

Specifications & Contract Documents

prepared for the

***City of Russellville
Water & Sewer***



for the proposed

***CITY PARK ELEVATED WATER
STORAGE TANK ADDITION PROJECT***

prepared by

MCGHEE ENGINEERING, INC.
Guthrie, Kentucky

October 2021

City of Russellville, Kentucky

City Park Elevated Water Storage Tank Addition Project

CONTRACT DOCUMENTS

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City of Russellville, Kentucky

City Park Elevated Water Storage Tank Addition Project

CONTRACT DOCUMENTS

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- Appendix 1 - KPDES Form NOI-SW (Notice of Intent for Storm Water Discharges)
- Appendix 2 – Various Permit Copies, project specific (KDOW, FAA, etc)
- Appendix 3 – Geotechnical Report (Earth Science Engineering, LLC; Clarksville, TN)

Contract Drawings

Contract Drawings consist of 6 Sheets bound separately from this document.
See the index on the cover sheet of the Contract Drawings.

PARTIAL
PREVIEW

ADVERTISEMENT TO BID

City of Russellville Water & Sewer
168 South Main Street
Russellville, KY 42276

The **City of Russellville** will receive sealed Bids for the construction of their **City Park Elevated Water Tank Addition Project** until **3:30 p.m. local time, Tuesday, April 26, 2022** at the Russellville Mayor's Office, 168 South Main Street, Russellville, Kentucky, 42276, at which time they will be publicly opened and read aloud.

The work to be performed involves the construction of a 250,000 gallon elevated water storage tank and other related items at the City/County Park in Russellville, Kentucky (Logan County). Bids will be received for a single prime Contract. Bids shall be on a lump sum basis and possible additive alternate bid items as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is: McGhee Engineering, Inc., at P.O. Box 267, 202 South Ewing Street, Guthrie, Kentucky 42234 or by calling (270) 483-9985. Prospective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Fridays between the hours of 8:30-4:30 pm, and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Plans must be ordered by visiting www.mcgreeengineering.com and clicking "**Bid Opportunities**". Plans will be sold with an option of Digital only OR Printed Set w/ Digital copy. Bids will be accepted only from registered contractors holding approved bid forms provided by the Issuing Office. Plan holders may be viewed at www.mcgreeengineering.com.

"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."

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

Published by the authority of the City of Russellville
Mark Stratton, Mayor

Dated March 23, 2022

"EQUAL EMPLOYMENT OPPORTUNITY"

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

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Article 18 – Bids to Remain Subject to Acceptance

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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 7 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, including but not limited to American Iron and Steel requirements as mandated and subsequent statutes mandating domestic preference which apply to 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;
- 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 incontrovertible 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, if 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 for 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 Bid on a lump sum price basis for the Work on the Bid Form.

14.02 Bidders shall complete and submit with the Bid all such items as are identified as being part of the bid submittal.

14.03 Discrepancies between the price written in figures and price written in words will be resolved in favor of the price written in words.

14.04 Bids will be evaluated on the basis of price, and on the responsiveness and qualifications of the Bidder. Life-cycle cost analysis and the effect of time of completion on the overall project may be considered to determine the lowest overall cost to the entire water system. It shall be at the Owner's sole discretion to determine which bid, if any, is most cost effective considering price and time of completion in relation to the total water system project.

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 received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to the location of the bid opening, as listed in the Advertisement.

15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

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.

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 less the value of materials purchased directly by OWNER/COMMISSION, if applicable.

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 with 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 the Owner's own Reserve Funds. However, other state and federal sources may be utilized, if they become available, and all associated requirements of these monies will be applicable to the overall project. Any such requirements will be added via Addendum, if before letting, or by change order afterwards.

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 (if applicable).

ARTICLE 23 – LICENSES, FEES, AND TAXES

23.01 The Bid shall include all taxes in effect at the time the Bid is submitted, unless specifically exempted in the Bidding Documents. No change will be allowed for taxes from which OWNER is exempt. Bidders who are uncertain as to what items are 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 2, state prevailing wages do not apply to this Contract.

24.03 Federal Davis Bacon wage rates do not apply to this contract at this time per the intended financing plan.

ARTICLE 25 – OTHER BID REQUIREMENTS

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

Statement of Experience
List of Subcontractors

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 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 iron and steel products used in this project must be produced in the United States. "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.

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. **Bidders shall abide by all contract insurance requirements and limits as set forth in the Supplementary Conditions section of the Contract Documents.**

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 the 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.

PARTIAL
PREVIEW

BID FORM

Project Identification: City of Russellville's
City Park Elevated Water Storage Tank Addition Project

Contract Identification: City Park Tank Addition

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is Submitted to: City of Russellville
168 South Main Street
Russellville, KY 42276

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 as 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. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

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

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.

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 prices:

BASE BID (Bidder to fill in bid price and completion time)	
Provide a 250,000 gallon elevated water storage tank including foundation, valves & accessories, fittings, piping, site work, fencing, SCADA communications, access road and all other related work necessary for a complete and operational water storage system ready for use.	Lump Sum Price \$ _____
Bidder proposes to provide: <input checked="" type="checkbox"/> Painted, Multi-Leg Elev. Steel Water Storage Tank	(price in words) _____ _____

- 5.02 **The apparent Low Bidder is required to submit a detailed breakdown of his proposal within 48 hours after the bid opening 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 kinds 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 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.
- 5.05 **SUPPLEMENTAL UNIT PRICES:** The following Supplemental Unit Prices will apply in the event that additions to or deductions from the work required in the Bid are ordered. A single price shall be bid for each item. OWNER reserves the right to accept or reject these prices by inclusion in or omission from the Contract Documents to be executed after the award of the Contract. The cost of this work is not to be included in the base bid amount.

