HENDERSON WATER UTILITY

INVITATION FOR BIDS
and TECHNICAL SPECIFICATIONS

Comanche Drive Sewer Replacement Project

HENDERSON, KENTUCKY

January 2019
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COMANCHE DRIVE SEWER REPLACEMENT PROJECT

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**Note:** Items shown with Bold Underline in this Table of Contents must be completed in their entirety in the bid submittal.
INVITATION FOR BID

The Henderson Water and Sewer Commission of the City of Henderson, Kentucky will receive sealed competitive bids at its office at 111 Fifth Street, Henderson, Kentucky 42420, until 1:30 p.m. (CST), on the 9th day of January 2019, at which time the bids will be opened and considered for the purchase of the following:

COMANCHE DRIVE SEWER PROJECT
FOR THE
HENDERSON WATER UTILITY

REF# 201904 Comanche Drive Sewer Project

Specifications and Instructions to Bidders, and copies of plan sheets for this project may be obtained from:

HWU website:  http://tinyurl.com/hwu-bids

HWU Administration Building:  111 Fifth Street, Henderson, KY  42420

The Water and Sewer Commission reserves the right to accept or reject any or all bids in whole or in part and to waive informalities and/or technicalities in the bids. Conflicts of interest, gratuities and kickbacks as defined and provided for in K.R.S. 45A.455 are absolutely prohibited.

Clarifications and Addenda will be posted on the HWU procurement web site as listed above.
1. DEFINITIONS:

ASA used herein:

a. The term “solicitation” includes the Invitation for Bid, Solicitation Instructions and Conditions, Bid Form and Technical Specifications, and any Clarifications or Addenda issued by the Owner.

b. The term “offer” means “bid” or “proposal”.

c. The term “Vendor” shall mean the party responsible for furnishing submittals, equipment, accessories, controls, operation and maintenance manuals and training, startup services and warranting the equipment as required in this Request for Proposals. Prior to award of contract, a potential Vendor may be referred to by the terms “Bidder” or “Offeror”.

d. The term “Owner” shall mean the Henderson Water Utility (HWU), 111 Fifth Street, Henderson, Kentucky, 42420.

e. The term “Engineer” refers to an individual employee of the Owner, acting as design engineer or inspector for this project or procurement.

f. The term “Purchase Order” shall mean the document executed by the Vendor and the Owner of which each of the following form a part: the Invitation for Bids; the Vendor’s Proposal; and the attached plan and technical specifications for Comanche Drive Sewer Project, prepared by Henderson Water Utility, dated June 2018.

g. The term “Nonresident bidder” is defined by KRS 45A.494(3).

h. The term “Resident bidder” is defined by KRS 45A.494(2).

i. The term “Qualified bidder” means Kentucky Industries for the Blind, Incorporated; any nonprofit corporation that furthers the purposes of KRS Chapter 163; or a qualified nonprofit agency for individuals with severe disabilities as described in KRS 45A.465(3).

2. PREPARATION OF OFFERS:

a. Offerors shall examine the drawings, specifications, schedule, and all instructions. Failure to do so shall be at the offeror’s risk.

b. Offers shall set forth full, accurate, and complete information as required by the solicitation. Offers that contain an offeror’s own special terms and conditions in conflict with the terms of the solicitation or state statutes and regulations may be rejected.

c. Each offeror shall furnish the information required by the solicitation on the bid forms included herein. The offeror shall sign the solicitation in ink and type or print in ink his name, firm, address, telephone number, and date. Erasures or other changes shall be initialed in ink by the person signing the offer. Approved electronic format may also be accepted.

d. Any explanation or statement which the offeror wishes to make concerning the bid shall be written separately and independently of the proposal or bid, attached to the bid form, and placed in the envelope with the bid. Any such statement or explanation must refer to the bid submitted and shall also be signed by the offeror.

e. Unit price for each unit offered shall be shown and such price shall include packing and delivery to HWU unless otherwise specified within the Bid Form, and shall include startup and training services where specified in the Technical Specifications. Fuel Surcharges and any other miscellaneous charges should be included in the unit price. A total shall be entered in
the amount column of the schedule for each item offered. In case of discrepancy between a unit price and extended price, the unit price shall govern.

f. Cash discounts shall not be considered in making the award of the contract.

g. Trade discounts shall be deducted by the vendor in calculating the unit price quoted, unless otherwise stated.

h. Offers for supplies or services other than those specified shall not be considered unless authorized by the solicitation.

i. Proposal shall include guaranteed time schedules for submission of shop drawings after award of the Purchase Order, and for shipment of equipment after receipt of approved shop drawings. The award of the Purchase Order will be based on the quoted price and an acceptable shop drawing and equipment delivery schedule.

j. Time, if stated as a number of days, shall include Saturdays, Sundays, and Holidays. One day is 24 hours; one week is 7 days; one month is 28 days.

3. OFFEROR CLARIFICATION – REQUEST AND RESPONSE

Any explanation desired by an offeror regarding the meaning or interpretation of the solicitation drawings, specifications, etc., shall be requested in writing to the HWU Purchasing Manager, not less than five (5) calendar days prior to the bid opening date. Oral explanations or instructions given before the award of the contract shall not be binding. Any information given to a prospective vendor concerning a solicitation shall be furnished to all prospective vendors as an amendment or clarification of the solicitation, if such information is necessary to vendors in submitting offers on the solicitation, or if the lack of such information would be prejudicial to uninformed vendors.

4. ACKNOWLEDGEMENT OF ADDENDA TO SOLICITATIONS

Receipt of an addendum to a solicitation shall be acknowledged by the offeror. Acknowledgement shall be received prior to the hour and date specified for receipt of offers, or shall be shown in the appropriate place on the Bid Form. Verbal acknowledgement shall not be accepted. Failure to acknowledge addenda may cause the bid to be considered non-responsive.

5. PROTEST PROCEDURES

a. Protests prior to bid opening

Any protests, prior to bid opening must be submitted in writing and received by HWU at least ten (10) calendar days prior to bid opening. This ten (10) calendar day deadline may be waived by the HWU Purchasing Manager for good cause shown. The HWU Purchasing Manager will issue a response to the protest no later than five (5) calendar days after receipt of the protest. The response shall be in writing and set forth the reasons for the response. Upon receipt of a protest, the HWU Purchasing Manager will immediately determine if the bid opening should be postponed. If the bid opening is postponed, HWU will notify all prospective bidders who have been furnished a copy of the specifications that a request for review has been received and that the bid opening is postponed. Upon issuance of its response to the protest, HWU will issue an appropriate addendum rescheduling the bid opening.
b. **Protests after bid opening**

Protests after bid opening will be considered only as to issues which were not apparent before bid opening. After bid opening no protests of specifications will be considered. Any protest after bid opening, including a protest of contract award, must be submitted in writing and received by HWU within five (5) calendar days of the action being protested. No other form of protest will be considered. After the time for protest of contract award has expired, these protest procedures will be considered to be inapplicable, and any disputes will be resolved by HWU under contract provisions or other remedies, if available. 

Protests submitted to HWU shall:

(a) Include the name and address of the protestor.
(b) Identify clearly the procurement under which the protest is being submitted.
(c) Identify the action being protested and provide sufficient detailed documentation to support the protest action.
(d) Indicate the action, ruling or relief desired from HWU.

The HWU Purchasing Manager will review the protest and render his or her decision in writing within five (5) calendar days of receipt of the protest, setting forth reasons for his or her decision. HWU is responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of the procurement, including protests, contract defaults, disputes or breaches. The decision of the HWU Purchasing Manager as to protests shall be final and conclusive, unless, within five (5) calendar days of the date a decision was rendered by the HWU Purchasing Manager, a written appeal of the same is submitted by the bidder to the City of Henderson Water and Sewer Commissioners. Any appeal to the Commissioners shall include:

(a) A statement of the grounds for review and any supporting documentation.
(b) A copy of the protest filed with HWU and a copy of the HWU Purchasing Manager’s decision.

