



CITY OF HAVELOCK

Post Office Box 368
Havelock, NC 28532

INVITATION TO BID

Pursuant to North Carolina General Statutes §143-131, the City of Havelock invites informal bids on the following:

Bids must be submitted in accordance with the attached specifications. Bids must include an itemized schedule (including quantity, unit price and total) for each work element. Bids can be submitted through the United States Postal Service to P.O. Box 368 Havelock, NC 28532 or emailed to bids@havelocknc.us. Cover sheets, envelopes, etc. should be clearly marked with the words:

*“City of Havelock,
Sewer Line Repair at Woodhaven Drive, End of Previous Point Repair to MH G91”*

Address Bids to: Lee Tillman, Director of Finance
City of Havelock
P.O. Box 368
1 Governmental Ave.
Havelock, NC 28532
Fax: 252-447-0126
Email: Bids@havelocknc.us

Bids will be accepted until **2:00 PM (EST) on Wednesday, May 20, 2020** at which time they will be reviewed in the office of the City Finance Director. Informal bid openings are not subject to public inspection until the contract is awarded. Quotes are not subject to public inspection until the contract is awarded. The bids are good for 75 days after opening. The winning bidder will be issued a Notice To Proceed (NTP) along with a Purchase Order. The performance period is 90 calendar days from the NTP.

Bidders are cautioned not to submit bids until the proposed requirements and specifications have been carefully examined. It will be considered that bidders will have satisfied themselves as to the accuracy of the specifications. No proposal will be considered unless prices are submitted for all items requested in any section. The City reserves the right to change the amount of quantities.

The names of certain brands or makes denote quality standard in the article desired, but do not restrict bidders to the specific brand, make or manufacturer named. They are meant to convey to prospective bidders the general style, type, character and quality of the article desired.

The successful bidder on all construction contracts will be required to conduct the operation in accordance with all Federal, State, and Municipal health and safety rules, regulations and laws applicable to the operation. The successful bidder may be asked to provide the City with a copy of the company's safety plan prior to commencing work. For all projects over \$30,000, a general contractor's license must be furnished to the City if applicable.



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The City will not sell bid packages. Plans, specifications, and addenda may be viewed and obtained online at www.havelocknc.us. Click on: "Bid on a Contract"; "Current Bids". The Bidder's List is maintained by Vendor Registry. Registration for the Bidder's List is made online at www.havelocknc.us. Click on: "Bid on a Contract"; "Vendor login/Registration".

N.C.G.S. (North Carolina General Statutes), specifically §160A-20.1(b), prohibit the City from entering into contracts with contractors and subcontractors who have not complied with the requirement of Article 2 or Chapter 64. The Contractor shall submit the E-Verify Affidavit, located in the Bid Proposal section, with their bid. Bids that do not include this Affidavit will be considered non-responsive.

N.C.G.S 147-86.42-84 requires that contractors with a North Carolina Local Government must not utilize any subcontractor found on the State Treasurer's Iran Divestment list or Companies Boycotting Israel list. The referenced lists can be found on the State Treasurer's website at the address www.nctreasurers.com and will be updated every 180 days.

The City of Havelock reserves the right to reject any or all proposals and to purchase items from the state contract in the efforts to award the contract to the bidder it deems to be for the best interest of the City.

This institution is an equal opportunity provider, and employer.

Contact person(s) for information on this bid:

For questions in regards to the bid specifications, the City requires and only responds to questions submitted in writing and sent via email to: Bids@havelocknc.us

Questions must be received by **2:00 PM (EST) on Wednesday, May 6, 2020**. If questions are received, the City will respond no later than **12:00 PM (EST) on Tuesday, May 12, 2020**.

This is the 22nd day of April 2020

Published: Vendor Registry April 22, 2020

CITY OF HAVELOCK

Lee W. Tillman
Director of Finance

Bid Sheet

Base Bid: _____

NC Sales Tax: _____

Delivery Cost (if applicable): _____

Total Cost to City: _____

Bids must include an itemized schedule by quantity, unit price and total for each work element.

