

# Specifications & Contract Documents

*prepared for the*

## *Auburn Water & Sewer*



*for the proposed*

### **WASTEWATER TREATMENT PLANT EXPANSION PROJECT**

Contract 2 - Stewart Drive Lift Station  
Replacement

*prepared by*

**MCGHEE ENGINEERING, INC.**  
Guthrie, Kentucky

**August 2023**

**Specifications and Contract Documents**  
**WASTEWATER TREATMENT PLANT EXPANSION**  
**Contract 2 – Stewart Drive Lift Station Replacement**

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**Auburn  
Water  
&  
Sewer**



**Michael Hughes**  
*Mayor*

**Mike Rogers**  
*Councilmember*

**Rex Evans**  
*Councilmember*

**Peggy Thomas**  
*Councilmember*

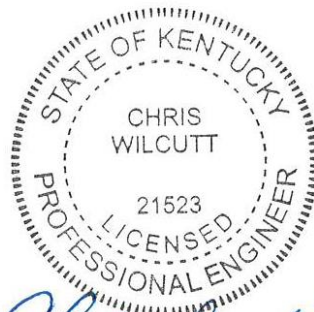
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*Chris Wilcutt*

**August 2, 2023**

**Auburn Water & Sewer  
WASTEWATER TREATMENT PLANT EXPANSION PROJECT  
Contract 2-Stewart Drive Lift Station Replacement**

**CONTRACT DOCUMENTS**

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**Auburn Water & Sewer  
WASTEWATER TREATMENT PLANT EXPANSION PROJECT  
Contract 2-Stewart Drive Lift Station Replacement**

**CONTRACT DOCUMENTS**

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Purchased By A Construction Contractor For A Sewer Or Water Project With A  
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**Contract Drawings**

Contract Drawings consist of 5 sheets bound separately from this document.  
See the index on the cover sheet of the Contract Drawings.

Partial Preview

## ADVERTISEMENT FOR BIDS

City of Auburn  
P.O. Box 465 – 103 East Main Street  
Auburn, KY 42206

**RE: Auburn Wastewater Treatment Plant Expansion Project  
Contract 2 – Stewart Drive Lift Station Replacement**

The City of Auburn will receive sealed construction Bids for their **Wastewater Treatment Plant Expansion Project: Contract 2 – Stewart Drive Lift Station Replacement** until **1:30 p.m. local time, Thursday, February 8, 2024** at the office of the Auburn City Hall, 103 East Main Street, Auburn, Kentucky 42206, at which time they will be publicly opened and read aloud.

The contract involves the replacement of the City's Stewart Drive Lift Station in accordance with contract plans and specifications. All work is located in Auburn, Kentucky (Logan County).

The Issuing Office for the Bidding Documents is: McGhee Engineering, Inc., 202 South Ewing Street, P.O. Box 267, Guthrie, Kentucky 42234 - (270) 483-9985. Prospective Bidders may examine the Bidding Documents at the Issuing Office or at Auburn City Hall during normal business hours and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Plans must be obtained from the Bid Opportunities page at [www.mcgheeengineering.com](http://www.mcgheeengineering.com). Bids will be accepted only from registered contractors holding approved bid forms provided by the Issuing Office through the referenced website. A preview of bidding documents and a listing of plan holders may be viewed at [www.mcgheeengineering.com](http://www.mcgheeengineering.com), and a tabulation of results will be posted there shortly after bidding.

Bid security shall be furnished in accordance with the Instructions to Bidders.

"Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference applies an American Iron and Steel requirement to this project. All listed iron and steel products used in this project must be produced in the United States. The term "iron and steel products" means the following products made primarily of iron or 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. The de minimis and minor components waiver apply to this contract."

Published by the authority of the City of Auburn  
Michael Hughes, Mayor

Dated: January 8, 2024

## INSTRUCTIONS TO BIDDERS

A. These Instructions to Bidders establish requirements for Bidding and Award of Contract.

B. Table of Articles

Article 1 – Defined Terms

Article 2 – Copies of Bidding Documents

Article 3 – Qualifications of Bidders

Article 4 – Site and Other Areas; Existing Site Conditions; Examination of Site; Owner's Safety Program;  
Other Work at the Site

Article 5 – Bidder's Representations

Article 6 – Pre-Bid Conference

Article 7 – Interpretations and Addenda

Article 8 – Bid Security

Article 9 – Contract Times

Article 10 – Liquidated Damages

Article 11 – Substitute and "Or-Equal" Items

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Article 13 – Preparation of Bid

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Article 16 – Modification and Withdrawal of Bid

Article 17 – Opening of Bids

Article 18 – Bids to Remain Subject to Acceptance

Article 19 – Evaluation of Bids and Award of Contract

Article 20 – Bonds and Insurance

Article 21 – Signing of Agreement

Article 22 – Retainage

Article 23 – Licenses, Fees & Taxes

Article 24 – Wage Rate Determination

Article 25 – Other Bid Requirements

Article 26 – Laws, Ordinances & Regulations

Article 27 – Insurance

Article 28 – Safety Standards & Accident Prevention

## ARTICLE 1- DEFINED TERMS

Other terms used in the bidding documents and not defined elsewhere have the following meanings which are applicable to both the singular and plural thereof.

1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and the Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

- A. Bidder - The individual or entity who submits a Bid directly to OWNER.
- B. Issuing Office - The office from which the Bidding Documents are to be issued.
- C. Successful Bidder - The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

## ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.

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

2.03 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

## ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **10** days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

- A. Evidence of Bidder's authority to do business in the state where the Project is located.
- B. Bidder's state or other contractor license number, if applicable.
- C. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 - SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE;  
OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:

- a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
- b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
- d. Technical Data contained in such reports and drawings.

- 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

- 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.



- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

#### 4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

#### 4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

### ARTICLE 5 – BIDDER'S REPRESENTATIONS

#### 5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work,
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the

Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;

- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an irrevocable representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### ARTICLE 6 – PRE-BID CONFERENCE

6.01 If warranted, a pre-Bid conference will be held at the time and location stated in the invitation or advertisement for bids. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

#### ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents. Addenda will be mailed no later than **three days** prior to the day set for receiving Bids. Failure of any Bidder to receive any such Addendum or interpretation shall not relieve such Bidder from any obligations under the Bid as submitted. All Addenda so issued shall become part of the Contract Documents.

7.03 Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

7.04 Receipt of all addenda must be acknowledged in space provided in the Bid.

## ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of **five percent (5%)** of the Bidder's maximum Bid price and in the form of a certified check or a Bid Bond (EJCDC No. C-430, 2013 Edition) issued by a surety meeting the requirements of paragraphs 6.01 and 6.02 of the General Conditions.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 10 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

## ARTICLE 9 - CONTRACT TIMES

9.01 The number of days within which, or the dates by which the Work is to be substantially completed, and completed and ready for final payment, are set forth in the Agreement.

## ARTICLE 10 - LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages in any for failure to timely attain Substantial Completion or completion of the Work in readiness for final payment, are set forth in the Agreement.

## ARTICLE 11 - SUBSTITUTE OR "OR-EQUAL" ITEMS

11.01 The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date of receipt of Bids in the case of a proposed substitute and 5 days prior in the case of a proposed "or equal". Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. Each such request shall include Manufacturer's Certification letter for compliance with AIS requirements and subsequent statutes mandating domestic preference, if applicable. Refer to Manufacturer's Certification Letter provided in these Contract Documents.

11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

11.03 If award is made, Contractor shall be allowed to submit proposed substitutes and "or equals" in accordance with the General Conditions.

## ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 A list of subcontractors, suppliers, individuals, or entities shall be submitted along with the Bid at the Bid Opening to the OWNER. If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

12.03 CONTRACTOR shall not be required to employ any subcontractor, supplier, individual, or entity against whom CONTRACTOR has reasonable objection.

12.04 The CONTRACTOR shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.

## ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

- A. All blanks on the Bid form must be typed or completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternative, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown. The corporate seal shall be affixed and attested by the secretary or an assistant secretary.

13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.

13.05 A Bid by an individual shall show the Bidder's name and address for receiving notices.

13.06 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The joint venture's address for receiving notices shall be shown.

13.07 All names shall be typed or printed in ink below the signatures.

13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the number and dates of which must be filled in on the Bid form.

13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

#### ARTICLE 14 - BASIS OF BID; COMPARISON OF BIDS

14.01 Bidders shall submit a Lump Sum Bid for the Base Bid. The price for all Base Bid items shall be included in the Lump Sum Base Bid.

14.02 Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.03 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances named in the Contract Documents as provided for in paragraph 19.2 of the General Conditions. The final Contract Price will be adjusted to reflect actual costs on account of cash allowances. No allowances for temporary services are provided. Bidder shall include costs for temporary services in Contract Price.

#### ARTICLE 15 - SUBMITTAL OF BID

15.01 Bid Form is to be completed and submitted with all the attachments as required.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement to Bid and shall be enclosed in an opaque sealed envelope, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of the Bidder, and shall be accompanied by the Bid security and other required documents. If the Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to place indicated in the Advertisement to Bid. No relief shall be provided for a mailed Bid not being received by the prescribed time. No Bid will be considered which is received after the time set for receiving Bids.

#### ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BIDS

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.

16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

#### ARTICLE 17 - OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

#### ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for a period of **90 days**, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

#### ARTICLE 19 – EVALUATION OF BIDS & AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the responsive Bid perceived by the Owner as offering the greatest advantage to the Owner.

##### 19.03 Evaluation of Bids

- A. In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, and other data as may be requested in the Bid form or prior to the Notice of Award.
- B. For the determination of the apparent low Bidder(s) when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.



19.06 The Bid is subject to Kentucky Revised Statutes Section 45A.490 through 45A.494, which in general provides that a "resident bidder" of Kentucky is to be given a bidding preference over a "nonresident bidder" who is registered in a state that gives preference to its in-state resident bidders over a Kentucky resident bidder. The bidding preference is to be the same as that stipulated of the state of the "nonresident bidder." If the state of "nonresident bidder" provides no specific preference, then "resident" and "nonresident bidders" are to be treated the same when evaluating Bids.

19.07 If a Contract is to be awarded, OWNER will give the successful Bidder a Notice of Award within 90 days after the time set for opening Bids.

## ARTICLE 20 - BONDS AND INSURANCE

20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment bonds and insurances. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment bonds and insurances.

20.02 All bonds required by the project shall be payable to the OWNER in an amount of one hundred percent of the Contractor's maximum Base Bid price.

## ARTICLE 21 - SIGNING OF AGREEMENT

21.01 When the OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by a list of items and information required of the Successful Bidder for evaluation by the OWNER and funding agency, if applicable. Within **10** days thereafter, the successful Bidder shall deliver the full number of original copies of the items listed and the Notice must be acknowledged by the Successful Bidder within **10** days thereafter. After receipt of an acknowledged Notice of Award, a pre-construction meeting will be scheduled at which time the OWNER and Successful Bidder will execute the required number of Agreements and Notice to Proceed. After certification by the Local Counsel and any other required parties, the OWNER shall deliver one fully signed counterpart to the Successful Bidder along with a complete set of Drawings with appropriate identification. OWNER will furnish the Contractor up to three (3) sets of conforming Contract Documents, Technical Specifications and Plans free of charge. Additional sets may be obtained from the Engineer at commercial reproduction rates. The successful bidder shall commence work within ten (10) calendar days after receipt of written notice to proceed and shall progress therewith so that the work shall be completed in accordance with the terms of the Contract Documents within the time allowed after the date of the commencement of contract time.

**21.02 This Contract is expected to be funded with City Reserves and in part with funds provided by the United States Department of Agriculture, Rural Development (RD). USDA-RD requirements and provisions must be met by the Bidder and all subcontractors.**

21.03 Concurrence by USDA in the award of the Contract is required before the Contract is effective.

## ARTICLE 22 - RETAINAGE

22.01 Prior to Substantial Completion, OWNER will retain an amount equal to 5% of each progress payment application. Amounts previously retained shall not be paid to the CONTRACTOR until substantial completion of the Work. In no event shall the total Retainage be more than 5% of the value of the work satisfactorily completed.

22.02 Retainage shall be applicable to the Total Value of Work and Stored Materials less the Value of In-place OWNER Purchased Materials.

## ARTICLE 23 – LICENSES, FEES, AND TAXES

23.01 The Bidder shall be aware of the current KRS 139.480(34) {revised January 2023} regarding the tax exemption for building materials, fixtures, and supplies purchased by a construction contractor for a sewer or water project with a governmental agency. **No sales tax shall be included in the stated bid prices.** The awarded contractor will be required to complete a **Certificate of Exemption (see Appendix)** with each vendor on the project. Bidders who are uncertain as to other items subject to tax, or who require further explanation or clarification, are requested to contact the State of Kentucky Revenue Cabinet.

23.02 Successful Bidder must comply with any City ordinances relating to Occupational License Fees, Business Licenses, payroll, and net profits taxes and any other ordinances which may apply to the project. Refer to the Supplementary Conditions SC-6.10 for additional information.

23.03 Successful Bidder must provide proof of having all such licenses or fees at or before the signing of the Contract.

## ARTICLE 24 - WAGE RATE DETERMINATION

24.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5(b) apply.

24.02 Pursuant to 2017 Kentucky House Bill 3, State prevailing wages do not apply to this Contract.

24.03 Federal Davis Bacon wage rates do not apply to this Contract.

## ARTICLE 25 – OTHER BID REQUIREMENTS

25.01 Bidder shall complete the following documents attached to the Bid:

Statement of Experience  
Certification Regarding Debarment, etc. (AD 1048)  
Compliance Statement (RD 400-Q)  
Certification for Contract Grants and Loans (RD 1940-Q)

## ARTICLE 26 – LAWS, ORDINANCES, AND REGULATIONS

26.01 Bidder must familiarize itself with all laws, ordinances, and regulations by federal, state, city, or other governmental agency, which by reason of being neglected or violated may affect the Work contemplated and must secure and pay the fee required for any permits which may be necessary unless such fees are otherwise indicated to be paid in the Bidding Documents.

26.02 Bidders must comply with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, and the Contract Work Hours Standard Act.

26.03 Bidders must comply with the President's Executive Order No. 11246 as amended, which prohibits discrimination in employment regarding race, creed, color, sex or national origin.

26.04 This project will be in compliance with Executive Order 11246 (Equal Employment Opportunity) as amended.

26.05 The Contractor/Subcontractor will comply with 41CFR 60-4, in regard to affirmative action, to insure equal opportunity to females and minorities and will apply the time tables and goals set forth in 41 CFR 60-4.



26.06 Bidder will make positive efforts to use small, minority, women owned and disadvantaged businesses.

26.07 Bidder/Owner will comply to provisions for timely periodic payments and for limiting retainage (40 CFR 31.36).

#### ARTICLE 27 – INSURANCE

27.01 Before execution of Contract by OWNER, the successful Bidder shall furnish OWNER a certificate or certificates issued by or on behalf of insurers or a self-insurance program or group self insurance program, qualified to do business in the Commonwealth of Kentucky under KRS Chapter 304 or KRS Chapter 342, certifying that the successful Bidder complies with the Worker's Compensation laws of Kentucky and is insured or indemnified against public liability claims which may arise out of the performance of the Work under the proposed Contract.

