

**BALTIMORE COUNTY, MARYLAND
PURCHASING DIVISION
400 WASHINGTON AVENUE, ROOM 148
TOWSON, MARYLAND 21204-4665**



REQUEST FOR BID NO. B-1059

**SANITARY SEWER/STORM DRAIN CUT & COVER, ON-CALL,
TERM CONTRACT**

Due Date: 10/26/16, Time: 3:00 PM

Pre-Bid Conference: 10/14/16, Time: 10:00 AM

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Amendments to solicitations often occur prior to bid opening and sometimes within as little as 48 hours prior to bid opening. It is the potential vendor's responsibility to frequently visit the Purchasing web site (www.baltimorecountymd.gov/purchasing) to obtain amendments once they have downloaded a solicitation.

BIDDER CHECK LIST

- Have you signed your bid?
- Have you signed the Procurement Affidavit?
- Have you filled out all applicable forms?
- Have you returned the original? (and required duplicate copies when required?)
- Have you signed and returned amendments?
- Have you included the bid bond, if required?
- Have you completed, signed and included all required MBE/WBE forms and documents? (if applicable)
- Have you included and verified the complete electronic version (CD) of your bid?

**BALTIMORE COUNTY, MARYLAND
REQUEST FOR BID NO. B-1059
SANITARY SEWER/STORM DRAIN CUT & COVER, ON-CALL, TERM CONTRACT**

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BALTIMORE COUNTY, MARYLAND
General Instructions for Solicitations

1. Instructions, Forms and Specifications

1.1 All bids/proposals are to be submitted on and in accordance with the forms provided by the Purchasing Division. All bids must be submitted in a sealed envelope or carton as appropriate. All bids must be clearly identified on the front of the envelope or top of the carton with the SOLICITATION NUMBER and the DUE DATE and TIME. Bid times are either Eastern Standard Time or Eastern Daylight Time, whichever prevails. Late bids will not be considered.

1.2 Responses to Requests for Bids and Requests for Proposals shall be accompanied by an executed Procurement Affidavit, as provided by the Purchasing Division. This does not apply to Requests for Quotations.

1.3 Amendments to solicitations often occur prior to bid opening and sometimes within hours prior to bid opening. All bidders are responsible for frequently visiting the Purchasing web site to obtain amendments once they have downloaded a solicitation.

1.4 Additional information or clarification of any of the instructions or information contained herein may be obtained from the Purchasing Division. The County assumes no responsibility for oral instructions or suggestions. All official correspondence in regard to this solicitation must be directed to, and will be issued by, the Purchasing Division.

1.5 Bidders finding any discrepancy in or omission from the specifications, in doubt as to meaning, or asserting that the specifications are discriminatory, shall notify the Purchasing Division in writing at once, but in no case later than five (5) business days prior to the scheduled opening of bids. Exceptions stated do not obligate the County to change the specifications. The Purchasing Division will notify all bidders in writing, by amendment duly issued, of any substantive revisions to specifications or instructions.

1.6 Unless a written exception detailing non-conformance to specifications is noted on the bid, any part number, product number, catalog number, etc., noted on the bid will be considered in full compliance with the specifications.

1.7 Submission of a bid in response to this solicitation evidences the bidder's acceptance of these General Instructions and the terms and conditions of the solicitation. Submission of a bid evidences bidder's representation and warranty that the person submitting the bid response is authorized to act for and bind the contractor.

1.8 All original and duplicate bids/proposals and other attachments, related documents and correspondence,

including all follow-up documents and correspondence, shall be typed or written in English. All prices/percentages and/or other monetary figures shall be in United States dollars.

1.9 Requests for Bids and Requests for Proposals should be accompanied by an electronic version (Compact Disc) of the bid proposal in PDF format. It shall be the bidder's responsibility to verify that the electronic version is complete. The electronic version of the non-successful proposal response will be the only version retained by Baltimore County. The Compact Disc must be labeled with the bid number, the bid title, and the bidder's name submitting the response. All bids must be submitted in a sealed envelope or carton as appropriate. This does not apply to Requests for Quotation.

1.10 Issuing Officer: The sole point of contact for the County for purposes of this solicitation is the Buyer, listed on the cover page; questions regarding any aspect of the competitive process must be directed to the Buyer, in writing.

2. Award of Solicitations

2.1 Any award pursuant to Requests for Quotation and Requests for Bid is made to the lowest responsive and responsible bidder following the public opening of bids under Section 10-2-406 of the Baltimore County Code, 2003, as amended.

2.2 Awards on Requests for Quotations and Requests for Bid will be made within sixty (60) days after bid opening unless otherwise indicated in this solicitation. No bidder will be allowed to withdraw a bid during that period.

2.3 The successful bidder may be required to give security or bond, as stated in the bid document, for performance of the contract.

2.4 When there is a conflict between the unit price or percentage and the extension, the unit price or percentage will prevail as the amount of the bid.

2.5 Cash discounts will be considered in determining awards. However, cash discount offers must allow not less than 30 days to be considered in bid evaluation. A bid offering a cash discount in a period of less than 30 days will be evaluated as a bid without a discount offer; however, should that bidder obtain award by consideration of the gross price, the County shall make every effort to obtain the discount. The County will not accept any payment terms with a period of less than 30 days.

2.6 Invoices against resulting order(s) must be submitted, in duplicate, to the Office of Budget and Finance, Disbursements Section, 400 Washington Avenue, Room 148, Towson, Maryland 21204-4665. Invoices must show the vendor's Federal Tax Identification Number or Social Security Number, as appropriate, and order number and line number(s) that correspond with resulting order(s).

2.7 The County will not pay interest charges or other penalties for invoice payments.

2.8 Prices quoted shall be exclusive of all non-applicable Federal and Maryland State taxes. Tax exemption certificate will be furnished if required.

2.9 The County reserves the right to consider making payments via electronic funds transfers (EFT) on contracts for which this payment vehicle may be appropriate.

3. Reservations

3.1 The County reserves the right to reject, in whole or in part, any and all bids received, and to make a whole award, multiple awards, a partial award, or no award, to best serve the public interest.

3.2 The County may waive formalities in bids as the interests of the County may require.

3.3 The County reserves the right to increase or decrease quantities by approximately twenty (20) percent to be purchased at the prices bid.

3.4 The County reserves the right to award solicitations or place orders on a lump sum or individual item basis, or in such combination as to best serve the public interest.

3.5 The County may waive minor differences, irregularities, and technicalities in the specifications, provided they neither violate the specifications intent, materially affect the operation for which the items or services are being purchased, nor increase estimated maintenance and repair costs to the County.

3.6 At any time during normal business hours and as often as the County may deem necessary, the Contractor shall make available to and permit inspection and photocopying, by the County, its employees or agents, of all records, information and documentation of the Contractor related to the subject matter of this contract, including, but not limited to, all contracts, invoices, payroll, and financial audits.

3.7 Notwithstanding any other terms or provisions of the contract, in the event the County is temporarily or permanently prevented, restricted or delayed in the performance of any or all of the duties and obligations imposed upon or assumed by it thereunder, by act of the

General Assembly of Maryland or the Baltimore County Council, by a court of competent jurisdiction or by administrative delay not due to the fault of the County (and its members and agents) shall not be liable directly or indirectly for any claims caused to or suffered by the Contractor or any other person in connection with or as a result of such prevention, restriction or delay.

3.8 The County further reserves the right to make such investigation as it deems necessary to determine the ability of bidders to furnish the required services, and bidders shall furnish all such information for this purpose as the County may request. The County also reserves the right to reject the proposal of any bidder who is not currently in a position to perform the contract, or who has previously failed to perform similar contracts properly, or in a manner acceptable to the County, all of which shall be in the County's sole discretion.

4. Delivery

4.1 Bidders shall guarantee delivery of materials in accordance with the delivery schedule stated in specifications. All items shall be delivered F.O.B. Destination/Inside Delivery, unless otherwise indicated, with delivery costs and charges included in the bid price.

4.2 The County reserves the right to charge the Contractor or vendor for each day the materials, supplies, or services are not delivered in accordance with the delivery schedule. The sum established by the specifications may be invoked at the discretion of the Purchasing Agent, said sum to be considered not as a penalty, but as liquidated damages, and deducted from final payment, or otherwise, charged to the Contractor or vendor. This remedy is not exclusive but shall be in addition to all other rights and remedies available to the County. These liquidated damages shall be in addition to any and all actual damages incurred directly or indirectly by the County, its agents, assigns, and contractors.

4.3 All bidders and vendors are to ensure that packaging materials used for this requirement are not made of non-recyclable Styrofoam (Polystyrene). Additionally, any materials used in packing to cushion, protect and ship are to be made of recycled, recyclable or biodegradable materials.

5. Competition

5.1 The name of any manufacturer, trade name, or vendor catalog number mentioned in the specifications is for the purpose of designating a standard of quality and type, and for no other purpose unless otherwise stated in the solicitation.

5.2 A bidder may offer a price on only one unit per line item. Even though two or more units may meet the specification, bidders must determine for themselves which to offer. Submission by a bidder of prices for more than one unit shall be sufficient cause for rejection of the bid for that specific item.

5.3 Bids which show omission, irregularity, alteration of forms or additions not called for, as well as conditional or unconditional unresponsive bids, or bids obviously unbalanced, may be rejected.

5.4 All bids must be accompanied by such descriptive literature as may be called for by the specifications or proposal.

5.5 If products to be provided to the County contain any substances that could be hazardous or injurious to a person's health, a material safety data sheet (MSDS) must be provided to the Purchasing Division. This applies also to any product used by a Contractor when providing a service to the County.

5.6 Specifications are based on County needs and uses, estimated costs of operations and maintenance, and other significant and/or limiting factors to meet County requirements, and to ensure consistency with County policies. Minimum specifications, and maximum specifications where included, are not established arbitrarily to limit competition or to exclude otherwise competitive bidders.

5.7 Unless multiple or alternate bids are requested in the solicitation, these bids may not be accepted. However, if a bidder clearly indicates a base bid, it shall be considered for award as though it were the only bid submitted by the bidder.

6. Terminations

6.1 Termination for Convenience: The County may terminate a contract, in whole or in part, without cause, by providing written notice thereof to the Contractor. In the event of termination, without cause, the County shall advise the Contractor in writing of the termination date and of work to be performed during the final days prior to contract termination. The Contractor shall be paid for all reasonable costs incurred by the Contractor up to the date of termination set forth in the written notice of termination. The Contractor will not be reimbursed for any anticipatory profits, which have not been earned up to the date of termination. Payments to be provided on a lump sum basis shall be prorated by the County based on the services rendered or goods delivered up to the date of termination set forth in the written notice.

6.2 Termination for Default:

6.2.1 In addition to other available rights and remedies, the County shall have the right upon the happening of any default, without providing notice to the Contractor: 1) To terminate a contract immediately, in whole or in part; 2) To suspend the contractor's authority to receive any undisbursed funds; and/or 3) To proceed at any time or from time to time to protect and enforce all rights and remedies available to the County, by suit or any other appropriate proceedings, whether for specific performance or any covenant, term or condition set forth in the contract, or for damages or other relief, or proceed to take any action authorized or permitted under applicable law or regulations.

6.2.2 Upon termination of a contract for default, the County may elect to pay the Contractor for services provided or goods delivered up to the date of termination, less the amount of damages caused by the default, all as determined by the County in its sole discretion. If the damages exceed the undisbursed sums available for compensation, the County shall not be obligated to make any further disbursements hereunder.

6.3 Funding Out: If funds are not appropriated or otherwise made available to support contract continuation in any fiscal year, the County shall have the right to terminate the contract without prior notice to the Contractor and without any obligation or penalty.

7. Hold Harmless – Indemnification

7.1 The Contractor shall defend, indemnify and hold harmless the County, its employees, agents and officials from any and all liabilities, claims, suits, or demands including attorney's fees and court costs which may be incurred or made against the County, its employees, agents or officials resulting from any act or omission committed in the performance of the duties imposed by and performed under the terms of the contract. The Contractor shall not be responsible for acts of gross negligence or willful misconduct committed by the County.

7.2 The Contractor shall also defend, indemnify and hold harmless the County, its employees, agents and officials from any and all liabilities, claims, suits, or demands including attorney's fees and court costs which may be made against the County, its employees, agents or officials by any third party arising from the alleged violation of any third party's trade secrets, proprietary information, trademark, copyright, patent rights, or intellectual property rights in connection with the contract.

7.3 Unless notified in writing by the County to the contrary, the Contractor shall provide defense for the County, its employees, agents and officials in

accordance with this Article and in doing so the Contractor shall allow the County to participate in said defense of the County, its employees, agents and officials, to the extent and as may be required by the County and the Contractor shall cooperate with the County in all aspects in connection therewith. All filings, actions, settlements, and pleadings shall be provided to the County for comment and review prior to filing or entering thereof. No filing, action, settlement or pleading shall be filed or entered without the prior consent and approval of the County.

8. Minority/Women's Business Enterprise (MBE/WBE) and Small Business Notice: Baltimore County is seeking Minority, Woman and Small Businesses to bid on current solicitations as a prime or sub contractor. In accordance with the Executive Order dated June 4, 2009, "an overall goal of 15% of the cumulative total of all discretionary dollars spent in a fiscal year of County procurements is to be awarded to and/or performed by MBE and WBE firms." MBE/WBE's and Small Businesses are encouraged to respond to this solicitation.

9. Authority

9.1 In case of disputes as to whether an item or service quoted or delivered meets specifications, the decision of the Purchasing Agent or authorized representative shall be final and binding on both parties. The Purchasing Agent may request the recommendation in writing of the head of the using agency, the Standards and Specifications Committee, or other objective sources.

9.2 Bidders desiring to appeal a decision of the Purchasing Division must deliver written protests to the Purchasing Division within 10 days of notification of award. The Purchasing Agent or designee will review the protested decision, examine any additional information provided by the bidder and respond in writing within 10 working days of receipt of written protests.

9.3 Instructions, Specifications, and Proposals are issued, and all bids, quotations, orders, and purchases are made pursuant and subject to the provisions of the Baltimore County Charter, and Article 10, Title 2 of the Baltimore County Code, 2003, as amended, and regulations and policies established or prescribed by the Purchasing Division.

10. HIPAA: The Contractor shall comply with the Health Insurance Portability and Accountability Act (HIPAA) and shall execute a Business Associate Agreement as may be required by the County.

11. Reports: When required, reports prepared for Baltimore County should be printed on recycled and recyclable paper printed on both sides per Section 10-2-312 of the Baltimore County Code, 2003, as amended.

12. Terms of Contract

12.1 Any contract awarded pursuant to this solicitation shall be by and between the successful bidder and the County, and shall contain and incorporate, but may not be limited to, all terms and conditions of the solicitation, any amendments or changes thereto. Submission of a bid in response to this solicitation evidences the Contractor's acceptance of the terms and conditions therein.

12.2 The provisions of the contract awarded pursuant to this solicitation shall be governed by the laws and regulations of Maryland and Baltimore County.

12.3 Any litigation arising out of or relating in any way to the contract or the performance thereunder shall be brought only in the courts of Maryland, and the Contractor hereby irrevocably consents to such jurisdiction. To the extent that the County is a party to any litigation arising out of or relating in any way to the contract or the performance thereunder, such an action shall be brought only in a court of competent jurisdiction in the courts of the State of Maryland.

13. Severability: If any provisions in the contract are declared by a court or other lawful authority to be unenforceable or invalid for any reason the remaining provisions hereof shall not be affected thereby and shall remain enforceable to the full extent permitted by law.

14. Counterparts: The contract may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed to be an original and all of which taken together shall constitute but one and the same instrument.

15. Survival: The provisions of paragraphs 1.7 (Representations and Warranties), 4.2 (Damages), 7 (Indemnification), and 10 (HIPAA) shall survive delivery of commodities and/or performance of services.

16. No Waiver, Etc.: No failure or delay by the County to insist upon the strict performance of any term, condition or covenant of the contract, or to exercise any right, power, or remedy consequent upon a breach thereof, shall constitute a waiver of any such term, condition, or covenant or of any such breach, or preclude the County from exercising any such right, power, or remedy at any later time or times.

17. Maryland Registration / Qualification Requirements:

17.1 Baltimore County verifies the company's status with SDAT and may require the successful bidder to

submit a Good Standing Certificate (also known as a "Certificate of Status") issued by the Maryland Department of Assessment and Taxation's ("SDAT") Charter Division, and the State of Organization.

17.2 For information on registering to do business in the State of Maryland call SDAT at (410) 767-1340 or email at charterhelp@dat.state.md.us. Sole Proprietors and General Partnerships should call (410) 767-4991. You may download the SDAT forms at <http://www.dat.state.md.us/sdatweb/sdatforms.html>

17.3 Baltimore County requires the successful bidder to be in "good standing" (also known as Certificate of Status) with the State in which it is organized, and in the State of Maryland, under certain circumstances. Baltimore County verifies the successful bidder's status with SDAT. Non-compliance to this section may result in a delay in contract award or rejection of a bid.

18. Eligibility of Candidates for Employment:

18.1 The E-Verify program is an internet-based employment verification system that allows employers to verify employee status against Federal Social Security and immigration databases.

18.2 Baltimore County encourages employers to utilize the E-verify program, or an equivalent system, as a means to help employers determine the eligibility of new hires.