Company Name: _____

Company Address: _____

Contact Person: _____

Telephone Number: _____

NC Contractor's License Type and Number: _____

Number of Addendums Acknowledged (circle one): N/A 1 2 3 4

As of the date listed below, the vendor or bidder listed above is compliant with N.C.G.S. 147-86.42-84, the Iran Divestment Act and the Companies Boycotting Israel Act.

Authorized Signature: _____

Print Name of Authorized Signature: _____

Title: _____

Address Bid to: Lee Tillman, Director of Finance
City of Havelock
P.O. Drawer 368
1 Governmental Avenue
Havelock, NC 28532
Bids@Havelocknc.us

Please indicate the Bid name on the outside of the envelope.

Scope of Work

Project Area is Woodhaven Drive between end of point repair near MH G57 to MH G91.

The project is the installation of a new pre-cast doghouse manhole at the end of a previous point repair and approximately 307 feet of 10-inch sewer main into MH G91, as shown in Figure 1. The point repair replaces existing truss pipe with sections of VCP, PVC, or concrete pipe. Contractor shall locate all existing service laterals connected to the existing sewer to be replaced prior to installation of proposed sewer main. Service laterals connected to the existing sewer main shall be replaced up to and including the cleanouts. If there is no cleanout or the cleanout is outside of the right-of-way, replace service laterals up to the right-of-way and install a new cleanout. Reference Figure 2, for installation of laterals and cleanouts. Complete the replacement of the sewer main, connection to the existing manhole with new boot Kor-n seal (or equivalent), backfill, pavement repair, and connection and replacement of all sewer laterals, as necessary. Following installation of the proposed sewer, the excavation shall be backfilled in 8-inch lifts with suitable soils. Pavement shall be repaired in accordance with NC DOT Standards. Project bid shall include all materials and labor required to install the new pre-cast doghouse manhole, with Kor-n seal (or equivalent) boot, backfill, pavement repair, and connection and replacement of all sewer laterals and cleanouts, as necessary. All materials to be disposed in accordance with State and local requirements.

Contractor shall be responsible for 811 locating existing utilities and verifying all existing site conditions, including but not limited to existing pipe diameter, invert elevations, and existing pipe material prior to beginning repair.

Sewer Materials:

A. PVC SDR 35 Gravity Sewer Pipe

1. PVC gravity sewer pipe shall conform to all the requirements of ASTM 03034 and shall be capable of withstanding the overburden pressures determined by the depth of burial in the field. Minimum pipe stiffness (F/dY) at 5% deflection and 115.
2. Pipe shall have bell and spigot ends and be water tight. Pipe shall have an integral elastomeric-gasket bell end. Gaskets shall be in conformance with ASTM F679.
3. Point repair to manhole replacement is required, replace existing sewer with

PVC gravity pipe.

4. See Attachment 1 "Gravity Sewer Installation and Testing Requirements" for additional requirements.
- B. PVC Service Lateral Pipe and Fittings
 1. Service laterals to be replaced with new cleanout at or near right of way with Schedule 40 pipe, with plain ends for solvent-cemented joints with, Schedule 40, socket-type fittings.
 - C. PVC Cleanouts
 1. Schedule 40 PVC pipe and fittings with PVC threaded plug. Include PVC sewer pipe fitting and riser to cleanout of same material as sewer piping and will be set at right-of-way.
 - D. Nonpressure-type Pipe Couplings
 1. Couplings for joining PVC gravity sewer pipe to existing sewer shall be solid sleeve type suitable for all types of pipe. Material shall be ductile iron with gaskets suitable for sewer service. Coupling shall be Hymax Coupling or equal.

Truss and Solid Wall Plastic Pipe Cutting

- A. Cutting of pipe lengths, where required, shall be performed using tools or equipment that will provide a neat, perpendicular cut without damage to the plastic. All burrs shall be removed using a file, knife or abrasive paper. Spigot ends on cut pipe shall be beveled to prevent gasket damage.
- B. As necessary, clean, seal, and lubricate the cut end of truss pipe in accordance with the recommendations of the manufacturer of the Truss Pipe to SDR 35 adapter.

