Furnishing and programming the following control panels.
    - a. Well 3 Starter Panel
  - 2. Additional signal wires to/from the following existing control panels.
    - a. Well Master Control Panel
  - 3. Factory testing and field testing, calibrating, and commissioning.
  - 4. Providing and installing new field devices as shown on the drawings and in the specifications.
  - 5. Operator training after completion of satisfactory field testing.
- B. The Contract Documents including drawings and specifications are complementary parts and what is called for by one part shall be as binding as if called for by all parts.
- C. This control and instrumentation system shall provide overall control and monitoring of the entire water system.
- D. It shall be the responsibility of the Contractor to furnish a complete and fully operating system. The Contractor shall be responsible for all details which may be necessary to properly install, adjust and place in operation the complete installation. The Contractor shall assume full responsibility for additional costs which may result from unauthorized deviation from the Contract Documents.

##### 1.02 REFERENCES

- A. National Fire Protection Agency (NFPA).
- B. National Electric Code (NEC).
- C. Underwriters Laboratory (UL).
- D. National Electrical Manufacturers Association (NEMA).
- E. Instrumentation, Systems and Automation Society (ISA).
- F. Institute of Electrical and Electronics Engineers (IEEE).
- G. American National Standards Institute (ANSI).

##### 1.03 SELECTED ABBREVIATIONS

HMI                      Human-Machine-Interface

I/O	Input / Output
OIT	Operator Interface Terminal
HOA	Hand-Off-Auto
ISA	Instrument Society of America
LOS	Line of sight
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
PC	Personal Computer
PCS	Process Control System
PLC	Programmable Logic Controller
SCADA	Supervisory Control and Data Acquisition
UL	Underwriters' Laboratories, Inc.
UPS	Uninterruptible Power Supply

#### 1.04 SUBMITTALS

- A. In addition to the requirements of the Contract Documents, the following information shall be provided in tabbed, booklet format covering all Work.
- B. Shop Drawings:
  - 1. Well 3 Starter Panel
- C. Product Data:
  - 1. Catalog Information: Provide catalog information and descriptive literature on all equipment associated with the Process Control System. Uniquely identify submittal items on catalog pages containing more than the submitted item.
  - 2. Product Data (Specification) Sheets: Provide product data sheets for each component provided under this Section. The purpose of the data sheets shall be to supplement the generalized catalog information provided by citing all specific features for each specific component (e.g.: scale range, materials of construction, special options included). Product Data Sheets shall follow General ISA S20 format.
- D. Spare and Expendable Items Submittal
  - 1. Contractor shall provide a list of recommended spares and expendable items as recommended by System Integrator in sufficient quantities to sustain the Process Control System for a period of 3 years after acceptance.
  - 2. In addition to the Spares and Expendables List, Contractor shall provide a Component Part List as recommended by Systems Integrator. The Component Part List shall be a complete parts list for the entire Process Control System, and shall have the following features:
    - a. All components shall be grouped by component type, with the component types identified in a similar manner to the component identification code used in these Specifications.

- b. All components shall be listed with their exact and complete manufacturer's part number, including all options or accessories.
  - c. All components shall be identified with their complete tag number as shown in these Specifications, or as modified or assigned by Contractor and approved by ENGINEER.
  - d. All components without tag numbers shall be grouped within component types by manufacturer's part number. Exact quantities shall be listed for each part number.
- E. Prepare In-Factory Inspection and Testing, and Field Wiring and Testing Sign-Off documents. Documents shall be submitted during course of project to ENGINEER for approval.

#### 1.05 QUALITY ASSURANCE

- A. Contractor shall engage the services of a qualified System Integrator for the purposes of furnishing the Process Control System, providing technical assistance on the installation of System and certifying the correctness of said installation.
- B. Equipment shall be latest and most modern design at time of Notice to Proceed.
- C. Like items of equipment shall be end products of single manufacturer to achieve standardization for maintenance, spare parts, operation, and service.
- D. Process Control System components shall be grounded in accordance with National Electric Code (NEC) requirements.
- E. Process Control System components shall meet all equipment and installation requirements in accordance with National Electric Code (NEC) Articles 500, 501 and 504 as applicable.

#### 1.06 SYSTEM INTEGRATOR RESPONSIBILITY

- A. System Integrator shall inspect Equipment provided under this Section prior to shipment to Project sites.
- B. System Integrator shall provide schematic diagram to the Owner/Engineer for review and approval.
- C. System Integrator shall send approved schematic diagram to panel builder for preparation of panel shop drawings for submittal to Owner/Engineer for approval prior to panel fabrication.
- D. System Integrator shall coordinate work with Contractor to insure that:
  - 1. All components provided under this Section shall be properly installed.
  - 2. All components provided under this Section shall be properly configured.
  - 3. The proper type, size, and number of control wires with conduits shall be furnished and installed.
  - 4. Proper electric power circuits shall be provided for all components and systems.
- E. System Integrator shall be responsible for coordination of voltage levels and signal types for signals connected to Process Control System. System Integrator shall provide relays, signal

isolators, termination or pull-up resistors, signal conditioners or other devices only as required for proper interfacing and operation of non-compatible devices.

- F. System Integrator shall supply all equipment fully configured, specific to the process functions described herein.
- G. All field located conduits, wiring and cables shall be provided under CSI MasterFormat Division 26 specifications.
- H. Functional descriptions contained are for information purposes intended to supplement and complement instrumentation control schematics and other details when included in drawings and specifications. Provide instrumentation hardware and software as necessary to perform control functions specified herein and shown on drawings. Ensure coordination of instrumentation manufacturer with other work to ensure that necessary wiring, conduits, contacts, relays, converters, and incidentals are provided in order to transmit, receive, and control necessary signals to other control elements, to control panels, and to receiving stations.
- I. Only U.L. labeled components shall be used in control panels. Isolation protection of non-U.L. labeled components with a ground fault circuit interrupter receptacle shall be allowed with the ENGINEER's approval.

#### 1.07 WORK FOR HIRE

- A. Any and all configuration, programming, setup or other software functions (SOFTWARE) performed on all intelligent devices provided as part of this Project is to be considered "Work for Hire" under the 1976 Copyright Act as amended (title 17 of the United States Code). The SOFTWARE shall be owned by OWNER and shall be turned over to OWNER fully documented as the work is completed.
- B. OWNER intends only to obtain the SOFTWARE for its own use.
- C. OWNER shall not prevent the SOFTWARE supplier from reuse of the SOFTWARE concepts and ideas for other projects. Any reuse of the SOFTWARE concepts and ideas generated under this Project shall be solely the responsibility of the SOFTWARE supplier. The SOFTWARE supplier shall defend, indemnify and hold harmless OWNER from all claims, damages and expenses (including reasonable litigation costs), arising out of any use, misuse or misapplication of SOFTWARE concepts and ideas.

#### 1.08 WARRANTY

- A. Furnish a copy of the warranty together with the operating instructions and maintenance data for the complete system.
- B. System defects and deficiencies shall be corrected by Contractor within 48 hours of notification if OWNER does not have necessary replacement parts in stock and within 24 hours of notification if OWNER has necessary replacement parts in stock. Failure to correct these items per these requirements may result in Contractor losing Maintenance Bond.
- C. Products found to be defective or nonconforming during the warranty period shall be replaced with new products.

## PART 2 – PRODUCTS

### 2.01 SYSTEM INTEGRATOR

- A. Approved system integrators shall include:
  - 1. Altronex Control Systems, Madison, WI
  - 2. Automatic Systems Co., Ames, IA
  - 3. Jetco, Altoona, IA
  - 4. Quality Control & Integration, New Prague, MN
  - 5. In Control, Inc., Blaine, MN
  - 6. Approved Equal

## 2.02 EQUIPMENT, SYSTEMS AND SERVICES

- A. Equipment, Systems and Services provided under this Section shall conform to the following requirements.
  - 1. UL 508 - Standards for Safety, Industrial Control Equipment.
  - 2. NEMA ICS 1 - General Standards for Industrial Control and Systems.
  - 3. NEMA ICS 2 - Standards for Industrial Control Devices, Controllers and Assemblies.
  - 4. NEMA ICS 3 - Industrial Systems.
  - 5. NEMA ICS 6 - Enclosures for Industrial Controls and Systems.
  - 6. NEMA ICS 250 - Enclosures for Electrical Equipment.

## 2.03 CONTROL PANELS – DESCRIPTION AND FUNCTION

- A. Well 3 Starter Panel
  - 1. Hardware: Well 3 Control Panel shall be located in the proposed well house at Well 2. Panel shall contain following hardware:
    - a. Minimum NEMA 1 enclosure with a minimum two-point latching mechanism with single operating handle and key or padlock latch kit. Enclosure shall be mounted firmly to the wall.
    - b. Reduced voltage soft starter
    - c. Underload/overload and phase loss protection (may be integral to soft starter)
    - d. Panel shall be provided with transformers, relays, fusing, terminal blocks, and other internal components required for proper operation.
  - 2. Communication with Water System Control Panel PLC: Contractor shall provide signal wires between Water System Control Panel and Well 3 Starter Panel as required for proper operation of the Well 3 Starter Panel. The Water System Control Panel will control the Well 3 Starter Panel. 40 90 00 Appendix A provides drawings for the existing Water System Control Panel for reference.
  - 3. Function: The proposed Well 3 Starter Panel will communicate with the existing Water System Control Panel and operate based on run signal from existing panel.
- B. Water System Control Panel Modifications
  - 1. Existing Water System Control Panel will remain. 40 90 00 Appendix A provides drawings for the existing Water System Control Panel for reference. No programming of the existing PLC is required. Setpoints and settings may need to be adjusted for



proper operation. The Water System Control Panel is already set up for the following I/O from additional equipment provided as part of this project:

Description	DI	DO	AI	AO	Software Interface
Well 3 Electromagnetic Flow Meter	DI	DO	AI	AO	
Instantaneous Flow			1		
Well 3 Starter Panel	DI	DO	AI	AO	
Pump Required		1			
Well Pump 3 Failure		1			
Well Pump 3 Fault	1				
Well Pump 3 Auto	1				
Well Pump 3 Run	1				
Well 3 Level Transducer	DI	DO	AI	AO	
Water Level			1		

## PART 3 – EXECUTION

### 3.01 INSTALLATION

- A. Contractor shall install and wire Well 3 Starter Panel equipment in accordance with System Integrator's, the Drawings and Instrument Manufacturer's written instructions and approved submittals.
- B. Contractor shall coordinate with the Engineer on tagging of devices and modify as required per the Engineer's direction.
- C. Each tag number shall be unique to that device.

### 3.02 REMOTE I/O INPUT/OUTPUT SIGNAL CHARACTERISTICS

- A. Analog signals shall be 4 – 20 mA dc and shall conform to the compatibility requirements of ISA Standard S50.1. Transmitters and receivers shall be fully isolated.
- B. Discrete signals shall be two-state logic signals of two types. Except as identified herein, discrete input and output signals shall utilize 24V DC sources.