#### ARTICLE 28 – SAFETY STANDARDS AND ACCIDENT PREVENTION:

28.01 With respect to all work performed under this contract, the contractor shall:

Comply with the safety standards provision of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "federal Register", Volume 36, No. 75, Saturday, April 17, 1971. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property. Maintain at his/her office or other well know place at the job site, all articles necessary for giving first aid to one injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

## BID FORM

Project Identification: City of Auburn Water & Sewer  
Wastewater Treatment Plant Expansion Project

Contract Identification: Contract 2 – Stewart Drive Lift Station Replacement

### ARTICLE 1 – BID RECIPIENT

1.01 This Bid is Submitted to: City of Auburn Water & Sewer  
PO Box 465  
Auburn, Kentucky 42206

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

### ARTICLE 2 – BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for **90 days** after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

### ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No. \_\_\_\_\_ Date \_\_\_\_\_  
Addendum No. \_\_\_\_\_ Date \_\_\_\_\_  
Addendum No. \_\_\_\_\_ Date \_\_\_\_\_

B. Bidder has visited the Point of Destination and site where the Goods or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost,

progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
- K. **The Bidder shall be aware of the current KRS 139.410(4) regarding the tax exemption for building materials, fixtures, and supplies purchased by a construction contractor for a sewer or water project with a governmental agency. No sales tax shall be included in the stated bid prices. The awarded contractor will be required to complete a Certificate of Exemption (see Appendix) with each vendor on the project.**

#### ARTICLE 4 – BIDDER'S CERTIFICATION

##### 4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their

property to influence their participation in the bidding process or affect the execution of the Contract.

## ARTICLE 5 – BASIS OF BID

5.01 Bidder will compete the Work in accordance with the Contract Documents for the following price:

LUMP SUM BID AMOUNT	
In figures	In Words
\$ _____	_____ _____

The Bidder specifies that his Base Bid is based on using the following brands and/or suppliers of equipment:

Lift Station Pump \_\_\_\_\_

5.02 **The Bidder is required to attach to this Bid Form a detailed proposal which totals the lump sum amount above. This proposal should provide a detailed breakdown of the lump sum bid with unit pricing and thorough description of each component of the work. Any proposed deviations or exceptions from the specifications must be thoroughly described in the Bidder's proposal. Any special provisions must be thoroughly described in the Bidder's detailed proposal, if warranted.**

5.03 The prices shall include all labor, materials, (all excavation is bid unclassified and will not constitute any additional cost to OWNER if rock is encountered), overhead, profit, insurance, and other costs necessary to cover the finished work of the several items called for.

5.04 Bidder acknowledges that (1) the Lump Sum Bid Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

## ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

## ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of the Bid:

- A. Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Certified Check (circle type of security provided);
- B. If Bid amount exceeds \$10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;

EJCDC® C-410, Bid Form for Construction Contracts.

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- C. If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (AD-1048);
- D. If Bid amount exceeds \$100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans;
- E. Statement of Experience

## ARTICLE 8 – DEFINED TERMS

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

## ARTICLE 9 – BID SUBMITTAL

- 9.01 This Bid submitted by:

Submitted by:

_____ Signature	_____ Business	
_____ Printed or Typed Name	_____ Bidder's Business Address	
_____ Title	_____ City, State, Zip Code	
_____ Employer's Tax ID No.	_____ Business Phone No.	_____ Business Fax No.
_____ Business Email Address	_____ Cell Phone No.	_____ Other Contact No.

- 9.02 Bid submitted on \_\_\_\_\_, 2023.

Seal (if required)

## SUMMARY OF WORK

### 1.0 GENERAL

#### 1.01 WORK INCLUDED

- A. Replacement of a sanitary sewer lift stations in Auburn, Kentucky.
- B. The Contractor shall include all materials, labor and equipment necessary for completion of the Project. The Contract Documents are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth but which is reasonably implied or necessary for proper performance of the Project shall be included.

#### 1.02 PERMITS

Contractor shall obtain all permits related to or required by the Work in this Contract.

#### 1.03 CODES

Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices, citations and similar communication to the Owner.

#### 1.04 EXISTING CONDITIONS AND DIMENSIONS

- A. The Work in this Contract will be performed at the site of an existing lift station in Auburn, Kentucky.
- B. The Contractor is responsible for verifying all existing conditions, elevations, dimensions, etc., and providing his finished work to accommodate existing conditions.

### 2.0 CONTRACTOR'S DUTIES

#### 2.1 Construction and Related Activities

The Contractor shall provide and pay for all labor, materials, equipment, machinery, tools, superintendence, insurance, shipping, utilities, and other costs required for a complete and functioning lift station installation.

#### 2.2 Taxes

The Contractor shall pay all required sales taxes, payroll taxes, consumer and use taxes, and other taxes relating to the work of the project.

#### 2.3 Permits

The contractor shall secure and pay for all legally required permits, licenses and fees associated with the construction.

#### 2.4 Notices

The Contractor shall provide all required notices, including notices to utility owners of intent to excavate in the vicinity of their utilities, notices to property owners of intent to enter their property for construction purposes, notices regarding the interruption of any utility service, as well as other notices required by the plans and contract documents. The Contractor shall provide traffic control equipment and flagman, as may be required by the Kentucky Department of Highways or by working conditions.

## 2.5 Laws

Contractor shall fully comply with all applicable laws, ordinances, rules, regulations, orders and other legal requirements, and shall bear the cost of such compliance.

## 2.6 Character of Workmen

Contractor shall employ workman and foremen with sufficient knowledge of and experience in the type of work proposed to assure satisfactory performance. Workman shall maintain a professional demeanor and appearance at all times on the project. Any workman on the project who performs work in an incompetent manner, or acts in a disorderly or intemperate manner shall be removed from the project, and may not be employed on any portion of the project unless approved by the Owner.

## 2.7 Notice of Discrepancies

If discrepancies or ambiguities are found in the plans, specifications, contract documents or in any communication to the contractor, the contractor shall immediately notify the Engineer in writing. Do not proceed with the affected work until clarification is received.

## 2.8 Inspection

Provide at all times, access to the work for inspection by representatives of the Owner, the Engineer, and regulatory authorities having jurisdiction over the project.

## 2.09 Contractor's Use of Premises

Contractor shall confine his operations to public right-of-way, easements and property obtained by the Owner for construction of the project, or to areas secured by the Contractor for his use. Contractor shall take precautions to minimize disruption to existing properties.

Stored materials, regardless of their location shall be protected by the Contractor from damage, theft or degradation at all times.

## 2.10 Existing Facilities

The existing and adjacent roadways will be in continuous operation during the construction of the Project. Contractor shall avoid disturbing existing streets, and any other utilities or structures encountered in the work, except as necessary for construction operations. Contractor shall give at least 48 hours prior notice to the Owner, or to any utility or other entity, of any necessary disruptions to service, or work affecting active lines.

Lift stations must remain in service at all times during construction. No overflows or temporary bypassing will be permitted.

## 2.11 Partial Owner Occupancy

The Owner may, at his discretion, place into service any or all portions of the completed work prior to final completion of all work on the project. Placing a portion of the work in service before final completion does not relieve the contractor of his obligation to complete all work associated with that portion of the work (i.e. clean-up, surface restoration, etc.), to perform maintenance for the required period, or to provide warranty for that portion of the work

## 3.0 MEASUREMENT & PAYMENT

### 3.1 General

The Contractor shall furnish all labor, tools, equipment and materials to construct the proposed improvements complete as shown on the plans and described in these Specifications. The work shall be

measured for payment in accordance with applicable provisions of these Specifications and payment shall be made on the basis of the unit prices or lump sum prices bid. The sum of the payments for eligible pay items contained in the proposal form shall be the compensation to be paid for the completed project; provided however, that changes in the work covered by written change orders, properly executed, may result in additions or deductions from the contract price.