19. Warranty:

19.1. Contractor warrants for one year from acceptance, or for such longer period otherwise expressly stated in the attached solicitation, all goods, services, and construction provided. This includes a warranty against any and all defects. The contractor must correct any and all defects in material and/or workmanship that may appear during the warranty period, even if discovered after the end of the warranty period, by repairing any such defect, (or replacing with new items or new materials, if necessary), at no cost to the County and to the County's satisfaction.

19.2. Should a manufacturer's or service provider's warranty exceed the requirements stated above, that warranty will be the primary one used in the case of defect. Copies of manufacturer's or service provider's warranties must be provided upon request.

19.3. All warranties must be in effect from the date of acceptance by the County of the goods, services, or construction.

19.4. The contractor warrants that all work shall be accomplished in a workmanlike manner, and the contractor must observe and comply with all Federal, State, County and local laws, ordinances and regulations in providing the goods, and performing the services or construction.

20. American Manufactured Goods Required for Public Works:

20.1 The Contractor shall comply with Section 14-416 of the Maryland State Finance and Procurement Article which requires a contractor or subcontractor to use or supply American Manufactured goods in the performance of a contract for (a) constructing or maintaining a public work; or (b) buying or manufacturing machinery or equipment that is to be installed at a public work site, as the same may be amended from time to time.

20.2 This section does not apply: (a) if Baltimore County determines that: (i) the price of the American manufactured goods exceeds the price of a similar manufactured good that is not manufactured in the United States by an unreasonable amount; (ii) the item or a similar item is not manufactured or available for purchase in the United States in reasonably available quantities; (iii) the quality of the item or a similar item manufactured in the United States is substantially less than the quality of a comparably priced, similar, and available item that is not manufactured in the United States; or (iv) the procurement of a manufactured good would be inconsistent with the public interest; or (b) to emergency life safety and property safety goods.

20.3 The Contractor shall certify to Baltimore County whether the offered goods and/or services are provided in the United States.

**BALTIMORE COUNTY, MARYLAND
PROCUREMENT AFFIDAVIT**

A. AUTHORIZED REPRESENTATIVE

I HEREBY AFFIRM THAT:

I am the [title] _____ and I am duly authorized to represent and bind [business name] _____ (the "Business") and that I possess the legal authority to make this Affidavit on behalf of myself and the Business for which I am acting.

B. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, directly involved in obtaining or performing contracts with public bodies (as is defined in Section 16-101(f) of the State Finance and Procurement Article of the Annotated Code of Maryland), has been convicted of, or has had probation before judgment imposed pursuant to Article 27, Section 6-225 of the Criminal Procedure Article of the Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows [indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the Business]:

_____.

C. AFFIRMATION REGARDING OTHER CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, nor any of its officers, directors, partners, members, affiliates, or any of its employees directly involved in obtaining or performing contracts with public bodies, has:

(1) Been convicted under state or federal statute of a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract, fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property;

(2) Been convicted of any criminal violation of a state or federal antitrust statute;

(3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. §1961, et seq., or the Mail Fraud Act, 18 U.S.C. §1341, et seq., for acts arising out of the submission of bids or proposals for a public or private contract;

(4) Been convicted of a violation of the State Minority Business Enterprise Law, Section 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(5) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsection (1), (2), (3), or (4) above;

(6) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract;

(7) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described above, except as follows [indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition

of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the Business, and the status of any debarment]:

D. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, nor any of its officers, directors, partners, members, affiliates, or any of its employees directly involved in obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows [list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceeding, the name(s) of the person(s) involved and their current positions and responsibilities with the Business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension]:

E. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

(1) The Business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and

(2) The Business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows: [you must indicate the reasons why the affirmations cannot be given without qualification]:

F. SUB-CONTRACT AFFIRMATION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

G. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Business, nor any of its employees, have in any way:

(1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

(2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or offeror or of any competitor, or otherwise take any action to impact, restrain, or inhibit free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted;

(3) Colluded with anyone to obtain information concerning the bid that would give the Business an unfair advantage over others.

H. AFFIRMATION REGARDING POLITICAL CONTRIBUTION DISCLOSURE

I FURTHER AFFIRM THAT:

The Contractor affirms that it is aware of, and will comply with, the provisions of Sections 14-101 through 14-108 of the Election Law Article of the Annotated Code of Maryland, which require that every person who makes, during any 12-month period, one or more contracts, with one or more Maryland governmental entities involving cumulative consideration, or at least \$100,000.00, shall file with the State Board of Elections certain specified information to include disclosure of attributable political contributions in excess of \$500 during defined reporting periods.

I. CERTIFICATION OF REGISTRATION AND TAX PAYMENT

I FURTHER AFFIRM THAT:

(1) The business was formed in the State of *(Insert State Name)*: _____

(2) The Business is a *(please select one)*:

- Corporation
- Partnership
- Limited Liability Company
- Limited Liability Partnership
- Sole Proprietor
- Other: _____

(If sole proprietor #3 below does not apply, continue to #4.)

(3) Is this business registered with the Maryland State Department of Assessments and Taxation ("SDAT") in accordance with the Corporations and Associations Article of the Annotated Code of Maryland?

Yes No

a. If yes, is the business in good standing in the State of Maryland, and has it filed all of its annual reports, together with filing fees? Yes No

b. Registered Agent as shown in SDAT:

Name: _____

Address: _____

c. If not, is the business in good standing in the formed in State of origination? Yes No

(4) Except as validly contested, has the -Business -paid, or -arranged for payment of, all taxes due the State of Maryland and Baltimore County, and -filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Employment Security Administration, as applicable, and -paid all withholding taxes due the State of Maryland prior to final settlement?

Yes No

J. CONTINGENT FEES

I FURTHER AFFIRM THAT:

The Business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee or agent working for the Business, to solicit or secure the Contract, and that the Business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee or agent, any fee or other consideration contingent on the making of the Contract.

K. AFFIRMATION OF NONDISCRIMINATION IN EMPLOYMENT

I FURTHER AFFIRM THAT:

During the performance of any contract awarded pursuant to the solicitation of which this affidavit is a part:

(1) The Business will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, marital status, sexual orientation, genetic information, or disability unrelated in nature and extent so as to reasonably preclude the performance of the employment, or because of the individual's refusal to submit to a genetic test or make available the results of a genetic test. The Business will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, age, national origin, marital status, sexual orientation, genetic information, or disability unrelated in nature and extent so as to reasonably preclude the performance of the employment, or because of the individual's refusal to submit to a genetic test or make available the results of genetic test. Such action shall include, but not be limited to the following: employment, promotion, upgrading, demotion or transfer, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Business agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the owner setting forth provisions of this nondiscrimination clause.

(2) The Business will, in all solicitations or advertisements for employees placed by or on behalf of the Business, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, national origin, marital status, sexual orientation, genetic information, or disability unrelated in nature and extent so as to reasonably preclude the performance of the employment, or because of the individual's refusal to submit to a genetic test or make available the results of a genetic test.

(3) The Business shall send to each labor union or representative of workers with which the Business has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the owner, advising the said labor union or workers' representative of these commitments, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Business shall furnish, if requested by the County, a compliance report concerning our employment practices and policies in order for the County to ascertain compliance with the special provisions of this affidavit concerning nondiscrimination in employment.

(5) In the event of the Business's noncompliance with the nondiscrimination clause of this affidavit, the contract may be canceled, terminated, or suspended in whole or in part, and the Business may be declared ineligible for further County work.

(6) The Business shall include the special provisions outlined herein pertaining to nondiscrimination in employment in every subcontract, so that such nondiscrimination in employment provisions shall be binding on each subcontractor or vendor.

L. FOREIGN CONTRACTS DISCLOSURES

I FURTHER AFFIRM THAT:

(1) The Business affirms that it is aware of, and will comply with, the provisions of Sections 10-2-110 Article 10. Finance, Title 2 – Purchasing, Baltimore County Code 2003, as amended, which requires that prior to the award of a contract for services under the provisions of this title, and during the entire term of a contract award, the bidder or vendor shall disclose to the County whether any services covered by the bid or contract, including any subcontracted services, will be performed outside the United States.

(2) The Business affirms that it is aware of, and will comply with, the provisions of Section 12-111 of the Maryland State Finance Procurement Article, which requires bidders to make certain disclosures relating to subcontractors or services, regarding plans at the time the bid is submitted, to perform any services with an estimated value of \$2 million or more under the contract outside the United States. This provision applies to: (1) construction-related services; (2) architectural services; (3) engineering services; or (4) energy performance contract services. The provision requires bidders to disclose:

- a. Whether the Business or any contractor that the Business will subcontract with to perform the contract has plans, at the time the bid is submitted, to perform any services required under the contract outside the United States; and
- b. If the services under the contract are anticipated to be performed outside the United States;
- c. Where the services will be performed; and
- d. The reasons why it is necessary or advantageous to perform the services outside the United States.

(3) Indicate below whether or not the Business has information to disclose. (**You must check one of these**)
[] The Business has no plans, at the time the bid is submitted, to perform any services under the contract outside the United States.

[] The Business has plans, at the time the bid is submitted, to perform services under the contract outside the United States.

- i. The services will be performed in the following location: _____
- ii. It is necessary or advantageous to perform the services outside the United States for the following reason(s): _____

M. AFFIRMATION REGARDING INVESTMENT ACTIVITIES IN IRAN

I FURTHER AFFIRM THAT:

At the time the bid/proposal is submitted, or if the contract is renewed, the Business:

- i. Is not identified on the list created by the Maryland State Board of Public Works as a person, Business or entity engaging in investment activities in Iran as described in Section 17-702 of the Maryland State Finance and Procurement Article ; or
- ii. Is not engaging in investment activities in Iran as described in Section 17-702 of the Maryland State Finance and Procurement Article.

If the Business is unable to make the certification, it will provide the County, under penalty of perjury, a detailed description of the Business' investment activities in Iran.

N. ACKNOWLEDGMENT

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the County and may be distributed to units of (1) Baltimore County; (2) the State of Maryland; (3) other counties or political subdivisions of the State of Maryland; (4) other states; and (5) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify or waive, on behalf of Baltimore County, or the State of Maryland or any unit of the State of Maryland having jurisdiction, the exercise of any right or remedy at Law or in equity with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the Business with respect to (a) this Affidavit, (b) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, AFTER DILIGENT INQUIRY.

Date: _____

By: _____

Name:
Title:
(Authorized Representative and Affiant)

**“PRIME” CONTRACTOR
MINORITY INFORMATION**

This form is NOT applicable to Sub-Contractor requirements, and should be completed by the PRIME Contractor ONLY.

A. AUTHORIZED REPRESENTATIVE

I am the [title] _____ of [business] _____ (the “Business”).

B. DEFINITIONS

I am aware that, pursuant to the June 4, 2009 Executive Order of Baltimore County, Maryland, the following words have the meanings indicated.

(A) “Minority Business Enterprise” or “MBE” means a business enterprise that is owned, operated and controlled by one or more minority group members (African American, Hispanic American, Asian American, or Native American) who have at least 51% ownership and in which the minority group members have operational and managerial control, interest in capital and earnings commensurate with their percentage of ownership.

(B) “Women’s Business Enterprise” or “WBE” means a business enterprise that is owned, operated and controlled by one or more women who have at least 51% ownership and in which the women have operational and managerial control, interest in capital and earnings commensurate with their percentage of ownership.

C. INFORMATION REGARDING MINORITY STATUS

The Business is a certified MBE ___ or WBE ___

Maryland State Department of Transportation (MDOT) # _____

City of Baltimore # _____

Name Other Jurisdiction: _____ # _____

The Business is not a certified MBE/WBE, however, the ownership of the Business consists of _____% minorities and _____% women (for a total of _____%), each of which has operational and managerial control, interest in capital and earnings commensurate with their percent of ownership. Please select the ethnic group of the owner(s) regardless of MBE/WBE certification:

African American Hispanic American Caucasian
 Asian American Native American Other

_____ The Business anticipates utilizing subcontractors for _____% of the work of the contract requirements.

_____ The Business anticipates utilizing MBE/WBE subcontractors for _____% of the work of the contract requirements. (Complete attached MBE/WBE forms)

Date: _____

By: _____

Name:
Title:
(Authorized Representative)

Taxpayer Identification Number (TIN) and Certification
(Substitute for IRS Form W-9)
COMPLETE BOTH SIDES OF FORM

Baltimore County, Maryland
 Office of Budget and Finance
 400 Washington Avenue, Room 148
 Towson, Maryland 21204

Certification of TIN and business name are required for all successful bidders prior to issuing a contract or purchase order. Completion of **SIDE 1** of this form is necessary to meet IRS regulations. All MBE/WBE vendors should also complete **SIDE 2**. For questions, call 410-887-3587.

SIDE 1

List your legal business name below, as shown on your income tax return . Sole proprietors should list their individual name as noted on your social security card. You may enter a business name on line 2. Other entities must list your business name as shown on Federal tax documents. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on the business name line (2). For limited liability companies (LLC) that are owned by an individual, the owner's name must be listed in the Name line (1) and the business name can be listed on the business name line (2). For limited liability companies that are corporations, partnerships, etc., enter the business name on Name line (1).																																														
1. Name (as shown on your income tax return)																																														
2. Business name, if different from above																																														
Address																																														
City	State ZIP Code																																													
Remittance Address, if different from above																																														
City	State ZIP Code																																													
Contact Person	Title																																													
Phone Number () - Ext:	Fax Number () -																																													
E-mail address																																														
Taxpayer Identification Number (TIN)																																														
Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1. For individuals, this is your social security number (SSN). For other entities, it is your employer identification number (EIN). Note, this is the TIN shown on your federal tax documents.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="9">Social Security Number</td> </tr> <tr> <td style="width:20px;"> </td><td style="width:20px;"> </td> </tr> <tr> <td align="center" colspan="9">OR</td> </tr> <tr> <td align="center" colspan="9">Employer Identification Number</td> </tr> <tr> <td style="width:20px;"> </td><td style="width:20px;"> </td> </tr> </table>	Social Security Number																		OR									Employer Identification Number																	
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<input type="checkbox"/> CHECK HERE IF YOU ARE EXEMPT FROM BACK-UP WITHHOLDING																																														
<input type="checkbox"/> CHECK HERE IF YOU ARE TAX-EXEMPT, EXPLAIN:																																														
Filing Status (Ownership) (LLC is not acceptable)																																														
<input type="checkbox"/> Individual	<input type="checkbox"/> Sole Proprietor																																													
<input type="checkbox"/> Corporation	<input type="checkbox"/> Partnership																																													
<input type="checkbox"/> Other: (explain)																																														
CERTIFICATION:																																														
Under penalties of perjury, I certify that:																																														
1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and 2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and 3. I am a U.S. person (including a U.S. resident alien).																																														
Signature of U.S. Person	Date																																													

SIDE 2

MBE / WBE Certification	
<p>Maryland Department of Transportation (MDOT)</p> <p>Certification #: _____</p> <p>Certification Date: _____ / _____ / _____</p> <p>Pending: _____</p>	<p>City of Baltimore</p> <p>Certification #: _____</p> <p>Certification Date: _____ / _____ / _____</p> <p>Pending: _____</p>

Business Ownership (Check Only One)					
	G	Government Entity		O	Other: _____
	H	Disabled		P	Non Profit
	MA	Minority-owned, Not small business		W	Woman-owned, Small business
	M	Minority-owned, Small business		WA	Woman-owned, Not small business
	NS	Non-minority-owned, small business		X	Woman-owned, Minority, Small business
	NL	Non-minority-owned, Large business		XA	Woman-owned, Minority, Not small business

Type of Business/Organization			
	Association		Attorney
	Government Entity		Educational Institution
	Medical Service Provider		Non-profit Organization
	Other: (explain)		Financial Institution

Ethnicity of Ownership (Check Only One)					
	A	Asian American		I	American Indian/Alaskan Native
	B	African American		N	Non-minority
	H	Hispanic American		O	Other Ethnic Group: _____

Incorporation	
Incorporation State: _____	OR Date Business Started _____ / _____ / _____

Signature		
I certify that the information shown on this registration is true and correct. I will advise the Purchasing Division immediately, in writing, of any change affecting this data.		
Signature: _____	Title: _____	Date: _____



BALTIMORE COUNTY, MARYLAND
INSURANCE PROVISIONS

1. GENERAL REQUIREMENTS

1.1 Coverages Required:

Unless otherwise required by the specifications or the contract, the Contractor/Vendor shall purchase and maintain the insurance coverages listed herein.

Insurance Companies must be acceptable to Baltimore County and have an A.M. Best Rating of A-, Class X or better.

1.2 Verification of Insurance:

Before starting work on the contract or prior to the execution of the Contract on those bid, the Contractor/Vendor shall provide Baltimore County, Maryland with verification of insurance coverage evidencing the required coverages.

1.3 Baltimore County as Additional Insured:

The coverage required, excluding Worker's Compensation and Employers' Liability and Medical Malpractice Liability/Professional Liability/Errors and Omissions Liability, must include **Baltimore County, Maryland** as an additional insured.

1.4 Contractor's/Vendor's Responsibility:

The providing of any insurance herein does not relieve the Contractor/Vendor of any of the responsibilities or obligations the Contractor/Vendor has assumed in the contract or for which the Contractor/Vendor may be liable by law or otherwise.

1.5 Failure to Provide Insurance:

Failure to provide and continue in force the required insurance shall be deemed a material breach of the contract.