### 3.03 FIELD QUALITY CONTROL

- A. Protection during Construction.
  1. Throughout Contract, Contractor shall provide protection for materials and equipment against loss or damage and the effects of weather. Prior to installation, store items in indoor, dry locations. Provide heating in storage areas for items subject to corrosion under damp conditions. Specific storage requirements shall be in accordance with the ENGINEER-reviewed System Integrator's recommendations.
- B. Cleaning and Touch-up Painting.
  1. Contractor shall keep the premises free from accumulation of waste material or rubbish. Upon completion of work, the Contractor shall remove materials, scraps, and debris from premises and from interior and exterior of all devices and equipment. Touch-up scratches, scrapes, or chips in interior and exterior surfaces of devices and

equipment with finishes matching as nearly as possible the type, color, consistency, and type of surface of the original finish.

C. Panels and Panel-Mounted Equipment.

1. Panels and panel-mounted devices shall be assembled as completely as possible at the System Integrator's factory. No work, other than correction of minor defects or minor transit damage, shall be done on the panels at the job site.

D. Inspections.

1. System Integrator shall provide services of qualified service Engineer to supervise and inspect equipment installation to ensure system is installed in accordance with System Integrator's recommendations.
2. All materials, equipment, and workmanship shall be subject to observation at any time by ENGINEER'S representatives. The Contractor shall correct any work, materials or equipment not in accordance with these Contract Documents or found to be deficient or defective. The Contractor shall make corrections in a manner satisfactory to ENGINEER at no additional cost to OWNER.
3. The System Integrator shall supervise final power and signal connections by Contractor to all equipment provided under this Section. For all equipment provided under this Section and all other equipment interfaced by the system, the System Integrator shall verify and certify by written notice to ENGINEER, correctness of final signal connections and correctness of adjustment.
4. System Integrator shall field calibrate equipment at time of complete startup on loop-by-loop basis. System Integrator shall submit calibration certification to ENGINEER for each piece of equipment. System Integrator shall make adjustments necessary to place equipment in satisfactory operation.
5. During this startup period, Contractor's personnel are to thoroughly check all of the equipment and perform the on-site tests specified above.

3.04 START-UP SERVICES

- A. System Integrator shall provide for equipment installation check, calibrations, control adjustments, and other services in field by qualified service representative to produce complete working installation in compliance with drawings and specifications, satisfactory to Owner and Engineer. This field service shall be to cover both the separate mounted instrumentation involved in the system and the Well 3 Starter Panel system components. System Integrator shall provide field start-up service/training at the Owner's facility.
- B. A one-year warranty of complete system equipment including all parts and labor shall be provided, beginning when final completion has been established.

3.05 FIELD INSPECTION AND TESTING

- A. Repeat factory testing after field installation with field end elements and the final communication medium. A "cradle-to-grave" checkout to determine that each input/output is operational from the field device to PLC panels, and OITs. These tests shall be witnessed by the Engineer and Owner's representative and an I/O points checklist shall be provided by the Systems Integrator to the Engineer for approval prior to beginning field testing. The systems integrator shall provide cell phone or two-way radios for

communications to remote site during testing. Upon completion of testing, all inputs/outputs shall be functioning as intended by the contract documents.

**3.06 STANDARDS**

- A. Control and control assemblies shall be manufactured, assembled, and documented in accordance with the latest NEMA Standards. All control panel assemblies shall be equipped with a serialized UL 508A label.

**3.07 SCHEDULING**

- A. The contractor shall schedule execution of the installation and start-up of the process instrumentation system to meet requirements of the overall project. In addition, a “cradle-to- grave” test of all I/O points and field devices shall be scheduled with the Owner’s representative in attendance to verify the test.

**3.08 STORAGE**

- A. All electronic electrical equipment and any other items sensitive to humidity, moisture, and temperature shall be stored in a heated, dry enclosure at a site approved by the engineer. After installation, similar protection shall be provided until the OWNER’s acceptance of the system.

**END SECTION.**

## SECTION 43 25 13

### SUBMERSIBLE CENTRIFUGAL PUMPS

#### PART 1 – GENERAL

##### 1.01 DESCRIPTION

- A. Contractor shall furnish and install one (1) new submersible, multi-stage well pump, column pipe and accessories as specified herein for Well 3.
- B. Related items specified elsewhere:
  - 1. Division 26
  - 2. 33 21 00 – “Public Water Supply Wells”
  - 3. 40 72 43 – “Submersible Pressure Transducers”
  - 4. 40 90 00 – “Process Instrumentation and Controls”

##### 1.02 QUALITY ASSURANCE

- A. The Contract Documents are intended to describe all details of a complete equipment installation for the purpose specified. The Contractor shall be responsible for all details necessary for properly installing, adjusting and placing into operation a complete working system.

##### 1.03 SUBMITTALS

- A. Shop Drawings and Product Data
  - 1. Submit shop drawings and product data for the pump and all accessories, showing general dimensions, construction details, and full descriptive literature. Shop drawing submittal shall include pump curve, motor data, and operation and maintenance data.

##### 1.04 GUARANTEE

- A. The manufacturer shall guarantee the materials and workmanship of the products supplied to be free from defects for a period of one year from the date of shipment of said equipment. The equipment shall be guaranteed by the Contractor for one (2) year from the date of final acceptance by the Owner, regardless of any conflicting guarantees from the manufacturer.

#### PART 2 – PRODUCTS

##### 2.01 SUBMERSIBLE WELL PUMP

- A. Design Point: 150 gallons per minute (gpm) at 480 feet total dynamic head (TDH).
- B. Stages: Nine (9) – may vary by manufacturer and model.
- C. Motor: 25 HP, 208v, 3-phase, 60 Hz, 3450 RPM, non-overloading anywhere on the pump curve.
- D. Protection: Overtemp and Seal Failure
- E. Discharge Size: 3”

- F. Acceptable Manufacturers:
  - 1. Franklin Electric
  - 2. Goulds Water Technology
  - 3. Webtrol
  - 4. Approved equal

## 2.02 COLUMN PIPE AND ACCESSORIES

- A. The column pipe shall be 360 feet of 3-inch diameter Schedule 40, ASTM A53, Grade A, threaded steel pipe. Couplings shall be steel. Provide reducer or bushing if necessary to connect to pitless unit spool.
- B. The entire inside and outside of the drop pipe and fittings shall be coated with a three-coat epoxy system consisting of the following:
  - 1. Prime Coat: Organic zinc-rich primer in accordance with SSPC-Paint 20, Type II, chemically cured. Minimum dry film thickness of 2.0 mil.
  - 2. Intermediate coat: Noncoal tar epoxy in accordance with ANSI/AWWA C210. Minimum dry film thickness of 4.0 mil.
  - 3. Final Coat: Noncoal tar epoxy in accordance with ANSI/AWWA C210. Minimum dry film thickness of 4.0 mil.
- C. Coating shall be applied in strict conformance with the manufacturer's standard specifications for the materials and surfaces involved. Where entire paint system is factory applied, Contractor shall provide field touch up in accordance with paint manufacturer's recommendations as needed to repair damages due to shipping and handling.
- D. Check valves shall be 3-inch Ductile Iron Inline Check Valve, threaded connections, and 200 psi rating.
- E. Pressure transducer: see section 40 72 43
- F. Electric cable: provide electric cable to motor as recommended by motor manufacturer.
- G. All discharge piping and appurtenances in contact with potable water shall meet ANSI/NSF 61 certification.

## PART 3 – EXECUTION

### 3.01 INSTALLATION

- A. The pump, column pipe, and all accessories that are to be in contact with the groundwater shall be disinfected as per AWWA C654.
- B. Install one check valve immediately above pump.
- C. Secure power cable and submersible transducer cable to column pipe at intervals not exceeding 10 feet.
- D. Install means to disconnect power cable in pitless unit if space allows, or provide stainless steel junction box near well head for disconnection. Same junction box may be used to provide disconnection and bellow for submersible transducer.

## END SECTION.

## SECTION 46 70 00

### CHEMICAL FEED SYSTEMS

#### PART 1 – GENERAL

##### 1.01 SECTION INCLUDES

- A. Chemical Feed Pumps
- B. Chemical Injection Points

##### 1.02 GENERAL

- A. Furnish and install a chemical feed pump, tubing, and injection point for sodium hypochlorite and ortho/polyphosphate for the proposed well.

##### 1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's data sheets on each product to be used, including, but not limited to, the following:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation manual and operating guidelines.
- B. Shop Drawings: Submit the following for review and approval prior to fabrication:
  - 1. Detailed shop drawings of the chemical feed pumps and injection quills.

##### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer's Installation and Operating Guidelines recommendations for delivery, storage, and handling.

#### PART 2 – PRODUCTS

##### 2.01 CHLORINE FEED PUMP

- A. Provide one (1) chlorine pumps for proposed well.
- B. Model and Manufacturer:
  - 1. Model SVP4 as manufactured by Stenner Pump Company.
- C. Components shall be compatible with 12.5% sodium hypochlorite solution.
- D. Type: Peristaltic
- E. Pump Design:
  - 1. Capacity: 5.0 gallons per day (GPD)
  - 2. Max pressure: 100 PSI
  - 3. Speed Control: Manual adjustable
  - 4. Tube Size: #1
- F. Certification: NSF 61

## 2.02 ORTHO/POLYPHOSPHATE FEED PUMP

- A. Provide one (1) ortho/polyphosphate pump for proposed well.
- B. Model and Manufacturer:
  - 1. Model SVP4 as manufactured by Stenner Pump Company
- C. Components shall be compatible with ortho/polyphosphate solution.
- D. Type: Peristaltic
- E. Pump Design:
  - 1. Capacity: 5.0 gallons per day (GPD)
  - 2. Max pressure: 100 PSI
  - 3. Speed Control: Manual adjustable
  - 4. Tube Size: #1
- F. Certification: NSF 61

## 2.03 CHEMICAL INJECTION POINT

- A. Provide retractable PVC injection quill (3/8" Schedule 80) with 3/4" no-lead brass corporation stop. Quill shall extend to 1/3 the pipe diameter away from the wall.
- B. Provide tubing from chemical feed pump to injection quill. Tubing shall be rated for 100 psi and for use with sodium hypochlorite solution.
- C. Provide check valve between injection quill and tubing.

## 2.04 DAY TANK

- A. Provide one 2-gallon polyethylene day tanks with lid for the chlorine feed system. Tank walls shall be translucent. Day tank shall replace existing day tank. Adjust piping from bulk tank if necessary to work with new day tank.
- B. Provide one 1-gallon polyethylene day tank with lid for the ortho/polyphosphate system. Tank walls shall be translucent. Phosphate system does not currently have a day tank. Install new day tank on existing scale. Operator will manually fill day tank from ortho/polyphosphate shipping container.