The Contractor's attention is called to the fact that although the pay items shown shall be the basis for establishing the contract price, the description of the pay items does not necessarily reflect the full extent of work to be performed. The cost of the incidental work which is necessary but which is not specifically listed as one of the pay items, shall be included in the prices bid for the pay items to which the incidental work is most closely related.

END OF SECTION 01-100

Partial Preview



## **PUMP STATION EQUIPMENT**

### **1.0 SCOPE**

The work to be performed under this specification includes furnishing and installing chopper-type submersible pumps and appurtenances suitable for pumping raw, unscreened wastewater.

### **2.0 GENERAL REQUIREMENTS**

#### **2.1 Distributor's Qualifications**

The manufacturer shall be represented by a distributor with at least one factory certified technician qualified to service the pumping equipment, a factory approved shop for maintenance and repair of the pumping equipment, and a stock of repair and service parts. The distributor shall be located not over 250 miles from the site of the pump installation unless approved by the Engineer.

#### **2.2 Shop Drawings**

Submit shop drawings for the pumping and control equipment, including manufacturer's literature, performance curves, dimensional drawings and other items required to document full compliance with the contract requirements in accordance with Section 01-300.

#### **2.3 Manufacturer**

Pumps shall be as manufactured by Vaughn or pre-approved equal.

The drawings and specifications were prepared based on Vaughn Model S3L. CONTRACTOR shall include in the bid and shall be responsible for the cost of any changes to accommodate other equipment including, but not limited to, structural, mechanical, and electrical work. CONTRACTOR shall also pay additional costs necessary for revisions of drawings and/or specifications by ENGINEER.

### **3.0 MATERIALS**

#### **3.1 Operating Conditions**

The pumping equipment shall meet the performance requirements set forth in Table 1.

The motor supplied shall be large enough to assure that the pump shall be non-overloading through the entire head range, and have sufficient torque to assure positive shearing at starts. Contractor will be required to supply a larger motor than shown in the referenced table if necessary to meet this requirement. Contractor will then be required to provide upgraded electrical service, panels, controls, generator, etc. at his expense to accommodate the larger motor. If the pump can be supplied with a smaller motor and still meet the non-overloading requirement, the smaller motor may be provided, however, other components of the system may not be downsized.

All pumps for each duty shall be identical and interchangeable. The pumps shall be non-overloading, and free of vibration, noise and cavitation at all points on the curve.

#### **3.2 Pump General Requirements**

The pumps shall be guide rail mounted, submersible, direct driven, single stage, vertical, chopper-type submersible pumping units. Each unit shall be complete with a close-coupled, submersible electric motor; a floor-mounted discharge elbow, supporting guide rails, electric and control cords, and all other appurtenances required for a complete and operational installation. The pump and motor unit shall be automatically connected to, and supported by the discharge elbow when lowered into the wet well along the guide rails, without requiring personnel to enter the wet well.

Influent Pumps shall be suitable for use with variable frequency drives to control rotational speed and pump output. Pumps shall be suitable for continuous use at all rotational speeds within the stated flow range.

Table 1  
Pump Operating Conditions

	Stewart Drive LS
Number of Pumps*	2
Rated Head (ft)	50
Flowrate at Rated Head (gpm)	100
Operational Range (gpm)	100-250
Minimum Motor Horsepower	7.5
Minimum Efficiency at Duty Point (%)	35%
Nominal Discharge Size (in)	3" (4" w/ adapter bracket @ connection)
Basin Depth (ft)	12
Power Supply <u>(Contractor to Verify before ordering)</u>	277/480v - 3 $\phi$

### 3.3 Pump Construction

The pump casing shall be constructed of cast ductile iron, with smooth, rounded water passages to avoid clogging. The impeller shall be constructed of hardened steel, of a design suitable for chopping and maceration of raw wastewater by continuous shearing action between hardened metal cutters on the impeller leading edge and pump casing. All pump rotating components shall be dynamically balanced to avoid vibration. Pumps shall be equipped with cartridge type mechanical seals. Thrust bearings shall have a minimum L-10 rated life of 100,000 hours. Bearings shall be oil lubricated with an automatic oil level monitoring system serviceable without removing the pump from the wet well, capable of shutting down the pump in the event of low oil condition, and reporting fault conditions to SCADA. Oil switch shall be rated for 120-volt and 2.5-amperes. Fasteners used in construction of the pump shall be stainless steel, and each pump shall have an engraved stainless steel nameplate indicating the manufacturer, model, serial number, rated flow and head, horsepower, RPM, and electrical service requirements.

### 3.4 Motor Construction

The pump motor shall be a sealed submersible NEMA B type. Pump motor shall be hazardous location rated meeting the requirements of a Class I, Division 1, Groups C and D location. The motor shall be suitable for operation on 480-volt, three phase, 60 hertz current. The motor shall have Class F insulation and tandem mechanical seals in oil bath with moisture sensing probes. The motor shaft shall be ball bearing mounted and capable of carrying all thrust loads generated by operation of the pump. The motor shall be protected by a double seal system with a device to detect and indicate seal failure. The motor shall have thermal overload protection to shut down operation at high temperature. Pump motors shall have a minimum service factor of 1.15. Motors on VFDs shall be inverter-duty rated, meet the requirements of NEMA MG1 Part 31, and be capable of a minimum speed turndown of 4:1.

### 3.5 Discharge Elbow

Provide a heavy cast iron discharge elbow suitable for attachment to the wetwell floor, and supporting the pump and guide rails. The discharge elbow shall seal with the pump discharge automatically upon lowering the pump along the guide rails, and shall decouple automatically upon lifting the pump. The outlet of the discharge elbow shall connect with a standard ANSI 125 lb. flange. Anchor bolts for attachment of the elbow to the floor shall be stainless steel.

### 3.6 Guide Rails

Provide guide rails constructed of stainless steel pipe as recommended by the pump manufacturer. Provide all required mounting hardware and intermediate supports. Guide rails shall be one continuous pipe, with no irregularities to interfere with sliding of the pump guide bracket.

### 3.7 Lift Chain

A stainless steel chain or cable suitable for lifting the pump and removing it from the wetwell shall be provided and installed for each pump.

### 3.8 Power Cables

Power cord and control cord shall be sealed at entry to the pump with an epoxy potting compound, and additional mechanisms as required to assure complete sealing, and to provide for a cable pull of 300 pounds. Cords shall be suitably insulated for submersion service. Cords shall have a suitable receptacle end for connection and disconnection of the power supply without entering the wetwell. Provide a stainless steel Kellum grip strain relief on motor cable to support cable at the wet well hatch cover. Provide minimum 30 feet of cable for each pump, more as necessary. Cable shall be sufficient length to provide continuous run from in-place pump to point of cable connection.

### 3.9 Pump Protection

The motor stator shall incorporate two thermal switches in series to monitor the temperature of each phase winding. At a temperature preset to protect the motor the thermal switches shall stop the motor and be capable of activating an alarm.

Dual moisture sensing probes shall be provided to detect water intrusion into motor. When activated, the sensor shall be capable of activating an alarm or indicator. The thermal switches and sensor shall be connected to a monitoring unit which shall be installed in the Division 26 provided Motor Control Panel.