Dewatering

- A. The Contractor shall dewater as required for the completion of the work. All water removed by dewatering operations shall be disposed of in accordance with the North Carolina Sedimentation Pollution Control Act.
- B. All dewatering flows shall pass through a sediment filter bag. Sediment filter

bags shall be of polypropylene nonwoven geotextile fabric with a sewn-in sleeve of sufficient size to accept a 4-inch diameter discharge hose. The discharge hose should be extended into this sleeve a minimum of 6-inches and be tightly secured with a hose clamp or other suitable to prevent leakage. Hose connection through a slit in the bag will not be acceptable. Contractor shall size sediment filter bags as necessary to dewater trenches.

- C. All well points shall be properly abandoned, backfilled, and the surface shall be restored after completion of the work.

Excavation and Shoring

- A. The Contractor is responsible for the design and protection of all excavation and shoring. Shoring shall be designed and sealed by a professional engineer registered in the State of North Carolina, as required by OSHA, CFR 1926.
- B. Contractor shall notify NC 811 for utility locations prior to any excavations.
- C. In no case shall excavation exceed that which can be backfilled by the end of the workday.

Pipe Bedding

- A. Pipe bedding shall be 8 inches of No. 57 Stone. Minimum trench width shall be the outside diameter of the pipe plus 18-inches on each side of the pipe. Consolidated ABC stone shall be installed from the top of the 57 stone bedding to the top of the installed pipe.

Backfill and Compaction

- A. All excavations shall be backfilled with native soils or select fill if the excavated material is not suitable. Contractor shall be responsible for the removal and disposal of all excavation material and construction debris.
- B. Compaction shall be to 98% Standard Proctor.
- C. Backfill shall be completed and layered in maximum lifts of 8 inches.

Erosion and Sediment Control and Surface Restoration

- A. The Contractor shall be responsible for the installation and maintenance of all erosion and sediment control in accordance with the NC Erosion and Sediment Control Manual.
- B. Construction activities shall be completed in such a manner that erosion of disturbed areas and off-site sedimentation is absolutely minimized.
- C. All disturbed areas shall be restored as soon as construction is complete. Seed type shall match existing grass in maintained areas. Follow the NC Erosion and Sediment Control Manual for seeding type.
- D. Rolled erosion control matting shall be used to stabilize all disturbed slopes.

Pavement Restoration

- A. Replacement of asphalt roadway and/or concrete driveways to include under driveway culverts are the responsibility of the contractor and shall be returned to original condition at end of project.
- B. The maximum width of pavement replacement for the installation of new sewer main and point repairs shall be 10 feet. The maximum width of pavement replacement for the replacement of service laterals is 5 feet. If pavement cuts are 24 inches or less from the edge of pavement, then the asphalt must be removed and replaced to the edge of pavement.
- C. All road repairs shall be completed in accordance with Detail 0251301R, Typical Pavement Junction, attached to this Scope of Work in Figure 3.

Bypass Pumping

- A. If sewage bypass pumping is required for completion of any repairs of existing sewer mains, the Contractor shall design and furnish all materials, labor, equipment, power, fuel, fuel storage, maintenance, etc. to implement a temporary pumping system for the purpose of diverting the existing flow around the work area on a daily basis, for the duration of the project. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction. Contractor shall also be responsible for any fines imposed by local, state, and/or federal agencies for failure to maintain flows or contain spills and/or overflows.

- B. Bypass pumping from manhole to manhole is allowed in all project areas. Bypass pumping operation must be manned at all times that pumps are operating. Bypass pumping shall not be allowed to occur during weekends and holidays unless the Contractor receives approval to work during those times and said work requires temporary bypass pumping. When possible, bypass systems shall be removed prior to rain events so that no portion of the bypass system impedes the flow of the sewer.

- C. The minimum pumping capacity of the bypass pumps should match the table below for the diameter of pipe being bypassed:

Pipe Diameter	Pump Capacity
8" – 10"	1500 gpm

- D. For each size pump, Contractor shall have on-hand, a minimum of one spare standby pump with the minimum pumping capacity required. At least 2 wrap around repair clamps shall be on-site at all times for each size pipe being used. If flexible hoses or collapsible hose is being used, provide appropriate repair kits onsite for each size hose being used.