Item	Description of Work	Unit	Unit Price
1	Install FAA compliant Full LED Dual L864/865 beacon light system atop the tank bowl in compliance with a FAA permit (pending by owner); based on structure height & location	LS	\$ _____
2	Install a Cathodic Protection System for the Water Tank Structure, fully operational, complete, and ready for use	LS	\$ _____
3	Remove and replace Existing 14-inch Butterfly Valves (2) with a single 14-inch Gate Valve within the existing valve vault, including pipe spool; complete, & ready for use.	LS	\$ _____
4	Retrofit Existing Valve Vault & surrounding area to remove items to add new gate valves (2), mag meter, fittings, pipe spools, bypass piping and tap, plus other accessories all as shown in Detail 6, Sheet D3; complete, & ready for use.	LS	\$ _____

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

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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. List of Subcontractors
 - C. 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 Supplemental 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 _____, 2022.

Seal below (if required)

MULTI-LEG WELDED STEEL ELEVATED WATER STORAGE TANK

1.0 GENERAL

1.1 Scope of Work

The work called for in this Section shall consist of all the necessary materials, tools, equipment and all labor for the design, delivery, construction of the tank foundation, piping, tank erection and all necessary appurtenances as shown on the plans. It shall also include fabrication, field erection, testing and coating system all in conformity with detailed shop and erection drawings to be furnished by the tank manufacturer and as specified herein. All tanks supplied by this Specification must be NSF certified and meet AWWA D-100 and be approved by the Drinking Water Branch of the Kentucky Division of Water.

1.2 Qualifications of Tank Supplier

The work described in this section shall be performed by an experienced Contractor that has successfully designed, constructed and commissioned elevated tanks of the type described by this specification that are of similar capacity, all in satisfactory operation for at least five years.

All pre-qualified Bidders proposing construction of a new elevated welded steel water storage tank must submit with their bid a listing of the ten most recent tanks of that type completed by the Bidder, and a listing of any nearby elevated tanks constructed in our region within the last 10 years. Projects where the tank contractor and any proposed subcontractors worked together are of particular interest. The listing shall include a general description of the tank, including volume and height, name address and telephone number of the Owner, name of the erection contractor, and the completion date. The Bidder shall also provide similar information for all uncompleted elevated welded steel water storage tanks under contract. The Owner reserves the right to contact owners and to use the reference and workload information as a consideration in award of the contract.

Acceptable pre-qualified manufacturers for the type of tank described by this specification are as follows:

- CB&I Constructors, Inc.
- Calwell Tanks, Inc.
- Phoenix Fabricators and Erectors, Inc.

Other manufactures may be pre-qualified by meeting the requirements listed in the Instructions to Bidders – Article 3. Other potential bidders shall submit evidence supporting their request for pre-qualification at least ten days prior to bid date. Other prospective bidders found to be pre-qualified will be added to the list of acceptable contractors by addendum.

Elevated tank design, multi-leg support structure design, and steel tank construction shall not be subcontracted. These items shall be self-performed by the Contractor. The foundation design and construction may be subcontracted to qualified providers. A qualified superintendent, directly employed by the Contractor, shall be on site at all times during construction of the foundation, support structure, steel tank, piping, pumping equipment, electrical and controls. This superintendent does not have to be the same individual for each phase of construction, but the Contractor shall have a single Project Manager overseeing the entire project. This qualified Project Manager shall be the same individual & primary point of contact from the start of project until the end, unless approved otherwise by the Engineer during construction.

1.3 Tank Design Parameters

The tank, of the traditional multi-column type, shall have the following minimum dimensions/capacity.

Inside Diameter (feet)	40	Net Capacity (Gallons)	250,000
Head Range (feet)	28.33	Overflow Elevation (feet)	850
Height-base to overflow (feet)	122		

1.4 Submittal Drawings and Specifications

Submittals of supporting data and shop drawings shall be in accordance with the procedure set forth in Section 01-200.

Construction shall be governed by the Owner's drawings and specifications showing general dimensions and construction details, after written approval by the Engineer of detailed erection drawings prepared by the tank bidder. There shall be no deviation from the drawings and specifications, except upon written order from the Engineer.

The bidder is required to furnish, for the approval of the Engineer and at no increase in contract price, 6 sets of complete specifications and construction drawings for all work not shown in complete detail on the bidding drawings. A complete set of structural calculations shall be provided for the tank structure and foundation. All such submissions shall be stamped by a Professional Engineer ⁽¹⁾ licensed in the State of Kentucky and ⁽²⁾ in responsible engineering charge of the work. The Contractor's Design Engineer shall have a minimum of five years of experience in the design of the elevated type tank described by this specification. The foundation engineer shall have at least five years of experience in the design of the type of foundation system proposed.

When approved, two sets of such prints and submittal information will be returned to the bidder marked "NO EXCEPTIONS" and these drawings will then govern for the work detailed thereon. The approval by the Engineer of the tank supplier's drawings shall be an approval relating only to their general conformity with the bidding drawings and specifications and shall not guarantee performance, detailed dimensions, or quantities, which remain the bidder's responsibility.

The Contractor shall submit certified mill test reports from an independent testing laboratory for all steel plates and principal structure members.