If the appeal is submitted prior to award of a contract, HWU will not award until the matter is resolved. If the contract has been awarded prior to the appeal, the contractor shall proceed diligently with the performance of the contract.

6. **SUBMISSION OF OFFERS**

a. Offers and modifications thereof shall be enclosed in sealed envelopes and addressed to the office specified in the solicitation. The offeror shall show the opening hour and date specified in the solicitation, the solicitation number, and the name and address of the offeror on the face of the envelope(s).

b. Telegraphic or facsimile offers shall not be considered unless authorized by the solicitation; however, offers may be modified by telegraphic or facsimile notice, if such notice is received prior to the hour and date specified for receipt. Telegraphic or facsimile modifications shall not mention unit prices or total price; but shall only refer to percentage change or numerical change (i.e., “reduce unit price of item 1 by $1.00”).

c. Samples of items, if required, shall be submitted within the time specified, and not unless otherwise specified, at no expense to HWU. If not destroyed by testing, samples shall be
returned at the offeror’s request and expense, unless otherwise specified by the solicitation. Unless a request for their return is made within thirty (30) days of award of contract, all samples shall become property of HWU.

7. **MODIFICATION OR WITHDRAWAL OF OFFERS**
Offers may be modified or withdrawn by written notice received prior to the exact hour and date specified for receipt of offers. An offer may also be withdrawn in person by an offeror or his authorized representative, if his identity is made known and he signs a receipt for the offer, but only if the withdrawal is made prior to the exact hour and date set for receipt of offers.

8. **LATE OFFERS AND MODIFICATIONS**
Offers and modifications of offers received at the office designated in the solicitation after the exact hour and date specified for receipt shall not be considered for an award of contract, UNLESS:
   a. No bids are received other than the late bid; and
   b. The needs of HWU are determined to preclude the re-solicitation of bids.

9. **MULTIPLE AND ALTERNATE BIDS**
Bidders shall submit one response only to the solicitation and shall not propose more than one price, model, and brand for each bid item. Multiple or alternate bids offering more than one bid price in total (or by line-item) shall be cause for rejection unless specifically called for in special provisions provided elsewhere in the solicitation.

10. **AWARD OF CONTRACT**
   a. It is the intent of HWU to award this contract to the vendor or vendors offering the lowest evaluated bid price for products which meet the specifications set forth in this document. Any and all anticipated costs for HWU to implement the project will be taken into consideration.
   b. HWU reserves the right to reject any offers and to waive informalities and minor irregularities in offers received. The award of this contract will be contingent upon funds being appropriated for this purchase.
   c. The bidder, if awarded an order or contract, agrees to protect, defend, and save harmless the Henderson Water and Sewer Commission and the Henderson Water Utility against any demand for the use of any patented materials, process, article, or device, that may enter into the manufacture, construction, or form a part of the work covered by either order or contract and he further agrees to indemnify and save harmless the Henderson Water and Sewer Commission and the Henderson Water Utility from suits or actions of every nature and description brought against it, for on account of any injuries or damages received or sustained by any party or parties, by or form any of the acts of the contractor, his servants, or agents.
   d. The awarded contract shall agree to offer the prices and the terms and conditions offered herein to any municipality, county or state government; public utility; non-profit hospital; educational institute; special governmental agency; and non-profit corporation performing governmental functions in Western Kentucky area who wish to participate in a cooperative purchase program with Henderson Water Utility. Other agencies will be responsible for entering into separate agreements with the Contract and for all payments thereunder.
   e. The bidder agrees to hold the proposed pricing for up to 90 days after bid proposal is opened, or for such time as specified on the Bid Form, if different.
f. A written award mailed (or otherwise furnished) to the successful offeror within the time for acceptance specified in the offer shall be deemed to result in a contract without further actions by either party.

11. METHOD OF AWARD: BEST VALUE - RANKING APPROACH
The Owner intends to award a Contract to the Contractor whose bid, conforming to the BID FORM, is the most advantageous on the basis of "best value" for all products, services, and requirements contained herein. An evaluation committee or a designated individual will evaluate the information provided by the Contractor in response to the established measurable criteria contained herein.

   **Measurable Criteria: Price 100 Points**
   **TOTAL POINTS 100 Points**

Each Contractor is responsible for submitting all relevant, factual and correct information with their Bid to enable the evaluator(s) to afford each Contractor the maximum score based on the available data submitted by the Contractor. The Contractor shall explicitly adhere to the BID FORM which contains adequate space for the Contractor's pricing.

**Bid Price (100 Points)**
The bidder with the lowest Bid Price receives the maximum score. The bidder with the next lowest Price receives points by dividing the lowest Price by the next lowest Price and multiplying that percentage by the available points. For Example, 100 points is allocated to the lowest Price criteria for this procurement, Bidder "A" bids $3.00 as the lowest bidder and receives the maximum 100 points ($3.00 / $3.00 = 1.00 X 100 = 100). Assume Bidder "B" is next lowest bidder at $4.00, then "B" receives 75 points ($3.00 / $4.00 = .75 X 100 = 75).

Best Value scoring is subject to Reciprocal preference for Kentucky resident bidders and Preferences for a Qualified Bidder or the Department of Corrections, Division of Prison Industries (KAR 200 5:410). The Contractor is required to submit a complete copy of the "Required Affidavit for Bidders, Offerors, and Contractors Claiming Resident Bidder Status" attached to the BID FORM.

12. KENTUCKY / INDIANA SALES AND USE TAXES
Sales of tangible personal property or services to HWU are not subject to state sales or use taxes. Henderson Water Utility's Kentucky/Indiana sales tax exemption number will be provided to the successful bidder(s).

13. COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS
Any contracts or orders placed as a result of the offer shall be governed by the laws of the Commonwealth of Kentucky. The rights and obligations of the parties thereto shall be determined in accordance with these laws. Any offer conditioned upon governance by the laws of a state other than Kentucky shall not be considered.

Conflicts of interest, gratuities and kickbacks as defined and provided for in KRS 45A.455 are absolutely prohibited. Bidder acknowledges and certifies by submission of his bid that all the provisions of KRS 45A.455 are complied with fully.
A City of Henderson business license is required for all vendors servicing accounts within the City of Henderson. A Henderson County business license is required for all vendors servicing accounts at HWU locations outside the City of Henderson but in Henderson County. Information regarding the business license can be obtained by calling the business license office at 270-831-1200. Vendors will be allowed ten (10) days after award of bid to submit a copy of their current business license(s) to the Purchasing Manager.

14. CONFLICTS OF INTEREST – Gratuities and kickbacks – Use of confidential information (KRS 45A.455)

a. It shall be a breach of ethical standards for any employee with procurement authority to participate directly in any proceeding or application; request for ruling or other determination; claim or controversy; or other particular matter pertaining to any contract, or subcontract, and any solicitation or proposal therefore, in which to his knowledge:
   i. He, or any member of his immediate family has a financial interest therein; or
   ii. A business or organization in which he or any member of his immediate family has a financial interest as an officer, director, trustee, partner, or employee, is a party; or
   iii. Any other person, business, or organization with whom he or any member of his immediate family is negotiating or has an arrangement concerning prospective employment is a party. Direct or indirect participation shall include but not be limited to involvement through decision, approval, disapproval, recommendation, preparation of any part of a purchase request, influencing the content of any specification or purchase standard, rendering of advice, investigation, auditing or in any other advisory capacity.

b. It shall be a breach of ethical standards for any person to offer, give, or agree to give any employee or former employee, or for any employee or former employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment, in connection with any decision, approval, disapproval, recommendation, preparation of any part of a purchase request, influencing the content of any specification or purchase standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling or other determination, claim or controversy, or other particular matter, pertaining to any contract or subcontract and any solicitation or proposal therefore.

c. It is a breach of ethical standards for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

d. The prohibition against conflicts of interest and gratuities and kickbacks shall be conspicuously set forth in every local public agency written contract and solicitation therefore.

e. It shall be a breach of ethical standards for any public employee or former employee knowingly to use confidential information for his actual or anticipated personal gain, or the actual or anticipated personal gain of any other person.
15. CONTRACT MODIFICATIONS

During the period of the contract, no modification shall be permitted in any of its conditions and specifications unless the contractor receives written approval from the Purchasing Manager. If the contractor finds at any time that existing conditions make modification in requirements necessary, he shall promptly report such matter to the Purchasing Manager for consideration and decision. All contract modifications shall be subject to the provisions of 200 KAR 5:311.