- E. Contractor shall be responsible for the maintenance and operation of the bypass pumping for the duration of the installation. Overflows that occur shall be the responsibility of the contractor including cleanup and any fines assessed or damages caused to private or public property.

Access

- A. Each project area is within an existing City of Havelock easement or within City street right-of-way.

- B. If additional access is required through private property, the Contractor shall coordinate access through the City with the property owner(s) and restore all disturbed area to the satisfaction of the property owner(s).

Traffic Control

- A. Contractor shall submit a Traffic Control Plan in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) for any operations affecting traffic including but not limited to road closures. City must approve the traffic plan prior to implementation, including 24-hour notice prior to any lane closure.
- B. Access to residences for local traffic shall be maintained throughout contract. Contractor shall provide a minimum of one week (7 days) notice to City of Havelock for any road closure.

Water Provided by the City of Havelock

- A. The Contractor shall provide all necessary pipe, fittings, and approved backflow prevention device, and obtain a water meter assembly from the Owner for connection to fire hydrants. The Contractor will be required to record daily meter readings at the beginning and ending of each workday and provide these readings to the Owner with each pay request. The Contractor will not be charged any fees for the use of the meter nor for any water used in the work. No fire hydrant shall be obstructed in case of a fire in the area served by the hydrant. No additional payment to the Contractor shall be made for use of the meter or the documentation of water used. The Contractor shall be responsible for providing all other necessary hoses and tools for obtaining the water.

General Provisions

- A. Contractor shall comply with all requirements of OSHA 1926.
- B. Work hours shall be 8am to 5pm, Monday through Friday. No work shall be performed on City holidays. Work outside established work hours must be scheduled with the City 48 hours in advance and is subject to approval.
- C. Contractor will obtain all necessary permits. Permits required by City of Havelock are provided free of charge.
- D. Roadway repair is the responsibility of the contractor.
- E. All necessary efforts shall be made to control erosion and sediment release while this project is under construction.
- F. The Contractor is to clean and remove all debris at the end of each work day.
- G. All underground utilities are to be 811 located, prior to work being started.
- H. Contractor is responsible for all damage to existing roads, driveways, drainage, or utilities that occur as a result of the construction of the project.

- I. Contractor is responsible for all damage to City property that occur as a result of the construction of the project.
- J. Contractor shall provide safety measures during entire length of the project.
- K. Contractor is responsible for the storage and safety of all materials and equipment on jobsite.

Liquidated Damages:

The Contractor agrees to pay the owner \$300 per day in liquidated damages for each day beyond the duration described below for the period of performance.

CONSTRUCTION SEQUENCE

General Sequence

- A. Notice to Proceed will be issued and the total construction time for this project shall not exceed 21 days from the date of Notice to Proceed.
- B. All repairs and replacements shall be internally inspected following completion of the individual repair. CCTV inspection videos shall be submitted to the Owner prior to final payment for the repair.

Construction Sequence, repair between end of point repair to MH G91

- A. Locate all existing service laterals connected to the existing sewer main
- B. Install erosion control devices as needed to avoid sedimentation loss from the excavation area.
- C. Excavate and dewater the area around the pipe to be replaced. Excavation of trench shall not advance more than 100 feet ahead of the installation of the sewer pipe. In no case should the excavation extend beyond that which can be backfilled by the end of the workday.
- D. If needed, install sewer bypass system and maintain service until replacement is complete.
- E. Install new precast doghouse manhole at the end of existing point repair, field verify location.
- F. Remove existing sewer main and replace with approximately 307 feet of 10-inch pipe between end of point repair to MH G91. Installation of new sewer main shall be in accordance with the requirements of Attachment 1 "Gravity Sewer Installation and Testing Requirements."