The tank manufacturer's and installing contractor's standard published warranty shall be included with submittal information.

2.0 PRODUCTS

2.1 MATERIAL

- A. All welded steel water tanks and accessories shall be in conformance to the latest revisions of AWWA Standard D100 with AWWA Standard D102 Painting Steel Tanks for Water Storage (height and diameter) to conform to industry standards, manufacturing and/or shipping economies. All metal in the structure shall be manufactured, rolled or shaped in accordance with the current A-283 specifications of ASTM. The minimum thickness of any steel plate in contact with water shall be one-quarter (1/4) inch. **A total of 1/8-inch corrosion allowance over and above the minimum thickness required by applicable standards shall be included on all tank steel components in contact with or encapsulating stored water.** Corrosion allowance applies to the roof.
- B. Plate and Shell Materials shall be open-hearth electric-furnace, or basic oxygen-process steel conforming to ASTM Specification A36 for hot-rolled structural shapes as outlined in AWWA Standard D100, Section 2.
- C. Bolts, anchor Bolts and Nuts shall conform to ASTM Specification A307 as outlined in AWWA Standard D100, Section 2.
- D. Accessories shall be as shown on the drawings and conform to AWWA Standard D100 Section 7 for:
- | | |
|---------------------|-----------------------------|
| a. Shell Manholes | f. Safety Devices |
| b. Pipe Connections | g. Roof Openings |
| c. Ladders | h. Vent |
| d. Overflow | i. Ladder Gate |
| e. Balcony | j. Water Level Target Gauge |

- E. All safety devices shall conform to Federal Specification RR-S-1301 and OSHA requirements.
- F. The manufacturer shall design and detail the tank and foundation in accordance with AWWA Standard D100 and submit the design drawings for the steel structure and foundation to the Engineer. All Drawings must be signed and sealed by a Professional Engineer licensed in the State of Kentucky.
- G. The following Minimum Design Standards, corresponding to the latest revision of AWWA D100, shall apply and the structure shall safely withstand the following loads acting separately or in combination:
1. Seismic Zone Characteristics (*For classification, refer to procedures defined by ASCE 7*)
 2. Specific gravity of contents = 1.0.
 3. Design Wind Speeds (*For classification, refer to procedures defined by ASCE 7*)
 4. Snow Load = 25 psf.
 5. No freeboard.
 6. Weight of the structure
 7. Weight of the water in the tank.
 8. Weight of all appurtenant loadings.

Where more stringent design criteria are required by referenced standards or are appropriate in the judgment of the professional engineer responsible for the detailed tank design, those criteria shall be used.

- H. Foundation: shall be designed by the tank manufacturer and design drawings shall be submitted to the Owner as stated above.
- a. Excavation shall be in accordance with Division 02 of these Specifications.
 - b. Concrete work shall be in accordance with Division 03 of these Specifications and other requirements set forth in this Section.
 - c. Piping and valves shall be in accordance with Section 11-200 of these Specifications.
 - d. Tank foundation is to be designed for an allowable soil bearing pressure and other, design considerations as set forth in the geotechnical report included in appendix A.
- I. The tank manufacturer may propose minor deviations in the size of the tank (height and diameter) to conform to manufacturer's standards, manufacturing and/or shipping economies. All such deviations shall be approved by the Engineer prior to fabrication and shipping of materials to the job site.
- J. The tank manufacturer shall design the tank and foundation in accordance with AWWA Standard D100 and submit the design drawings to the Engineer. All drawings must be signed and sealed by a Professional Engineer licensed in the State of Kentucky. The construction of the foundation and erection of the steel shall be in strict compliance with the approved design drawings and in accordance with AWWA Standard D100. A National Sanitation Foundation Certificate must be supplied with the tank shop drawings.
- K. The steel tower supporting the tank shall consist of a circle of peripheral tubular steel columns with bracing members and a central riser.

3.0 EXECUTION

- A. Access Road and Site Grading: The Contractor will be responsible for the construction of a permanent access driveway in accordance with the Contract Drawings. The tank erector shall take the necessary steps to protect the existing access road while working and reinstate the road to the good condition after construction.