# PART 3 – EXECUTION

## 3.01 INSTALLATION

- A. Existing chemical feed system for Well 2 will remain. Add pump, tubing, and injection quill for chlorine and ortho/polyphosphate. Install tubing in existing conduits along with tubing for Well 2 chemical feed. Install per manufacturer's recommendations and as shown in the Plans.

## END SECTION.

# **FEHR GRAHAM**

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ENGINEERING & ENVIRONMENTAL

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INDEX OF SHEETS	
SHEET NUMBER	SHEET TITLE
A.01	TITLE
A.02	LEGEND
A.03	EXISTING CONDITIONS & REMOVALS
A.04	WWPPP
C.01	GENERAL NOTES & QUANTITIES
E.01	ELECTRICAL PLAN
L.01	SITE PLAN AND GRADING
M.01	WATER MAIN PLAN & PROFILE
U.01	WELL PROFILE
U.02	DETAILS

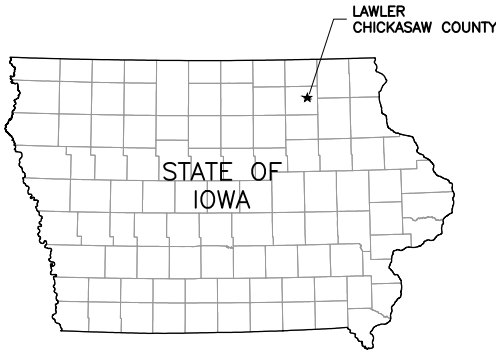
# WELL NO. 3 IMPROVEMENTS

## FOR CITY OF LAWLER LAWLER, IOWA

24-289

CHICKASAW COUNTY

11/04/2025

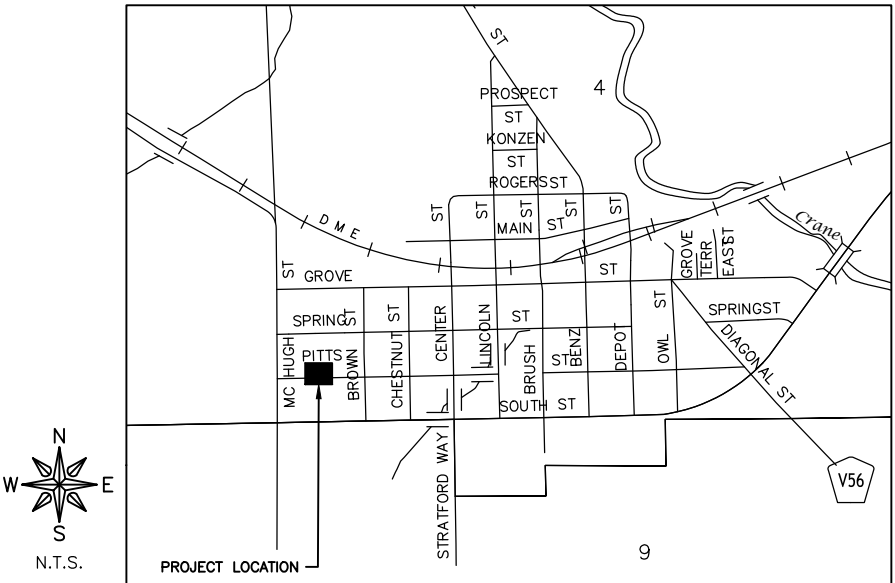


OWNER/DEV	CITY OF LAWLER
ADDRESS	414 EAST GROVE STREET
	LAWLER, IA 52154
P#	563.238.3614

CITY ADMINISTRATION	
MAYOR.....	MARK MUETERTHIES
COUNCIL MEMBERS.....	JEREMY SCHEIDEL
	KAREN WILSON
	DALE KING
	KURT CROELL
	COLE ROBERSON
CITY SUPERINTENDENT.....	JAY UHLENHAKE
CITY CLERK.....	SUZIE BRYNE

UTILITIES	
UTILITY TYPE	COMMON NAME
WATER & SEWER	CITY OF LAWLER
ELECTRIC	CITY OF LAWLER
TELEPHONE	HAWKEYE TELEPHONE
GAS	BLACK HILLS ENERGY
CABLE	WINDSTREAM
COMMUNICATIONS	IOWA COMMUNICATIONS NETWORK (ICN)

(CONTRACTOR TO BE RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS TO BE MADE.)



LOCATION MAP

**FEHR GRAHAM**  
ENGINEERING & ENVIRONMENTAL

ILLINOIS

IOWA

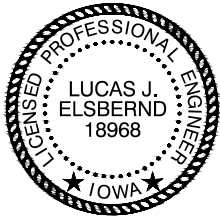
WISCONSIN

MANCHESTER, IOWA  
221 E. MAIN STREET, SUITE 301  
MANCHESTER, IA 52057  
P# (563) 927-2060

THE 2025 VERSION OF THE STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, ALSO KNOWN AS SUDAS (2025), PLUS FEHR GRAHAM SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.



BID



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

*Lucas J. Elsbernd*

Lucas J. Elsbernd, P.E.

License Number 18968

My license renewal date is December 31, 2025.