2. INSURANCE COVERAGES

2.1 General Liability Insurance

2.1.1 Minimum Limits of Coverage:

Personal Injury Liability and Property Damage Liability Combined Single Limit - \$500,000 each occurrence

2.1.2 Such insurance shall protect the Contractor/Vendor from claims which may arise out of, or result from, the Contractor's/Vendor's operations under the contract, whether such operations be by the Contractor/Vendor, any subcontractor, anyone directly or indirectly employed by the Contractor/Vendor or Subcontractor, or anyone for whose acts any of the above may be liable.

2.1.3 Minimum Coverages to be Included:

- (a) Independent Contractor's coverage;
- (b) Completed Operations and Products Liability coverage; and
- (c) Contractual Liability coverage.

2.1.4 Damages not to be Excluded:

Such insurance shall contain no exclusions applying to operations by the Contractor/Vendor or any Subcontractor in the performance of the Contract including but not limited to: (a) Collapse of, or structural injury to, any building or structure; (b) Damage to underground property; or (c) Damage arising out of blasting or explosion.

2.2 Automobile Liability Insurance

2.2.1 Minimum Limits of Coverage:

Bodily Injury Liability and Property Damage Liability
Combined Single Limit - \$500,000
any one accident

2.2.2 Minimum Coverages to be Included:

Such insurance shall provide coverage for all owned, non-owned and hired automobiles.

2.3 Workers' Compensation and Employers' Liability Insurance

Such insurance must contain statutory coverage, including:

Employers' Liability insurance with limits of at least:

- Bodily Injury by Accident - \$500,000 each accident
- Bodily Injury by Disease - \$500,000 policy limit
- Bodily Injury by Disease - \$500,000 each employee

2.4 Other

Such other insurance in form and amount as may be customary for the type of business being undertaken by the Contractor/Vendor.

BALTIMORE COUNTY, MARYLAND MBE/WBE PARTICIPATION SUMMARY

Executive Order: Minority business enterprises and women business enterprises (MBE/WBE) shall have the maximum opportunity to participate in the performance of contracts financed in whole, or in certain circumstances, in part with County funds. Accordingly, on June 4, 2009, the County Executive adopted the attached Executive Order addressing MBE/WBE participation in County contracts.

Each Contract: The County shall establish a minimum MBE/WBE participation amount for each contract, as applicable.

Bidder Responsibility: The bidder shall ensure that MBE/WBE participation occurs in accordance with the contract requirements and the County Executive's Executive Order. All bidders shall ensure that MBE/WBE have the maximum opportunity to compete for and perform County contracts, as applicable. Baltimore County, Maryland, and/or its bidders and contractors shall not discriminate on the basis of race, color, national origin, disability or sex in the award and performance of any County contract.

APPROVED MBE/WBE LISTINGS

Published compilations of approved and certified MBE/WBE, contractors, subcontractors, material suppliers, etc. include:

1. BALTIMORE COUNTY MINORITY AND WOMEN BUSINESS ENTERPRISE DIRECTORY (PRISM):
<http://www.baltimorecountymd.gov/Agencies/fairpractices/minoritybusiness/directory.html>
2. DIRECTORY OF MINORITY BUSINESS ENTERPRISE (MDOT):
http://mbe.mdot.state.md.us/directory/search_select.asp
3. MINORITY BUSINESS DIRECTORY OF THE CITY OF BALTIMORE:
<http://cityservices.baltimorecity.gov/mwboo/>

BIDDER'S ACTIONS

Seeking Commitments: The bidder will seek commitments by subcontract or otherwise from MBE/WBE for supplies and/or services, any combined value of which equals or exceeds the required percentage of MBE/WBE participation for the County contract.

Expenditures for Materials and Supplies: A bidder may count toward its MBE/WBE contract requirements, all expenditures for materials and supplies obtained from MBE/WBE suppliers and manufacturers, provided that the MBE/WBE assumes the actual and contractual responsibility for the provision of the materials and supplies.

Information to be Supplied: All bidders shall submit the following information to the County at the time of bid submission:

1. The name of an employee designated as the bidder's liaison to the County's Office for Fair Practices.
2. The following forms shall be completed and submitted
 - Certified MBE/WBE Utilization and Fair Solicitation Affidavit (**Form A**); from among those names appearing in the Approved MBE/WBE Listings (excepting Federal Highway Administration projects, which exclusively require MBE/WBE approved and certified by the Maryland Department of Transportation Certification Committee);
 - A MBE/WBE Participation (**Form B**) completed and signed by the prime contractor and MBE/WBE for each MBE/WBE listed on the Form.
 - A MBE/WBE Disclosure and Participation Statement (**Form C**) completed and signed by the prime contractor and MBE/WBE for each MBE/WBE listed on the Form.

- If applicable, MBE/WBE Subcontractor Unavailable Certificate (**Form D**) completed and signed by the prime contractor and MBE/WBE for each MBE/WBE listed on the Form.
 - If applicable, MBE/WBE Outreach Efforts - Compliance Statement (**Form E**) completed and signed by the Bidder.
 -
3. For DPW contracts, if the bidder intends to fulfill the MBE/WBE requirements by use of a joint venture, he/she must submit a Joint Venture Disclosure Affidavit (**Form D-EEO-006-A** and **B** showing the extent of MBE/WBE participation. If a bidder intends to use a MBE/WBE joint venture as a subcontractor to meet its MBE/WBE requirements, the affidavit must be submitted through the bidder by the proposed subcontractors and signed by all parties.
 4. If the bidder's proposed MBE/WBE participation does not meet the MBE/WBE contract requirements, information sufficient to demonstrate that the bidder has made every effort to meet the requirements must be submitted. (See DETERMINATION OF BID RESPONSIVENESS hereafter)

RECORDS AND REPORTS

Records to be Kept: The bidder must keep such records as are necessary to determine compliance with its MBE/WBE utilization requirements:

1. The MBE/WBE and non-minority contractors, type of work being performed, actual values of work and services.
2. Documentation of all correspondence, contacts, telephone calls, etc., to obtain MBE/WBE services for the contract.
3. All prime contractors and MBE/WBE sub-contractors are required to report monthly to the County through an online system called PRISM. If the contractor cannot submit his/her report on time, he/she will notify the County MBE/WBE office and request additional time to submit the report. Failure of the contractor to report in a timely manner may result in a finding of noncompliance. The County in its sole discretion and/or upon written request may require additional reports regarding MBE/WBE.

Retaining Records: All MBE/WBE records must be retained for 3 years following the expiration or any earlier termination of the contract and shall be available for inspection and photocopying by the County.

Investigation and Notification: Whenever the County believes the bidder, contractor, or any subcontractor may not be operating in compliance with the MBE/WBE requirements, the County may, in its sole discretion, conduct an investigation. If the County finds the bidder, contractor, or any subcontractor is not in compliance with the MBE/WBE requirements, the County may exercise any and all rights and remedies available to the County, under the contract, at law or equity, as deemed applicable and appropriate by the County in its sole discretion.

DETERMINATION OF BID RESPONSIVENESS

Request for Deviation: If the bidder is unable to procure from MBE/WBE's (by subcontract or otherwise), supplies and services, any combined value of which equals the required percentage of the total value of the contract, the bidder shall request, in writing, a deviation or waiver of the contract requirements. To obtain such a waiver, the bidder must submit the following information at the time bids are due:

The request for waiver request shall include (1) a signed unavailability statement (Form D) executed by all MBEs and WBEs that the bidder solicited for participation and (2) Outreach Efforts/Compliance Statement (Form E) that demonstrates the bidder's good faith efforts to comply with the contract requirements, including copies of solicitation documentation to all potential subcontractors:

Emails, letters, facsimile transmittals and confirmations containing plans, specifications, and anticipated time schedule for portions of the work to be performed and meeting notes and agendas clearly identifying the certified MBE or WBE classification and dates that the bidder contacted each MBE/WBE; and

Telephone logs containing names, addresses, dates, telephone numbers, work to be performed, anticipated time schedule and classification of certified MBEs and WBEs contacted.

Bid Rejection/Liquidated Damages/Contract Breach: For Purchasing contracts, the apparent low bidder's failure to provide a responsive MBE/WBE Plan as required by the solicitation may result in the bidder being deemed non-responsive and the County's rejection of the bid. FOR DPW CONTRACTS, (a) THE SOLICITATION, INCLUDING BUT NOT LIMITED TO THIS MBE/WBE PARTICIPATION SUMMARY AND ALL RELATED COUNTY MBE/WBE DOCUMENTS, AND (b) THE BID RESPONSE SHALL COLLECTIVELY OVERRIDE, CONTROL AND GOVERN OVER Section GP 7.29 of the February 2000 Baltimore County Department of Public Works' Standard Specifications for Construction and Materials. For DPW contracts, the apparent low bidder's failure to provide a responsive MBE/WBE Plan in the bidder's response as required by (a) described above, may result in the Director of the Department of Public Works' determination that the bid is non-responsive and recommendation to reject the bid as non-responsive despite the bidder being the apparent low bidder. For DPW contracts, if the County awarded the contract to the apparent low bidder who provided a responsive MBE/WBE Plan, but, if after said award and before execution of Contract Documents, the apparent low bidder fails to comply with the MBE/WBE Plan as required in (a) and (b) above, such failure may result in the Director of the Department of Public Works' recommendation to annul the award and forfeiture of the bidder's Proposal Guaranty to the County, not as a penalty, but as liquidated damages sustained. In such case, the County may proceed as it determines to be in its best interest, including but not limited to, the Notice of Award may be made to the next lowest responsive and responsible bidder or the work may be re-advertised.

After execution of each and any applicable County contract, in the event a contractor becomes aware it may or will fail to fulfill the applicable MBE/WBE requirements and/or may or will deviate from the contractor's bid response/contract terms, the contractor shall promptly advise the County of this in writing. Thereafter, the County will determine what action or remedy, if any, is appropriate on a case-by-case, contract by contract, basis. For example, such contractor failure may result in (i) a breach for which the County determines it is appropriate to declare a contract default and thereafter take further action and/or remedy as deemed appropriate by the County in its sole discretion, or (ii) a contract breach upon which the County may elect take no further action if deemed appropriate by the County in its sole discretion, or (iii) if mutually agreeable to the County and the contractor, such revision shall be documented via a contract amendment, executed by legally authorized representatives of the County and the contractor as described below in "Approval Required for Changes", or (iv) other actions or remedies as deemed appropriate by the County. Each action and/or remedy described above is at the sole discretion of the County.

Cooperation in Reviews: The bidder will cooperate with the County in any reviews of the contractor's procedures and practices with respect to MBE or WBE firms, which the County may from time to time conduct in its sole discretion.

Approval Required for Changes: Any and all changes to the contractor's use of MBE/WBE subcontractors during the contract term must be mutually agreeable to the County and the contractor and shall be documented via a contract amendment, executed by legally authorized representatives of the County and the contractor.

Other: If the documents used to determine the contractor's efforts, achievement of, and/or the status of an MBE/WBE requirement or fulfillment thereof contain false, misleading or misrepresenting information, the contractor may be declared in breach of the contract and/or the County may take any and all actions and/or remedies available to the County under the contract, at law, or in equity. If an MBE/WBE is disqualified by any public entity, including but not limited to, Baltimore City, the State or MDOT, at any time after award or during the term of the contract, the County may, in its sole discretion, take any action or no action, as deemed appropriate by the County, including but not limited to, review of each situation on a case-by-case basis, require the prime contractor to promptly submit for County approval, the contractor's plans for fulfilling the required MBE/WBE participation under the contract, and/or request such detail and additional information as the County, in its discretion deems appropriate.

PROSPECTIVE BIDDERS

If the solicitation includes a MBE/WBE **subcontracting** goal, you **MUST** demonstrate “**Good Faith**” effort either by:

1. If you will be able to meet the goal for each assigned task, complete and sign FORM A with the initial bid submission, FORM B and FORM C must be submitted with the proposed submission for the assigned task.

***NOTE:** All Forms must be completed and signed. However, FORM C-1 **MUST** be completed and signed by both the prime and the MBE/WBE subcontractor.*

OR

2. If you are unable to meet any portion of the goal, you **MUST** do one of the following:
 - a. If you are requesting a **partial waiver**, complete and sign FORM A, FORM B and FORM C to identify the portion of the goal that will be met. In addition, complete and sign FORM D and FORM E **accompanied with all supporting documentation** for the portion of the goal that will not be achieved.
 - b. If you are requesting a **full waiver**, complete and sign FORM A indicating your intent to request a full waiver accompanied with a completed and signed FORM D and FORM E **accompanied with all supporting documentation.**

***NOTE:** All Forms must be completed and signed. However, FORM C and FORM D **MUST** be completed and properly signed by **both** the Prime **AND** the MBE/WBE subcontractor(s).*

Reminder: MBE/WBE **subcontracting** goal apply to **ALL** prime/general contractors including certified and non-certified minority and women owned firms.

BALTIMORE COUNTY, MARYLAND
Certified MBE/WBE Utilization and Fair Solicitation Affidavit
(FORM A)

**This document must be completed and submitted with Bid/Proposal to Baltimore County.*

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

* * * * *

I acknowledge the:

- The goals, if applicable, of:
 - _____ % for certified MBE-owned businesses and
 - _____ % for certified WBE-owned businesses.

I have made a good-faith effort to achieve this MBE/WBE requirement. If awarded the contract, I will comply with this MBE/WBE contract requirement and will continue to use my best efforts to increase MBE/WBE participation during the contract term.

PLEASE CHECK ONE BOX (EITHER 1, 2, OR 3)

NOTE: ANY INCONSISTENCY BETWEEN THIS FORM AND FORM B MBE/WBE PARTICIPATION MAY RENDER A BID NON-RESPONSIVE AND THE COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

1 Prime contractor has met the MBE/WBE contract requirements for this solicitation and contract. I submit the MBE/WBE Participation Form B and Form C, along with this Affidavit, which details how the prime contractor will achieve the contract requirements.

or

2 After having made a good-faith effort to achieve the MBE/WBE requirements, the prime contractor can only achieve partial success. I submit the MBE/WBE Participation Form B, Form C, Form D and Form E along with this Affidavit, which details how the prime contractor will partially achieve the contract requirements.

I request a partial waiver and will meet the following MBE/WBE participation goals:

- Partial waiver of MBE/WBE subcontract participation subgoals, if applicable:
 - _____ % for certified MBE-owned businesses and
 - _____ % for certified WBE-owned businesses.

or

3 After having made a good faith effort to achieve the MBE/WBE requirements for this contract, the prime contractor is unable to achieve the requirements and/or sub requirements for this contract. I submit the MBE/WBE Participation Form D and Form E, along with this Affidavit, which details the steps the prime contractor has taken in an attempt to achieve the contract requirements. Therefore, I request a full waiver.

IF YOU HAVE CHECKED BOX 2 OR 3, THE FOLLOWING IS APPLICABLE:

- 1) If a bidder is unable to comply with the goals established in a bid for a project, the bidder may submit a request for a waiver at the time of bid submission. However, occasions for granting waivers will be limited.

BALTIMORE COUNTY, MARYLAND
Certified MBE/WBE Utilization and Fair Solicitation Affidavit
(FORM A)

- 2) The request for waiver shall include documentation that demonstrates the bidder's good faith efforts to comply with the goals, including:
- (I) Signed unavailability statements from all MBEs and WBEs that the bidder solicited for participation; and
 - (II) Copies of solicitation documentation to all potential subcontractors, including:
 - (a) Emails, letters, facsimile transmittals and confirmations containing plans, specifications, and anticipated time schedule for portions of the work to be performed and meeting notes and agendas clearly identifying the certified MBE or WBE classification and dates that the bidder contacted each; and
 - (b) Telephone logs containing names, addresses, dates, telephone numbers, work to be performed, anticipated time schedule and classification of certified MBEs and WBEs contacted.

As I have checked Box 2 or 3 of this Affidavit, I understand I must submit the following supporting documentation with the bid:

- *MBE/WBE Participation Schedule* (Form B)
- *MBE/WBE Disclosure and Participation Statement* (Form C)
- *MBE/WBE Subcontractors Unavailable Certificate* (Form D) (if applicable)
- *MBE/WBE Outreach Efforts – Compliance Statement* (Form E)
- Any other documentation in accordance with Section 6 (E) Bid Requirements of the attached Executive Order.

I acknowledge that the MBE/WBE subcontractors/suppliers listed on the *MBE/WBE Participation Schedule* (Form B) will be used to accomplish the percentage of MBE/WBE participation that the prime contractor shall achieve.

In the solicitation of subcontract quotations or offers, MBE/WBE subcontractors were provided the same information and amount of time to respond, as were non-MBE/WBE subcontractors.

The solicitation process was conducted in such a manner so as to not place MBE/WBE subcontractors at a competitive disadvantage to non-MBE/WBE subcontractors.

I solemnly affirm under the penalties of perjury that this Affidavit is true to the best of my knowledge, information, and belief.