- B. The Contractor is responsible for all excavation for the foundation and piping. All unused excavated material shall be placed as directed by the Engineer for final grading and fill. All excavation shall be performed as outlined in this Specification and shown on the Plans.
- C. The erection contractor shall be certified by the tank manufacturer as being proficient and having the equipment and experience necessary to erect the tank. Further, the Contractor shall provide a factory trained supervisor who will be in charge of the construction of the foundation and tank to insure compliance to the manufacturer's specifications.
- D. All Welds except those on roof structures must be full penetration butt welds. Lap welds will only be acceptable on roof structures provided they are also seal welded on the interior of the tank. Welding must be done by operators who have been qualified within the previous year, in accordance with the requirements of the American Welding Society. Records of these qualification tests shall be available to the Engineer.
- E. Weld inspection shall be in accordance with AWWA D100 except that inspection of full penetration butt-welded joints shall be made by radiographic method. Inspection by removal of sectional specimens shall not be permitted. All weld testing required by AWWA D100 is to be paid for by the Contractor. If requested by the Owner, the contractor shall provide additional spot radiographic inspections to be paid for by the Owner.
- F. Accessories
1. A water-bearing steel riser pipe of a 48 inch diameter from base of the tower to the tank bottom. A 24" diameter minimum hinged manway shall be located in the riser pipe 3' above the foundation. The top of the riser shall be equipped with a safety grate.
 2. An 10-inch diameter steel inlet/outlet connection pipe with base elbow. The pipe shall extend up into the riser pipe a minimum of 12" above the riser bottom or as needed to accommodate a tank mixing system, if specified.
 3. An 10-inch diameter tower supported steel overflow pipe. The overflow pipe shall be formed to match the roof contour and extend to discharge onto a splash pad at grade level. A corrosion resistant insect screen will be located at the discharge point to prevent the ingress of birds and insects.
 4. One 24" diameter weather proof access hatch with hinged cover and catch located at top of tank to provide access to tank interior.
 5. One 24" (minimum) diameter tank vent located at the center of the tank roof to permit passage of air at a sufficient rate to prevent development of dangerous pressures or vacuum. The vent will be designed to prevent the ingress of birds, insects, or animals. The vent should be sized for needed venting capacity for maximum inflow or outflow considering a main break at the base of the tank.
 6. The tank shall be equipped with a balcony not less than 24" wide with a handrail not less than 42" high. The floor of the balcony shall be designed for a minimum vertical load of 1000 pounds assumed to be applied to any point. The floor shall be perforated for drainage. The OSHA approved handrail shall be capable of withstanding a 300 pound load applied laterally at the top rail.
 7. Fixed ladders on the tower from a point 10' above grade level to balcony. Fixed outside tank ladder to roof hatch. Interior ladder extending from the base of the riser to the roof access hatch.
 8. All ladders shall be equipped with an OSHA approved cable-type safety climbing device with TWO belt and clamp assemblies (one for the Owner and one for the Engineer).

9. A water level gauge shall be provided per the manufacture's standards and installed as indicated on the plans.
10. A tank identification plate shall be mounted on the tank riser pipe above the access manhole. The identification plate shall contain the following information.
 - a. Tank Contractor
 - b. Engineer & Owner
 - b. Contractor's project or file number
 - c. Tank capacity
 - d. Height to overflow
 - e. Date erected

G. Cathodic Protection (Not Required in the Base Bid; Supplemental Bid Item only)

1. Cathodic protection for the tanks shall be provided by the tank manufacturer. The design of cathodic protection for the tank shall be the responsibility of the tank manufacturer. The cathodic protection shall conform to AWWA D104-91.
2. Attachment of rectifier boxes, anodes, or wiring to tank structure shall be approved by the tank manufacturer.
3. Electrical continuity between all tank side wall or floor panels shall be the responsibility of the tank manufacturer.
4. The power unit shall include the necessary rectifier, transformers, control circuitry, meters, wiring and appurtenances of adequate capacity to meet the protection requirements of the structure. Power unit shall be designed for single phase, 110 volt, 60 Hertz A.C. circuit breaker and D.C. overload relay shall be provided. Entire Unit shall be air cooled. The Contractor must provide permanent power to the site via Pennyrile RECC. The Contractor will be accountable for coordinating and accommodating the power installation during construction. The Contractor will also be responsible for providing all necessary labor, equipment, and materials necessary to convey power to the Cathodic Protection power unit with disconnect from the referenced point of power source."
5. Control circuitry shall be capable of operation in a manual or automatic mode. Automatic mode shall be capable of adjusting current output to maintain a preselected potential with reference to a standard reference electrode.
6. Reference electrodes shall remain stable for a minimum of 2 years.
7. Panel shall have on D.C. voltmeter and a D.C. ammeter for each D.C. Circuit. A potential indicating voltmeter shall be part of the sensing circuit which will indicate the structure potential value.
8. Cabinet shall be NEMA-standard for outdoor service, adequately ventilated and provided with lock and hasp.
9. Anodes shall be Durichlor 51 Alloy, a silicon-chromium cast iron material designed for 10 years or more operating life.
10. Rubber or synthetic coated copper wire shall be encased in rigid conduit for all positive circuits. Conduits shall be fastened to tank wall to the satisfaction of the Engineer. All electrical materials and workmanship shall conform to the requirements of the National Electrical Code.
11. System shall be POLATROL with XL Anode assembly as manufactured by Wallace and Tiernan or approved equal.

- H. The water storage tank, ladders, and accessories shall be painted in accordance with the latest revision of AWWA Standard D102, and with this specification.
- I. Foundation shall be excavated to the depth and dimension shown on the approved Contractor submittals. All excavation shall be to stable material and shall be in accordance with Division 02 of this specification. Excavations shall be inspected prior to placing concrete. Reinforcing steel shall be as detailed on the approved shop drawings and shall be clean, free from rust, scale and dirt. All concrete and concrete work shall be in accordance with Division 03 and described in other sections of the Specifications and detailed on the Plans.
- J. Surface Preparation - All steel surfaces shall be prepared by as specified in the Steel Structures Painting Council Specification. Interior surfaces shall receive SSPC-SP10 "Near-White Blast Cleaning". Exterior surfaces shall receive SSPC-SP6 "Commercial Blast Cleaning". A minimum angular anchor surface profile of 1.5 mils is required.
- K. After blast cleaning, all surfaces shall be thoroughly and completely cleaned of any residue or dust before applying primer. Primer must be applied within 24 hours after blast cleaning.
- L. Interior Painting System - The tank interior shall receive a zinc/epoxy paint system equal to the following Tnemec System:

Application	Acceptable Products	DFT (mils)	Color
Primer	Tnemec Series 90-Hydro-Zinc	2.5-3.5	Gray
Stripe Coat	Tnemec Series 1140 Pota-Pox Plus	3-4	White
Intermediate		N/A	Delft Blue
Finish	Tnemec Series 22/FC22 Epoxoline	18-30	Tank White
Total		20.5-33.5	