Pages or sheets covered by this seal: All

11/4/2025

Date

ORIGINAL SET FOR PROJECT: 24-289 DATE CREATED: 11/04/2025

REVISIONS		
REV. NO.	DESCRIPTION	DATE

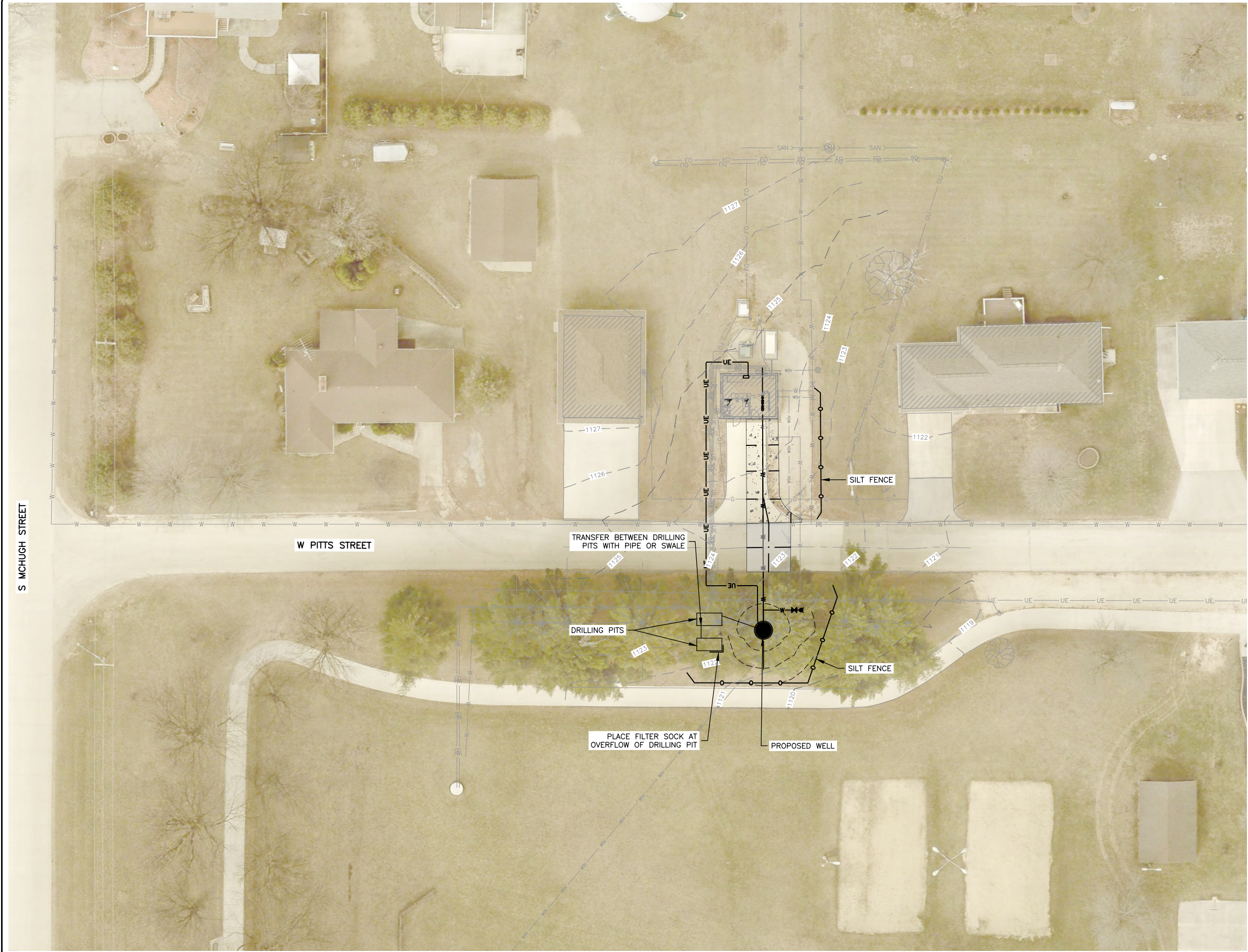
ABBREVIATIONS		SYMBOLS																										
<div><div>&lt;ABCACIACRASCALTARCHASPHASTMBFPPBTBLDGBLKBMBOTBSMTBVB-BCL or CLC to CC &amp; GCFCFCHDCICHRCLRCMUCTYCONCCONTC-BCOORDCUCCTRSCSDEPDETDIAGDIMDI DNSTRDPDWGEJEL, ELEVEP EQUIPEQUIVEWEXP, EXISTEXT, EXISTE = FD, FDNFEFFFILFINFLFLRFLMFNDFRMGFTGGYGHSEHMAHNGRHORIZH.P.HWHΔ = I IDINTINVIPJSTLATLAVLFL.P.LTMAXMELMHMINMJMTLNNo. OR #NOMNTSOCODOPNGOPPCCPCFPDP</div><div>ANGLEAGGREGATE BASE COURSEACRE(S)AMERICAN CONCRETE INSTITUTEAGGREGATEAMERICAN INSTITUTE OF STEEL CONSTRUCTIONALTERNATEARCHITECTASPHALTAMERICAN SOCIETY OF TESTING AND MATERIALSBALL VALVEBACKFLOW PREVENTERBITUMINOUSBUILDINGBLOCKINGBENCHMARKBOTTOMBASEMENTBUTTERFLY VALVEBACK-TO-BACK OF CURB DIMENSIONCENTERLINECENTER TO CENTERCURB AND GUTTERCUBIC FEETCHORD LENGTHCAST IRON PIPECHECK VALVECLEARCORRUGATED METAL PIPECONCRETE MASONRY UNITCOUNTYCONCRETECONTINUOUSCENTERLINE TO BACK OF CURB DIMENSIONCOORDINATECOPPER PIPINGCENTERSCUBIC YARDSCORPORATION STOPDEGREE OF CURVEDEPRESSEDDETAILDIAGONALDIMENSIONDUCTILE IRON PIPEDOWNDOWNSTREAMDRAINAGE PIPE/STORM PIPEDRAWINGEASTEXPANSION JOINTELEVATIONEDGE OF PAVEMENTEQUIPMENTEQUIVALENT EACH WAYEXPANSIONEXISTINGEXTERIOREXTERNAL DISTANCEFLOOR DRAINFOUNDATIONFIELD ENTRANCEFINISH FLOORFILLETFINISHFLOW LINEFLOORFORCE MAINFOUNDVPIFRAMINGFOOTINGFACE TO FACEGAUGE GALVANIZED IRON PIPEGRADEGRATING SUPPORTGROUTGAS VALVEGYPSUMHOUSEHORIZONTAL CURVEHOT MIX ASPHALTHANGERHORIZONTALHIGH POINTHOT WATERHOT WATER HEATERCENTRAL ANGLEMOMENT OF INERTIAINSIDE DIAMETERINTERIORINVERT ELEVATION; BASED ON BENCH MARK DATUMIRON PIPEJOISTLENGTH OF CURVELATERALLAVATORYLINEAL FEETLOW POINTLEFT OF SURVEY BASE LINEMAXIMUMMATCH EXISTINGMANHOLEMINIMUMMECHANICAL JOINTMETALNORTHNUMBERNOMINALNOT TO SCALEON CENTEROUTSIDE DIAMETEROUTSIDE TO OUTSIDEOPENINGOPPOSITEPOINT OF CURVATUREPORTLAND CEMENT CONCRETEPOUNDS PER CUBIC FOOTPERFORATED DRAIN PIPE</div></div>	<div><div>PEPIPLPLPPLYWDPMPRPRESSPR, PROPPRVPRSPPSIPSLPTPLGPVCRRI RDCRRCCORCPRRDRREINFRREQDRROWRFRRRNDRRRRSPRT R&amp;RSBRSCHEDSECSEFSHRSHTSHTGSPSPASPSPECSSQSSTASTDSTLSTRUCTSWSYSYMTAN TBC TBM TDTHKTRTYTYP U.O.N. UPUPSTRURUSGSVCVPVERTVOLVPCVPIVPRC VPTWWCWFWMQWVWGTWPWSWWFW/WWOXP</div><div>POLYETHYLENE PIPEPOINT OF INTERSECTIONPLATEPLUG VALVEPOLYPROPYLENE PIPEPLYWOODPRINCIPAL MERIDIANPRESSURE REGULATORSPOINT OF REVERSE CURVATUREPRESSUREPRESSURE REDUCING VALVEPOUNDS PER SQUARE FOOTPOUNDS PER SQUARE INCHPIPE SLEEVEPOINT OF TANGENCYPLUG VALVEPOLYVINYL CHLORIDE (PLASTIC) PIPERADIUSREDUCERREINFORCED CONCRETE CYLINDER PIPIREINFORCED CONCRETE PIPIROOF DRAINREINFORCINGREQUIREDRIGHT OF WAYRAFTERROUNDRAILROADRAILROAD SPIKERIGHTREMOVE AND REPLACE SOUTHSTREAM BEDSCHEDULESECTIONSQUARE FEETSHOWERSHEET SHEATHINGSANITARY PIPESPACING OR SPACESSPECIFICATIONSQUARESANITARY SERVICESTATIONSTANDARDSTEELSTRUCTURALSIDEWALKSQUARE YARDSYMMETRICALTANGENT LENGTHTOP BACK OF CURBTEMPORARY BENCH MARK; BASED ON BENCHMARK DATUMTILE DRAINTHICKTREADTYPETYPICALUNLESS OTHERWISE NOTEDUTILITY POLEUPSTREAMURINALUS GEOLOGICAL SURVEYVERTICAL CURVEVITRIFIED CLAY PIPEVERTICALVOLUMEVERTICAL POINT OF CURVATUREVERTICAL POINT OF 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HYDRANT</div><div><div></div></div></div><div><div><div></div></div><div>WATER VALVE WITH BOX</div><div><div></div></div></div><div><div><div></div></div><div>CURB STOP W/CURB BOX</div><div><div></div></div></div><div><div><div></div></div><div>REDUCER</div><div><div></div></div></div><div><div><div></div></div><div>WATER VALVE VAULT</div><div><div></div></div></div><div><div><div></div></div><div>11.25° BEND</div><div><div></div></div></div><div><div><div></div></div><div>22.50° BEND</div><div><div></div></div></div><div><div><div></div></div><div>45° BEND</div><div><div></div></div></div><div><div><div></div></div><div>90° BEND</div><div><div></div></div></div><div><div><div></div></div><div>TEE</div><div><div></div></div></div><div><div><div></div></div><div>CAP</div><div><div></div></div></div><div><div><div></div></div><div>WATER METER</div><div><div></div></div></div><div><div><div></div></div><div>SPRINKLER HEAD</div><div><div></div></div></div><div><div><div></div></div><div>TRACER WIRE BOX</div><div><div></div></div></div></div>	<div><div><div>EXISTING</div><div>STORM SEWER</div><div>PROPOSED</div></div><div><div>ST</div><div>ST</div><div>ST</div></div><div><div>DT</div><div>DT</div><div>DT</div></div><div><div><div></div></div><div>STORM SEWER</div><div><div></div></div></div><div><div><div></div></div><div>DRAIN TILE</div><div><div></div></div></div><div><div><div></div></div><div>DITCH LINE (PAVED)</div><div><div></div></div></div><div><div><div></div></div><div>DITCH LINE (UNPAVED)</div><div><div></div></div></div><div><div><div></div></div><div>STORM MANHOLE</div><div><div></div></div></div><div><div><div></div></div><div>CATCH BASIN</div><div><div></div></div></div><div><div><div></div></div><div>STORM SEWER INLET</div><div><div></div></div></div><div><div><div></div></div><div>STORM SEWER INLET - BEHIND CURB</div><div><div></div></div></div><div><div><div></div></div><div>DOWNSPOUT</div><div><div></div></div></div><div><div><div>X" TYPE</div></div><div>CULVERT AND SIZE</div><div><div>X" TYPE</div></div></div><div><div><div></div></div><div>RCCP OR RCP EQRS (RCAP) END SECTION</div><div><div></div></div></div><div><div><div></div></div><div>METAL OR HDPE END SECTION</div><div><div></div></div></div><div><div><div></div></div><div>FLOW DIRECTION</div><div><div></div></div></div></div>	<div><div><div>EXISTING</div><div>EROSION CONTROL</div><div>PROPOSED</div></div><div><div></div><div>EROSION CONTROL BLANKET</div><div></div></div><div><div></div><div>TEMPORARY AND PERMANENT SEEDING AREA</div><div></div></div><div><div></div><div>UNDISTURBED AREA</div><div></div></div><div><div></div><div>STABILIZED CONSTRUCTION ENTRANCE</div><div></div></div><div><div></div><div>SILT FENCE</div><div></div></div><div><div></div><div>INLET PROTECTION</div><div></div></div><div><div></div><div>TEMPORARY SEDIMENT TRAP</div><div></div></div><div><div></div><div>CULVERT INLET PROTECTION</div><div></div></div><div><div></div><div>ROCK OUTLET PROTECTION</div><div></div></div><div><div></div><div>ROCK CHECK DAM - COURSE AGGREGATE</div><div></div></div><div><div></div><div>ROCK CHECK DAM - RIP RAP</div><div></div></div><div><div></div><div>DITCH CHECK</div><div></div></div></div>	<div><div><div>EXISTING</div><div>UTILITY</div><div>PROPOSED</div></div><div><div>FO</div><div>FO</div><div>FO</div></div><div><div>TV</div><div>TV</div><div>TV</div></div><div><div><div></div></div><div>CABLE TV RISER PEDESTAL</div><div><div></div></div></div><div><div><div></div></div><div>OVERHEAD UTILITY</div><div><div></div></div></div><div><div><div></div></div><div>UNDERGROUND ELECTRIC</div><div><div></div></div></div><div><div><div></div></div><div>ELECTRIC RISER PEDESTAL</div><div><div></div></div></div><div><div><div></div></div><div>ELECTRIC MANHOLE</div><div><div></div></div></div><div><div><div></div></div><div>UNDERGROUND TELEPHONE</div><div><div></div></div></div><div><div><div></div></div><div>TELEPHONE RISER PEDESTAL</div><div><div></div></div></div><div><div><div></div></div><div>TELEPHONE MANHOLE</div><div><div></div></div></div><div><div><div></div></div><div>UTILITY POLE</div><div><div></div></div></div><div><div><div></div></div><div>UTILITY POLE W/ METER</div><div><div></div></div></div><div><div><div></div></div><div>UTILITY POLE W/ TRANSFORMER</div><div><div></div></div></div><div><div><div></div></div><div>UTILITY POLE W/ LIGHT</div><div><div></div></div></div><div><div><div></div><div></div></div><div>UTILITY POLE WITH GUY WIRE AND ANCHOR</div><div><div></div><div></div></div></div><div><div><div></div></div><div>LIGHT (MAST MOUNTED)</div><div><div></div></div></div><div><div><div></div></div><div>LIGHT POLE (SINGLE FIXTURE)</div><div><div></div></div></div><div><div><div></div></div><div>YARD LIGHT</div><div><div></div></div></div><div><div><div></div></div><div>GAS MAIN</div><div><div></div></div></div><div><div><div></div></div><div>GAS METER</div><div><div></div></div></div><div><div><div></div></div><div>GAS VALVE</div><div><div></div></div></div><div><div><div></div></div><div>GAS STRUCTURE</div><div><div></div></div></div><div><div><div></div></div><div>TRANSFORMER</div><div><div></div></div></div><div><div><div></div></div><div>GENERATOR</div><div><div></div></div></div></div>	<div><div><div>EXISTING</div><div>TRAFFIC RELATED</div><div>PROPOSED</div></div><div><div><div></div></div><div>CONTROLLER</div><div><div></div></div></div><div><div><div></div></div><div>MAST ARM ASSEMBLY AND POLE</div><div><div></div></div></div><div><div><div></div></div><div>SIGNAL HEAD AND POST</div><div><div></div></div></div><div><div><div></div></div><div>SIGNAL HEAD</div><div><div></div></div></div><div><div><div></div></div><div>PEDESTRIAN HEAD</div><div><div></div></div></div><div><div><div></div></div><div>PEDESTRIAN PUSH-BUTTON</div><div><div></div></div></div><div><div><div></div></div><div>HAND HOLE</div><div><div></div></div></div><div><div><div></div></div><div>DOUBLE HAND HOLE</div><div><div></div></div></div><div><div><div></div></div><div>HAND HOLE OR JUNCTION BOX</div><div><div></div></div></div><div><div><div></div></div><div>HEAVY-DUTY HAND HOLE</div><div><div></div></div></div><div><div><div></div></div><div>EXISTING CONDUIT (LENGTH AND SIZE) PROP GALVANIZED STEEL OR PVC CONDUIT UPPER NUMERAL INDICATES LENGTH "T" INDICATES CONDUIT IN TRENCH "P" INDICATED CONDUIT PUSHED LOWER NUMERAL INDICATES SIZE AND TYPE</div><div><div></div></div></div><div><div><div></div></div><div>LUMINAIRE</div><div><div></div></div></div><div><div><div></div></div><div>ARROW - THROUGH, TURN LEFT</div><div><div></div></div></div><div><div><div></div></div><div>ARROW - THROUGH</div><div><div></div></div></div><div><div><div></div></div><div>ARROW - TURN LEFT</div><div><div></div></div></div><div><div><div></div></div><div>ARROW - TURN RIGHT</div><div><div></div></div></div><div><div><div></div></div><div>ONE DIRECTION TURN ONLY</div><div><div></div></div></div><div><div><div></div></div><div>HANDICAPPED PARKING STALL</div><div><div></div></div></div><div><div><div></div></div><div>TRAFFIC DETECTOR LOOP</div><div><div></div></div></div><div><div><div></div></div><div>TRAFFIC CONTROL BOX</div><div><div></div></div></div></div>																					
<div><div>ILLINOIS</div><div>IOWA</div><div>WISCONSIN</div></div>		<div><div>OWNER/DEVELOPER:</div><div>CITY OF LAWLER</div><div>414 EAST GROVE ST</div><div>LAWLER, IOWA 52154</div></div>		<div><div>PROJECT AND LOCATION:</div><div>WELL NO. 3 IMPROVEMENTS</div><div>LAWLER, IOWA</div></div>		<div><div>DRAWN BY: GSE</div><div>APPROVED BY: LJE</div><div>DATE: 11/04/2025</div><div>SCALE: AS NOTED</div></div>		<div><div>REVISIONS</div><table><tr><th>REV. NO.</th><th>DESCRIPTION</th><th>DATE</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table></div>		REV. NO.	DESCRIPTION	DATE													<div><div>DRAWING: LEGEND</div><div>SET TYPE: BID</div><div>G:\C30\24\24-289\24-289 Design.dwg, A.02</div></div>		<div><div>JOB NUMBER: 24-289</div><div>SHEET NUMBER: A.02</div></div>	
REV. NO.	DESCRIPTION	DATE																										