16. ADDITIONAL CHARGES/FEES
The bid price of the product is the complete product price. There will be no fuel surcharges, delivery fees, handling fees, container return fees, or any other fees/charges associated with the purchase, installation or delivery of products.

17. WARRANTY – CORRECTIVE WORK
The Contractor shall guarantee all work performed under this contract for a period of one (1) year after the date of Substantial Completion. This provision covers any work performed by the Contractor that is found to be defective, the repair of any damages to the site and adjacent areas that the contractor used during construction. Where defective work has been corrected or removed and replaced, the correction period with respect to that work will be extended for an additional period of one year after correction has been satisfactorily completed.

18. SELLER’S INVOICES
Invoices shall be prepared and transmitted via fax or USPS to HWU at the provided address. Invoices shall contain, at a minimum, the following information: Purchase Order number, Bill of Lading number, delivery location, and an appropriate weight ticket, where applicable.

HWU is a municipality and invoices are processed for payment not less than once per month. Terms are net 30 after receipt of invoice.

19. PRECEDENCE OF PROVISIONS
In the event of an inconsistency between provisions of the solicitation, the inconsistency shall be resolved by giving precedence in the following order: (a) Addenda, if issued; (b) Solicitation Instructions and Conditions; (c) General Conditions; (d) other provisions of the contract, whether incorporated by reference or otherwise; and, e) the Technical Specifications.

20. NONDISCRIMINATION
Civil Rights Act of 1964: In accordance with the provisions of Title VI of the Civil Rights Act of 1964 and the regulations of the Federal Department of Transportation (49 CFR, part 21) issued pursuant to such Act, all bidders are hereby notified that HWU will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the responsible bidder with the lowest evaluated bid without discrimination on the grounds of race, color, national origin, disability, gender, or age.

Americans with Disabilities Act: In accordance with the provisions of The Americans with Disabilities Act of 1990 (ADA) which specifically prohibits discrimination against persons with disabilities, all bidders are hereby notified that the contract entered into pursuant to this advertisement shall include a clause that specifically requires compliance with the ADA and prohibits discrimination against persons with disabilities. The ADA further requires that all new construction, reconstruction, and
alterations to existing pedestrian facilities be constructed in accordance with Federal accessibility standards.

21. INSURANCE

Contractors, including all Subcontractors, furnishing labor, and/or equipment under this requirement shall carry the following insurance in addition to all insurance required by law. Valid certificates of insurance shall be furnished to the Owner prior to the Contractor causing any work to begin.

<table>
<thead>
<tr>
<th>A. Workman’s Compensation</th>
<th>Statutory</th>
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<tbody>
<tr>
<td>B. Broad Form Comprehensive General Liability including coverage for Bodily Injury, Personal Injury, Products, Completed Operations, and Broad Form Property Damage, (No deductible clauses are acceptable for these coverages), and Independent Contractors (Subcontractors)</td>
<td>Bodily Injury: $1,000,000 each occurrence $2,000,000 aggregate Property Damage: $1,000,000 each occurrence</td>
</tr>
<tr>
<td>C. Comprehensive Automobile Liability, including Hired Car and Employer’s Non-Ownership Liability Coverage.</td>
<td>$1,000,000 Combined Single Limit</td>
</tr>
<tr>
<td>D. Endorsement naming as additional insured “The Henderson Water and Sewer Commission, its elected and appointed officials, employees, agents, boards, consultants, assigns, volunteers and successors in interest.”</td>
<td></td>
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<tr>
<td>E. Endorsement that Contractor’s insurance coverage shall be primary insurance as respects HWU. Any insurance or self-insurance maintained by HWU shall be separate from Contractor’s insurance and shall not contribute with it.</td>
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<tr>
<td>F. Certificates of insurance, issued by companies authorized to do business in the state of Kentucky, satisfactory in form to the HWU and signed by the Bidder’s insurer shall be supplied by Bidder to HWU evidencing that the above insurance is in force and that not less than thirty (30) calendar days written notice will be given to the HWU prior to any cancellation or restrictive modification of the policies. Bidder shall replace any cancelled policy within the thirty (30) day notice period so that there is no lapse in coverage at any time during the period covered by this contract.</td>
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The insurance shall:

a) Include the interests of the Owner, Contractor, Subcontractor, Engineer, Engineer’s consultants and any other individuals, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

b) Be written on a Builder’s Risk “all-risk” or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss.

c) Remain in effect for the duration of the contract and warranty period.
1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to furnish equipment as specified or indicated in the Bid Documents and Technical Specifications for the Bid Price(s) and in accordance with the other terms and conditions of the Bid Documents and Technical Specifications.

2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and the Bid Documents and Specifications. This bid will remain subject to acceptance for sixty days after the day of bid closing.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement that:
   a. BIDDER has examined copies of all the Bidding Documents and of the following addenda (receipt of all which is hereby acknowledged):
      
      | DATE | NUMBER |
      |------|--------|
      |      |        |
      |      |        |

   b. BIDDER has familiarized itself with the nature and extent of the Bid Documents and Technical Specifications, and all conditions, laws and regulations that in any manner may affect cost, or furnishing the equipment required.
   c. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought
by collusion to obtain for itself any advantage over any other Bidder or over the PURCHASER. Bidder acknowledges and certifies by submission of his bid that all the provisions and statutes of KRS 45a.465 are complied with fully.

d. Specify a unit price in figures for each bid item for which a quantity is given and show the products of the respective unit prices and quantities written in figures in the space provided for that purpose. Round the products by dropping all digits past the cent. Write in ink or type all figures. In case of discrepancy between a unit price and extended price, the unit price shall govern.

Bid Form A
Furnish and Install 10” Sanitary Sewer
Pricing to be held for 60 days after submittal is opened

ITEM No. 1: Mobilization & Demobilization

Includes Mobilization and Demobilization of personnel and subcontractors to site, general conditions, traffic control, Bid Bond, Performance and Payment Bond, etc., and all other costs not included in the other items under this Contract. This item will be paid 75% with the first pay application after the start of construction, and 25% with the last pay application, and includes all costs of any subsequent demobilizations and re-mobilizations as required by the project schedule.

LUMP SUM BID PRICE____________________________________________________

______________________________________________________________________ Dollars ($_______________).
(Use words) (figures)

ITEM No. 2: 10” PVC Sanitary Sewer

281 Linear Feet of 10” Sanitary Sewer Pipe, PVC D-3034, SDR-35, from Existing Sanitary Sewer Manhole 2208 to New Sanitary Sewer Manhole 2209 (SMH2208 to SMH 2209) including excavation and disposal of trench materials; furnishing and installing all pipe, connections, joint materials and other materials; coring and connection to manholes as required; testing; furnishing and installing bedding and backfill (Methods A, B or C, as required, per Std. Drawings HWUS001A, HWUS001B or HWUS001C), including pavement replacement in areas that are currently paved; all complete in place and ready for use.