- M. Exterior Painting System - The tank exterior shall receive a zinc/urethane/fluoropolymer coating system. The paint manufacturer utilized shall furnish an extended 15-year warranty to the owner for color and gloss retention, adhesion and corrosion resistance for the exterior coating system in accordance with the following:

1. Check, crack, blister or delaminate from the substrate.
2. Allow the substrate to corrode in excess of 1% of the surface area being coated as measured in accordance with ASTM D 610-95 "Standard Test Method for Evaluating Degree of Rusting on Painted Surfaces" for a period of five (5) years from substantial completion date or corrode in excess of an additional 0.5% per year for balance of the warranty coverage period.
3. Change color more than 5 DE Hunter units as determined in accordance with ASTM D 2244 by comparing the affected exposed coating cleaned with water and a soft cloth with unexposed Original Project Color Standards maintained the Manufacturer and the Owner.
4. Exhibit loss of gloss in excess of 24 units as measured by a gloss meter in accordance with ASTM D523-89 with 60 degree geometry.
5. Chalk in excess of a rating of 8 as measured in accordance with ASTM D4214, Method A.

The paint manufacturer shall also furnish an extended 10-year material warranty to the owner for corrosion resistance and not to check, crack, blister or delaminate from the substrate for the interior coating system in accordance with the following:

1. Check, crack, blister or delaminate from the substrate
2. Allow the substrate to corrode in excess of 1% of the surface area being coated as measured in accordance with ASTM D 610-95 "Standard Test Method for Evaluating

Degree of Rusting on Painted Surfaces” for a period of five (5) years from substantial completion date or corrode in excess of an additional 0.5% per year for balance of the warranty coverage period.

The specified exterior systems are as follows:

Application	Acceptable Products	DFT (mils)	Color
Primer	Tnemec Series 94-H ₂ O Hydro-Zinc	2.5-3.5	Gray
Intermediate	Tnemec Series 73 Endura-Shield	2-3	Beige
Finish*	Tnemec Series 700 Hydroflon	2-3	White
Logos	Tnemec Series 700 Hydroflon: Two Coats may be needed per logo colors	2-3	TBD by Owner
Total		6.5-9.5	

*Owner reserves the right to change finish color selection at the time of shop drawing review.

Concrete foundations shall be sweep blast cleaned to remove laitance and any existing coating systems. Prepared surfaces shall receive two coats of Tnemec Series 156-30BL applied at 6-8 mils per coat. Color to match tank finish coat.

Tank graphics shall consist of finish coat material applied at 2-3 mils dry film thickness in colors to be selected by the Owner. Two coats may be needed to achieve proper hide depending on logo colors selected. Graphics shall consist of logo in the text style and colors as indicated in the Appendix of these contract documents. The graphic shall be located on two sides of the tank as indicated on the plans. The Contractor shall submit a layout drawing to the Engineer for approval before proceeding with the work.

- N. All coatings shall be a system and shall be thoroughly compatible each with the other. No coatings or primers of different manufacturers shall be applied one upon the other. The Contractor shall submit the proposed coatings systems to the Engineer for approval prior to application.
- O. Follow the Manufacturer's recommendation regarding application procedures and suitable application conditions. Each application shall achieve a dry film thickness within the specified range. More than one coat per application may be required depending upon the means of application.
- P. Paint shall not be applied in rain, snow, fog, or mist, or when the steel surface temperature is less than 5°F above the dew point.
- Q. Each coat of paint shall be in proper state of cure or dryness before the application of the succeeding coat. Follow manufacturers recommendations regarding minimum and maximum recoat intervals.
- R. All weld seams shall receive one brush coat of the specified primer after the sandblasting and cleaning has been completed. This brush prime coat is in addition to the specified prime coat. Remove weld spatter, burrs, or protrusions; remove and/or round sharp edges; and smooth rough welds prior to abrasive blasting. Welds should be ground to remove any irregularities and are considered ready for painting when a minimum finishing level of a D designation, as defined by NACE SP0178 latest revision, has been achieved.
- S. All coats shall be smooth, free of brush marks, streaks, laps or pile up of paints, and skipped or missed areas. If required to achieve the required dry film thicknesses, more than the stated number of coats may be necessary.
- T. All work will be subject to inspection by the Owner's representative. The Contractor shall provide suitable testing equipment including magnetic dry film thickness gauge, surface thermometer,

psychrometer and holiday tester along with any necessary calibration devices. The Contractor shall conduct on-going quality control testing sufficient to assure compliance with all specified requirements. The finished coatings shall be subjected to a wet sponge holiday test to be conducted by the Contractor and witnessed by the Engineer (or his representative). The Contractor shall correct any defects found by testing.

U. Lighting & Wiring

Contractor shall provide a 110/240v – 200 amp service panel at a location to be determined, and shall be responsible for bringing power from the existing utility service pole to the panel. **(Note: The contractor may utilize the existing service panel on site if sufficient capacity exists. If panel capacity does not exist, the contractor shall replace and upgrade the electrical service to sufficiently serve the new tank lighting, the new SCADA panel plus the existing booster pumping station.)** The tank shall be provided with suitable LED lighting mounted on the balcony handrail to illuminate the tank graphic &/or logo. The balcony lights shall be provided with a photocell operated light sufficient to provide adequate illumination of the entire graphic &/or logo. All wiring shall be performed by a licensed electrician and shall conform to applicable codes.