Bidder/Offeror Name

Phone Number

Address

Affiant Signature

Address (continued)

Printed Name & Title

E-mail address

Date

**BALTIMORE COUNTY, MARYLAND
MBE/WBE PARTICIPATION SCHEDULE
(FORM B)**

**This document must be completed and submitted with Bid/Proposal to Baltimore County.*

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

PLEASE COMPLETE THE FOLLOWING INFORMATION FOR EACH MBE/WBE PARTICIPANT

Prime Contractor's Name	Prime Contractor's Address and Telephone Number
Project Name and Description	Project Location
	Base Bid \$ _____
1. MBE/WBE Firm Name	MBE/WBE Firm Address
MBE/WBE Firm Telephone Number _____ MBE/WBE Firm Fax Number _____ <input type="checkbox"/> MDOT Certification <input type="checkbox"/> Baltimore City Certification # _____	MBE/WBE Group Type <input type="checkbox"/> (African American) <input type="checkbox"/> (Women) <input type="checkbox"/> (Asian) <input type="checkbox"/> (Hispanic) <input type="checkbox"/> (American Indian) <input type="checkbox"/> (Other)
Work to be Performed and Subcontract Dollar Amount	Percent of Total Contract
2. MBE/WBE Firm Name	MBE/WBE Firm Address
MBE/WBE Firm Telephone Number _____ MBE/WBE Firm Fax Number _____ <input type="checkbox"/> MDOT Certification <input type="checkbox"/> Baltimore City Certification # _____	MBE/WBE Group Type <input type="checkbox"/> (African American) <input type="checkbox"/> (Women) <input type="checkbox"/> (Asian) <input type="checkbox"/> (Hispanic) <input type="checkbox"/> (American Indian) <input type="checkbox"/> (Other)
Work to be Performed and Subcontract Dollar Amount	Percent of Total Contract
3. MBE/WBE Firm Name	MBE/WBE Firm Address
MBE/WBE Firm Telephone Number _____ MBE/WBE Firm Fax Number _____ <input type="checkbox"/> MDOT Certification <input type="checkbox"/> Baltimore City Certification # _____	MBE/WBE Group Type <input type="checkbox"/> (African American) <input type="checkbox"/> (Women) <input type="checkbox"/> (Asian) <input type="checkbox"/> (Hispanic) <input type="checkbox"/> (American Indian) <input type="checkbox"/> (Other)
Work to be Performed and Subcontract Dollar Amount	Percent of Total Contract
MBE/WBE Total Dollar Amount	Total MBE/WBE Percent of Entire Contract
Form Prepared by: Name _____ Title _____ Date _____	Reviewed and Accepted by Minority Business Enterprise Officer Name _____ Title _____ Date _____

Total MBE Participation:	_____ %	\$ _____
Total WBE Participation:	_____ %	\$ _____
Total Participation:	_____ %	\$ _____

BALTIMORE COUNTY, MARYLAND
MBE/WBE - SUBCONTRACTOR UNAVAILABILITY CERTIFICATE
(FORM D)

**If applicable, this document must be completed and submitted with Bid/Proposal to Baltimore County.*

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

1. It is hereby certified that the firm of _____
(Name of Minority firm)

located at _____
(Number) (Street)

(City) (State) (Zip)

was offered an opportunity to bid on the _____ contract.

2. The _____ (MBE/WBE Firm), is either unavailable for the work/service or unable to prepare a bid for this project for the following reason(s):

Signature of Minority Firms MBE/WBE Representative

Title

Date

MDOT/Baltimore City Certification #

Telephone #

3. PRIME CONTRACTOR SIGNATURE AND CERTIFICATION

I certify under oath that I contacted the Certified MBE/WBE and they advised me that they are unavailable, unable to perform the work/services for the above-contract or failed to respond to repeated requests for a price proposal for the above-contract.

Signature of Prime Contractor

Title

Date

BALTIMORE COUNTY, MARYLAND
MBE/WBE - OUTREACH EFFORTS - COMPLIANCE STATEMENT
(FORM E)

**If applicable, this document must be completed and submitted with Bid/Proposal to Baltimore County.*

NOTE: If you do not complete and submit this form with your bid or offer to the County, the County may, in its sole discretion, deem your bid or offer NON-RESPONSIVE and accordingly the COUNTY WILL NOT CONSIDER YOU FOR CONTRACT AWARD.

In conjunction with the bid or offer submitted in response to Solicitation Number _____, I state the following:

1. Bidder/Offeror identified opportunities to subcontract in these specific work categories:

2. Attached to this form are copies of the solicitation documentation in accordance with Section 6 (E) Bid Requirements of the Executive Order, used to solicit certified MBE/WBEs for the subcontract opportunities accompanied with the signed MBE/WBE Subcontractor Unavailability Certificate (Form D).

3. Bidder/Offeror made the following attempts to solicit MBE/WBEs:

Signature – Bidder Offeror

Print or Type Name of Firm

Street Address

City State Zip Code

Date

PERFORMANCE BOND

Bond No. _____

Principal

Business Address of Principal

Surety

Obligee: BALTIMORE COUNTY, MARYLAND
A body corporate and politic

A Corporation of the State of _____ and authorized to do business in Maryland

Penal Sum of Bond (express in words and figures) DOLLARS \$ _____

Contract Name _____ **Date of Contract** 20 _____

Contract Number _____ **Date Bond Executed** 20 _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL, above-named, and SURETY, above-named, and authorized to do business in the State of Maryland, are held and firmly bound unto the OBLIGEE, above-named, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, THE PRINCIPAL entered into a certain contract with the OBLIGEE described and dated as shown above, and is required to provide this bond pursuant to Maryland state law and/or County law and the contract.

NOW, THEREFORE, if the aforesaid Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the OBLIGEE with or without notice to the SURETY, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the SURETY being hereby waived, then, this obligation to be void; otherwise to remain in full force and effect.

THE SURETY FURTHER GUARANTEES that it is rated "B" or better by the A.M. Best Company, and the contract bid amount must be less than or equal to the underwriting limitation contained in the Department of Treasury Circular 570 as amended at the time of underwriting.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In Presence of: _____ **Individual Principal**

Witness: _____ **as to:** _____ (SEAL)

Print Name: _____ **Print Name:** _____

Attest: _____ **Corporate Principal**

(Name of Corporation)

Witness: _____ **By:** _____

Print Name: _____ **Print Name:** _____ (SEAL)

Title: _____

Attest: _____ **Surety**

(Name of Surety)

Business Address: _____

Witness: _____ **By:** _____ Affix

Print Name: _____ **Print Name:** _____ Corporate

Title: _____ Seal

Reviewed for Baltimore County Requirements

Office of the County Attorney

PAYMENT BOND

Bond Number _____

Principal

Business Address of Principal

Surety

Obligee: **BALTIMORE COUNTY, MARYLAND**
A body corporate and politic

A Corporation of the State of _____ and authorized to do business in Maryland

_____ DOLLARS \$ _____

Penal Sum of Bond (express in words and figures)

Contract Name

_____ 20 _____
Date of Contract

Contract Number

_____ 20 _____
Date Bond Executed

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL, above-named, and SURETY, above-named, and authorized to do business in the State of Maryland, are held and firmly bound unto the OBLIGEE, above-named, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, THE PRINCIPAL entered into a certain contract with the OBLIGEE described and dated as shown above, and is required to provide this bond pursuant to Maryland state law and/or County law and the contract.

NOW, THEREFORE, the condition of this obligation is such that if the aforesaid Principal shall promptly make payments to all persons supplying labor and/or material to the Principal and to any subcontractor of the Principal in the prosecution of the work provided for in said contract and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the SURETY being hereby waived, then, this obligation to be void; otherwise to remain in full force and effect.

THE SURETY FURTHER GUARANTEES that it is rated "B" or better by the A.M. Best Company, and the contract bid amount must be less than or equal to the underwriting limitation contained in the Department of Treasury Circular 570 as amended at the time of underwriting.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In Presence of:

Individual Principal

Witness: _____

as to: _____ (SEAL)

Print Name: _____

Print Name: _____

Attest:

Corporate Principal

(Name of Corporation)

Witness: _____

By: _____

Print Name: _____

Print Name: _____ (SEAL)

Title: _____

Attest:

Surety

(Name of Surety)

Business Address: _____

Witness: _____

By: _____ Affix

Print Name: _____

Print Name: _____ Corporate

Title: _____ Seal

Reviewed for Baltimore County Requirements

Office of the County Attorney

IF SUBMITTING BOND, THIS FORM MUST BE USED

BID BOND

Principal	Business Address of Principal
Surety	Obligee
a corporation of the State of _____ and authorized to do business in the State of Maryland	BALTIMORE COUNTY, MARYLAND, a body corporate and politic
Penal Sum of Bond (express in words and figures)	
Description of Bid	Date of Contract
Contract No. _____	Date Bond Executed
Proposal or Item No. _____	

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL above named and SURETY above named, are held and firmly bound unto the OBLIGEE above named in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that if the aforementioned Principal shall be awarded the contract. The said Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will pay unto the Obligee the entire Penal Sum of the Bid Bond of the said Principal as liquidated damages.

Signed and sealed _____
(Date)

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In Presence of:

Witness

INDIVIDUAL PRINCIPAL

as to _____ (SEAL)

In Presence of:

Witness

CO-PARTNERSHIP PRINCIPAL

Name of Co-Partnership _____ (SEAL)

as to by _____ (SEAL)

CORPORATE PRINCIPAL

Name of Corporation

By _____

Title _____

Surety

By _____

Title _____

Affix Corporate Seal
Affix Corporate Seal

Witness
Title _____

Witness
Title _____

Business Address of Surety _____

NOTE: Under Corporate Principal, this bond must be executed by either president or vice-president. Any person legally empowered to bind the corporation may execute document only if a copy of the resolution granting this right is attached.

BID REPLY LABEL

*CUT ON THE DOTTED LINE AND SECURE
TO THE OUTSIDE OF YOUR RESPONSE
ENVELOPE OR CARTON.*

REQUEST FOR BID

**NO. B-1059
10/26/16, 3:00 PM
SANITARY SEWER/STORM DRAIN CUT &
COVER, ON-CALL, TERM CONTRACT**

**TO: BALTIMORE COUNTY, MARYLAND
PURCHASING DIVISION
400 WASHINGTON AVE, ROOM 148
TOWSON, MARYLAND 21204-4665**

**BALTIMORE COUNTY, MARYLAND
REQUEST FOR BID NO. B-1059
SANITARY SEWER/STORM DRAIN CUT & COVER, ON-CALL, TERM CONTRACT**

GENERAL CONDITIONS

1. SCOPE

- 1.1 Baltimore County government under this agreement shall purchase services for storm drain and sanitary sewer cut and cover construction required during the period of time covered by this agreement. These construction services shall be performed for agencies working under and with the Department of Public Works. The quantities shown are approximate and for the purpose of bid evaluation. Baltimore County reserves the right to order such services as may be required during the agreement period, and it also reserves the right not to order any services bid upon by the Contractor, if such services are not required by Baltimore County. There shall be no compensation for work estimated in this solicitation but not ordered during the term of this agreement. The quantities for these items may be increased, decreased, or deleted entirely from the contract by the Engineer without negotiation. The Contractor will not be allowed to submit a claim against Baltimore County for any adjustments to the contract unit price bid, should the item(s) be increased, decreased, or eliminated.
- 1.2 As part of this Contract, the Contractor may be asked to assist with emergency utility tasks that occur within Baltimore County. Under these conditions, the Contractor will be expected to report to the emergency work site within 12 to 24 hours, ready to work. No plans will be given for an estimate; and an informal or verbal estimate may be used to expedite preparation of an emergency purchase (delivery) order. Field work will be begun as directed by the Engineer. Failure to report as needed under these circumstances will be a factor to be considered either at time of renewal of the contract or at the time of assignment of additional tasks.
- 1.3 The scope of this contract shall be to provide work on an on-call basis to perform tasks involving short extensions of storm drains and sanitary sewers, refurbishment of storm drainage and sanitary sewer facilities, construction and refurbishment of ditches, curb and gutter, channel stabilization, sediment control and other utility work as directed.

Tasks are normally limited to work costing less than \$150,000.⁰⁰ per task, with larger tasks to be considered for separate bid. Tasks estimated as costing more than \$150,000.⁰⁰ may be done under this contract only with written approval by the involved Section Chief.

Work upon each task will be done in accordance with the instructions provided by the **Engineer** and with the following **Contract Documents**:

- 1.3.1 **Baltimore County "Standard Specifications for Construction and Materials"** dated February 2000 and as updated periodically, herein referred to as "*Standard Specifications*".
- 1.3.2 **Baltimore County "Standard Details for Construction"** dated 2007 and as updated periodically, herein referred to as "*Standard Details*".
- 1.3.3 Plans or design sketches as provided to the inspector for his use. See Section 26 of these General Conditions.
- 1.4 The work to be done under this contract includes, but is not limited to, provision of all labor, materials, supervision, equipment, services, incidentals, and related items necessary to complete the work in accordance with this specification and scope of work.

2. COOPERATIVE PURCHASE.

- 2.1 The County reserves the right to extend all of the terms, conditions, specifications, and unit or other prices of any contract resulting from this bid to any and all public bodies, subdivisions, school districts, community colleges, colleges, and universities including non-public schools. This is conditioned upon mutual agreement of all parties pursuant to special requirements which may be appended thereto. The supplier/contractor agrees to notify the issuing body of those entities that wish to use any contract resulting from this bid and will also provide usage information, which may be requested.
- 2.2 The County assumes no authority, liability or obligation, on behalf of any other public or non-public entity that may use any contract resulting from this bid. All purchases and payment transactions will be made directly between the contractor and the requesting entity. Any exceptions to this requirement must be specifically noted in the bid/proposal response.

3. MULTI-AGENCY PROCUREMENT.

- 3.1 Baltimore County reserves the right to extend the terms and conditions of this contract to any and all other County agencies requiring these commodities and/or services. A delivery order will be issued against the original master agreement, confirming the contracted pricing and giving quantity and delivery requirements.

4. TERM OF AGREEMENT.

- 4.1 The term of the contract shall be for one (1) year. The County reserves the right to renew this contract for up to four (4) additional one-year renewal options under the same terms and conditions. The County will automatically renew the contract on each option year unless notice is given to the Contractor that the contract is not renewed.
- 4.2 If price adjustments are requested pursuant to the terms of the contract, the Contractor must notify the Baltimore County Purchasing Division at least ninety (90) days prior to the current terms expiration date.
- 4.3 The Contractor must maintain the insurance coverages required by the County while the contract is in force, including automatic renewal terms, and shall provide documentation of such insurance in a form satisfactory to the County when required.

5. METHOD OF AWARD.

- 5.1 Award will be made on a total lump sum basis. In accordance with Sec. 10-2-406 of the Baltimore County Code, 2003, as amended, past performance of bidders in furnishing goods and services to Baltimore County will be considered in determining the award.
- 5.2 Bidders will be required to provide at least three (3) (names of contract persons and phone numbers) references of similar sized and scoped contract during the past two (2) years.
- 5.3 **Each successful bidder must be pre-qualified with the Baltimore County Department of Public Works in Classification C, D-2, F-1, F-3 and F-7 prior to award of the contract. Each bidder must submit their list of sub-contractors with his/her bid. All sub-contractors must be approved by the Baltimore County Department of Public Works prior to award of the contract. All sub-contractors must be pre-qualified in the specific areas of the work they are to perform for the prime contractor prior to award of the contract.**
- 5.4 The award of this contract to the successful bidder is subject to an appropriation of funds by the Baltimore County Council.

- 5.5 The maximum number of awards to be made under the proposal is stated in the solicitation. In accordance with the number of awards stated, awards are made to the lowest responsive and responsible bidders.
- 5.6 It is the intention of Baltimore County to issue work equally to all contractors in a general rotation, however, the assignment of work shall be at the sole discretion of Baltimore County. Any claim of any contractor against the County for extra compensation or damages, arising out of the assignment of work by the County, shall be deemed to have been waived by all contractors.
- 5.7 In addition, the County reserves the right to award individual jobs on a specific rotation basis, based on demonstrated areas of experience and expertise, or based on job location.
- 5.8 Awards shall be placed to two (2) primary contractors, effectively the two lowest responsive and responsible bidders.

6. APPLICABLE GENERAL CONDITIONS AND SPECIFICATIONS.

- 6.1 All work performed under this contract shall be done in strict compliance with the Special Provisions bound herewith and with the ***Standard Specifications and Standard Details*** referenced in Section 1.3, and subsequent addenda thereto, so far as the same may be applicable, a copy of the same being on file in the Office of the County Executive and the Office of the Director of Public Works for Baltimore County. The General Conditions and Special Provisions sections are in addition to the County's Standard Specifications. General Instructions for Formal bids will take precedence.

7. PRICES.

- 7.1 Prices quoted must remain firm for the period covered by this agreement, unless price escalation is herein specified. Price quoted shall include delivery costs and charges.
- 7.2 The County reserves the right to solicit bids on the open market when the Contractor's proposal for any work is \$25,000 or greater.

8. PRICE ESCALATION. All prices offered herein shall be firm against any increase for one (1) year from the effective date of this proposed agreement.