REVISIONS		
REV. NO.	DESCRIPTION	DATE



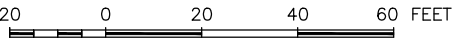


WELL WATER POLLUTION PREVENTION  
(WWPPP) – EROSION CONTROL PRACTICES.

1. ALL PROPOSED EROSION CONTROL BMPs SHALL BE IN PLACE IN FIELD PRIOR TO THE BEGINNING OF WELL CONSTRUCTION. 12" FILTER SOCKS SHALL COMPLY WITH SUDAS FIGURE 9040.2.
2. SEDIMENT SHALL BE REMOVED FROM DRILLING PITS AS NECESSARY AND DISPOSED OF OFF SITE.
3. BREAKS AND GAPS IN SEDIMENT BARRIERS THAT OCCUR SHALL BE REPAIRED IMMEDIATELY.
4. ALL INSTALLED EROSION CONTROL PRACTICES WILL BE MAINTAINED UNTIL THE DISTURBED AREAS THEY PROTECT ARE RE-STABILIZED.
5. CONTRACTOR SHALL COORDINATE ALL WELL WATER DISCHARGE WORK WITH THE CITY OF LAWLER.

WELL WATER POLLUTION PREVENTION PLAN  
(WWPPP) – DESCRIPTION OF PLANNED ACTIVITY.

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMIT AND PROVIDING INSPECTIONS. COPIES OF INSPECTION WILL BE PROVIDED TO ENGINEER.
2. PROJECT INCLUDES DRILLING A MUNICIPAL WATER SUPPLY WELL APPROXIMATELY 1,280 FEET IN DEPTH. THE WELL WATER THAT IS DISCHARGED DURING WELL DEVELOPMENT MAY INCLUDE, BENTONITE DRILLING FLUID, SOILS SEDIMENT, FOAM, AND OTHER PRODUCTS NEEDED FOR THE WELL CONSTRUCTION.
3. THE PLANNED WELL CONFIGURATION INCLUDING CASING DIAMETERS AND LOCATION IS SHOWN WITHIN THE PROJECT PLANS.



**FEHR GRAHAM**  
ENGINEERING & ENVIRONMENTAL

ILLINOIS  
IOWA  
WISCONSIN

OWNER/DEVELOPER:  
CITY OF LAWLER  
414 EAST GROVE ST  
LAWLER, IOWA 52154

PROJECT AND LOCATION:  
WELL NO. 3 IMPROVEMENTS  
LAWLER, IOWA

DRAWN BY: GSE  
APPROVED BY: LJE  
DATE: 11/04/2025  
SCALE: AS NOTED

REVISIONS		
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SET TYPE: BID  
G:\C30\24\24-289\24-289 Design.dwg, A.04

JOB NUMBER:  
24-289

SHEET NUMBER:  
A.04



GENERAL NOTES

1. ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
2. THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS (SUDAS), 2025 EDITION PLUS SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS AS PREPARED BY FEHR GRAHAM SHALL BE CONSIDERED A PART OF THESE DOCUMENTS AS IF BOUND HEREIN.
3. THE QUANTITIES INDICATED ON THE PROPOSAL FORM ARE APPROXIMATE ONLY, AND DO NOT CONSTITUTE A WARRANTY OR GUARANTEE BY THE JURISDICTION AS TO THE ACTUAL QUANTITIES INVOLVED IN THE WORK. SUCH QUANTITIES ARE TO BE USED FOR THE PURPOSE OF COMPARISON OF BIDS AND DETERMINING THE AMOUNT OF BID SECURITY, CONTRACT, AND PERFORMANCE, PAYMENT, AND MAINTENANCE BOND. IN THE EVENT OF DISCREPANCIES BETWEEN UNIT PRICES AND UNIT PRICE EXTENSIONS LISTED IN A BIDDER'S PROPOSAL, UNIT PRICES SHALL GOVERN AND UNIT PRICE EXTENSIONS SHALL BE CORRECTED, AS NECESSARY, FOR AGREEMENT WITH UNIT PRICES. THE JURISDICTION EXPRESSLY RESERVES THE RIGHT TO INCREASE OR DECREASE THE QUANTITIES DURING CONSTRUCTION, AND TO MAKE REASONABLE CHANGES IN DESIGN, PROVIDED SUCH CHANGES DO NOT MATERIALLY CHANGE THE INTENT OF THE CONTRACT. THE AMOUNT OF WORK TO BE PAID FOR SHALL BE BASED UPON THE ACTUAL QUANTITIES PERFORMED.
4. CONSTRUCTION SURVEY FOR THIS PROJECT TO BE PROVIDED BY THE OWNER. **THE CONTRACTOR IS REQUIRED TO PROVIDE MINIMUM OF TWO BUSINESS DAYS' NOTICE TO THE ENGINEER WHEN REQUESTING STAKES.**
5. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE ENGINEERING DEPARTMENTS AND UTILITY COMPANIES PRIOR TO CONSTRUCTION. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO ANY EXISTING UTILITY. IOWA CODE 480, UNDERGROUND FACILITIES INFORMATION, REQUIRES NOTICE TO IOWA ONE CALL (1-800-292-8989) NOT LESS THAN 48 HOURS BEFORE EXCAVATION, EXCLUDING WEEKENDS AND LEGAL HOLIDAYS.
6. THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND ROCK ELEVATIONS ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AND ROCK ELEVATIONS BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES AND ROCK ELEVATIONS.
7. THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PROJECT AREA AND BECOME THOROUGHLY FAMILIAR WITH THE ACTUAL JOB CONDITIONS PRIOR TO BIDDING AND THE START OF ANY WORK. FAILURE TO VISIT THE SITE SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE WORK IN ACCORDANCE WITH THESE DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY AT THE SITE, ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS, AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES, OMISSIONS, AND/OR CONFLICT PRIOR TO PROCEEDING WITH THE WORK.
9. THE CONTRACTOR SHALL NOT SCALE DRAWINGS. DIMENSIONS SHALL GOVERN. LARGE SCALE DRAWINGS SHALL GOVERN OVER SMALL SCALE DRAWINGS. NOTES AND DETAILS ON THE DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES OUTSIDE THE CONSTRUCTION LIMITS RESULTING FROM NEGLIGENCE.
11. CONTRACTOR SHALL PROTECT EXISTING FACILITIES, BUILDINGS, AND OTHER APPURTENANCES NOT TO BE REMOVED FROM THE SITE DURING THE CONSTRUCTION ACTIVITIES.
12. CONTRACTOR SHALL CONFINE HIS WORK TO THE CONSTRUCTION LIMITS AND EASEMENTS. IF THE CONTRACTOR OBTAINS ADDITIONAL EASEMENT FOR THE STORAGE OF EQUIPMENT AND MATERIALS, COPIES OF THE AGREEMENTS WITH THE PROPERTY OWNERS SHALL BE PROVIDED TO THE OWNER.
13. CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION SCHEDULE AND STAGING PLAN A MINIMUM OF TWO (2) DAYS PRIOR TO THE PRECONSTRUCTION MEETING.
14. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ACCESS TO INDIVIDUAL PROPERTIES DURING CONSTRUCTION WHENEVER PRACTICAL. CONTRACTOR SHALL NOTIFY RESIDENTS OF ACCESS RESTRICTIONS MINIMUM OF 24 HOURS PRIOR TO REMOVAL OF EXISTING ACCESS.
15. CONTRACTOR SHALL SUBMIT FOR ACCEPTANCE WORK PLANS AND SCHEDULES FOR ACCOMPLISHMENT OF TEMPORARY AND PERMANENT EROSION CONTROL PRIOR TO THE START OF CONSTRUCTION.
16. CONTRACTOR SHALL COORDINATE TEMPORARY DISRUPTION OF UTILITY SERVICES WITH THE CITY OF NEW ALBIN, AFFECTED UTILITY COMPANIES AND/OR AFFECTED PROPERTY OWNERS WHEN RELOCATING EXISTING FACILITIES, CONNECTING TO EXISTING FACILITIES AND PLACING NEW SERVICES.