Additionally, the contractor's electrician will be responsible for mounting the SCADA panel (provided by others; See Technical Specification 01-201 "Allowances"), providing power from the electrical service panel to the SCADA panel, providing the necessary wiring & conduit from the panel to the new pressure transducer (provided by others) within the tank vault, and mounting the SCADA antenna on the tank with associated coax cable (cable provided by others).

V. Tank Mixing System

Contractor shall provide a Hydrodynamic Mixing System (HMS) as a supplemental system installed within the potable water storage reservoir which passively utilizes the energy provided by the inlet water supply (via pumped or gravity head) and generates a sufficient inlet momentum to achieve a complete homogeneous blending of the water volume within the reservoir with the inlet supply flow. Determination of Complete Homogeneous Blending shall be defined by the modeling requirements and supporting hydraulic analysis as conducted by each individual manufacturer for their specific system configuration as defined within these specifications. System submittals not providing this validation shall not be considered as a viable Hydrodynamic Mixing System (HMS) and shall not be accepted as an equivalent to this system specification.

The complete Hydrodynamic Mixing System shall be supplied by the variable orifice nozzle manufacturer to maintain single source responsibility for the system. All modeling and hydraulic and mixing calculations pertaining to the HMS shall originate from the duckbill valve manufacturer. The complete system shall be defined as all piping and appurtenances within the tank downstream of the tank penetration. Appurtenances include pipe, fittings, horizontal and vertical pipe supports, expansion joints, variable orifice duckbill check valves, and any other equipment specified within this section of the specifications. The HMS shall be manufactured by Red Valve Company/Tideflex Technologies (Pittsburgh, PA 15220) or approved equal.

W. Field Testing

Hydrostatic Test - Following completion of erection and cleaning of the tank, and pressure testing of the piping, the structure shall be tested for liquid tightness by filling tank to its overflow elevation. Timing of the filling shall be in conformance with recommendations of the project geotechnical report. Any leaks disclosed by this test shall be corrected by the erector in accordance with the manufacturer's recommendations, and the test repeated until no leakage is observed. Water required for the initial testing shall be furnished once by the Owner at the time of tank erection completion at no charge to the tank erector. Water for subsequent tests will be paid for by the Contractor. Proper disposal of test water, including dechlorinating, shall be the responsibility of the Contractor. Labor and equipment necessary for tank testing is to be included in the price of the tank.

- X. Disinfection – The completed tank shall be disinfected in accordance with AWWA 652 (Method 2 only; spray method) and in accordance with requirements of the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water. The contractor shall provide and pay for all labor and materials associated with disinfection, except that the Owner will provide water equal to one tank volume for disinfection purposes. Any additional water needed will be charged to the contractor. **The Contractor shall fill the tank in accordance with the procedure outlined within the Geotechnical Report.** Afterwards, the contractor shall deliver bacteriological testing results indicating satisfactory disinfection of the tank to the owner.
- Y. Certifications - Upon completion of the tank, the Contractor shall provide the Owner with a "Notarized Certification of Compliance" stating that the tank has been designed, fabricated, erect, inspected, tested and disinfected in accordance with all the requirements of the American Water Works Association Standard D100, and that the results of all inspections, radiographs, and tests indicate the tank is in full compliance with AWWA Standard D100.

4.0 WARRANTY

The Contractor shall warrant the Project for a period of at least one year from the date of completion and acceptance by the Owner. The warranty shall provide that any part of the Project shall be free from defects in material and workmanship, and that the Contractor shall correct any deficiencies in materials or workmanship that occur during the warranty period at no cost to the Owner. An end-of-warranty inspection of the work shall be conducted in accordance with AWWA D102 no earlier than one year beyond the date of final completion of the project. The Owner and Engineer shall witness the inspection. The Contractor shall be responsible for scheduling and performing the inspection. The warranty period will not expire until after the end-of-warranty inspection, and the correction of any defects found thereby.