A monitoring unit rated for 120 Vac power supply shall be provided for installation in the Motor Control Panel and Motor Control Center. Monitoring unit shall be VPMR, an manufactured by MPE, or approved equal.

### 3.10 Control Panels

- A. The pumps shall be controlled by an integral pump control panel suitable for starting and stopping pump operation and varying pump rotational speed based on liquid level in the basin and adjustable setpoints established by the system operator, and automatically alternating pump operation between start. The control panel shall be UL listed as an assembly.
- B. Pump on, off, speed and alarm levels shall be controlled by an electronic level controller using a submersible pressure sensor. The pressure sensor cable shall be of sufficient length to reach the panel termination with no splices. The panel shall allow a pump to be ramped up to an adjustable starting speed and stopped when the level drops to an adjustable cut-off point. If the wetwell level continues to rise, the pump shall be incrementally ramped up to higher speeds until the level begins to fall, or the pump reaches full speed. The level and speed control setpoints shall be field adjustable without use of equipment.
- C. A NEMA 4X stainless steel control panel enclosure shall be provided suitable for mounting on a stainless steel pedestal attached to the pump station basin cover. All electrical components shall be mounted in the enclosure. The enclosure shall have a lockable outer door and a separate, hinged deadfront inner door. All control switches, lights and overload resets shall be mounted through the inner door. The pump circuit breaker and control circuit breaker shall be mounted with operating handles through the inner door, and shall have locking tabs that prevent the inner door from being opened with the breakers in the "ON" position.
- D. The panel shall include pump circuit breakers, control circuit breaker, alarm circuit fuse, control circuit fuse, , variable frequency drives, IEC rated motor starters with 3-pole ambient compensated bimetal overload relay, pump hand-off-auto switches (momentary in the hand position) alarm test switch, pump run lights, pump elapsed time run meters, seal leak lights, start and run capacitors, start relays, solid state alternator relay, override relay, terminal blocks, ground lugs, 110 volt, 15 amp convenience outlet, condensation heater, and all necessary wiring and brackets.

- E. The control panel shall be fitted with a red polycarbonate alarm light mounted to the top of the panel which shall be activated by high water in the basin, and automatically deactivated when the water level subsides.
- G. All internal wiring shall be color coded, with each wire having a different color scheme for identification. All incoming wires shall terminate into a box clap type terminal block. All control wires shall be 14 gauge, type TEW copper wire. A schematic diagram (with wire color) shall be permanently affixed to the inside of the enclosure.

#### 3.11 Access Hatch

Provide two each single leaf aluminum access hatch for the wet well and valve vault for each station in the size indicated on the plans. Hatches shall be designed to support a loading of 150 psf, and shall have a non-skid checkered surface. Hatches shall be designed to embed flush in a concrete station cover. Hatches shall have a lift-assist torsion rod assembly, a hold-open mechanism, a retractable handle for opening, and a locking mechanism suitable to receive a standard padlock. Hatches shall be Bilco Type K or equal.

#### 3.12 Piping and Valves

All piping in the lift station and valve vault shall be flanged ductile iron. Pump isolation valves shall be plug valves, and check valves shall be swing check valves, each conforming to Section 02-642.

### 4.0 INSTALLATION

The pumps shall be installed in the wetwell, shimmed and leveled as required. Grout fillets shall be installed in the wetwell to direct flow to the pumps, and to minimize sedimentation. Guide rails shall be installed plumb, and at the correct spacing for proper pump installation and removal. Control panels shall be mounted on stainless steel uni-strut type mounting hardware adjacent to the pump station. The installation shall be in accordance with the pump manufacturer's instructions.

### 5.0 START-UP, TESTING AND ACCEPTANCE

#### 5.1 Start Up and Testing

After installation, the pumping system shall be inspected by an authorized representative of the pump manufacturer, who shall also attend and supervise start-up and pump performance testing.

The installed pumps shall be performance-tested in the field. The performance test shall involve operating the pumps over varying head and flow conditions to verify performance equal to the submittal data, operation of the control system, operation of the meter system, and any other components of the pumping system. Allow at least 16 hours of field time for start-up and training.

#### 5.2 Operations Manuals

Provide two paper sets of operation and maintenance manuals for all components of the pumping system. Manuals shall fully describe the system, including dimensional and schematic drawings. Manuals shall detail recommended operations and maintenance procedures, provide a routine maintenance schedule, list spare part numbers and provide complete contact information for repair and spare parts. The manuals are to be provided at the time of start-up. The complete manual shall also be provided in electronic format (Adobe Portable Document Format).

END OF SECTION 11 100



CONSTRUCTION PLANS

for the

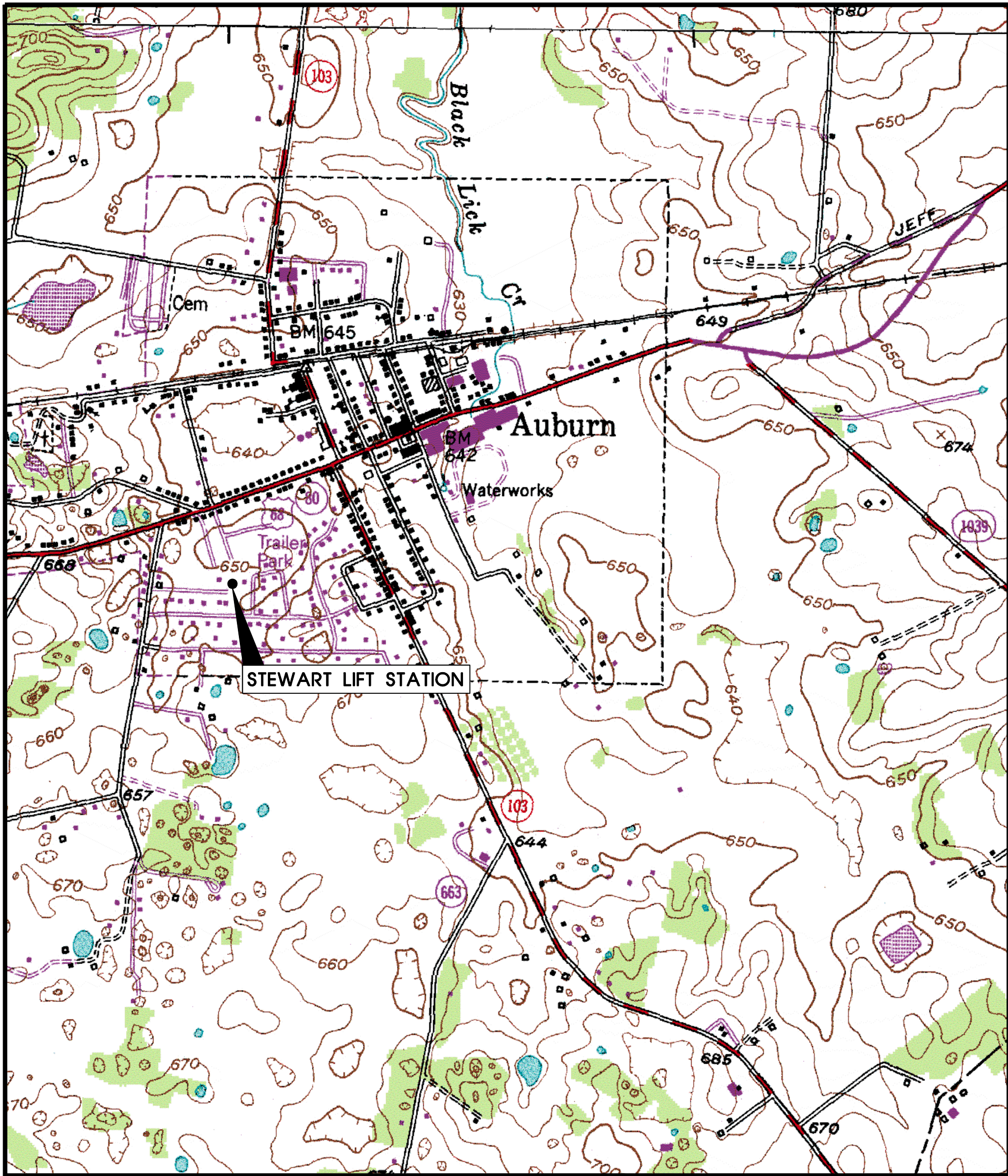
Stewart Drive Lift Station Replacement Project