- G. Reconnect service laterals. Service laterals shall be replaced up to and including the cleanout. Where there is no cleanout or where the cleanout is outside the right-of-way, service laterals shall be replaced to the right-of-way line and a new cleanout shall be installed.
- H. New sewer main shall be booted into the existing manhole and the new pre-cast doghouse manhole. No sanitary sewer manholes will be replaced in this project area.
- I. Pressure test sewer main as specified in Attachment 1 "Gravity Sewer Installation and Testing Requirements."
- J. Backfill and compact in the locations of the repairs in accordance with Detail 0251301R on Figure 3.
- K. Internally CCTV inspect the sewer main for defects and leaks. If any leaks or defects are noted the Contractor shall make repairs as approved by the Owner. Provide a copy of the final CCTV inspection to the Owner. Payment for repair will not be made before CCTV inspection is provided and repair is approved by the Owner.
- L. Repair asphalt in the location of the repairs in accordance with Detail 0251301R on Figure 3.

All construction must be in keeping with State, NCDOT standards, including base stone, traffic control, and OSHA standards, including any confined space entries.



Point Repair:
Proposed Doghouse
Manhole



1 inch = 100 feet

City of Havelock
2019 Sewer Repairs

Point Repair:
Proposed Doghouse
Manhole

- NOTES:
- 1) CLEANOUT SHALL BE PLACED AT RIGHT-OF-WAY UNE OR IN LOCATION OF EXISTING CLEANOUT.
 - 2) DO NOT INSTALL A CLEANOUT INSIDE A FENCE.

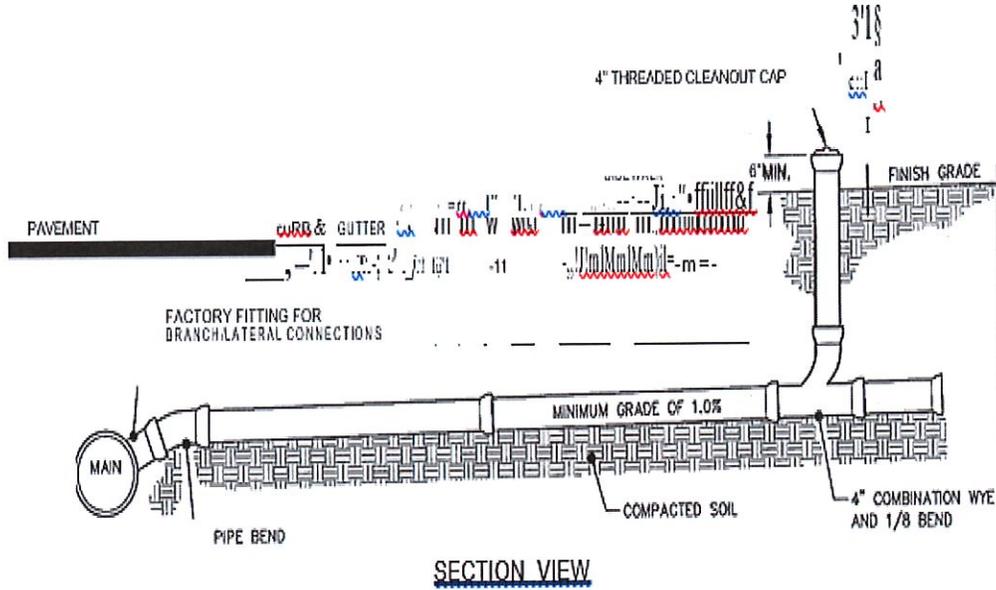
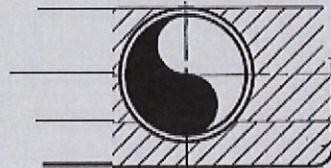
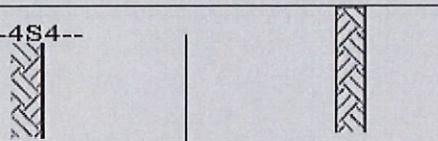