281 Linear Feet @ $_______________ Equals $ ______________________
Unit Price L.F. Extended Amount
ITEM No. 3: Connection of 6” Sanitary Sewer Laterals

Two (2) - 6” Sanitary Sewer Laterals, (per Std. Drawings HWUS006) including furnishing and installing all materials for reconnection of sewer laterals to serve adjacent houses and structures; continuation of service to laterals during sewer main installation; testing; all complete and ready for use.

2 Each @ $_______________ Equals $ ______________________

Unit Price Each Extended Amount

ITEM No. 4: 48” Standard Precast Manhole

One (1) – 48” Standard Manhole (SSMH 2209), (per HWUS008 in attached Standards Drawings), including excavation and disposal of existing materials; furnishing and installing manhole base, riser sections, cone, lid, frame and cover, per the attached detail; furnishing and installing bedding and backfill (Methods A, B or C, as required) including pavement replacement in areas that are currently paved; all complete and ready for use.

1 Each @ $_______________ Equals $ ______________________

Price Each Extended Amount

ITEM No. 5: Bypass Pumping

Includes furnishing, installing, and operating all machinery, pumps, piping, plugs, generators, etc., required to provide diversion of flow around the work, for the entire construction period, including any remedial work required prior to substantial completion.

LUMP SUM BID PRICE____________________________________________________

____________________________________________ Dollars ($_______________).

(Use words) (figures)
ITEM No. 6: Clearing, Fence Removal/Replacement, Grading, Seeding & Mulching, and Erosion Control

Includes all clearing of trees, vegetation and other items required to begin work, including disposal of materials cleared and grubbed; removing and resetting existing fences; final grading of backfill for trenches; seeding and mulching all disturbed areas after construction is complete; erosion control during construction and post construction; restoration of adjacent lawn areas for property owners; all complete in place and ready for use.

LUMP SUM BID PRICE____________________________________________________

____________________________________________ Dollars ($______________).

(Use words)       (figures)

ITEM No. 7: Undercut and Stabilization with No. 3 Stone – To Be Used as Needed

95 Tons of No. 3 Stone for stabilization of undercut areas due to poor soils; including all over-excavation, undercut and disposal of unsuitable trench materials; furnishing and placing No. 3 stone within the confines of the undercut areas; all complete in place and ready for use.

95 Tons @ $_______________________ Equals $ ______________________

Unit Price Ton  Extended Amount

TOTAL BASE BID PRICE

TOTAL BID PRICE____________________________________________________

____________________________________________ Dollars ($______________).

(Use words)       (figures)

Bidders – please attach a “post-it” note or other tag to this page, in your completed bid.
Shop Drawing / Completion Schedule:

Number of days from Award of Purchase Order to shop drawings: ________ days

Number of days from shop drawing approval to substantial completion: ________ days

Exceptions Taken to this Proposal: List any and all exceptions. (If none, check here). ☐
SIGNATURE PAGE

Non-Collusive Bid Statement: The undersigned bidder, having fully informed himself regarding the accuracy of the statements made herein, certifies that: (1) The bid has been arrived at by the bidder independently and has been submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in the bid, designed to limit independent bidding or competition, and (2) The contents of the bid have not been communicated by the bidder or its employees or agents to any person not any employee or agent of the bidder or its surety on any bond furnished with the bid, and will not be communicate by any such person prior to the official opening of the bid.

_________________________________
Signature of Authorized Official

_________________________________
Name and Title (printed)

_________________________________
Legal Name of Business

_________________________________
Address

_________________________________
Address

_________________________________
Address

_________________________________
Telephone Number

_________________________________
Date

Affix seal below if bid is by corporation.

This seal was herewith affixed in the presence of:

Signature ____________________________ Title ______________________________
REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS CLAIMING QUALIFIED BIDDER STATUS

FOR BIDS AND CONTRACTS IN GENERAL:

I. The bidder or offeror swears and affirms under penalty of perjury that the entity bidding, and all subcontractors therein, meets the requirements to be considered a “qualified bidder” in accordance with 200 KAR 5:410(3); and will continue to comply with such requirements for the duration of any contract awarded. Please identify below the particular “qualified bidder” status claimed by the bidding entity.

_______ A nonprofit corporation that furthers the purposes of KRS Chapter 163

_______ Per KRS 45A.465 (3), a “Qualified nonprofit agency for individuals with severe disabilities” means an organization that:

(a) Is organized and operated in the interest of individuals with severe disabilities; and

(b) Complies with any applicable occupational health and safety law of the United States and the Commonwealth; and

(c) In the manufacture or provision of products or services listed or purchased under KRS 45A.470, during the fiscal year employs individuals with severe disabilities for not less than seventy-five percent (75%) of the man hours of direct labor required for the manufacture or provision of the products or services; and

(d) Is registered and in good standing as a nonprofit organization with the Secretary of State.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder’s claim of qualified bidder status. Failure to provide such documentation upon request may result in disqualification of the bidder or contract termination.

Signed ____________________________
Printed Name ____________________________
Title ____________________________
Date ____________________________
Company Name ____________________________
Address ____________________________

Subscribed and sworn to before me by ____________________________ this _____ day of ____________________________, 2019.

Notary Public ____________________________
My Commission Expires ____________________________

[Seal of Notary]

Check this box if not claiming Qualified Bidder Status [ ]
REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS CLAIMING RESIDENT BIDDER STATUS

FOR BIDS AND CONTRACTS IN GENERAL:

The bidder or offeror hereby swears and affirms under penalty of perjury that, in accordance with KRS 45A.494(2), the entity bidding is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:

1. Is authorized to transact business in the Commonwealth;
2. Has for one year prior to and through the date of advertisement
   a. Filed Kentucky corporate income taxes;
   b. Made payments to the Kentucky unemployment insurance fund established in KRS 341.49; and
   c. Maintained a Kentucky workers’ compensation policy in effect.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder’s claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

________________________________________  ______________________________
Signature                                             Printed Name

________________________________________  ______________________________
Title                                                Date

________________________________________
Company Name

________________________________________
Address

Subscribed and sworn to before me by __________________________ this _____ day of __________________, 2019.

_____________________________________
Notary Public

My Commission Expires

[Seal of Notary]

Check this box if not claiming Resident Bidder Status
Statement Required Pursuant to KRS 45A.395
NON-COLLUSIVE AFFIDAVIT OF PRIME BIDDER

State of_________________________
County of_______________________

_______________________________, being first duly sworn, deposes and says that:

1. He or she is the owner, partner, officer, representative, or agent of __________________________, the Bidder that he or she has submitted the attached bid;
2. He or she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached bid or of any other bidder, or to fix any overhead, profit or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Henderson Water Utility, the City of Henderson or any person interested in the proposed Contract: and
5. The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

______________________________
Signed

______________________________
Title

Subscribed and sworn to before me this _____day of __________________, 2019.

______________________________
Title

______________________________
My commission expires _____________
Title
A. GENERAL

1. SCOPE OF WORK

This request is for a proposal to furnish and install a replacement for an existing 10” sanitary sewer on the Comanche Drive project for the Henderson Water Utility, Henderson, Kentucky.

Each bid item should include any delivery fees, handling fees, fuel surcharges, or any other fees/charges associated with the purchase, delivery and installation of the product.

No geotechnical work has been performed as part of the design for this project. The original sewer installation dates from approximately 1967. Point repairs have been performed on this line, and soil conditions are not ideal, with a high water table present.

If the total construction contract amount (bid) awarded is an amount in excess of twenty-five thousand dollars ($ 25,000), a Performance bond and a Payment bond shall be furnished. Performance and Payment bonds shall be in an amount equal to one hundred percent (100%) of the contract price.