on behalf of the

CITY OF AUBURN

Logan County, Kentucky

VICINITY MAP



SHEET INDEX

T-1	Title Sheet
P-1	Stewart Drive Lift Station Site Plan & Details
P-2	Stewart Drive Lift Station Site Details & Notes
P-3	Stewart Drive Lift Station Sanitary Sewer Details
P-4	Stewart Drive Lift Station Control Panel Platform Plan, Slab Plan & Details
E-1	Stewart Drive Lift Station Electrical Plan & Details

Mayor & City Council

Michael A. Hughes	Mayor
Mike Rogers	Councilman
Rex Evans	Councilman
Peggy Thomas	Councilman
Jeff Gregory	Councilman
Rhonda Sullivan	Councilman
Claude Tisdale	Councilman

Auburn, Kentucky  
P.O. Box 465 - 103 East Main Street  
Auburn, Kentucky 42206  
(270) 542-2511

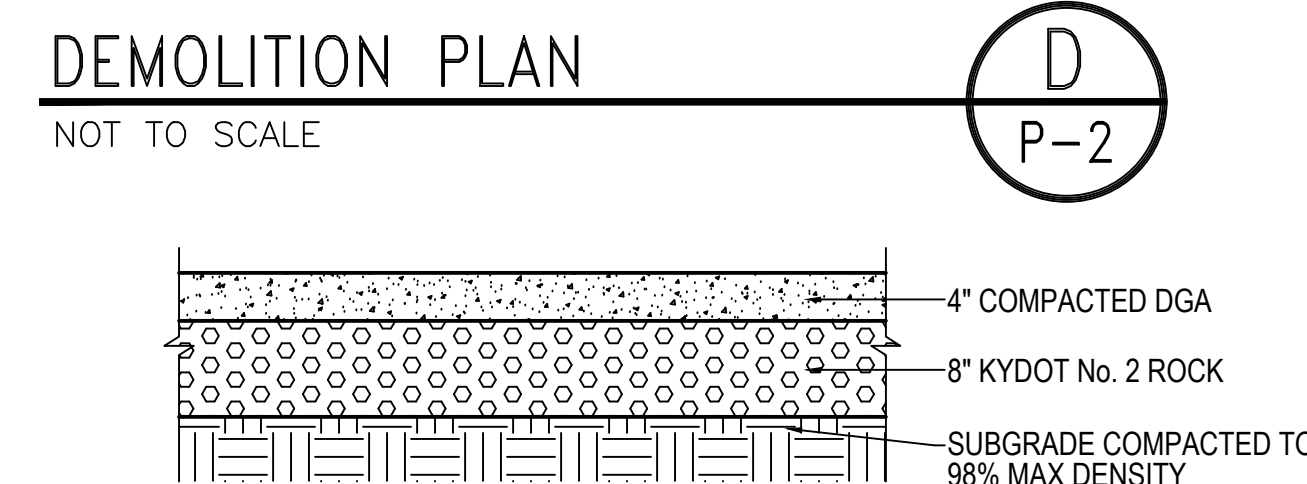
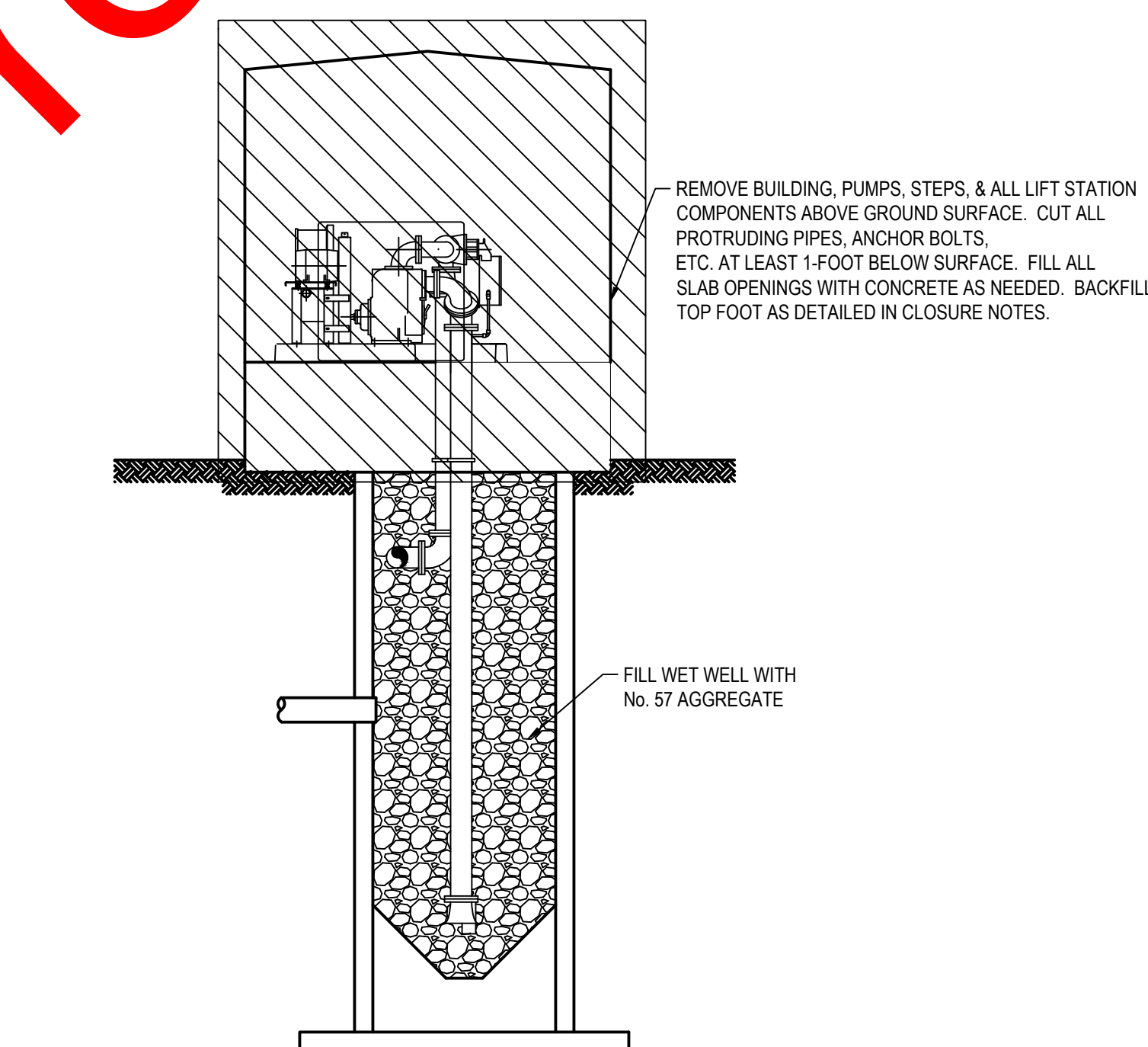
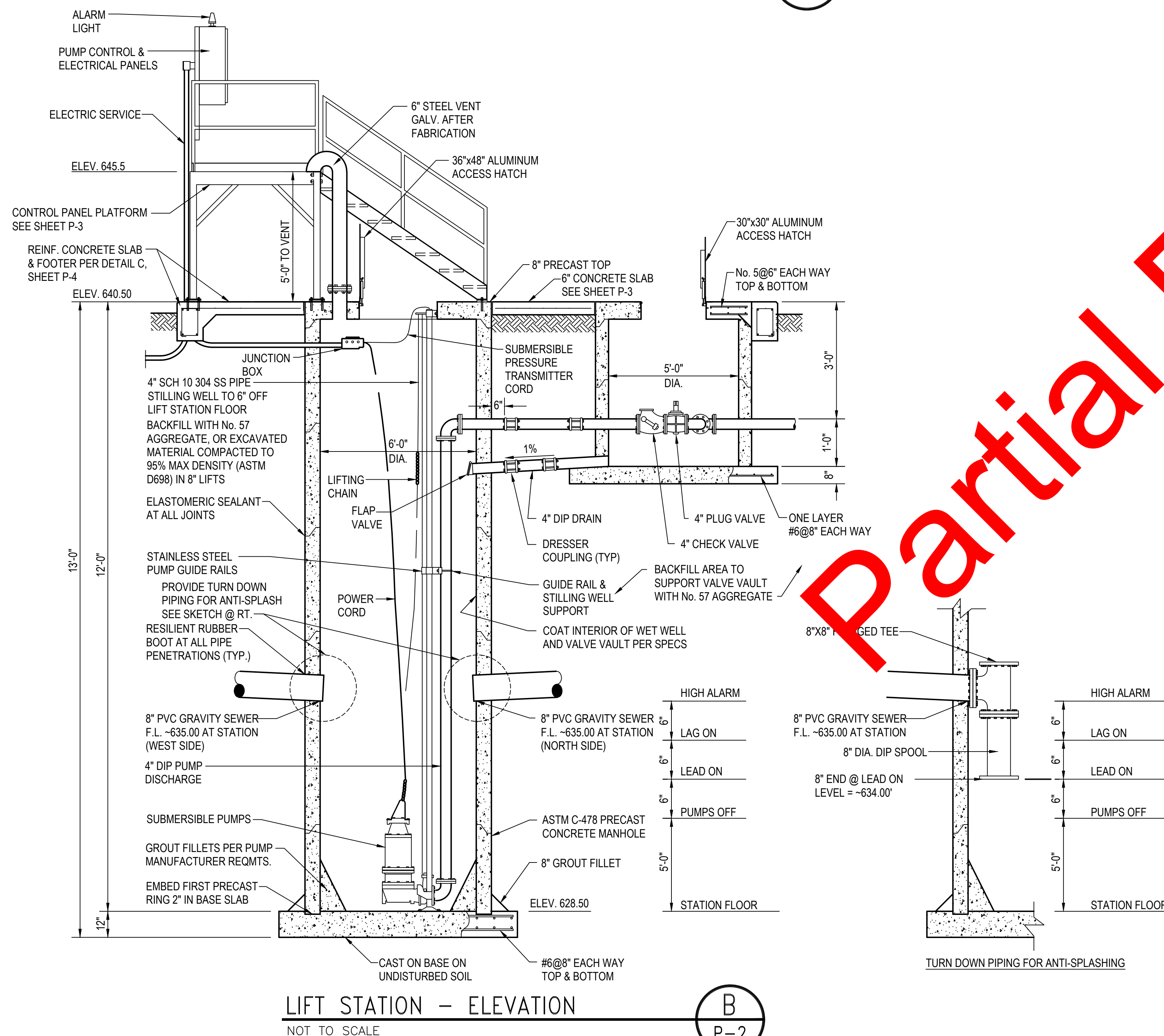
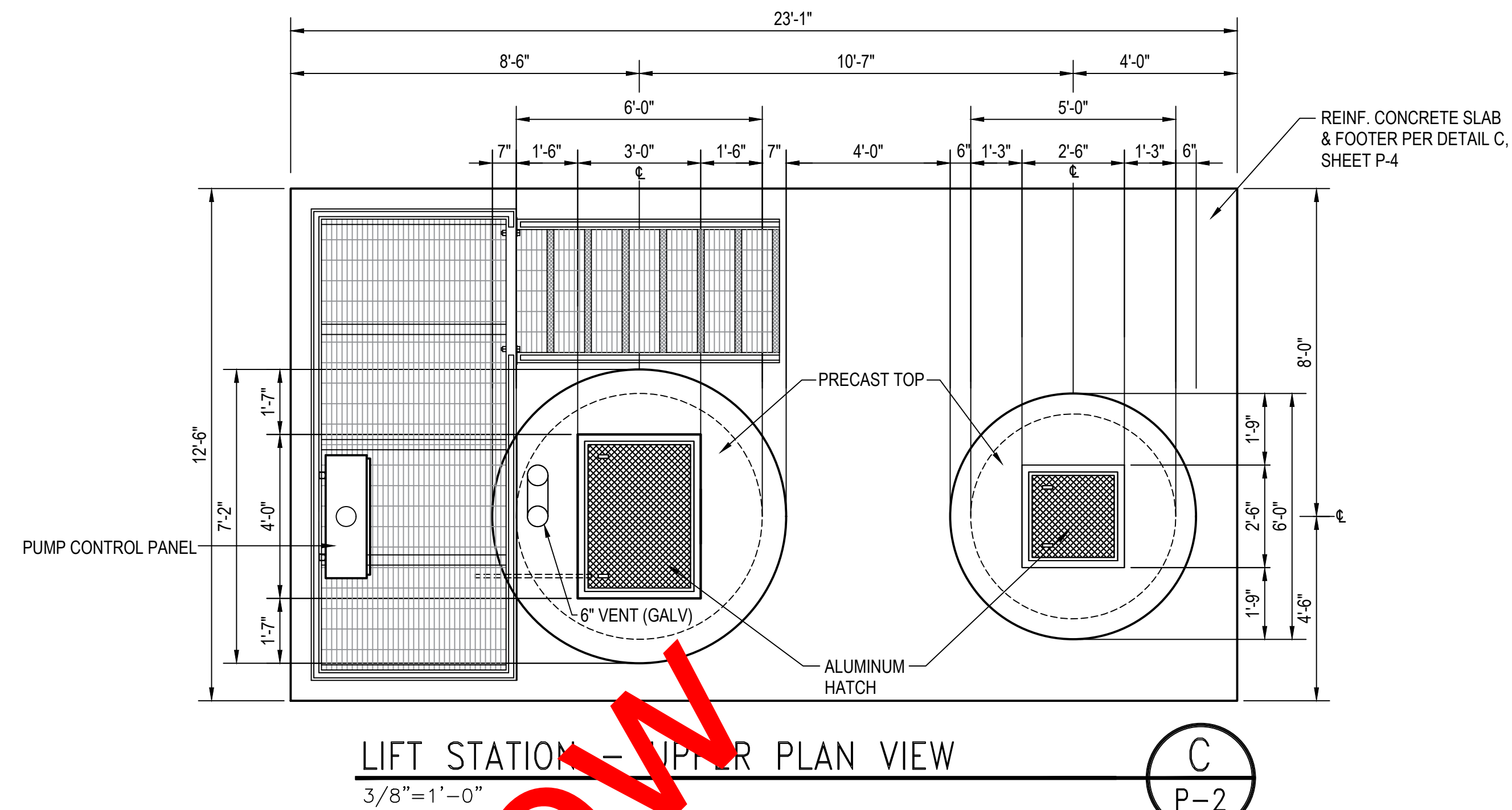
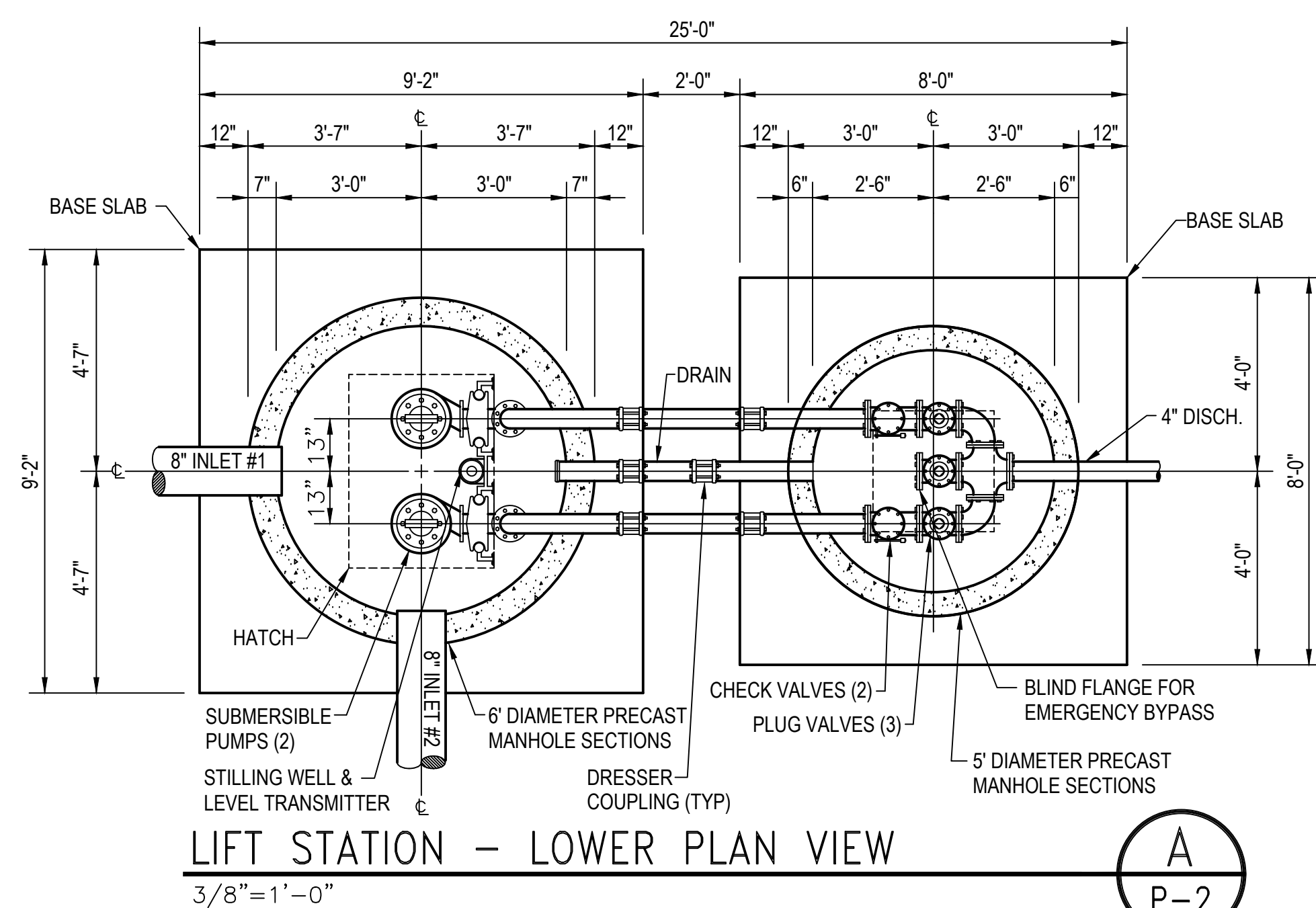
Engineer