- 8.1 Prior to commencement of each subsequent renewal term for all line items except those for hot mix asphalt, the County will entertain a request for escalation in accordance with the current Consumer Price Index at the time of the request or up to a maximum 5% increase on the current pricing, whichever is lower. For purposes of this section, "Consumer Price Index" shall mean the Consumer Price Index-All Urban Consumers-United States Average-All Items (CPI-U), as published by the United States Department of Labor, Bureau of Labor Statistics.
- 8.2 For line items for hot mix asphalt, Baltimore County will entertain a request for escalation equal to the actual cost increase to the Contractor. Bona-fide documents or price sheets from the manufacturer must accompany any request for price escalation for hot mix asphalt items. Baltimore County reserves the right to accept or reject the request for a price increase within fourteen (14) days.
 - 8.2.1 For line items for petroleum-based pipe products, Baltimore County will entertain a request for escalation equal to the actual cost increase to the Contractor. Bona fide documents or price sheets from the manufacturer must accompany any request for price escalation for these items. Baltimore County reserves the right to accept or reject the request for a price increase within fourteen (14) days.

8.3 For all line items except hot mix asphalt and petroleum-based pipe products, if the price increase is approved, the price will remain firm for 365 days from the date of the increase. For the items of hot mix asphalt and petroleum-based pipe products, if the price increase is approved, the price will remain firm for 120 days from the date of the increase.

9. **ENGINEER.** The term "Engineer" shall be used throughout this solicitation. The term will designate the person responsible for the administration of this agreement. The "Engineer" shall be authorized by the Director of the Department of Public Works. For any Baltimore County agency or for entities outside of the general County government (e.g. Baltimore County Board of Education, Maryland State Highway Administration), that wish to "piggyback" this agreement, the "Engineer" shall be designated by the respective department heads.

10. **MATERIALS, WORKMANSHIP, PERMITS, LICENSES, INSPECTIONS**

10.1 With regard to this contract, the Engineer, or a designated representative will determine acceptability of all work and/or services performed. If the work and/or services are not acceptable, the Contractor will be called in to review and correct all problem areas without additional cost to the County. Upon notification by the Engineer, or a designated representative, the Contractor will make repairs to deficient work and/or services in accordance with a schedule jointly agreed upon.

10.2 The Contractor shall not proceed with any task until all permits applicable to that task have been received. The Contractor is responsible for possession of valid copies of all applicable licenses and certifications required to proceed with and to complete the work.

10.3 The Contractor shall be responsible for the reporting and remittance of all State, Federal and local taxes, including sales taxes on material and equipment purchases, and shall hold Baltimore County harmless in the event of claims regarding taxes. Licenses, and taxes shall be the responsibility of the Contractor at no additional cost to the County.

10.4 The Department of Public Works will receive and evaluate all sewerage / drainage concerns, provide all plans and permits required and schedule work through Construction Contracts Administration Division. They will work closely with the field engineer and the Contractor for satisfactory production and improvements.

10.5 Contractor shall provide a complete, workmanlike, well-executed job in accordance with these specifications and all applicable national and local codes. Any additional code requirements requested by Baltimore County shall be noted within. In cases of conflict between requirements; that requirement which is in compliance with all applicable codes and which is also, in the opinion of Baltimore County, more advantageous to Baltimore County, shall govern.

11. **GUARANTEES.** All materials and/or equipment furnished and installed under this contract shall be unconditionally guaranteed for a minimum period of one (1) year from the date of acceptance of the system by the County against any and all defects in materials, workmanship and installation.

12. **INQUIRIES.** Any inquiries relative to this bid should be directed to Kathy Madary the Buyer, at (410) 887-3888.

13. **INVOICES.**

13.1 Daily work tickets, detailing the quantity of work performed under the payment unit of measure, shall accompany all invoices. Invoices must be legibly prepared showing the full description of all work performed, the unit price for each payment unit of measure, the specific task (location) and job order number. Authorization to pay invoices will be given by the Engineer prior to payment of invoices. Invoices must be submitted in duplicate on a monthly basis to the Office of Finance, Disbursements Section, Courthouse, Room 149, 400 Washington Avenue, Towson, MD 21204. A copy of each invoice must be submitted to the Engineer. Charges for late payment of invoices are prohibited.

- 13.2 Baltimore County may withhold, or on account of subsequently discovered evidence, nullify the whole or a part of any payment to such extent as may be necessary to protect the County from loss on account of:
- 13.2.1 Defective work not remedied.
 - 13.2.2 Claims filed or reasonable evidence indicating probable filing of claims, by parties other than the Contractor.
 - 13.2.3 Failure of the Contractor to make payments properly to subcontractors for material or labor.
 - 13.2.4 A reasonable doubt that the Contract can be completed for the balance then unpaid.
 - 13.2.5 Damages to another Contractor.
 - 13.2.6 Failure of the Contractor to submit data required within the time limits stated in the Contract Documents. When the grounds for withheld payment are removed, payment shall be made for amounts withheld because of them.
- 13.3 The Engineer shall notify the Design Division's On-Call Contract Manager when all work is complete on an assigned task. The Contractor shall deliver the final invoice for a completed task to the County for payment within 30 calendar days following completion of final construction on that task, including final paving operations. A copy of the final invoice shall be delivered to the Design Division's On-Call Contract Manager at that time. Baltimore County shall not be responsible for notifying the Contractor of pending closure of a specific task, nor shall they be responsible for funds not paid to the Contractor in the event that the Contractor does not submit a final invoice prior to task closure. As a rule, the Contractor may expect a task to be closed 90 days after final completion of work in order to "recycle" unused funding reserved for the closed task. The Contractor is advised to contact both the Engineer and the Design Division On-Call Contract Manager at the earliest possible time in the event that unforeseen events prevent prompt submittal of a final invoice.

14. **CORRECTION OF WORK AFTER FINAL PAYMENT.** Neither the final certificate nor payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for faulty materials and workmanship. Unless otherwise specified, the Contractor shall remedy any defects and pay for any damage to other work resulting from faulty materials or workmanship that appear within the guarantee period. The county shall give notice of observed defects with reasonable promptness.
15. **ASSIGNMENT.** The Contractor shall not assign the contract. He/she shall not sublet as a whole or sublet it by trades or other portions in an amount of more than 75% of the monetary value of the Contract. The remaining 25% shall be executed by the Contractor with labor and materials directly purchased and paid for by the Contractor. Costs for insurance, overhead, supervision, etc., may not be claimed as a portion of the 25% mentioned above. The execution of work by a subsidiary of the Contractor is not considered direct employment. The Contractor shall not assign any monies due or to become due to him/her under this agreement without the previous written consent of the County.
16. **LIENS.** Neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the County a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof. In either case, an affidavit should be provided stating that so far as he has knowledge or information, the releases and receipts include all the labor and material for which a lien could be filed. The Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the County, to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund the County all monies

that the latter may be compelled to pay in discharging such a lien, including all costs and reasonable attorney's fee.

17. MARYLAND STATE SALES TAX.

- 17.1 Contractors who are performing work for the State of Maryland or any of its political subdivisions are required to pay tax on materials and supplies which will be incorporated in the work.
- 17.2 The Contractor must pay the tax on all equipment that he/she purchases even though it may be used on a job for the State or any of its political subdivisions.

18. EMPLOYEES.

- 18.1 Qualifications of Employees. Only personnel thoroughly trained and skilled in the task assigned them may be employed on any portion of work. Any employee found to be unskilled or untrained in his/her work shall be removed from the work.
 - 18.1.1 Licensed Employees. When County, State or Federal laws required that certain personnel be licensed, then all such personnel employed on the work shall be so licensed.
 - 18.1.2 Quantity of Labor. The Contractor shall employ on the work, at all times, sufficient personnel to complete the work within the time stated in his proposal.
 - 18.1.3 Work Areas. The Contractor shall confine the operations of his/her employees to the limits as provided by law, ordinance, permits or directions of the Department of Public Works.
 - 18.1.4 Superintendent. The Contractor shall have, at all times during its progress, a competent superintendent and all necessary assistants assigned to each task. The Superintendent will represent the Contractor. All directions given to the Superintendent shall be as binding as if given to the Contractor. Important directions shall be confirmed in writing upon request in each case, Should the Superintendent be the cause of complaint by the Chief of the Bureau of Traffic Engineering and Transportation Planning or the Chief of the Bureau of Highways, or their designated representatives, for cause, the Superintendent shall be removed from the work and a new Superintendent shall be assigned to the project.
 - 18.1.5 Discipline. The Contractor shall at all times enforce strict discipline and good order among his/her employees and shall not employ or permit to remain on the work any unfit person. He/she shall enforce all instructions relative to use of water, heat, power, no smoking, and control any use of fires as required by law and by the Department of Public Works.
 - 18.1.6 Employees shall not be allowed to loiter on the work premises before or after job working hours.

19. RELATION OF CONTRACTOR AND SUBCONTRACTOR.

- 19.1 The Contractor agrees to bind every subcontractor and every subcontractor agrees to be bound by the terms of the Agreement, the Contract Documents specified in Section 1.3, the General Conditions, the Drawings, Special Provisions and Construction Specifications as far as applicable to his/her work, unless specifically noted to the contrary in the subcontract as approved in writing as adequate by the Department of Public Works.
- 19.2 The Subcontractor agrees to be bound to the Contractor by the terms of the Agreement, the Contract Documents specified in Section 1.3, Special Provisions, Construction Specifications,

and to assume toward him/her all obligations and responsibilities that he/her, by those documents, assumes toward the County.

20. MINORITY AND WOMEN BUSINESS ENTERPRISE REQUIREMENTS: The resulting minority and women business participation requirement for this contract is **25%**.

- 20.1 Each Contractor must comply with all Minority and Women Business Enterprises (M/WBE) participation requirements. Included with this solicitation package are copies of the County's M/WBE policy and provisions and M/WBE participation schedule forms. All M/WBE participation forms must be completed, executed, and **returned to the Purchasing Division with the bid** if a goal has been assigned. To request M/WBE participation forms, contact the buyer on the solicitation.
- 20.2 It is the intention of the contract, that the Contractor complies with the required participation levels on a cumulative basis for the full term of this agreement rather than on a job-to-job basis. The successful Contractor shall estimate the participation level (for the full term of the contract) for each subcontractor and/or suppliers listed on the participation schedule.
- 20.3 The Prime Contractor shall make a genuine good faith effort to comply with the Baltimore County Minority Business program's minimum 15% subcontracting goal. However, the percentage requirement may vary. The Prime Contractor shall make a good faith effort to obtain minority subcontractor participation even if the Prime Contractor has the capability to complete the work with its own workforce. This good faith effort is also applicable to Prime Contractors who are themselves, minority-owned or woman owned firms.
- 20.4 All prime contractors and MBE/WBE sub-contractors are required to report monthly to the County through an online using the MBE/WBE Compliance Portal (PRISM). The portal can be found under *Compliance Reporting for Prime Contractors and Sub-Contractors* at www.baltimorecountymd.gov/go/mwbe. The contractor must provide a contact person and contact information for the MBE/WBE compliance reporting. If the contractor cannot submit his/her report on time, he/she will notify the County MBE/WBE office and request additional time to submit the report. Failure of the contractor to report in a timely manner may result in a finding of noncompliance. The County in its sole discretion may require additional reports regarding MBE/WBE. Questions regarding the use of this system can be directed to the MBE Office at mwbe@baltimorecountymd.gov or call 410-887-3407.

21. INSURANCE.

- 21.1 The successful vendor will be required to provide verification of insurance coverage in accordance with the attached requirements. The successful vendor will have fifteen (15) calendar days to comply with this requirement, excluding County holidays and non-work days, if applicable.
- 21.2 The Insurer must maintain the insurance coverage required by the County while this agreement is in force, including automatic renewal terms, and shall provide documentation of such insurance in a form satisfactory to the County when required.
- 21.3 In the event the vendor changes their insurance carrier, new verification of insurance coverage must be provided to the County by the new insurance carrier within ten (10) days of the change of policy.

22. BONDS. The successful bidder shall be required to give both a performance and payment bond, each in the amount of the contract, conditioned that he shall comply in all respects with the terms and conditions of the agreement and his obligations thereunder, including the specifications.

23. PRE-BID CONFERENCE.

- 23.1 **A pre-bid conference will be held on Friday October 14, 2016 at 10:00 AM in the Purchasing Division, Courthouse, 400 Washington Avenue, Room 148, Towson, MD 21204. The purpose of the conference is to clarify any parts of the solicitation and answer questions, which may be pertinent to the request.**
- 23.2 Any significant changes to the solicitation as a result of the discussions at the pre-bid conference will be posted on the web site at: www.baltimorecountymd.gov/purchasing.

24. BID DEPOSIT REQUIREMENTS.

- 24.1 Bid deposit shall be required when indicated on bid proposal. Failure to submit such check or bond when required will nullify bid.
- 24.2 When specified, bids must be accompanied by either a Certified Check, Cashier's Check, Treasurer's Check or U.S. Money Order for five percent (5%) of the amount of the bid; or a Bid Bond for five percent (5%) of the amount of the bid, executed on the attached approved form. Only the bid bond form provided by the County will be acceptable and must be completed by a surety company duly licensed under the Laws of the State of Maryland.
- 24.3 Checks or money orders will be returned to unsuccessful bidders upon the award of the solicitation, and to successful bidders upon execution of the contract(s) and the meeting of bond requirements, if applicable.
- 24.4 Nonperformance by a successful bidder, or his failure to execute the agreement or meet bond requirements within fifteen (15) calendar days after the award, may result in his deposit being forfeited to the County as liquidated damages.

25. CONTRACT DOCUMENTS - DESIGN INTENT

- 25.1 Contract Drawings to be followed for this Contract shall be those approved drawings on file at the office of the Engineer. The Contract Drawings contain information as to amount, location, dimension and detail of the work to be performed in accordance with the Specifications. No deviation shall be permitted from the Contract Drawings and Specifications unless authorized in writing by the Engineer. Deviation by the Contractor from the Contract Documents without the Engineer's prior written approval shall be at the Contractor's risk and expense, including the expense of removal and restoration if so ordered.
- 25.2 Any discrepancies found between the Drawings and Specifications or any inconsistencies in the Drawings or Specifications shall be immediately reported to the Engineer, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities prior to corrections directed by the Engineer shall be done at the Contractor's risk. In the case of discrepancy or omission, the Engineer will determine the intent of the design in issuing clarifying or corrective instructions.
- 25.3 In order to fulfill the requirements of the Contract, conformance is required with both the Contract Drawings and Specifications. The Contractor is not released from responsibility for performing work called for in the Contract Drawings but not in the Specifications or vice versa; mention of work in either part is sufficient to include it under the Contract. In all cases, the decision of the Engineer will be final.

26. SUBSTITUTION OF EQUIPMENT OR MATERIALS

- 26.1 Whenever a material, article or process is specified or described by using the name of a proprietary product or the name of a particular vendor or manufacturer followed by the phrase "or equal," the specific item mentioned shall be understood as establishing type, function, dimension, appearance and quality desired and is to be the basis upon which bids are prepared.
- 26.2 Equipment or materials, other than those specified, will be permitted provided that, in the opinion of the Engineer, such equipment is equal to or better than that specified. Any such decision of the Engineer with respect to approval or disapproval of any equipment or material proposed to be substituted as an "or equal" is final, and the Contractor shall have no claim of any sort by reason of such decision.
- 26.3 If the Contractor proposes to provide equipment or materials as "or equal" to those specified, it shall be his responsibility to furnish complete, specific, detailed information from the manufacturer or supplier of such equipment or material establishing conformance with the requirements of the Contract Specifications. This shall consist of an item-by-item comparison of the Contract Specification requirements with the equipment or material proposed to be furnished. In the event the Contract Specifications mention a model number or other designated manufacturer in lieu of the detailed description and manufacturer, an item-by-item comparison shall be furnished of the equipment specified under the Contract and that proposed to be substituted. The Contractor shall bear the burden of responsibility of demonstrating that the equipment or material to be substituted is equal to, or of higher quality than, that specified. Submission of incomplete, insufficient or irrelevant data as evidence of compliance with this provision shall be grounds for denial of the Contractor's request.
- 26.4 All requests for approval of equipment and materials other than specified shall be submitted by the bidders to the Baltimore County Department of Public Works, Contract Division, in writing no less than fourteen (14) calendar days prior to the opening of bids for approval. If approved by the Department of Public Works, all bidders will be notified through an addendum to these Specifications no less than seven (7) days prior to the opening of bids. Upon extension of the opening date of the bids, the deadline for approval of equal or substitute equipment shall not be extended but shall remain fixed relative to the original date of the bid opening. Requests for changes to equipment or material must be made by the prime bidders, and requests for such changes by manufacturers or suppliers will neither be considered nor approved.
- 26.5 After the opening of bids, following approval of a request for a change to equipment or materials, the Contractor shall provide the County with a credit equal to the difference between the net cost to the Contractor of the article submitted and the lowest cost to the Contractor of the article specified. The Contractor shall submit these figures accompanying each substitute submittal; no request for substitution of equipment or materials will be considered without such figures.
- 26.6 The Engineer may, at his discretion, authorize use of substitute items or materials at greater, lesser or equal cost to those specified when required due to the Contractor's inability to obtain specified equipment or materials in a timely manner where unreasonable delays to the progress of the work may result.
- 26.7 In the case of the two previous paragraphs, the Contractor shall submit a written request for permission to use substitute equipment or materials, furnishing full information as to the costs of the items or materials specified and the substitute item or material. Such information shall be of sufficient detail to permit verification by the Engineer of the costs submitted. If approved by the Engineer, written authorization for credit to the County or payment to the Contractor will be made based on the cost difference between the specified item and the substitute item.

- 26.8 All decisions of the Engineer with regard to credits to the County, payments to the Contractor or equipment and materials to be substituted, shall be final.