Bid security (bid bond) in an amount equal to five percent (5%) of the amount of the bid shall be furnished for all bids. If the successful low bidder fails or refuses to execute the contract and bonds required within ten (10) days after notice of acceptance of his bid, he shall forfeit to the Owner as liquidated damages the bid security submitted with his bid.

If the work is not completed within the time specified, liquidated damages in the amount of $ 1,000 per week shall be deducted from the compensation due the contractor.

2. SUBMITTALS (Shop Drawings)

The Vendor shall submit to the Engineer a minimum of three copies of information describing and depicting the details of the equipment, controls, materials and/or services to be provided, hereinafter referred to as “shop drawings.” After approval, the Engineer will distribute the shop drawings as follows: two sets to Owner's central files, and one set to the Vendor. If the Vendor requires more copies, specify that at the time of submittal; the Engineer will review up to five sets of each shop drawing submittal.

Shop drawings shall be submitted no later than 30 days after the purchase order date.

Rejection of the same shop drawings on three separate occasions shall constitute grounds for total rejection of the proposed vendor as being unable or unwilling to meet the requirements of this request for proposals.

Shop drawings for the equipment and materials described in this Request for Proposals must show, as a minimum, the following information:

a. Manufacturer’s cut sheets or other detailed product information.
b. Detailed dimensional drawings of each valve and fitting.
c. Detailed description of materials of construction and applicable standards.
3. MATERIAL TO BE OBTAINED FROM THE CONTRACTOR

The Bidder shall provide all items named in this Request for Proposals or so noted on the Purchase Order and such incidental items as may be required for the safe and proper installation and operation of the materials and equipment furnished for the purpose(s) intended.

The Vendor shall provide all gaskets, bolts, and other miscellaneous items required to install the material described in this Request for Proposals.

Equipment or materials offered contrary to the provisions of this Paragraph will be subject to rejection.

4. TRANSPORT AND DELIVERY

Transport and handle items using equipment and methods that prevent damage to the coating. Deliver pipe adequately stored on timbers or pallets. Valves, gaskets, fittings and small parts shall be delivered on pallets, and shall be boxed, shrink-wrapped, or otherwise protected from weather and loss.

Repair minor damage to exterior and interior coatings as the Engineer directs before pipe installation. Significant damage due to improper procedures for packing and handling of pipe and other materials will be reason for rejection.

5. MATERIALS OR EQUIPMENT TO BE FURNISHED ("OR EQUAL" CLAUSES)

Where the specifications state "equal to" followed by a brand name or model, a standard of quality is being set. The naming of a brand or model is a matter of convenience to avoid writing a volume. Other brands or equipment under this category may be submitted. The Engineer will consider other products on the basis of materials of construction, weight, function, size (it must fit the space provided), service history and electrical and mechanical characteristics.

Where the specifications state one or more model numbers and manufacturers followed by the words "or approved equal" the meaning is that the product(s) specified is acceptable and that while there may be other products that are acceptable the only way to be assured is to submit the desired substitution during the BID PROCESS and receive an affirmative answer. The Engineer will consider the factors previously described in making the determination.

Unless otherwise specified, all materials shall be the best of their respective kinds and shall be in all cases fully equal to approved samples. The Engineer shall have the right to require the use of such specifically designated material, article, or process. The Engineer, where practical, may require submission of actual samples of materials or products.

6. SAFETY

All work shall be carried out in accordance with all applicable rules and regulations of the Kentucky Labor Cabinet, Division of Occupational Safety and Health, and HWU Safety Policies.

7. PRODUCT DELIVERY, STORAGE AND HANDLING

Care shall be exercised in transporting and handling to avoid damage to pipe and fittings, and all appurtenances. Materials shall be stored in an enclosure or under protective coverings if required by the engineer to prevent damage. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris.
Contractor shall be responsible for all materials furnished and shall replace at his own expense all materials found defective in handling after delivery. Contractor shall report to HWU immediately upon finding defects in any material supplied by HWU. Contractor shall furnish all materials and labor required for replacement of installed materials discovered defective or damaged.

HWU reserves the right to reject any materials that do not comply with these standards.

8. NOTIFICATION

The Contractor shall give the Owner or Owner’s representative a minimum of 48-hour notice before starting construction. Where a public roadway must be closed, notify all safety agencies and the general public in accordance with local and state regulations. Where a private driveway must be closed, provide the resident a minimum 48-hours’ notice. Maintain continuous access to residential private driveways to the maximum extent possible.

9. INSPECTION

The Owner’s Engineer shall make periodic observations during construction to provide final certification that the improvements were installed in conformance with HWU standards and the approved construction drawings. In addition to observation by the Engineer, a final inspection will be made prior to putting the facilities in service. Final inspection will be made prior to acceptance of any facilities and only after all construction is complete. The Contractor shall provide labor and materials as required to complete the punch list developed during final inspection. Access to the construction site and construction records shall be provided to inspectors at all times.

B. MATERIALS

1. MANHOLES

   a. Reinforced concrete manholes shall conform to ASTM C-478. The minimum inside diameter, except for the eccentric cone, shall be 48". Xypex admixture shall be used in all precast sanitary manholes but is not required for storm manholes. Manhole joints shall consist of "O" ring type conforming to ASTM 443 or 1-1/2" wide strip of "Kent Seal" bituminous mastic strip with non-shrink grout on the inside.

   b. Precast manhole bases shall conform to ASTM C-478 with a steel finish flowline channel and ledge. A chemical resistant rubber compression diaphragm will be precast into the manhole wall for every pipe entering the manhole. The diaphragm shall meet ASTM C-923. Poured in place manholes will use 3,500 psi concrete. Precast manhole base bedding shall be No. 5 crushed stone or Dense Graded Aggregate conforming to KYTC Specifications.

   c. Heavy duty manhole castings shall be traffic type of grey cast iron, East Jordan Iron Works part number 00102494 or Neenah foundry part number 1015T41, or approved equal, all meeting ASTM A48 Class 35. Frames shall be attached to the manhole barrel by four, 5/8-inch anchor bolts and shall be set in a bed of mastic to provide a watertight seal between the barrel and frame. Unless indicated as watertight, manhole covers shall be of the solid, self-sealing type, with no holes except watertight pick notches. The surface between the frame and cover shall fit smoothly without rocking. Top of casting
shall be level with pavement or sidewalk, and shall be a minimum of 1” above finished ground line in non-paved areas.
d. Manholes shall not have steps.

2. PVC PIPE
   a. All PVC pipe for gravity sewer lines shall conform to ASTM D-3034 and ASTM F-679, and shall be SDR-35 or greater wall thickness.
   b. The chemical resistance of the pipe and fittings shall be tested in accordance with ASTM D-543.
   c. All fittings shall be of the same material as the pipe and shall be consistent in strength, dimensions, and utility. Adaptors shall be provided for transitions to other pipe products.
   d. Pipe joints are to be made using an integral bell with elastomeric gasket and according to manufacturer’s recommendations. Push-on joints shall form a watertight seal and lubricants shall be non-toxic and compatible with the gasket and pipe material.
   e. Each length of pipe and fittings shall have the following information plainly marked on the pipe exterior: Nominal size; SDR or Class; type of material; manufacturer; NSF seal of approval. Pipe shall be furnished in standard fourteen-foot (14’) lengths.

C. INSTALLATION

1. TRENCH EXCAVATION

   Trenching shall be accomplished as described hereinafter. All excavation is “unclassified” and no additional payment will be made for rock excavation.

   Unless otherwise directed by the Engineer, trenches in which pipes are to be laid shall be excavated in open cut to the depths shown on the plans. Excavation in earth shall undercut the pipe to a depth below the required invert elevation that will permit laying the pipe in a bed of granular material to provide continuous support for the bottom quadrant of the pipe. The bedding shall be as set out hereinafter.