ESTIMATED QUANTITIES

NO.	CODE	DESCRIPTION	QUANTITY	UNIT
1	2010-C	CLEARING AND GRUBBING, STUMPS	1	LS
2	2010-D-1	TOPSOIL, ON-SITE	20	CY
3	2010-J-1	SUBBASE, SPECIAL BACKFILL	40	TON
4	2010-999-C	FILL, PROVIDE AND PLACE	20	CY
5	5010-A-1	WATER MAIN, TRENCHED, DIP, 6"	80	LF
6	5010-999-A	CONNECTION TO EXISTING WATER MAIN	1	EA
7	5020-999-A	FLUSHING HYDRANT ASSEMBLY	1	EA
8	7020-B	PAVEMENT, PCC, 6"	45	SY
9	7030-A-3	REMOVAL OF PAVEMENT	65	SY
10	7030-H-1	DRIVEWAY, PAVED, PCC, 6"	20	SY
11	8030-A	TEMPORARY TRAFFIC CONTROL	1	LS
12	9010-A	CONVENTIONAL SEEDING, FERTILIZING, AND MULCHING	0.10	AC
13	9040-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	40	LF
14	9040-N-2	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT	40	LF
15	9040-N-3	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	40	LF
16	11,020-A	MOBILIZATION	1	LS
17	11,050-A	CONCRETE WASHOUT	1	LS
18	012201-1.01-B-1	EROSION AND SEDIMENT CONTROL	1	LS
19	012201-1.01-B-1	DRILL NOMINAL 24" DIA. HOLE	40	VF
20	012201-1.01-B-1	FURNISH AND INSTALL 20" DIA. SURFACE CASING	40	VF
21	012201-1.01-B-1	DRILL NOMINAL 17" DIA. HOLE	210	VF
22	012201-1.01-B-1	FURNISH AND INSTALL 14" DIA. SURFACE CASING	250	VF
23	012201-1.01-B-1	DRILL NOMINAL 12" DIA. HOLE	580	VF
24	012201-1.01-B-1	FURNISH AND INSTALL 8" DIA. CASING	830	VF
25	012201-1.01-B-1	EQUIPMENT SETUP FOR GROUTING	1	LS
26	012201-1.01-B-1	FURNISH AND INSTALL NEAT CEMENT GROUT	580	SACK
27	012201-1.01-B-1	DRILL NOMINAL 8" DIA. OPEN HOLE	450	VF
28	012201-1.01-B-1	WELL DEVELOPMENT	2	HR
29	012201-1.01-B-2	TEST PUMP SETUP	1	LS
30	012201-1.01-B-2	TEST PUMP WELL	26	HR
31	012201-1.01-B-3	PLUMBNESS AND ALIGNMENT TEST	1	LS
32	012201-1.01-B-3	WATER QUALITY TESTING	1	LS
33	012201-1.01-B-4	WELL DISINFECTION	1	LS
34	012201-1.01-B-5	SAMPLES AND RECORDS	1	LS
35	012201-1.01-B-6	PITLESS UNIT AND WELL PROTECTION STRUCTURE	1	LS
36	012201-1.01-B-7	FURNISH AND INSTALL WELL PUMP	1	LS
37	012201-1.01-B-8	FURNISH AND INSTALL DROP PIPING	350	VF
38	012201-1.01-C	WELL HOUSE PIPING	1	LS
39	012201-1.01-D	CHEMICAL FEED SYSTEMS	1	LS
40	012201-1.01-E	WATER SYSTEM ELECTRICAL AND CONTROLS	1	LS



ILLINOIS  
IOWA  
WISCONSIN

OWNER/DEVELOPER:  
CITY OF LAWLER  
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LAWLER, IOWA 52154

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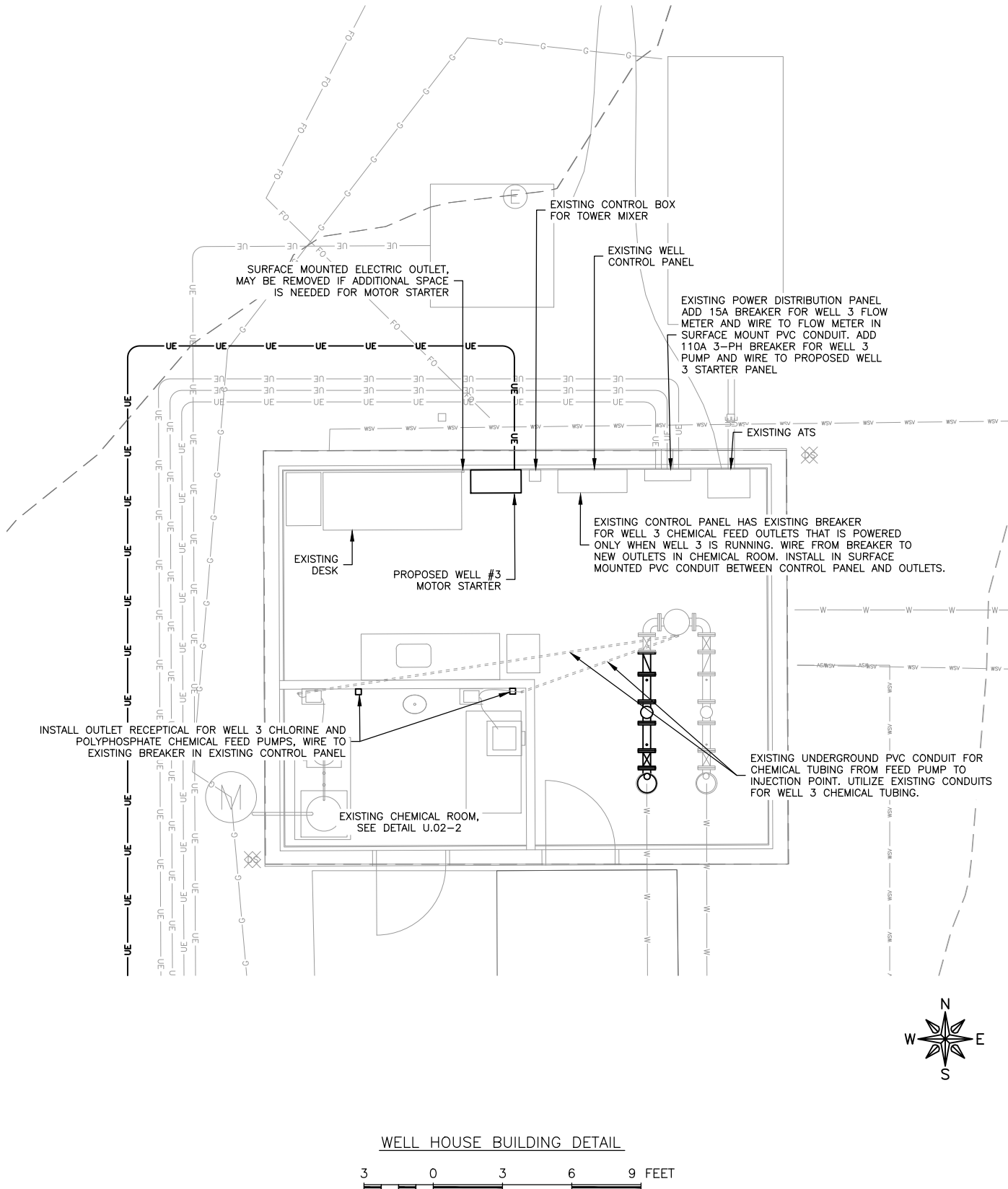
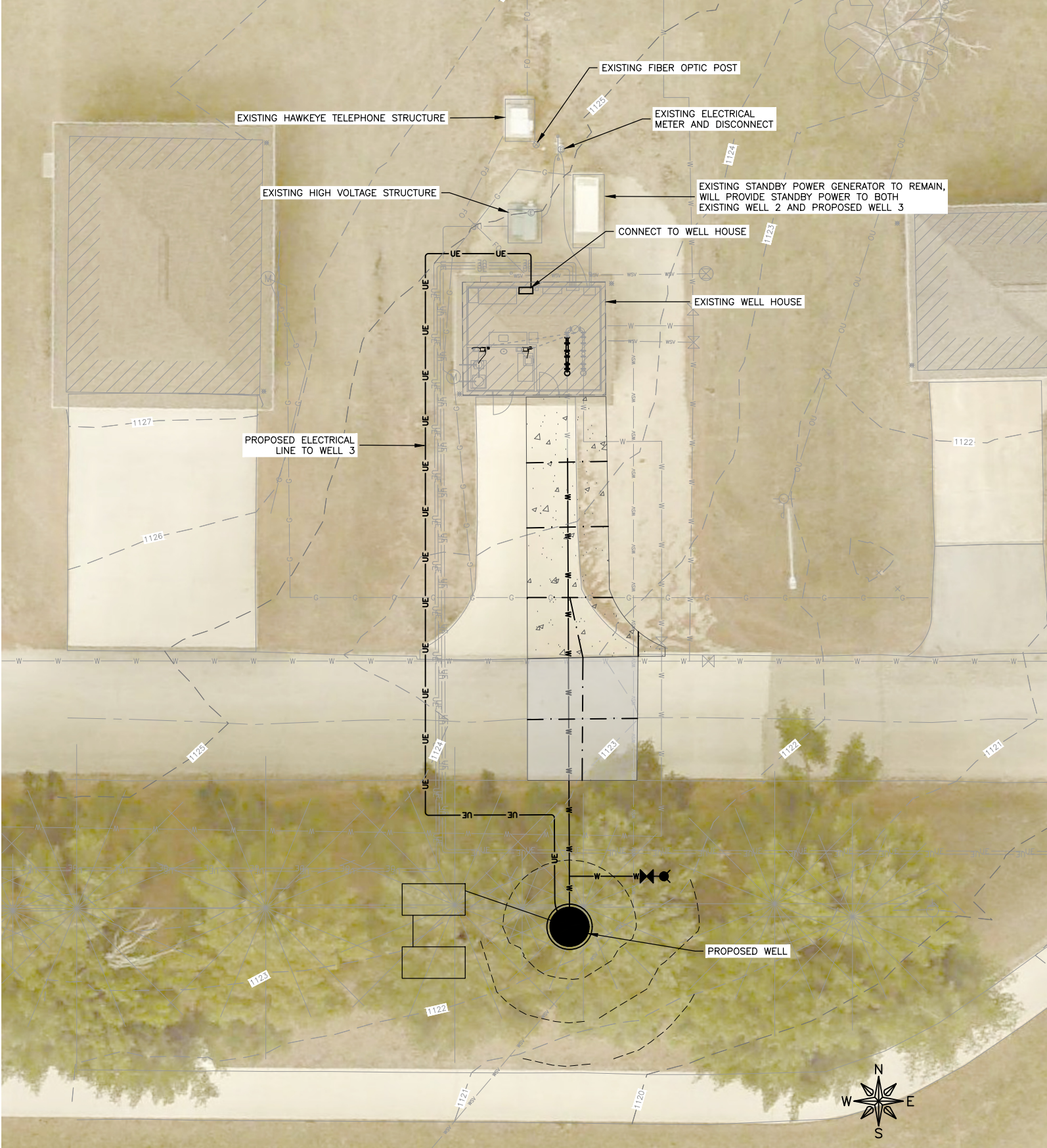
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DRAWING:  
GENERAL NOTES & QUANTITIES