27. FIRE HYDRANT UTILIZATION

- 27.1 Fire hydrant permits must be obtained if water is required from a hydrant. No water is to be drawn from a public fire hydrant except through a meter. Applications are made through the Department of Permits and Licenses. All costs are considered incidental to the cost of items bid. (Exception: The Department of Public Works will issue a meter for Fire Hydrant Utilization for charging, testing, or flushing new mains being constructed under a County Contract. At the request of the Contractor, within five (5) days of charging the lines, the Inspector will issue the meter application to the Contractor without cost; and there will be no charge for water use recorded on the meter provided. Failure to return the meter in good condition or utilization of the meter provided for any other purpose will be grounds for assessment of associated costs against the Contractor as liquidated damages.)

28. GUARANTEE

- 28.1 The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from the date of conditional acceptance of any item. (*NOTE: For warranty on grinder pumps, see Section G of these Special Provisions.*) The Contractor warrants and guarantees that the completed work is free from all defects due to faulty materials, equipment and workmanship and is in every way fit for the use intended, including but not necessarily limited to, the following:
- 28.1.1 Against all faulty or imperfect materials and equipment, subsidence of fill, backfill and embankment, vegetative stabilization and against all imperfect, careless and/or unskilled workmanship.
- 28.1.2 That work performed under this Contract, including all mechanical and electrical equipment, appurtenances and every part thereof, shall operate, with due care and maintenance, in a satisfactory and efficient manner in accordance with the requirements of these Contract Documents.
- 28.1.3 Where manufacturer's equipment warranties required elsewhere herein are in effect for a period longer than the Contractor's guarantee period, the County shall be named beneficiary of said warranties; and the Contractor shall furnish the County with a copy of said warranty.
- 28.1.4 That all structures and equipment designed to hold or convey water or prevent the entrance of water shall be watertight and leakproof at every point in accordance with their intended use.
- 28.1.5 No use or acceptance by the County of any part of the work, nor failure to use same, nor any repairs, adjustments, corrections or replacements made by the County due to the Contractor's failure to comply with any of his Contract obligations, or other corrections made by the County shall modify in any way the guarantee obligations of the Contractor under the Contract Documents.
- 28.1.6 The Contractor shall promptly make corrections as necessary by reason of such defects, including damage to other parts of the work resulting from such defects. The Contractor agrees to replace with proper workmanship, materials and equipment, and to correct and repair without cost to the County, any work which does not operate satisfactorily nor performs as specified, does not conform to the Contract Documents or is otherwise improper or imperfect. Exceptions will be made only for damage resulting from direct negligence of County personnel or that due to normal wear and tear. In the event the Contractor fails to properly perform such

repairs or corrections or other work made necessary by such defects, the County may do so and shall charge the Contractor for costs incurred.

29. SITE VIDEO

- 29.1 At the request of the Engineer, the Contractor shall provide videotape showing the work site prior to construction and shall provide two (2) copies of the video to the Chief, Construction Contracts Administration Division. The video shall show detailed views of the interior and exterior of any houses or other improved buildings (with particular attention to cracks and settlement) when construction equipment shall pass adjacent to the house or building. A letter of refusal of admittance signed by the occupant will be accepted by the Engineer in lieu of the interior videotape, with the understanding that the County will not pay for damages that cannot be directly attributed to the construction. Cost of the video will not be a pay item but must be included in other items bid, and no additional compensation to the Contractor will be considered.

30. STANDARD SPECIFICATIONS – FIXED PRICE ITEMS

- 30.1 Under this Contract, fixed prices in accordance with Standard Specifications Section 109 shall be used. The Contractor is notified that items listed in Section 109 will be bid and paid for at the fixed prices in the Addendum to the Standard Specifications effective January 1, 2003.

31. “SAMPLE” FORM CONTRACT

- 31.1 A sample of the County’s form contract may be found on the Baltimore County website at <http://www.baltimorecountymd.gov/Agencies/budfin/purchasing/currentsolicitations.html>. The vendor’s submission of a bid response without identifying exceptions expressly acknowledges and formally evidences the Offeror’s acceptance of all terms and conditions of the form contract. Any and all exceptions must be submitted in writing in the Offeror’s bid response.
- 31.2 If the Offeror submits an exception, which alters the County’s risk, liability, exposure in, or the intent of this procurement, the County reserves the right in its’ sole and absolute discretion to deem the vendor non-responsive.
- 31.3 All Offeror’s further understand and agree that the County will accept no vendor exceptions to the form contract at any time after submission of the bid response.

32. ELECTRONIC VERSION SUBMITTAL

- 32.1 In accordance with the General Instructions for Solicitations, #1.9, Instructions, Forms and Specifications, responses to Requests for Bids and Requests for Proposals shall be accompanied by an electronic version (CD) of the bid proposal in PDF format. The CD must be labeled with the bid number, the bid title, and the bidders’ name submitting the response. All bids must be submitted in a sealed envelope or carton as appropriate. This does not apply to Requests for Quotations.

**BALTIMORE COUNTY, MARYLAND
REQUEST FOR BID NO. B-1059
SANITARY SEWER/STORM DRAIN CUT & COVER, ON-CALL, TERM CONTRACT**

SPECIFICATIONS

SPECIAL PROVISIONS PART A

1. LOCATION OF WORK AND EXISTING CONDITIONS.

1.1 The work site shall be any location within the boundaries of Baltimore County, Maryland, as directed by the Engineer.

2. WORK SCHEDULE, INTERRUPTIONS, PROPERTY PROTECTION.

2.1 Work must be conducted between the hours of 7:00 a.m. and 7:00 p.m. unless directed by the Engineer to do otherwise. Differential mark-ups for working in the off hours, 7:00 p.m. - 7:00 a. m., Monday through Friday, weekends and holidays or exclusively between the hours of 9:00 a. m. - 3:00 p. m. weekdays (not including holidays), will be allowed provided these special work hours are requested and approved by the Engineer. See Section 31 of these Special Provisions for "Special Work Hours".

2.2 All work shall be accomplished during the weekdays Monday through Friday. No work shall be performed on the weekend and on the following County holidays:

New Years Day	Labor Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

2.3 The work described in this specification shall be done with the least inconvenience to Baltimore County Government and to the general public. Vehicles must have egress capabilities at all times. The amount of time that normal operations are interrupted shall be kept to an absolute minimum and shall be coordinated with the user agency at (410) 887-3711.

2.4 The Contractor is responsible to protect all existing and newly installed work, materials, equipment, improvements, utilities, structures, and vegetation at all times during the course of this contract. Any property or incidentals damaged during the course of this contract shall be repaired or replaced to the satisfaction of the Engineer and the property owner.

2.5 For each task, the Engineer shall approve the work schedule proposed by the Contractor. This work schedule shall be established with regard to constraints placed by property owners, utility company work schedules, the number of working days estimated, weather forecasts, availability of equipment, materials and labor sufficient to complete the work and other considerations. The Contractor is required to complete one task before disturbing another task site, unless permission of the Engineer for the Contractor to work on more than one site is granted.

2.6 The Contractor shall provide 72 hours of notice to Construction Contracts Administration Division at (410) 887-3531 before beginning work on a new task or before continuing work at a site where work was discontinued at the request of the Engineer.

3. CHANGES TO THE CONTRACT. The Contractor will notify the Chief, Storm Drain Design Section (at 410-887-3711) or the Chief, Sanitary Sewer Design Section (at 410-887-3765) as applicable, or a designated representative immediately by telephone of any unexpected emergency, subsurface or latent physical condition found, along with the recommendations for dealing with the matter. Any changes found necessary by the County or the Contractor that are not covered under the original scope of work, contract documents or drawing(s) shall be jointly agreed upon by the Contractor and

the County. Any additional costs to the project resulting from the changes must be submitted in writing by the Contractor to the Engineer as soon as possible so that an amendment to the purchase order can be issued by the Purchasing Agent covering the change(s) before the work can proceed. The County assumes no responsibility for oral instructions or suggestions. All official correspondence in regard to the Special Provisions should be directed to, and will be issued by the Purchasing Agent.

4. DEMOLITION AND DEBRIS REMOVAL

The Contractor shall be responsible to remove all debris from the site and clean affected work areas. The Contractor shall keep the premises free of debris and unusable materials resulting from their work and as work progresses; or upon request by the Engineer, shall remove such debris and materials from County property. The Contractor shall leave all disturbed areas as they were prior to beginning work.

5. POTENTIALLY HAZARDOUS MATERIALS

If the work to be performed under this contract requires the use of any product which contains any ingredient that could be hazardous or injurious to a person's health, a Material Safety Data Sheet (MSDS) must be submitted with the Contractor's bid at the time of bid opening. The extent of use of the hazardous material may be a factor in the award of the contract.

6. TEMPORARY SUSPENSION OF WORK. During the progress of any job, the Contractor shall partially or entirely suspend work and restore normal traffic flow in accordance with instructions from the Engineer. The work suspension shall be for such period or periods as the Engineer may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the suitable prosecution of the work. If it should become necessary to stop work for an indefinite period, the Contractor shall store all materials in such manner that they will not obstruct or impede the traveling public unnecessarily, nor become damaged in any way, and the Contractor shall take every precaution to prevent damage or deterioration of the work performed, and erect temporary structures where necessary. When conditions permit resumption of work, the Contractor shall notify the Engineer twelve (12) hours in advance and shall proceed with the work only when and if permission to do so is granted by the Engineer. Any work performed without approval of the Engineer will be at the Contractor's risk, and the Contractor shall be held liable for removal of any such work.

7. SECURING MATERIALS, TOOLS, EQUIPMENT AND JOB SITE SAFETY.

7.1 It shall be the sole responsibility of the Contractor and each sub-contractor performing services for this contract to safeguard their own materials, tools, and equipment. Baltimore County shall not assume any responsibility for vandalism and/or theft of materials, tools, and/or equipment.

7.2 All work shall be done in a safe manner and comply with all governing regulations concerning safety. This shall include, but not be limited to OSHA, MOSHA, etc. All work being performed for and/or on Baltimore County property shall fully conform to all local, state, and Federal Safety regulations.

7.3 Adequate barricades shall be erected and maintained completely around all staging areas where equipment and materials are stored and used. The Contractor shall be responsible for keeping the staging area neat, clean and a minimal local inconvenience.

7.4 If requested by the County, all existing mechanical and electrical systems and mechanisms within areas affected by proposed work shall be checked by the Contractor in the presence of the Engineer for proper operation before and after completion of the work.

8. WORK PROCEDURES

8.1 Work shall be assigned to the Contractor in the following fashion. The Engineer may request a written estimate, based on the contract prices, for a particular scope of work. Plans and Special

Provisions may accompany the request and the estimate shall conform to them. The Contractor shall visit the work site and submit a written estimate. Included in the quote shall be estimated quantities for each applicable line item, a brief description of repair to be done, and the work site location. If the written estimate is accepted, a Purchase Order shall be prepared. The Engineer shall give the Contractor a verbal Notice to Proceed and schedule the work following receipt of the Purchase Order. Once the Notice to Proceed is given, the Contractor shall have ten (10) calendar days to mobilize at the job site and begin work.

- 8.2 The Contractor shall maintain a daily worksheet for documenting and reporting quantities. The Contractor shall supply these worksheets. They shall be three (3) part NCR paper with one copy for the Engineer, one copy for the Contractor and one copy for the Contractor's invoice. The Contractor shall fax a copy of the previous day's worksheet to the Engineer on a daily basis. A sample form is included with this solicitation.
- 8.3 The Engineer shall inspect the work in progress and upon completion, and approve all work completed to his satisfaction. Any work not performed to the complete satisfaction of the Engineer shall be rejected and the work shall be corrected by the Contractor at no additional expense to Baltimore County. There shall be no exceptions to this provision. Baltimore County reserves the right not to approve additional work if it has not been pre-approved by the Engineer for construction.
- 8.4 The Contractor shall submit a schedule of operating sequences and a plan for maintaining traffic to the Engineer and obtain his approval before any work is performed under this contract. The Contractor will be responsible for assisting others whenever possible to avoid delay in the progress of the work. In this connection, reference is made to the work to be done by others and the activities of the various utility companies within limits of and during the life of the Contract. All incidental costs and/or expenses occasioned by the schedule of the operations required to accomplish the work under this project, including the coordination of same with the work of other organizations, is to be absorbed by the Contractor in the several pay items indicated in the Proposal.
- 8.5 At the end of each work day, copies of all work tickets, itemizing each payment unit of measure and quantities generated for that day's work, shall be provided to the Engineer for review and verification of work.
- 8.6 In the event of emergency, the Contractor shall respond to the job site as quickly as possible, not to exceed eight (8) hours from time of notification. The Contractor shall furnish to the Engineer the names, addresses and phone numbers of two individuals in his firm who can be contacted by the Engineer at any time in the event of an emergency. One of these two individuals shall respond to the Engineer within a maximum time period of four hours. The Contractor shall be available twenty-four (24) hours per day, each day of the year for emergency work. For any emergency work performed in special work hours (Monday through Friday, 7:00 p. m. - 7:00 a. m., weekends, and holidays), see Section 31 of the Special Provisions for measurement and payment.

9. MOBILIZATION

- 9.1 Mobilization will not be bid, but shall be paid at a rate of three (3) percent of the final cost of the task, up to a maximum of \$2,000 per task on a per "each" basis. Any expenses for Mobilization exceeding this amount shall be incidental to the costs of related items for the task.
- 9.2 Each task will be limited to a specific site, road or geographic area limited to three (3) square miles or less in all cases.

10. EQUIPMENT, MATERIALS & STORAGE

- 10.1 The Contractor is required to provide any equipment necessary to complete an assigned task in a timely and workmanlike manner. All equipment shall be in operable and safe condition and

shall be suitable in size and condition for the work that is to be done. At the request of the Engineer, unsuitable equipment or materials shall be removed from the site and replaced with acceptable equipment or materials. Any delays caused by equipment failure shall be at the Contractor's sole cost; the County will not pay for lost time under items bid, including time and materials items.

10.2 Neither equipment nor construction materials shall be stored on private residential property before the start of or after the completion of the applicable task. Surplus materials shall become the property of the contractor at the completion of each task and shall be removed by the Contractor at that time. Castings salvaged as part of the work, including inlet grates and frames, manhole frames and covers, etc. shall be returned to the nearest County yard if usable. No overnight storage of materials will be permitted within any designated floodplain. Storage within County property or Road right-of-way will be allowed only with written permission of the Engineer and with approved traffic control measures in place in County road right-of-way. The contractor shall be responsible for work, equipment and materials and security of same until work is inspected, tested and finally accepted. Materials and equipment shall be neatly and compactly stored in a location that minimizes inconvenience to occupants, County personnel, adjoining owners, public travel and others having rights of access to the site. Excess materials will be removed as directed by the Engineer.

10.3 The County will not accept delivery of materials or equipment for the Contractor. All expenses incurred in handling materials or equipment consigned or directed to the County will be charged to the Contractor.

11. TIME AND MATERIALS WORK

11.1 This contract consists of a considerable number of contingent bid items. The Department of Public Works cannot possibly include all bid items that may be encountered on tasks that will be assigned under this contract. We therefore are including items for labor hours and for unforeseen materials that will be needed to complete assigned tasks. Wherever possible, the contractor is to provide work under the various bid items. If this is not possible, the Engineer will review and approve work to be completed on a time and materials basis.

11.2 Labor rates are assumed to include small tools, powered and non-powered. Travel time shall be included as part of the Mobilization item for the particular task. The County shall pay the full hourly rate for all break time.

11.3 Payment items shall be as follows for time and materials work. Each labor category shall be paid for by the hour, with regular time and overtime applicable. Overhead and profit is included in the hourly rate.

(A) *Foreman*- Day-to-day supervisor for all Contractor's workers

(B) *Heavy Equipment Operator* - loaders, bulldozers, backhoes, trenching machines, liquid asphalt distributors, cranes, graders, Grade-alls, Hot Mix Asphalt paving & finishing machines, rollers, pan and scoop scrapers, spreaders, trenching machines, excavators, shovels, crawler wheel tractors, concrete paving & finishing machines, concrete mixers, drilling machines

(C) *Truck Driver* - All trucks over 1.5 ton capacity - single axle to tractor trailer

(D) *Skilled Laborer* -craftsmen of the journeyman grade, including masons, carpenters, concrete finishers, etc.

(E) *Unskilled Laborer* - Helpers to Journeyman craftsmen and all other labor requiring no special skills or experience or the exercise of discretion or independent judgement.

(F) *Equipment* - All equipment to be used during this agreement is listed in the "*Rental Rate Blue Book for Construction Equipment, Vol. 2*" as published by the Machinery Information Division of K-111 Directory Corp., latest edition. Equipment shall be paid for by the hour using the following Blue Book (as referenced) formula: weekly hourly rental rate (weekly rate divided by 40) + regional map adjustments plus estimated operating costs per hour. Overhead and profit, fuel, repairs, oil, vital fluids, maintenance, incidentals and all items of cost required for full operation of the equipment are pre-calculated in the Blue Book rating system. Only one hourly rate applies. The contractor shall be reimbursed for third party rental rates plus five (5) percent for overhead and profit for specialized equipment specified by the Engineer. All third party rental rates must be approved in writing by the Engineer prior to arrival of the equipment on site. Baltimore County shall not pay rental charges for unauthorized equipment at any job site.