END OF SECTION 11-103

CONSTRUCTION PLANS

for the

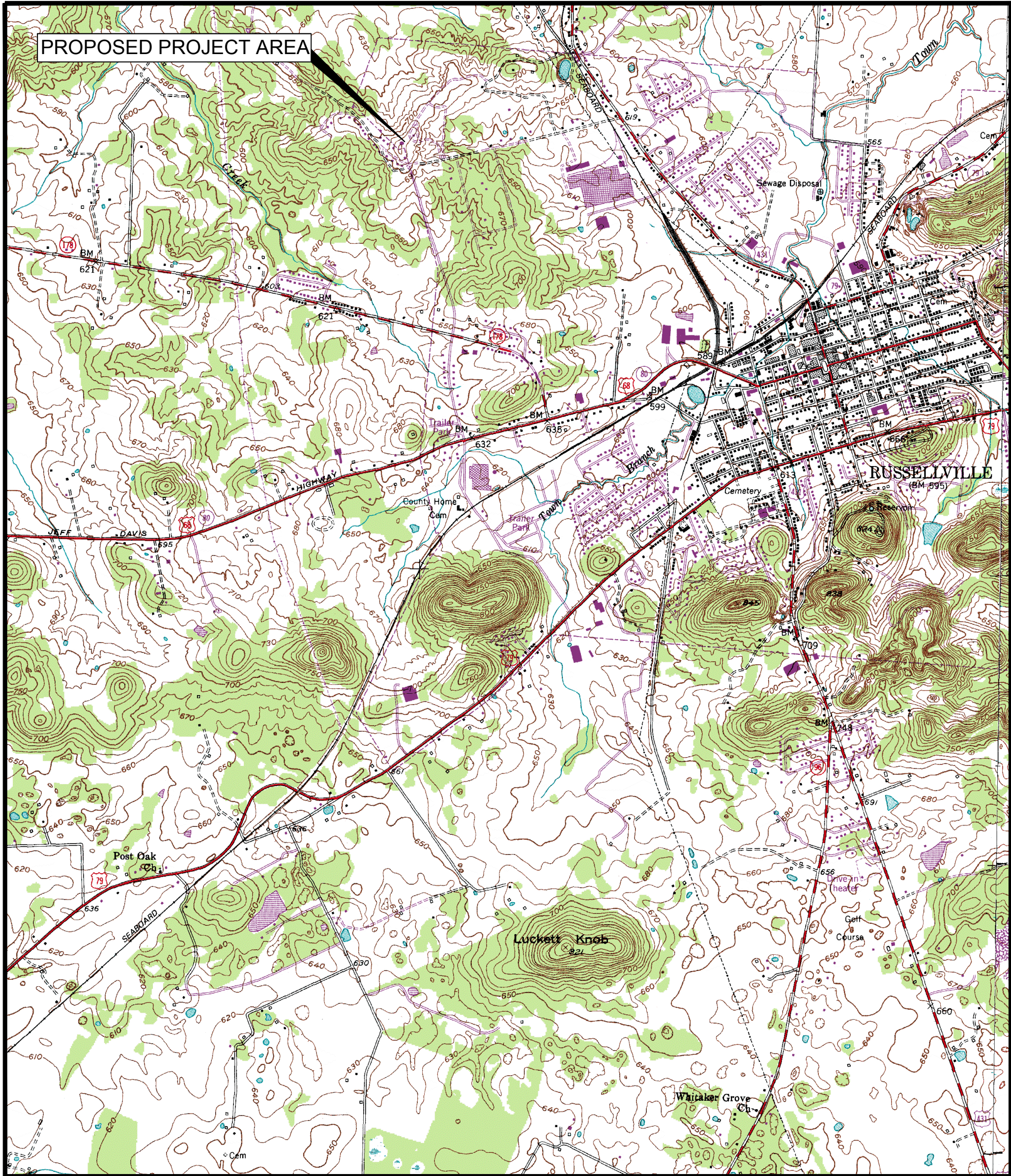
City Park Elevated Water Storage Tank Addition

by the

City of Russellville, Kentucky

Logan County, Kentucky

VICINITY MAP



SHEET INDEX

Mayor & City Council

Mark Stratton, Mayor
Pat Bell, Council Member
Jimmy Thompson, Council Member
Bill Becker, Council Member
Sandra Kinner, Council Member
Lorne W. Wooten, Council Member
Lance McCutty, Council Member

Russellville, Kentucky
168 South Main Street
Russellville, Kentucky 42276
(270) 486-5000

Engineer

McGhee Engineering, Inc.
202 Ewing St, Box 267
Cynthiana, Kentucky 42234
(270) 483-9985

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Δ			
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No	Revision	Date	By
REVISIONS			

OCTOBER 2021

PROJECT INFORMATION

T-1 Title Sheet

TANK PLANS

P-1 Site Plan

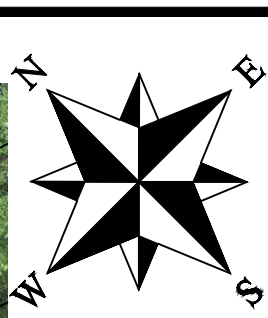
P-2 Tank Elevation

TANK DETAILS

D-1 Standard Details

D-2 Standard Details

D-3 Standard Details



SCALE: 1"=20'

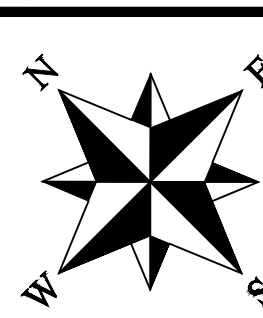
1. THE CONTRACTOR SHALL KEEP THE WORK AREA CLEAN AND ORDERLY AT ALL TIMES. ALL TRASH AND DEBRIS SHALL BE PICKED UP AND REMOVED FROM THE JOB SITE AT THE END OF EACH DAY.
2. DRIVEWAYS OR OTHER ACCESSWAYS REQUIRING EXCAVATION SHALL BE BACKFILLED COMPLETELY WITH GRAVEL AND SHALL BE COMPLETED WITHIN ONE WORKING DAY. IN NO EVENT SHALL SUCH AREAS REMAIN IMPASSABLE OVERNIGHT.
3. CONTRACTOR SHALL COORDINATE WORK ON PRIVATE PROPERTY WITH THE PROPERTY OWNER, DISTURBANCE OF EXISTING FENCES SHALL BE HELD TO A MINIMUM, AND ANY FENCE DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR SHALL CONTACT KY. UNDERGROUND PROTECTION, INC. AT (811), AS WELL AS OTHER UTILITIES, PIPELINE COMPANIES, ETC. POTENTIALLY HAVING UNDERGROUND LINES, UTILITIES, STRUCTURES, ETC. IN THE AREA FOR VERIFICATION AND LOCATION PRIOR TO EXCAVATION.
5. THE UTILITY/CITY SHALL BE RESPONSIBLE FOR OBTAINING AND RECORDING ALL EASEMENTS PRIOR TO CONSTRUCTION ON ANY PRIVATE PROPERTIES. CONTRACTOR SHALL VERIFY EASEMENTS AND RIGHT OF ENTRY BEFORE BEGINNING CONSTRUCTION.
6. ALL WORK AND INSTALLED ITEMS SHALL BE IN STRICT ACCORDANCE WITH THE CITY OF RUSSELLVILLE'S UTILITY SPECIFICATIONS AND STANDARDS. COPIES AVAILABLE FROM THE CITY UTILITY DIRECTOR.
7. SCALE IS SHOWN FOR CONVENIENCE ONLY. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS FOR CONSTRUCTION.