   Trenches shall be of sufficient width to provide free working space on each side of the pipe and to permit backfilling around the pipe, but unless specifically authorized by the Engineer, trenches shall in no case be excavated or permitted to become wider than 2 feet 6 inches plus the nominal diameter of the pipe at the level of or below the top of the pipe. If the trench does become wider than 2 feet 6 inches at the level of or below the top of the pipe, special precautions may be necessary, such as providing compacted, granular fill up to top of the pipe or providing the pipe with additional crushing strength as determined by the Engineer after considering the actual trench loads that may result and the strength of the pipe being used. The Contractor shall bear the cost of such special precautions as are necessary.

   Prior to excavating the trench, Contractor shall pothole far enough ahead to reveal obstructions that may necessitate changing the line or grade of the pipeline, to avoid delays or the addition of avoidable fittings. Before laying the pipe, the trench shall be opened far enough ahead to reveal obstructions that may necessitate changing the line or grade of the pipeline.
Unless specifically directed otherwise by the Engineer, not more than 100 feet of trench shall be opened ahead of pipe laying work of any one crew, and not more than 100 feet of open ditch shall be left behind the pipe laying work of any one crew. Watchman or barricades, lanterns and other such signs and signals as may be necessary to warn the public of the danger of open trenches, excavation and other obstructions, shall be provided by and at the expense of the Contractor. Conformance to all state highway requirements shall be the responsibility of the Contractor when encroachment on state right-of-way is necessary.

When directed by the Engineer, only one-half of street crossings and road crossing shall be excavated before placing temporary bridges over the side excavated for the convenience of the traveling public. All backfilled ditches shall be maintained in such a manner that they will offer no hazard to the passage of traffic. The convenience of the traveling public and property owners abutting shall be taken into consideration. All public or private drives shall be taken into consideration and shall be promptly backfilled or bridged at the direction of the Engineer. Disposal of excavated materials shall cause as little interference with the work as possible, and in every case the disposition of materials shall be satisfactory to the Engineer. Trenches in which pipes are to be laid shall be excavated in open cut to the depths shown on the approved plans, cut sheets or as specified by the Engineer.

Where conditions exist that may be conducive to slides or cave-ins, proper and adequate sheeting, shoring and bracing shall be installed to provide safe working conditions and to prevent damage to work. Trenches shall be kept free of water during the laying of the pipe and until the pipeline has been backfilled. All excavation shall be in accordance with OSHA and/or KOSHA regulations. Where a trench box is used, the excavation shall be made such that the box rests on undisturbed soil fully above the top of the installed pipe to a maximum of two (2) feet or the maximum allowed by other regulation, whichever is less; to avoid disturbing the pipe bedding when the box is pulled forward. Where sheeting or shoring is used, it shall be fully removed with the completion of backfilling unless otherwise approved in writing by HWU. Adequate and proper shoring of all excavations shall be the entire responsibility of the Contractor.

Dewatering of trenches shall be considered a part of trenching, at no extra cost to the Owner. Dewatering of trenches shall include ground water and storm or sanitary sewage. Suitable pumping and other dewatering equipment are to be provided by the Contractor, to insure the installation of the pipeline structure in a dewatered trench and under the proper conditions. Dewatering shall include all practical means available for prevention of surface runoff into trenches and scouring against newly laid pipe. Discharge water from dewatering operations shall be suitably handled and/or treated to prevent the discharge of sediment or other pollutants to storm sewers or waterways.

Wherever pipelines are in, or cross, driveways and streets, the Contractor shall be responsible for any trench settlement which occurs within these rights-of-way within one (1) year from the time of final acceptance of the work. If paving shall require replacement because of trench settlement within this time, it shall be removed and/or replaced by the Contractor at no extra cost to the Owner. Repair of settlement damage shall meet the approval of the Engineer, and the agency having jurisdiction over the roadway.
2. LAYING OF PIPE

2.1 Laying Requirements

All pipe shall be laid to lines, cover or grades shown on the Drawings.

All pipe shall be visually inspected for cleanliness, soundness and proper jointing.

All pipe shall be laid with: Proper alignment; evenness of width and depth of joints; perfection in jointing; and care of the pipe in handling.

The allowable pipe deflection at joints shall not exceed one-half the manufacturer’s allowed deflection.

Precautions must be taken to prevent flotation of the pipe prior to putting the pipeline into operation.

In wet, yielding or mucky locations where pipe is in danger of sinking below grade or floating out of grade or alignment, or where the backfill materials are of such a fluid nature that such movements of the pipe might take place during the placing of the backfill, the pipe must be weighted or secured permanently in place by such means as will prove effective.

A manhole will be required at the termination of any line installation, except for those that terminate at inlets.

No pipe shall be laid resting on solid rock, blocking or other unyielding objects. Jointing before placing in the trench and subsequent lowering of more than one section jointed together will not be allowed.

When locating near water lines, the horizontal separation between water and sewer lines should be at least 10 feet measured from the outside edge of each pipe wall. Should location conditions prevent a horizontal separation of 10 feet, HWU may allow a deviation on a case-by-case basis. Such deviation may be allowed if the sewer is laid in a separate trench or if it is laid in the same trench with the water main located at one side on a bench of undisturbed earth. In either case, the elevation of the crown of the sewer must be at least 18 inches below the bottom of the water main.

Whenever sewer lines must pass below water mains, the sewer lines shall be laid at such an elevation that the top of the sewer is at least 18 inches below the bottom of the water main. Should location conditions prevent the sewer line from being buried to meet the above requirements, HWU may allow a deviation on a case-by-case basis.

2.2 PIPE BEDDING

Standard Bedding – Sewer pipe shall, as a standard practice, be laid using bedding of No. 9 crushed limestone that shall be placed a minimum depth of four-inches (4”) below the bottom of the pipe barrel.

In no case shall the pipe be supported directly on solid rock. When rock is encountered in the trench bottom, bedding shall consist of size #9 crushed limestone only.
2.3 SPECIAL PIPE BEDDING - UNSTABLE SOILS

Unstable soils shall be stabilized by over excavating to allow a bedding of #3 crushed stone below the 4” of #9 crushed stone bedding. Basis of payment will be by delivery tickets.

All bore pits and any over digging related to such shall be stabilized with #3 stone and backfilled with #9 stone to sub-grade.

2.4 INSTALLATION AND JOINTING

Jointing of PVC pipe shall be accomplished in accordance with the manufacturer’s specifications.

Pipe shall not be laid in water or upon frozen sub grade at any time or condition when, in the opinion of the Engineer, conditions are unsuitable.

2.5 BACKFILLING

Backfilling of pipeline trenches shall be accomplished in accordance with the details set forth hereinafter. Backfill is not a separate pay item but shall be included in the unit price for the various types of pipes and structures included in the work.

In all cases walking or working on the completed pipelines, except as may be necessary in tamping or backfilling, will not be permitted until the trench has been backfilled to a point one foot (1’) above the top of the pipe. The filling of the trench and compaction of the backfill shall be carried on simultaneously on both sides of the pipe in such a manner that the completed pipeline will not be disturbed and injurious side pressures do not occur. The methods of backfilling shall be as follows:

**Method “A” - Backfilling in Open Terrain (see Figure 6-1 Appended):**

The lower portion of the trench, from the bottom of the trench to a point six (6) inches above the top outside surface of the pipe, shall be backfilled with No. 9 stone.

The upper portion of the trench above the #9 stone shall be backfilled with material which is free from large rock. Incorporation of rock with any individual piece having a volume exceeding eight (8) cubic inches is prohibited. Backfilling this portion of the trench may be accomplished by any means approved by the Engineer, but the incorporation of unsuitable material (trash, large rock) is prohibited. The trench backfill may be heaped over the top of the trench or leveled as directed by the Engineer.