(G) *Materials* - All materials shall be in accordance with *Standard Specifications* and Details and shall be from an approved supplier. Materials used may include but shall not be limited to bituminous concrete, portland cement concrete, aggregates, reinforcing steel, pre-approved precast concrete components, block, brick and mortar, masonry units, pipe and fittings, approved borrow, seed, mulch, gray iron castings, shoring, and materials for landscaping and concrete forming. All materials used shall be subject to normal inspection and approval procedures. Non-approved materials shall be removed from the site as directed by the Engineer. Baltimore County reserves the right to provide materials to the Contractor for incorporation in work performed under this agreement. Approved materials supplied by the Contractor for time and materials work shall be paid for under the following formula: [Contractor's cost of materials] x [Mark-up for Overhead & Profit]. Markup for Overhead & Profit is a bid line item.

- 11.4 WORK PROCEDURE - Where 10% or more of a task consists of time and materials items as opposed to bid items, the Engineer will request a written estimate for the time and materials work from the contractor based upon contract prices. The estimate shall conform to any plans and special provisions provided for the time and materials work. The Engineer will advise the Contractor prior to preparation of this estimate of the types and quantities of labor, equipment and materials needed to complete the work and whether the time and materials work will involve overtime hours, regular hours or a combination of both. If the estimate is acceptable, the Engineer will approve the estimate and sources of supply and issue a verbal notice to proceed. In cases where the Contractor's proposal for time and materials work is not acceptable, the County reserves the right to remove the entire task from this agreement and bid it on the open market.
- 11.5 If the time and materials work is less than 10% of a task, the Engineer may simply ask the Contractor to proceed with the work based upon a work schedule provided by the Engineer to the Contractor at least 7 days in advance. This schedule shall stipulate whether regular time, overtime or both shall be used by the Contractor in completing the time and materials work. It will also advise the Contractor of the quantities and types of labor, equipment and materials necessary to complete the time and materials work. All work assigned to the Contractor shall be coordinated, directed, scheduled and approved by the Engineer. The Contractor MUST receive approval from the Engineer before beginning work.
- 11.6 The Contractor shall supply and maintain a daily worksheet with a format that has received prior approval for documenting and reporting quantities. Identical copies of the worksheet shall be made for the Engineer, the Contractor's records and for the invoice to the County.
- 11.7 At the end of each workday, copies of all work tickets, itemizing each payment unit of measure and quantities generated for that day's work shall be provided to the Engineer for review and verification of work.
- 11.8 The Engineer shall inspect all work in progress and at completion and shall approve all work completed to his satisfaction. Unsatisfactory work shall be rejected and shall be corrected by

the Contractor to the satisfaction of the Engineer at the sole expense of the Contractor. There are to be no exceptions to this provision.

12. **MAINTENANCE OF TRAFFIC.**

12.1 At the end of each workday, the Contractor is required to complete the following:

12.1.1. Backfill and/or plate over all open excavation so that traffic flow is safely maintained.

12.1.2 Remove all equipment and material from the traveled portion of the roadway. Also, equipment and materials should not be stored in such a manner as to obstruct sight distance at any driveway or intersecting road.

12.1.3. Cover or remove all signs referring to a single lane operation. Also, it may be necessary for the Contractor to provide STEEL PLATES AHEAD signs on each approach to the construction area, if appropriate, or as directed by the Inspector for the project.

12.2 All existing driveway or side road access must be maintained at all times.

12.3 The Contractor is to be responsible for the fabrication, installation and maintenance of all traffic control devices. Said devices shall be in accordance with the latest edition of the *Manual On Uniform Traffic Control Devices (MUTCD)*. Also, the Contractor may be required to furnish additional signs should conditions warrant. Regarding the control of traffic through work areas, Part 6 of the *Manual On Uniform Traffic Control Devices* (latest edition) shall be utilized.

12.4 The Contractor shall also comply with the maintenance of traffic and signing instructions in the Maryland SHA Permit issued for any tasks

12.5 In addition to the above, the Contractor must contact the Inspector one (1) week prior to any work being done to go over maintenance of traffic.

12.6 The costs for Maintenance of Traffic shall be paid for as part of the prices bid for other items.

12.6.1 The item "Flagger" shall be performed, measured and paid for in accordance with Section 104.15 of the *Standard Specifications*.

12.6.2 The Contractor shall provide temporary traffic signs, furnished and placed on a rental basis for each task site. The signage is measured and paid on a square footage basis per task site (an area of jobs three square miles or less). Signs for traffic control shall be measured and paid for as square feet of "Temporary Traffic Signs". The contract price for temporary traffic signage is capped at \$22.00 per square foot. Bidders cannot bid more than the cap and the County shall not pay more than the cap for temporary traffic signage.

12.6.3 Traffic control barrels shall not be measured and shall be paid for as "Drums for Maintenance of Traffic" as a lump sum item per task.

12.6.4 When warranted by low traffic volumes, and when in accordance with MUTCD, Part 6, the Engineer may direct the Contractor to substitute approved traffic control cones for traffic drums. Traffic control cones shall be used in accordance with Section 104.14 of the *Standard Specifications*, with no measurement and payment as "Cones for Maintenance of Traffic" as a lump sum item per task.

12.6.5 Arrow boards shall be measured and paid for on a per unit per day basis as "Arrow Panel".

12.6.6 Concrete barriers shall be measured and paid for on a per linear foot basis as "Precast Temporary Concrete Traffic Barrier for Maintenance of Traffic".

13. TEST PITS, BORINGS & UTILITIES

- 13.1 The Contractor is solely responsible for contacting Miss Utility (1-800-257-7777) to identify all underground utilities, power cables, communication, water and sewer lines.
- 13.2 The Contractor shall notify Miss Utility (phone no.1-800-257-7777) at least three (3) days prior to beginning work so that BGE can arrange to relocate their facilities. Notification shall include nature of work to be done, location of job, and time and date work is to be started.
- 13.3 The Contractor is required to locate existing underground utilities to his own satisfaction prior to construction, unless elevations determined by excavated test pits are shown, Metrotech elevations are to be used as a guide, with cautious excavation in the area of utilities located by this method. The contractor will be held responsible for any damage to existing utilities or to connections to same, and shall receive no compensation for repairing damage or for time lost due to resulting delay.
- 13.4 Extreme caution shall be used in excavation adjacent to railroad tracks in order that any railroad signal conduit in the area not be disturbed. If conduit disturbance is a possibility, the Railroad shall be notified at least 48 hours in advance of commencement of work.
- 13.5 The Contractor shall use extreme caution in crossing existing utility (water, gas, sanitary, etc.) lines which are determined to have less than 6" clearance. The Engineer shall direct the Contractor to provide either a sand cushion or plastic foam spacers in sheet form to prevent one utility from bearing directly upon another in low clearance situations. Cost is to be included in unit price bid per linear foot of proposed pipe.
- 13.6 Soil borings, or test pits, for soil determination in improved roads are not to be excavated by the Contractor unless prior application is made by the Contractor and permit is issued by the Baltimore County Bureau of Highways and Traffic Operations.
- 13.7 If borings have been completed, the test boring logs presenting physical data on subsurface conditions are for informational purposes only. Neither Baltimore County nor the Engineer warrants or guarantees that the conditions and/or any part thereof will be the same as shown by the test borings. If the Contractor relies for any purposes upon said information, he does so at his own risk.
- 13.8 Bidders are urged to make their own subsurface exploration upon approval of written application. The cost of this exploration shall be at their own expense.

14. CONNECTION OF EXISTING DRAINS

Connection of existing property drains to proposed drain or channel, if required, shall be accomplished in accordance with Baltimore County *Standard Specifications* Section 303.03.10 (See Addendum). All sump pump outlet lines, rain leaders and any curb or drain structure penetrations that are encountered shall be reconnected as directed by the Engineer, after the Engineer is certain that backflow from the drain will not occur.

15. PIPE CONNECTIONS TO EXISTING DRAINS

Tee or Wye fittings for connection to existing storm drain pipes shall be made in accordance with applicable Standard Details. Pipe connections (tee or wye) shall be measured on a per each basis for the size of incoming pipe and size of existing pipe. Pipe Connections will be counted and paid for on the basis of the per "Each" bid for each size connection, which price shall include all excavation, tamped fill, labor, equipment, materials and tools necessary to complete the work.

16. CORE-BORING EXISTING DRAINS AND STRUCTURES

This work shall consist of boring a specified diameter hole into the side of an existing storm drain pipe or structure and inserting a suitable fitting to make a connection of the specified diameter. Unless otherwise directed by the Engineer, the centerline of the lateral connection shall intersect the centerline of the pipe being bored. The final connection shall be watertight, crack-free and shall not impede flow in an existing pipe. Measurement shall be on a per "Each" basis for "Core-bore/X in. Lateral with Pre-Fabricated Connection", where X is 4, 6, 8, 12, 15, or 18 inches. Payment shall be full compensation for all labor, equipment, materials, etc. required to complete this work satisfactorily. The contractor will be responsible for replacing either pipe or structure in kind if cracks or breaks occur during boring.

17. CONCRETE PIPE JOINTS

All concrete pipe joints shall utilize gaskets meeting ASTM C-361 Standards per Section 303.03.04 of Addendum to the *Standard Specifications*. In cases where C-361 gaskets cannot be used, alternate methods of obtaining soil-tight joints as outlined in Section 303.03.04 of Addendum shall be used.

18. CONCRETE COLLARS

- 18.1 Where required, concrete collars shall be constructed in accordance with Standard Detail D-4.00. Cost of constructing concrete collars shall be measured and paid for at the Contract unit price per cubic yard of "Mix #3 Concrete for Miscellaneous Structures".
- 18.2 Payment for this item will be full compensation for all applicable excavation, sheeting, shoring, dewatering, hauling, felt, invert paving, storing, re-handling of material, backfilling, forming bedding or foundation, compaction and for all labor, equipment, materials, tools and incidentals necessary to complete the work.

19. GEOTEXTILE (FILTER FABRIC) AND FILTER BLANKET

- 19.1 Geotextiles shall conform to Baltimore County *Standard Specifications* Section 921.09 and shall be paid for as part of the item for which it is specified. Unless otherwise specified on the plans, *Standard Details* or Special Provisions, Class C Geotextile shall be used.
- 19.2 Where directed by the Engineer, the Plans or the *Standard Details*, a filter blanket of approved aggregate of specified size and thickness shall be placed between native soil and riprap / gabions or as protection for geotextile during placement of riprap. The filter blanket shall be paid for as part of the item for which it is specified.

20. SHEETING & SHORING LEFT IN PLACE

Where sheeting and shoring is to be left in place, cost is to be paid for as part of price bid for associated pipe and/or structures.

21. SAW CUTTING

- 21.1 Saw cutting of existing structures, where required for repair, shall be paid for as part of "Removal of Existing Masonry".
- 21.2 Saw-cutting of existing asphalt paving shall be measured in terms of linear feet and paid for as "Full Depth Saw-Cut".
- 21.3 Where existing concrete paving must be removed to repair or replace an inlet located within a concrete alley or entrance, or where concrete paving is damaged adjacent to an inlet, the paving shall be saw-cut so that the damaged section can be removed. An expansion joint shall be placed as shown on Detail D-2.47 included within these Special Provisions. Joint sealer

shall be applied as applicable. The cost of the saw-cut, expansion joint and joint sealer shall be included in the price paid for replacing the concrete paving.

22. MdSHA HIGH EARLY STRENGTH CONCRETE MIX #6 MODIFIED

22.1 Within commercial driveway entrances and where specified by the Engineer or on plans, the Contractor shall use the subject concrete mix in order to be able to return the proposed work to service at the earliest possible time. Specifications for the materials are attached to these Special Provisions. Work shall be measured in terms of Square Yards of " 7" Concrete Paving for Entrances and Driveways, Mix #6" or Square Yards of " 7" Concrete Paving on 4" Graded Aggregate Base, Mix #6" and Linear Feet of " 7 In. Concrete Combination Curb and Gutter, Mix #6 on 3 In. Graded Aggregate Base". Payment will be full compensation for excavation, removal, hauling, subgrade preparation, base materials, forms, joints, placement, forming and finishing in accordance with applicable specifications.

23. FLOWABLE FILL

23.1 Flowable fill shall conform to all requirements of Section 313 of the *Standard Specifications*.

23.2 Upstream and downstream manholes along sanitary and storm drain systems adjacent to areas where flowable fill is to be placed shall be opened and monitored during placement of flowable fill. The Contractor will be responsible for removing any flowable fill that enters adjacent drains or sanitary sewers regardless of method of entry. No additional compensation will be allowed for this cleanup.

24. BACKFILLING OF TRENCH

24.1 **WITHIN STATE RIGHT-OF-WAY:** Recycled concrete #6 or flowable fill material shall be used in all areas within State Right-of-Way. The recycled concrete #6 must be compacted in accordance with the following:

24.1.1 The material shall be installed in 8" lifts, tamped by approved mechanical means, and compacted to 92% of AASHTO T- 180 density at optimum moisture content to within the top foot of subgrade. The top foot of subgrade shall be compacted as described above to 95% of AASHTO T-180 density at optimum moisture content.

24.1.2 The Contractor shall correct all deficiencies with respect to compaction as directed by the engineer without additional compensation.

24.2 **OUTSIDE STATE RIGHT-OF-WAY:** In all areas outside of the State right-of-way, the following shall apply:

24.2.1 Initial Backfill - Suitable material from project excavation shall be carefully placed around and to a depth of 2 feet over the pipe or structure. This initial backfill shall be carefully placed and tamped by approved mechanical means, in 6-inch layers, to a minimum of 92% of AASHTO T-180 density. Care shall be exercised during this operation in order to insure that the pipe is not damaged and the alignment of the utility is not disturbed.

24.2.2 General Backfill - Suitable material from the project excavation shall be used for general backfill wherever possible.

24.3 In all unimproved areas and existing roads, with either bound or unbound surfaces, the area extending from 2 feet above a pipe to the subgrade shall be refilled in layers not to exceed 12 inches. The refill shall be tamped by approved mechanical means and compacted to 90% of AASHTO T-180 density for all material within $\pm 3\%$ of the optimum moisture content. For all material with a moisture content more than 3% above optimum, the material shall be compacted to a minimum of 98% AASHTO T180 density at existing moisture content. Soils

more than 3% below optimum moisture content shall be wetted to bring the moisture content to within $\pm 3\%$ of optimum.

24.4 Insofar as the specifications for mechanical tamping equipment or methods are concerned, no specific requirements are included in these Special Provisions other than the use of any particular type of equipment is subject to the approval of the Engineer and that he/she has the sole right to judge what equipment is suitable for the uses intended.

24.5 After the completion of refilling, all material not used therein shall be removed and disposed of in such a manner and to such a point as approved or directed by the Engineer; and all roads, sidewalks and other places on, the line of the work shall be left clean and in good order. Cleaning up shall be done by the Contractor without extra compensation; and if he shall fail to do such work within a reasonable time after receipt of notice, the cleaning up will be arranged by the Engineer; and the cost will be retained out of monies due to or to become due the Contractor under the Contract.

24.6 The Contractor shall be aware that these alternative backfill specifications will probably require the storage and rehandling of excavated materials. In accordance with Section 303.04 of the *Standard Specifications*, the cost of storage and rehandling of excavated materials shall be included in the cost of the pipe.

25. TRENCH & EXCAVATION SUPPORT SYSTEMS

25.1 The Contractor shall support the sides and ends of all excavations with sheeting, shoring, stringers, trench boxes or other methods of the type, size and quality required for either temporary or permanent support. The Contractor shall submit details of his excavation support system and design computations prepared by, and sealed by, a Professional Engineer registered in the State of Maryland. The Engineer must approve the support concept, and the Contractor will be entirely responsible for the design and adequacy of the approved excavated support system.

25.2 Temporary trench and excavation support systems shall be removed as refilling proceeds in a manner so as not to damage any pipelines, structures, roadbed, fill or property. The Contractor shall be entirely responsible for the condition of all excavations made by him for the entire period of the contract. All slides, cave-ins or other unacceptable conditions shall be promptly corrected whenever they may occur without extra compensation.

25.3 In addition, the Contractor shall comply with the requirements for sheeting as specified in Maryland SHA Permit No. B-4-2920.

25.4 Cost of the trench or excavation support system shall be included in the cost of pipe or structure.

26. INLETS

26.1 Inlet locations along existing roads shall be set with the proposed curb opening face in line with the face of the existing curb and gutter, except with prior written approval of the Storm Drain Design Section, Bureau of Engineering & Construction.

26.2 Y-1 inlets shall be open on all 4 sides, except where noted. Y-1 inlets shall not be placed near or adjacent to a public road (use a modified A-1 inlet instead for adequate structural support for an errant vehicle) unless appropriate and approved measures are taken to prevent traffic from approaching the Y-1 inlet. Y-1 inlet openings shall be 4" to 6" measured vertically. Constructed openings on Y-1 inlets exceeding 6" in height shall be reset to be within the 4" to 6" range by fastening a #6 reinforcing bar horizontally across the opening to provide two equally sized openings. The bar, when installed, shall be embedded or fastened at each end securely enough to keep children out of the inlet, as judged by the Engineer. This work shall be measured on a per "Each" basis as "Adjust Existing Y-1 Inlet Opening".