1. WATER PIPE SHALL BE CLASS 350 DUCTILE IRON PIPE & FITTINGS IN ACCORDANCE WITH AWWA C-151/C-110.
2. GATE VALVES SHALL CONFORM TO AWWA C509 AND SHALL HAVE MECHANICAL OR PUSH-ON JOINT ENDS. VALVES SHALL BE RATED FOR 200 PSI WORKING PRESSURE.
3. FITTINGS SHALL BE DUCTILE IRON CONFORMING TO AWWA C110. CONCRETE FOR THRUST BLOCKING SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI.
4. DETECTOR WIRE SHALL BE 12 GAUGE SOLID COPPER INSULATED WIRE. ATTACH WIRE TO THE TOP OF THE PIPE WITH DUCT TAPE.
5. THE INSTALLED LINE SHALL BE FLUSHED THOROUGHLY, FILLED WITH WATER AND PRESSURIZED TO A DESIGNATED LIMIT FOR 4 HOURS. ANY LEAKAGE OBSERVED SHALL BE REPAIRED AND THE TEST REPEATED UNTIL THE ENGINEER DETERMINES THAT THE LINE IS ACCEPTABLE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING, REMOVING AND DISPOSING OF TREES, BRUSH, STUMPS, ROOTS, AND WEEDS WITHIN THE CONSTRUCTION AREA AS REQUIRED FOR CONSTRUCTION OF THE PIPELINE. AVOID CUTTING OF, OR DAMAGE TO MATURE TREES (DBH>5"), AND TREES NOT IN THE CONSTRUCTION AREA. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPLACEMENT OF TREES, SHRUBS, ETC. UNNECESSARILY DAMAGED OR REMOVED.

BASEMAP & SCALE NOTE:

THE LOCATIONS OF EXISTING TOPOGRAPHIC FEATURES AND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR ASSUME THAT ALL FEATURES ARE IDENTIFIED AND INDICATED IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL CONTACT 'KENTUCKY UNDERGROUND PROTECTION, INC.', AS WELL AS OTHER UTILITIES, PIPELINE COMPANIES, ETC. POTENTIALLY HAVING UNDERGROUND LINES, UTILITIES, STRUCTURES, ETC.. IN THE AREA FOR VERIFICATION AND LOCATION PRIOR TO EXCAVATION.

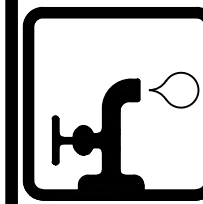


SCALE: 1"=20'

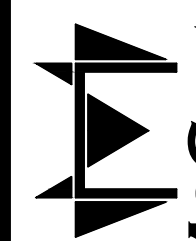
PROPOSED WATER LINE	
EXISTING WATER	
EXISTING RUSSELLVILLE SEWER	
EXISTING SEWER SERVICE LINE	
EXISTING OVERHEAD POWER/TELE LINE	
PROPERTY LINE	
RESIDENTIAL WATER METER	
PHONE PEDESTAL	
POWER/TELEPHONE POLE OR LIGHT POLE	
GUY WIRE	
VALVE	
FIRE HYDRANT	

<i>Ky. Underground Protection</i>	811
<i>AT&T</i>	(800) 945-6500
<i>Electric Plant Board</i>	(800) 726-2466
<i>Russellville Water & Sewer</i>	(270) 726-5042
<i>Texas Gas Pipeline</i>	(800) 626-1948
<i>Atmos (Western Kentucky Gas)</i>	(270) 843-3393
<i>KYTC Division #3: Bowling Green</i>	(270) 746-7898
<i>Logan County Road Department</i>	(270) 726-7480
<i>Logan Todd Regional Water Comm.</i>	(270) 483-6990

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6	FOR KDOWN REVIEW	10-01-21	CWW
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REVISIONS			



CITY OF RUSSELLVILLE
WATER & SEWER
106 SW Park Square
Russellville, KY 42276
(270) 726-5001

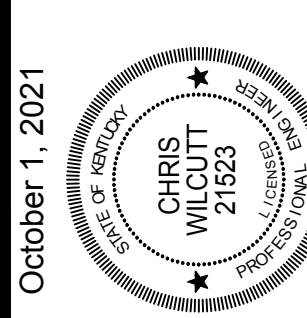


McGHEE
ENGINEERING
202 Ewing Street
Guthrie, KY 42234
(270) 483-9985

FIRM: McGhee Engineering
DES BY: CWW CHK BY: KWW
OWN BY: CWW APP BY:
SCALE: AS SHOWN
PROJECT DATE: 2021
PRINTED:
LENGTH OF BAR IS 1"
ON ORIGINAL DRAWING

**City of Russellville, Kentucky
Water Department**
City Park Water Storage Tank Addition
City Park - Tank Site Plan

October 1, 2021



Chris Willett

DRAWING NO.
SHEET P-1