McGhee Engineering, Inc.  
202 Ewing St, Box 267  
Guthrie, Kentucky 42234  
(270) 483-4149

FOR CONSTRUCTION	08-02-23	CWW
FOR KDOV REVIEW	08-02-23	CWW
No	Revision	Date By
REVISIONS		

AUGUST 2023



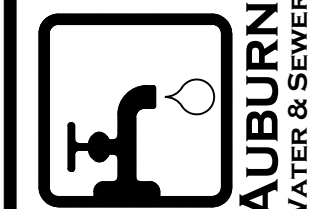


- ## CONSTRUCTION SEQUENCE & CLOSURE PLAN

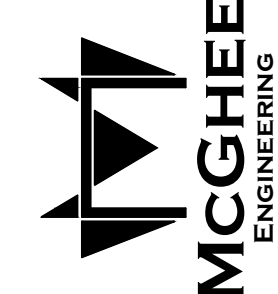
1. CONSTRUCT NEW WET WELL AND VALVE VAULT, INSTALL PUMPS, INTERNAL PIPING AND VALVES, CONTROL PANEL AND ELECTRICAL SERVICE. TEST OPERATE NEW PUMPS USING CLEAN WATER.
  2. INSTALL NEW GRAVITY LINE AND NEW DISCHARGE LINE UP TO TIE-IN POINT.
  3. DURING LOW-FLOW PERIOD, PUMP DOWN EXISTING STATION AND MAKE INFLUENT AND DISCHARGE TIE-INS. HAVE WASTEWATER PUMP TRUCK AVAILABLE TO PUMP DOWN EXISTING STATION AS NEEDED. WHEN CONNECTIONS ARE COMPLETE, START NEW PUMPS.
  4. DECOMMISSION EXISTING STATION, REMOVE ANY EQUIPMENT TO BE SALVAGED, CAP OR PLUG LINES TO BE ABANDONED, REMOVE ELECTRICAL SERVICE.
  5. REMOVE EXISTING ABOVE-GROUND STRUCTURE BELOW GRADE, FILL DRYWET-WELL WITH No. 57 AGGREGATE, COVER AREA WITH COMPACTED SOIL. BUILD UP DRIVEWAY AREA AS REQUIRED WITH COMPACTED EXCAVATED MATERIAL, PLACE DRIVEWAY STONE.
  6. REMOVE AND DISPOSE OF ALL UNUSED EQUIPMENT, INCLUDING CONTROL PANELS, ELECTRICAL SERVICE, METERS, POLES, ETC.
  7. GRADE AREA TO DRAIN, FERTILIZE, SEED AND MULCH ALL DISTURBED AREAS.
  8. UPON COMPLETION, THE EXISTING ACCESS DRIVE SHALL BE RE-GRAVELED WITH COMPACTED STONE (SEE DETAIL E, THIS SHEET). ADDITIONAL PARKING AREA SHALL BE IN ACCORDANCE WITH DETAIL E AS WELL.
- GENERAL NOTES

2			
1			
0	FOR KDOW REVIEW	08-02-23	CWW
No	Revision	Date	By

**REVISIONS**



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202 Ewing Street  
Guthrie, KY 42234  
(270) 483-9985

FIRM: McGhee  
DES BY: CWW    CHK BY: ETH  
DWN BY: CWW    APP BY:  
SCALE: AS SHOWN  
PROJECT DATE: 2023  
PRINTED:  
LENGTH OF BAR IS 1"  
ON ORIGINAL DRAWING

City of Auburn, Kentucky  
STEWART DRIVE  
LIFT STATION REPLACEMENT  
Site Details & Notes

# Quality On Tap!

August 2, 2023

DRAWING NO.

SHEET P-2