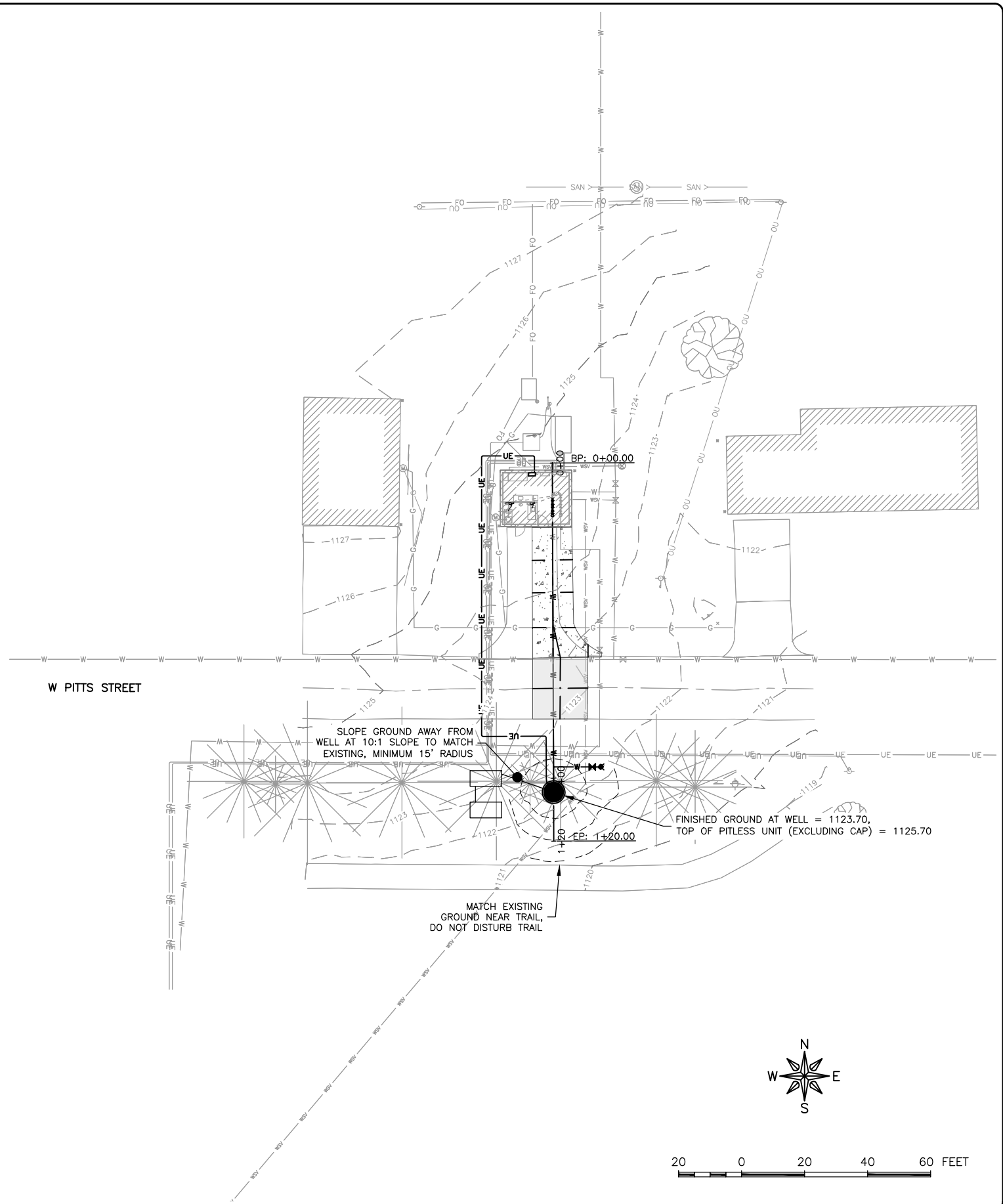
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24-289

SHEET NUMBER:  
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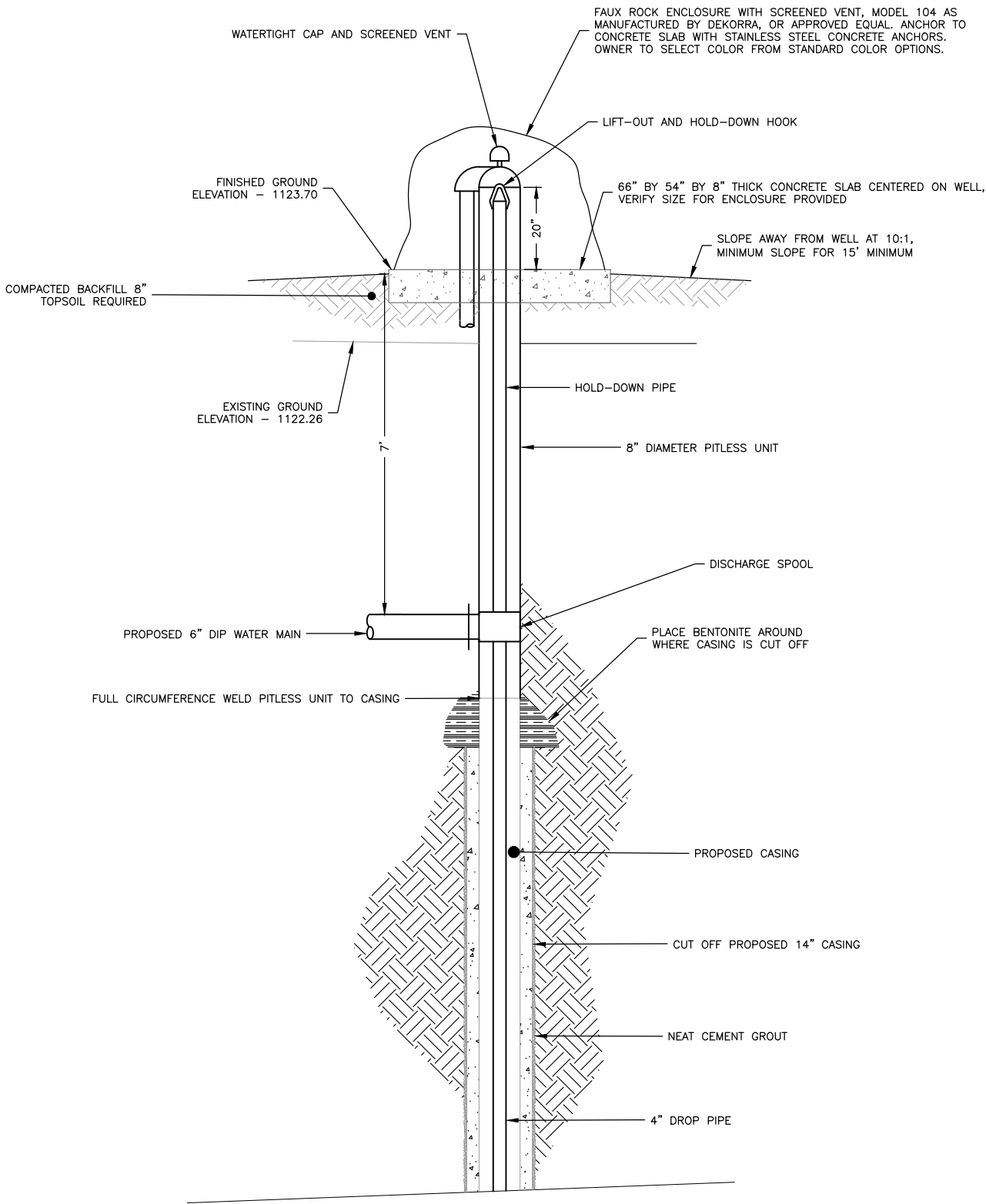
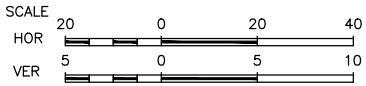
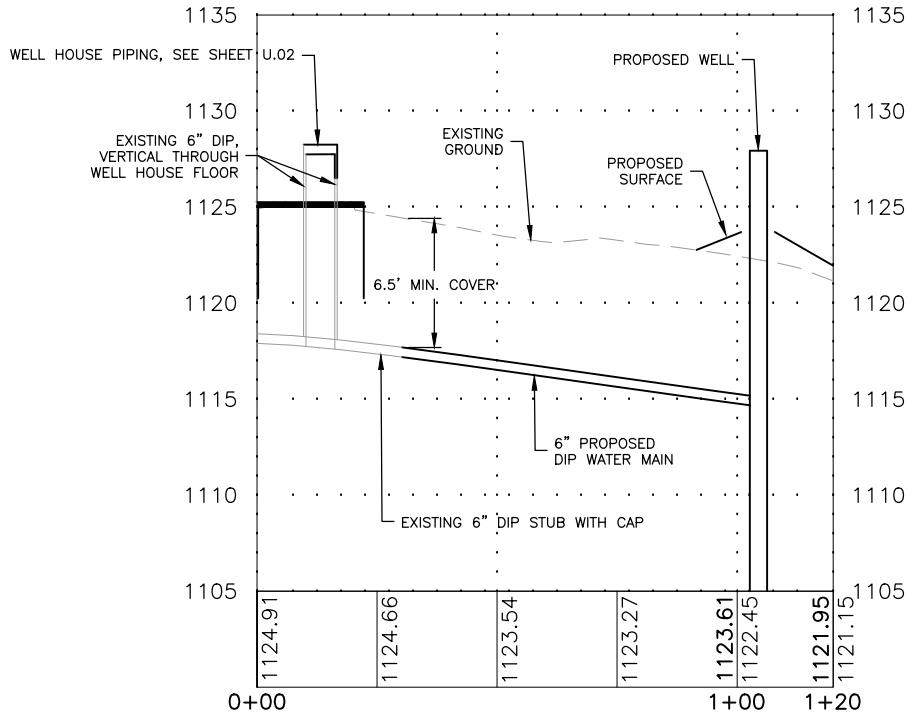
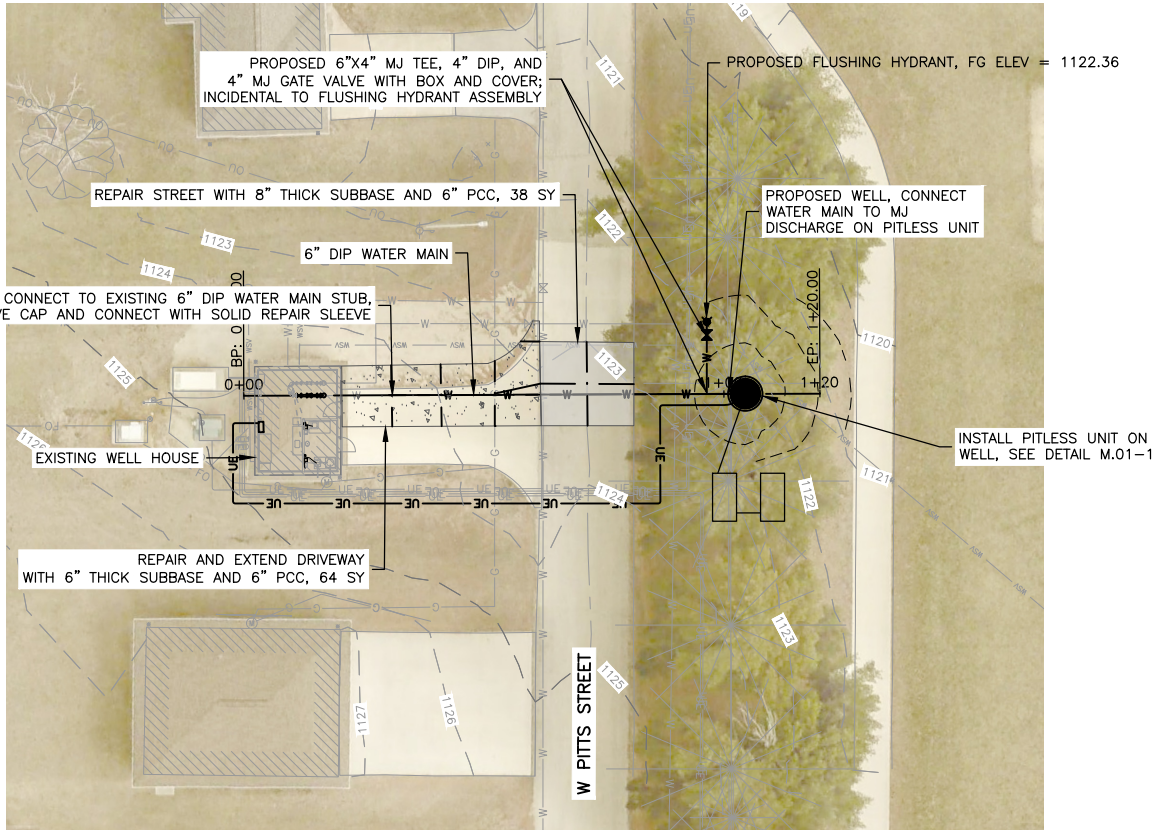