FIGURE 2
LATERAL CONNECTION AND CLEANOUT



PIPE O.D. + 36 INCHES MIN. WIDTH

BACKFILL SHALL BE 4S4--
COMPACTED TO 85%
STANDARD PROCTOR
AND COMPLETED IN
MAXIMUM LIFTS OF 3-
INCHES

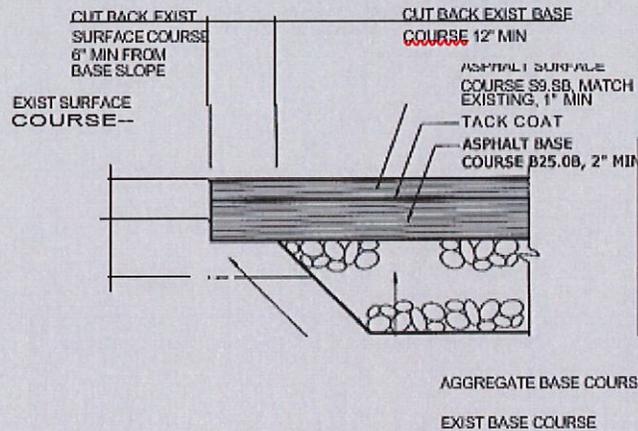


ABC STONE
CONSOLIDATED TO
TOP OF PIPE

PIPE BEDDED IN 8"
67 STONE

BEDDING - TYPE C

0222103R



TYPICAL PAVEMENT JUNCTION

0251301R

CITY OF HAVELOCK
2019 SEWER REPAIRS

DETAIL DRAWINGS

FIGURE 3

ATTACHMENT 1

GRAVITY SEWER INSTALLATION AND TESTING REQUIREMENTS

1. Gravity Sewer Installation Requirements

- A. Install piping beginning at low point at existing sewer, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, fittings, and couplings according to manufacturer's written instructions for using lubricants, cements, and other installation requirements. Maintain swab or drag in line, and pull past each joint as it is completed.
- B. Use factory fittings for branch/lateral connections. Install lateral connection fittings turned within 10 degrees of vertical, whenever possible.

2. Gravity Sewer Testing Requirements

- A. Schedule tests and their inspections with the Engineer and Owner with at least 48 hours' advance notice.
- B. Low Pressure Air Testing:
 - 1. Conduct an air test between each two consecutive manholes by plugging each end of the section to be tested and all pipe outlets in the section with suitable test plugs; one plug used at a manhole shall have an inlet tap or other provision for connecting an air hose from the air supply equipment.
 - 2. Pneumatic plugs shall be able to resist internal pressures without external blocking.
 - 3. The equipment shall include valves to control the rate at which air flows into the test section and pressure gages with minimum graduations of 0.1 psi and an accuracy of +0.04 psi to monitor the air pressure within the test section.
 - 4. Apply air pressure slowly to the test section until the pressure reaches 4.0 psi, plus an adjustment of 0.433 psi for each foot of ground water above the pipe crown in the line being tested. Internal air pressure, including adjustment for ground water, should never exceed 5.0 psi.
 - 5. When the pressure reaches 4.0 psi, plus adjustment for ground water, throttle the air supply so that the internal pressure is maintained

between 4.0 and 3.5 psi for at least 2 minutes to permit temperature stabilization. When the pressure has stabilized and is at or above 3.5 psi, disconnect the air supply, start a stopwatch, and allow stopwatch to run until the pressure has dropped 1.0 psi

6. Calculate the permissible time allocated for the 1.0 psi pressure drop on the basis of the diameter and length of main sewer tested, no adjustment being made for service connections included in the test section. The air test for a section shall be considered acceptable if the time elapsed for the 1.0 psi pressure drop is equal to or greater than the time indicated, and shall be considered unacceptable if the elapsed time is less than that indicated in the following tables:

MINIMUM HOLDING TIME (Min:Sec) REQUIRED FOR 1.0 PSI PRESSURE DROP								
PIPE DIAMETER	LENGTH OF MAIN LINE TESTED							
	100'	150'	200'	250'	300'	350'	400'	450'
8"	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10"	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48

7. If the test section fails to meet these requirements, the source of leakage shall be repaired and the pipe section re-inspected.

C. Deflection Test

1. No sooner than thirty (30) days after final backfill installation, each section of PVC pipe shall be checked for vertical deflection using an electronic deflect to meter or a rigid "Go No Go" device. Vertical deflection shall not exceed five (5) percent of the inside pipe diameter for PVC pipe. Where the actual deflection exceeds the allowable, the Contractor shall discover the cause and correct it before the pipe will be acceptable. For the purpose of this subsection, a section of sewer is defined as that length of sewer between successive manholes or special structures or stubouts for future connections.