**Method “B” - Backfilling Under Sidewalks and Unpaved Driveways (see Figure 6-2 Appended):**

The lower portion of the trench to a point six inches (6”) above the top of the storm sewer pipe shall be backfilled with No. 9 crushed stone.

The upper portion of the trench, from the top of the #9 stone to the finished surface, shall be backfilled with dense graded aggregate, placed in six-inch (6”) lifts and compacted with a plate compactor or other approved method.
Method “C” - Backfilling Under Streets, Roads and Paved Driveways (see Figure 6-3 Appended):

The lower portion of the trench to a point six inches (6”) above the top of the storm sewer pipe shall be backfilled with No. 9 crushed stone or fine gravel.

The upper portion of the trench, from the top of the #9 stone to the base of the asphalt or concrete pavement, shall be backfilled with dense graded aggregate, placed in six-inch (6”) lifts and compacted with a plate compactor or other approved method. If bituminous base is not placed immediately when the trench is backfilled, place stone or other approved material to the level of the existing pavement. At such time that pavement replacement is accomplished, any excess base course shall be removed and disposed of as required.

Before final acceptance, the Contractor will be required to level off all trenches or to bring the trench up to grade. The Contractor shall, at his expense, also remove and legally dispose of all excess earth or other materials from roadways, right-of-ways and/or private property. Hazardous materials shall be handled and disposed of in accordance with all local, state and federal requirements.

Flowable fill shall be allowed as an alternate method for backfilling of utility cuts and trenches, with approval of the Engineer.

2.6 CONCRETE CRADLE ANCHORS, THRUST BLOCKS OR ENCASEMENTS

Concrete cradle, anchors or encasement of sewer lines and/or fitting shall be placed where shown on the plans, required by the specifications, or as directed by the Engineer. Concrete shall be 2,500 psi and shall be mixed sufficiently wet to permit it to flow under the pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb the grade or line of the pipe or injure the joints.

3. OTHER ITEMS OF WORK

3.1 GRADING, SEEDING AND MULCHING

Grade ditches around catch basins to drain as per the plans. Contractor shall be responsible for filling all low spots in trenched areas for a period of one year from substantial completion.

Unless otherwise specified by the Engineer, all graded areas shall be left smooth and sown with a mixture of grasses at a rate of not less than 100 pounds per acre. Seed mixture shall be as shown below. When final grading has been completed, the area to be seeded shall be fertilized with number 12-12-12 fertilizer at a rate of 1000 lbs. per acre. After the fertilizer has been distributed, the Contractor shall disc or harrow the ground to thoroughly work the fertilizer into the soil. The seed shall then be broadcast either by hand or by approved sowing equipment. After the seed has been distributed, the contractor shall then lightly cover the seed by use of a drag or other approved device. All seed shall be certified. The seeded area shall then be mulched with clean, weed-free straw to a depth of approximately 2 inches. Any necessary reseeding or repairing shall be performed by the contractor prior to final acceptance.

Seed mixture for permanent seeding shall consist of the following:
a. 30% Kentucky 31 Tall Fescue (Festuca arundinacea)
b. 20% Creeping Red Fescue (Festuca rubra)
c. 35% Hard Fescue (Festuca longifolia)
d. 10% Ryegrass, Perennial (Lolium perenne)
e. 5% White Dutch Clover (Trifolium repens)

3.2 EROSION CONTROL

Contractor shall control water pollution through use of best management practices that limit eroded sediment leaving the site and shall coordinate these measures with the construction schedule to ensure effective and continuous erosion control throughout the construction and post construction periods. If more than 1 acre is disturbed during construction, Contractor shall apply for and maintain an NOI from the Kentucky Division of Water and from HWU.

Before any disturbance is made, perform an initial site inspection with the Engineer, record what areas are to be disturbed, submit an erosion and sediment control plan showing what BMPs will be used, design BMPs according to good engineering practices, and install the designated BMPs. Before opening or affecting any new areas, repeat this process and ensure all BMPs are installed before starting work.

Erosion control measures shall include the following:

(i.) Soil stabilization shall be initiated within fourteen (14) days of clearing or inactivity in construction.
(ii.) If seeding or another vegetative erosion control method is used, adequate temporary erosion control shall be provided until permanent cover is established.
(iii.) Techniques shall be employed to prevent the blowing of dust or sediment from the site.

Construction site access requirements shall include:

(i.) Approved temporary access entrance(s) provided at all sites.
(ii.) Other measures necessary to ensure that sediment is not tracked onto public streets by construction vehicles or washed into storm drains.

Other requirements include:

(i.) Trash control.
(ii.) Contained washout facility for concrete trucks.

3.3 EXISTING UTILITIES

Special precautions shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the City or by public or private utility companies.

Where existing utilities or appurtenant structures, whether underground or aboveground are encountered, they shall not be displaced or disturbed unless necessary, and in such cases shall be replaced in as good or better condition than found as quickly as possible.
The Contractor shall bear the entire responsibility for locating, avoiding or repairing damage to said existing utilities. No work shall be performed prior to contacting Kentucky 811 and existing underground utilities being located and marked. Contractor is responsible for contacting utilities that do not subscribe to Kentucky 811.

### 3.3 BYPASS PUMPING

Construct and maintain all temporary bypass systems and be responsible for all bypass pumping of sewage that may be required to prevent backing up of sewage and allow proper installation, inspection, rehabilitation, testing or drainage during sewer replacement or reconnections to existing sewers. Ensure that no damage will be caused to private property because of bypass pumping operations. Primary bypass pumps shall be critically silenced when used in residential settings or areas where excessive noise levels would create a disturbance.

Where no alternate sanitary sewer route is available or when twenty-four hours of storage is not feasible, redundant bypass pumping shall be installed.

The design, installation, and operation of the temporary pumping system shall be the Contractor’s responsibility. The Contractor shall demonstrate or employ the services of a subcontractor who can demonstrate to the Engineer that he specializes in the design and operation of temporary bypass pumping systems.

The Contractor may be required to provide on-site manual oversight of all bypass pumping operations 24 hours per day, 7 days per week when the bypass pumping system is in operation. To the maximum extent possible, Contractor shall phase and coordinate his work so as not to require bypass pumping overnight.

In the event that sewage accidentally discharges into the separate storm sewer system or street, immediately stop the overflow, notify the Engineer, and take the necessary action to clean up and disinfect the spillage and all residual contamination to the satisfaction of the Engineer. If sewage is spilled onto public or private property, wash down, clean up and disinfect the spillage and all residual contamination to the satisfaction of the Engineer.

Locate bypass pumping suction and discharge lines to not cause interference with the use of streets, private driveways and alleys. In cases where the suction and or discharge lines are required to be buried for vehicle / pedestrian traffic, cost for this work is incidental and includes complete restoration of any surface features disturbed.

Arrange for alternate methods of sewage disposal if individual services will be interrupted for more than 24 hours. Protect private property from backups and property damage.

Notify adjacent property owners, in writing, of disruption to service. Written notice shall be delivered the day prior to the beginning of work, and a local telephone number of the Contractor shall be included. Contractor shall personally contact any home or business which cannot be reconnected within the time stated in the written notice.
When bypass pumping operations are located on any street, the Contractor shall be responsible for erecting and maintaining Traffic Control devices for vehicular and pedestrian traffic. Submit a Traffic Control plan, at least seven days prior to beginning work at the site. This plan should delineate roads to be closed, speed restrictions, locations of signs and barricades, and sidewalk closures, in a clear and concise format, for use by the Contractor in obtaining City approval of the road closures and traffic restrictions.

Protect open excavations or manholes by use of barricades, fences, etc., from access by the public, small animals and children.