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PLOT DATE: 11/4/25 © 2025 FEHR GRAHAM





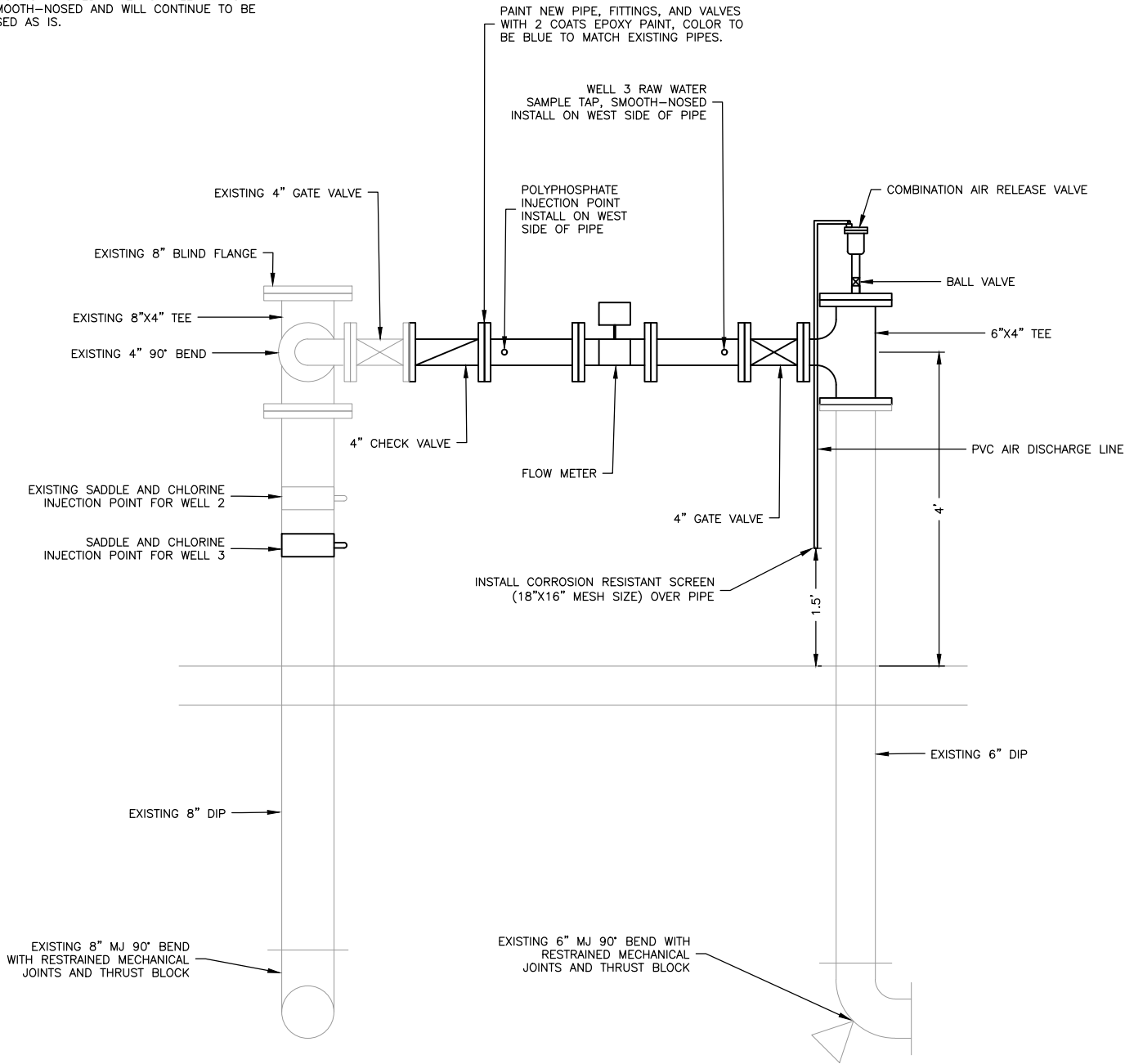
M.01 - 1  
PROFILE - WELL CONNECTION

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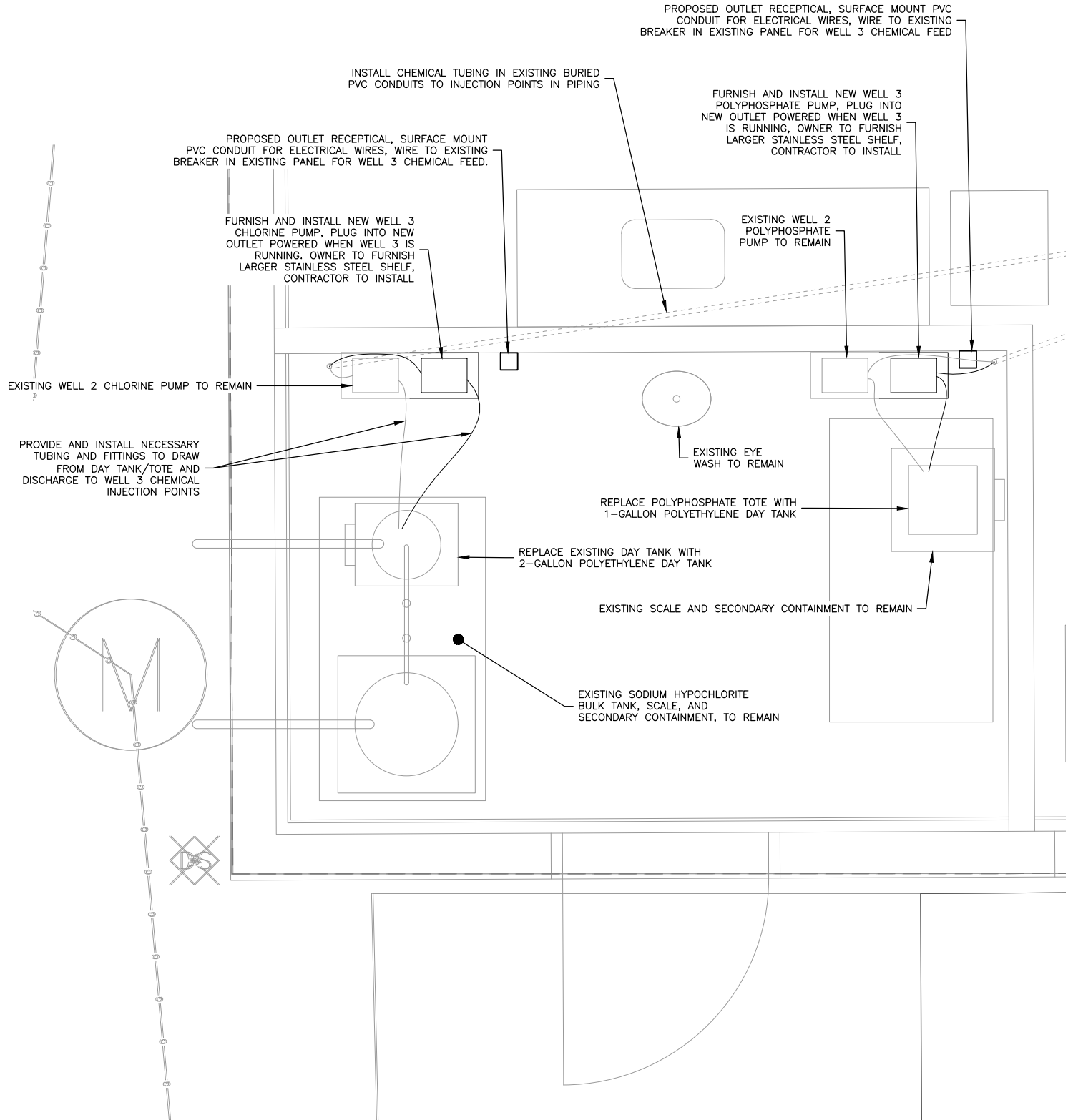




- NOTES:
1. INSTALL INJECTION POINTS ON SIDE OF PIPE. BEFORE ORDERING MATERIALS CONTRACTOR SHALL VERIFY CHEMICAL INJECTION POINTS AND FLOW METER MATCHES EXISTING EQUIPMENT INSTALLED FOR WELL 2.
  2. EXISTING FINISHED WATER SAMPLE TAP IS SMOOTH-NOSED AND WILL CONTINUE TO BE USED AS IS.



U.02 - 1  
WELL HOUSE PIPING PROFILE VIEW



U.02 - 2  
CHEMICAL ROOM PLAN VIEW

REVISIONS		
REV. NO.	DESCRIPTION	DATE