Pro tect bypass lines which cross open driveways, alleys or streets from traffic through the use of ramps or devices that allow passenger vehicles and light trucks to cross without damage to the bypass line or the vehicle.

Removal: When construction is complete, remove bypass piping and restore pavement and other improvements to their original condition or better.

Damages: Contractor shall clean and repair any damage that may result from his negligence, inadequate or improper installation, maintenance, and operation of the bypassing and flow control system, including mechanical or electrical failures, at his cost.
4. FIELD QUALITY CONTROL

After the lines or system have been brought to completion, and prior to final inspection, the Contractor will be required to clean all dirt, debris and trash from lines and manholes.

During the final inspection, the Engineer will inspect each individual line, from manhole to manhole, either by use of lights or other means at his/her disposal to determine whether the completed lines are true to line and grade as laid out or as shown on the plans.

4.1 TESTING REQUIREMENTS

All lines or sections of lines that are found to be laid improperly with respect to line or grade, that are found to contain broken or leaking sections of pipe or are obstructed in such a manner that they cannot be satisfactorily corrected otherwise, shall be removed and replaced.

Flexible pipe (PVC and HDPE) shall be lamp tested not less than 30 days after completion of installation and shall not be allowed to show more than 5% deflection.

4.2 MANHOLE TESTING

All manholes shall be subjected to a vacuum test in accordance with ASTM C1244, except as specified otherwise herein. Other forms of testing of some manholes may be required, as deemed necessary by the Owner.

Manholes shall be tested after installation with all connections in place and shall include testing of the seal between the cast iron frame and the concrete cone, slab or grade rings. Plug pipe openings; securely brace plugs and pipe.

A vacuum of at least ten inches of mercury (10" Hg) shall be drawn on the manhole. Shut the valve on the vacuum line to the manhole and shut off the pump or disconnect the vacuum line from the pump.

The manhole shall be considered to pass the vacuum test if the vacuum reading does not drop more than 1" Hg (i.e. from 10" Hg to 9" Hg) during the following minimum test times.

<table>
<thead>
<tr>
<th>Minimum Test Times for Various Manhole Diameters</th>
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<tbody>
<tr>
<td>MH Depth (feet)</td>
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<td>-----------------</td>
</tr>
<tr>
<td>15 Feet or less</td>
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<tr>
<td>15.01 to 30 Feet</td>
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</table>

When vacuum drop is greater than 1 inch of Hg during test period, repair and retest manhole; when vacuum drop of 1 inch of Hg does not occur during test period, discontinue test and accept manhole.

When vacuum test exceeds 1-inch Hg drop in specified time after initial repair, repair and retest manhole repeatedly until test is passed.
Comanche Drive Sewer Project  
Proposed Pipe Sizes, Elevations

<table>
<thead>
<tr>
<th>Manhole Number</th>
<th>Distance Between</th>
<th>Proposed Pipe Size/Type</th>
<th>Elevation – Top</th>
<th>Elevation – In/Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMH 2208</td>
<td></td>
<td></td>
<td>414.99</td>
<td>10” SE – 408.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10” NW – 408.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10” NE - 408.45</td>
</tr>
<tr>
<td></td>
<td>281’</td>
<td>10”/PVC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMH 2209</td>
<td></td>
<td></td>
<td>422.67</td>
<td>10” SW – 412.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10” NE – 412.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8” SE – 413.98</td>
</tr>
<tr>
<td></td>
<td>143’</td>
<td>10”/PVC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMH 2098</td>
<td></td>
<td></td>
<td>426.25</td>
<td>10” SW – 413.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10” SE – 413.96</td>
</tr>
</tbody>
</table>

See drawing attached for location information. Proposed elevations shown are same as existing.
TRENCH SECTION METHOD "A" OPEN TERRAIN
DUCTILE & PVC GRAVITY SEWER MAIN
& HDPE FORCE MAIN: OPEN CUT INSTALLATION

NOTE:

HAND PLACE AND TAMP BACKFILL MATERIAL TO 6" ABOVE TOP OF PIPE SO AS NOT TO DISTURB OR DAMAGE PIPE.

UPPER PORTION OF TRENCH USE EXCAVATED MATERIAL FREE FROM OBJECTS HAVING A VOLUME EXCEEDING EIGHT CUBIC INCHES.

PLACE BURIED METALLIC LOCATOR TAPE 18"--24" ABOVE TOP OF PIPE AS SHOWN. TAPE MUST CONTINUOUSLY READ: "CAUTION: BURIED SEWER LINE BELOW".

USE TRACER WIRE FOR FORCE MAIN INSTALLATION ONLY.

FORCE MAIN NOMINAL DEPTH 3'-6" MIN. TO 4'-0" MAX.

HOLES IN BEDDING FOR PIPE BELLS MUST BE PROVIDED AT EACH JOINT.
TRENCH SECTION METHOD "B" SIDEWALKS & UNPAVED DRIVEWAYS
DUCTILE & PVC GRAVITY SEWER MAIN
& HDPE FORCE MAIN: OPEN CUT INSTALLATION

NOTE:
BACKFILL TRENCH FROM BEDDING TO FINISH GRADE WITH #9 CRUSHED STONE. HAND PLACE AND TAMPER BEDDING TO 6" ABOVE TOP OF PIPE SO AS NOT TO DISTURB OR DAMAGE PIPE.

PLACE BURIED METALLIC LOCATOR TAPE 18"-24" ABOVE TOP OF PIPE AS SHOWN. TAPE MUST CONTINUOUSLY READ: "CAUTION: BURIED SEWER LINE BELOW".

USE TRACER WIRE FOR FORCE MAIN INSTALLATION ONLY.

FORCE MAIN NOMINAL DEPTH 3'-6" MIN. TO 4'-0" MAX.

HOLES IN BEDDING FOR PIPE BELLS MUST BE PROVIDED AT EACH JOINT.
TRENCH SECTION METHOD "C"
STREETS, ROADS, & PAVED DRIVEWAYS
DUCTILE & PVC GRAVITY SEWER MAIN
& HDPE FORCE MAIN: OPEN CUT INSTALLATION

NOTE:
HAND PLACE AND TAMPER BEDDING MATERIAL TO 6" ABOVE THE TOP OF PIPE SO AS NOT TO DISTURB OR DAMAGE PIPE.
LOWER PORTION OF TRENCH FROM BEDDING TO SIX INCHES BELOW BASE OF PAVEMENT USE #9 CRUSHED STONE.
UPPER PORTION OF TRENCH FROM #9 STONE TO BASE OF PAVEMENT USE A BASE COURSE OF DENSE GRADED AGGREGATE.
PLACE BURIED METALLIC LOCATOR TAPE 18"--24" ABOVE TOP OF PIPE AS SHOWN. TAPE MUST CONTINUOUSLY READ:
"CAUTION: BURIED SEWER LINE BELOW".
USE TRACER WIRE FOR FORCE MAIN INSTALLATION ONLY.
FORCE MAIN NOMINAL DEPTH 3"--6" MIN. TO 4"--0" MAX.
HOLES IN BEDDING FOR PIPE BELLS MUST BE PROVIDED AT EACH JOINT.
PROFILE VIEW
TYPICAL 6" PVC SEWER LATERAL, LESS THAN 10' DEEP

PROFILE VIEW
TYPICAL 6" PVC SEWER LATERAL, GREATER THAN 10' DEEP
MANHOLE BASE
CAST IN PLACE

CHEMICAL RESISTANT RUBBER-
DIAPHRAGM OR BOOT FOR
EVERY PIPE ENTERING THE
MANHOLE, MEETING ASTM
C-923, LATEST EDITION.

CONCRETE BENCH

1/2 PIPE DIAMETER

4'-0" min.

6" MIN. OF #9 CRUSHED STONE

#5a @ 12" EW

2" Ctr.