26.3 All new Type E and S inlets will use cast iron frames with bicycle-safe curved vane grates.

27. **INLET GRATE AND FRAME REPLACEMENT**

27.1 Scope:

27.1.1 This work shall consist of replacement of existing failed cast iron frames and all parallel bar grates and reticular (NR and WR) frames and grates encountered (as described in 27.1.2 of these Special Provisions) with new cast iron frames and curved vane grates.

27.1.2 All inlets located within road right-of-way that are disturbed by work performed as part of a task under this Contract shall have curved vane grates and cast iron frames (if not already in place) installed as part of this work.

27.2 Materials:

27.2.1 Materials shall be those specified in applicable Standard Details, in Section 909.04 (Addendum) "Gray Iron Castings" and in Section 305, "Miscellaneous Structures" in the *Standard Specifications*. Replacement grates shall be flat and true on all bearing surfaces and shall not "rock" within the matching frame after completion of installation. Existing frames to be re-used shall not be broken, warped, improperly sized or otherwise unsuited for continued use.

27.3 Construction:

27.3.1 Grates shall be replaced as follows:

- 27.3.1.1 EXISTING TYPE E INLET: (Standard Details D-2.06, 2.07, 2.09, 2.10) - Replace grate as specified on Standard Detail D-2.09A (or D-2.09B if applicable) using the curved vane replacement grate shown on that Detail.
- 27.3.1.2 EXISTING TYPE S INLET: (Standard Detail D-2.16 through D-2.20 inclusive) - Replace grate as specified on Standard Detail D-2.21A (or D-2.21B if applicable) using the curved vane replacement grate shown on that Detail.
- 27.3.1.3 CURVED VANE GRATES shall be installed in the frame in accordance with the directional arrow shown on the top surface of the grate. In the case of sumped double grate inlets, arrows shall point to the center of the inlet (vanes directed outward). Corrective measures shall be taken as needed to assure that the new grate does not "rock" within the frame under traffic loading. In the event that a frame is encountered that does not allow the replacement grate to sit properly within the frame squarely upon the frame supports, that frame shall be removed and replaced with an appropriately sized frame.
- 27.3.1.4 Existing Type NR and WR Inlets (Shown on superseded 1978 to 1985 Standard Details D-2.29 to D-2.35 inclusive) -Frames and grates to these inlets shall be removed and replaced with cast Type E and S frames respectively and the replacement grates as described herein for these frames.
- 27.3.1.5 Type NR inlets will require adjustment to the walls to account for the 3" greater thickness of the Type E frame.
- 27.3.1.6 Existing Non-Standard Inlets - This classification includes those existing inlets that have frames and grates that do not match either the Type E or Type S frames and grates. These frames and grates shall be removed and the exposed brickwork removed to a depth as directed on the plans or by the Engineer in the field. The replacement brickwork shall be "racked" as required

by the Engineer to allow the fitting and full support of a Type E or Type S Inlet frame, as directed on the plans or by the Engineer.

27.3.2 Existing frames shall be visually checked for breakage and correct sizing prior to installation of a replacement grate. Frames and / or grates that are replaced shall be salvaged and returned to the nearest Baltimore County Bureau of Utilities yard.

27.3.3 Replacement frames for combination curb and gutter inlets shall have flanges cut as directed by the Engineer in order to be in compliance with the applicable Standard Details for inlets. The horizontal gap between the face of the curb piece (header) and the top of the frame shall be no more than 1" in any case.

27.4 Method of Measurement and Basis of Payment

27.4.1 Replacement grates shall be measured in kind complete in place and paid for at the Contract unit price per each, as "Replacement Type E Curved Vane Grates" or "Type S Curved Vane Replacement Grate".

27.4.2 Replacement frames and grates shall be measured in kind complete in place and paid for at the Contract unit price per each matching set, as "Type E Frame with Type E Curved Vane Grates" or "Type S Frame with Curved Vane Grate".

27.4.3 Brickwork required in order to adjust existing brick inlet boxes to accept standard inlet frames shall be measured and paid for at the Contract unit price per cubic yard of "Brick Masonry for Miscellaneous Structures".

27.4.4 Cost of adjusting existing precast inlet walls to accept standard inlet frames shall be measured and paid for at the Contract unit price per linear foot of vertical depth for the applicable type of inlet.

27.4.5 Payment for the items specified in the Contract Documents will be full compensation for all applicable excavation, sheeting, shoring, dewatering, hauling, invert paving, storing, rehandling of material, removal and disposal of excess and unsuitable material, backfilling, forming bedding or foundation, compaction and for all labor, equipment, materials, tools and incidentals necessary to complete the work.

28. INLET REPAIR

28.1 Scope:

28.1.1 The work shall consist of repair of existing County storm drain inlet brickwork and replacement of concrete components that have failed. See also "Inlet Structure Replacement".

28.1.2 Grates and frames shall be replaced on repaired inlets in accordance with Section 27.1.2 of these Special Provisions.

28.2 Materials:

Materials shall be those specified in Section 903, "Masonry Products", Section 908 "Reinforcement Steel", Section 903.05 "Masonry Cement" and Section 305, "Miscellaneous Structures".

28.3 Construction:

28.3.1 Prefabricated curb pieces shall be manufactured in accordance with Standard Detail D-2.08. Prefabricated curb pieces shall be replaced with curb pieces with a visible steel angle embedded in the top of the curbpiece as shown on Detail D-2.08. If this angle is

not visible, the headpiece must be rejected as unacceptable. Prefabricated top slabs for Type A, B and Y inlets shall be manufactured in accordance with Standard Details for those inlets.

- 28.3.2 Frames, grates, headpieces, support beams and/or top slabs shall be removed and examined to determine if the casting shall be reused. Large chips or cracks, warping, breakage or excessive erosion of fines from the concrete are causes for rejection and replacement. NR and WR reticular grates and frames and reticular replacement grates for Type E and S frames shall be replaced in all cases in accordance with Special Provisions regarding "Inlet Frame and Grate Replacement", contained herein.
- 28.3.3 Upon placement of Type A or B inlet top slabs after inlet repair or replacement where sidewalk is NOT located behind the top slab, the Contractor shall pour a concrete barrier along the entire length of the rear wall of these inlets as shown in the "Top Slab Anchor Detail" shown on Standard Detail D-2.03. The Engineer has the option (on repaired inlets only) of allowing the contractor to "peg" the top slab in place with #6 rebars of 3 foot or longer length to be placed 12 inches to either side of the rear corners of the structure at the walls. Fully installed rebars may not protrude above the top of the top slab.
- 28.3.4 Longitudinal reinforcement in monolithic concrete curb and gutter for Type A or B inlets as shown in Details D-2.01A, D-2.01B, D-2.02A, D-2.02B and D-2.03 shall extend the entire length of the section in front of the inlet and shall be unspliced. Where necessary, adjacent curb and gutter shall be saw-cut and removed to provide the proper length of monolithic curb and gutter shown on the applicable detail.
- 28.3.5 Brickwork shall be removed to a depth where a complete course of brick has mortar intact. This layer shall be cleaned of mortar debris and leveled. The inlet shall then be reconstructed to grade using a prefabricated inlet riser section or new mortar with either new or clean, unbroken brick salvaged from the removed structure per *Standard Specifications*, Section 424, "Brick Masonry".
- 28.3.6 Contractor shall, as directed, saw cut frame flanges or make other adjustments to ensure an acceptable gap at the curb opening face on combination inlets. See Section 27.3.3 of these Special Provisions.
- 28.3.7 Salvaged or replacement frames, grates, headpieces and/or top slabs along with salvaged support beams shall be placed to grade after brick mortar has cured.
- 28.3.8 When required, the Contractor shall be directed by the Engineer to place a horizontal bar across existing vertical inlet openings in order to reduce the size of the opening for public safety. A round steel bar of #5 minimum size shall be placed horizontally across the center of the existing opening in such a way that the bar is firmly anchored against movement in any direction at both ends.

In cases where placement of such a bar risks blockage or clogging of the opening by debris, the Engineer shall consult with the Storm Drain Design Section regarding the proposed placement before work is done.

28.4 Method of Measurement and Basis of Payment –

- 28.4.1 Replacement inlet headpieces and top slabs shall be measured in kind complete in place and paid for at the Contract unit price per each, as "Replace Type E Combination Inlet Headpiece", "Replace Double Type E Combination Inlet Headpiece", "Replace Type S Combination Inlet Headpiece", "Replace Double Type S Combination Inlet Headpiece", "Replace A-1 Inlet Top Slab", "Replace A-2 Inlet Top Slab, Slab Width Per Plan", "Replace B-1 Inlet Top Slab", or "Replace B-2 Inlet Top Slab, Slab Width Per Plan".

28.4.2 Brickwork required for repair of existing brick inlet boxes shall be measured and paid for at the Contract unit price per cubic yard of "Brick Masonry for Inlet Repair".

28.4.3 In accordance with *Standard Specifications* section 305.04.03, concrete required to repair or replace broken concrete inlet components in place (such as Type A and B Inlet monolithic curb and gutter section) shall be measured and paid for at the Contract unit price per cubic yard of "Mix #3 Concrete for Inlet Repair". Except as noted in section 42 of these Special Provisions, this payment shall be full compensation for saw cutting, removal, excavation, bedding, forming, reinforcement as specified, cutting, bending, placement, supports and tying of reinforcement, placement of concrete, concrete finishing and for all labor, tools, equipment, and materials necessary to complete the work.

Concrete placed behind A or B inlet top slabs shall be measured and paid for at the Contract unit price per cubic yard of "Mix #2 Concrete for Miscellaneous Structures".

28.4.4 Except as noted in Section 42 of these Special Provisions, payment for the items specified in the Contract Documents will be full compensation for all applicable excavation, sheeting, shoring, dewatering, hauling, invert paving, storing, rehandling of material, removal and disposal of excess and unsuitable material, backfilling, forming bedding or foundation, frame and support beam adjustment, saw cutting of frames as directed, compaction and for all labor, equipment, materials, tools and incidentals necessary to complete the work.

28.4.5 Placement and anchoring of steel bars across existing vertical inlet openings shall be measured per "Each" item and paid for as "Adjust Existing Curb Inlet / Y-1 Inlet Opening".

29. INLET STRUCTURE REPLACEMENT

29.1 Where specified herein, on plans, or as directed by the Engineer, the Contractor shall replace an entire inlet structure rather than attempt to repair that structure. This will be done where a collapsed wall has occurred within an inlet structure having walls exceeding 8 feet in length, measured horizontally, including but not limited to Type B-1, B-2 and Double E inlets; or where other significant structural problems have occurred. The existing structure, including walls, top slab, headpiece, frames, grates and invert (invert in good condition may remain for poured-in-place replacement), shall be completely removed and the existing inlet box replaced with a precast or cast-in-place concrete structure in accordance with *Standard Details*. In no case will brick be used to construct a replacement structure. Suitable underdrains will be provided as part of the new structure as indicated on plans or as directed by the Engineer.

29.2 Except as noted in Section 42 of these Special Provisions, inlet replacement will be measured and paid for as specified in Section 305 of the *Standard Specifications*. Payment for the items specified in the Contract Documents will be full compensation for all frames, grates, headpieces or top slabs, applicable excavation, removal of existing structure, salvage as applicable of existing parts, sheeting, shoring, dewatering, hauling, invert paving, storing, rehandling of material, removal and disposal of excess and unsuitable material, backfilling, underdrains, forming bedding or foundation, compaction and for all labor, equipment, materials, tools and incidentals necessary to complete the work.

30. DEBRIS REMOVAL FROM STORM DRAIN STRUCTURES

As directed by the Engineer, the Contractor shall remove silt, loose debris, concrete, asphalt, brick, etc. from the inverts of inlets and manholes. Costs of removing and hauling this material shall be included in the costs associated with work on that structure. Where these materials must be removed from storm drain pipes, the Contractor shall advise the Engineer to contact the County's

Bureau of Utilities at (410)- 887-1242. The Bureau of Utilities will perform any pipe cleaning that that agency determines to be necessary.

31. SPECIAL WORK HOURS

31.1 At times, the Engineer will require that the Contractor perform work during the following special work hours:

- 7:00 P.M. - 7:00A.M., Monday through Friday, weekdays and holidays
- 9:00 A.M. - 3:00 P.M., Monday through Friday, no holidays

31.2 In order to use these Special Hours, the Contractor must have included the appropriate Special Work Hours item in the task estimate approved by the Bureau of Engineering and Construction's Design Division personnel. The Engineer shall request and approve the use of all special work hours prior to commencement of work on any job using these hours.

The Contractor shall consider alternates using regular hours along with special physical measures taken (such as use of concrete barriers for maintenance of traffic) prior to receiving approval for working Special Hours.

31.3 As compensation, the Contractor shall be paid a mark-up percentage over the regular contract pay item. This mark-up percentage shall be in addition to the regular contract pay item price. The contract will have a pay item for each differential mark-up. For example, if the contract price for Flowable fill is \$40.00 per cubic yard and the contractor bid 10% mark-up for special work hours 9:00 A.M. - 3:00 P.M., Monday through Friday, no holidays, the contractor can invoice the County for \$44.00 per cubic yard if these special work hours are used for any job.

31.4 Mark-up for Special Work Hours shall not apply to time and materials work.

32. FLEXIBLE (HDPE, PVC, etc.) PIPE USE FOR STORM DRAINS

32.1 Items for use of HDPE pipe in sizes of 15", 18" and 24" diameters have been included in this contract for use in storm drain systems. This pipe (or other suitable flexible pipe) may only be used for tasks for which this pipe material has been specified. It may NOT be substituted for other specified pipe materials without the written approval of the Storm Drain Design Section Chief and the Registered Professional Engineer responsible for preparation of the plans.

32.2 Other limitations are applicable to use of this material:

- The pipe is not to be used in sizes larger than 24" in diameter;
- it is not to be used where it will "daylight" at an outfall or inlet;
- manufacturer's approved methods and specifications for installation shall be used;
- it shall not be used where high groundwater can cause flotation;
- it shall be checked for retention of proper cross-section and grade following installation. See included Details for additional requirements for use of flexible pipe for Storm Drains in Baltimore County.

32.3 In cases where problems with line and cross-section occur with use of flexible pipe material, the pipe shall be removed and reinstalled correctly at the Contractor's sole expense, or a rigid pipe shall be substituted.

32.4 Note that openings in precast structures may need to be of a different size to properly accommodate the outer diameter of this pipe. See Section 41 of these Special Provisions regarding requirements for use of precast structures.

33. CLEARING AND GRUBBING. Clearing and Grubbing will be measured and paid for on a per square yard basis.

34. **ADJUST & REPLACE FENCES, SHRUBS, HEDGES, TREES, ETC.** Work done will be paid for on a time and materials basis, and will not be bid.

35. **SITE DISTURBANCE**

35.1 The Contractor will protect the work site for each task in accordance with the sediment control permit applicable to the task site. The Contractor shall work in such a way that both disturbed areas and the time of disturbance are minimized. The task site shall be fully stabilized when the Contractor completes work at that site. All disturbed areas on private property will be sodded. Other designated areas shall be seeded and mulched, except as noted on plans and sediment control details, or as directed by the Engineer. These items shall be paid for at the unit price bid for "Sodding", "Seeding" and for "Temporary Mulching". The Contractor shall seed with a low-maintenance ground cover seed mix on disturbed areas that are not on or adjacent to private residential property. See *Standard Specifications*, Section 707, "WILDFLOWER SEEDING".

35.2 An approved dewatering method shall be used to remove sediment-laden water from traps, sumps, etc. This water shall never be discharged directly to a storm drain or channel.

35.3 At the sole discretion of the Engineer in the field, the Contractor shall excavate, ball in burlap and replant privately owned shrubs of manageable size located in existing easements or other existing County-owned property. The shrubs, or other small plants shall be planted at a location that is mutually agreeable to the owner and the Engineer. The County offers no guarantee that plants originally planted in County-owned right-of-way will survive transplanting and shall suffer no liability for damage to these plants or to private property resulting from these transplanting operations. Work done will be paid for on a time and materials basis, and will not be bid.

36. **TEMPORARY MULCHING**

36.1 All non-paved areas disturbed (except wetlands) will immediately receive temporary mulching. Temporary mulching will be placed after completion of drain construction and regrading before final restoration. Areas subject to repeated disturbance shall receive temporary mulching as directed by the Engineer.

36.2 Measurement for temporary mulching shall be on a square yard basis for all non-paved areas disturbed by construction.

36.3 Payment shall be made by the contract unit price per square yard for "Temporary Mulching" which price will be full compensation for all labor, material, equipment and incidentals required to satisfactorily complete the work as specified.

37. **GABIONS.** The term "gabions" on the drawings and contract documents refers to Class 4 Stone-filled Wire Mesh Baskets, PVC-coated.

38. **WATER SUPPLY ITEMS**

38.1 A number of water supply items have been included in this contract on a contingent basis for occasional use with either storm drain or sanitary sewer tasks where these items may occur or for occasional use on possible emergency tasks.

39. **EROSION AND SEDIMENT CONTROL**

39.1 Construction operations shall be carried out in such a manner that erosion will be controlled and water and air pollution will be minimized. State and local laws concerning pollution abatement will be followed. Construction plans detail erosion and sediment control measures to be employed during the construction process. All work at a task site shall be performed under a

blanket sediment control permit or under an APPROVED sediment control plan specific to the site.

39.2 Measurement and Payment:

The items "Super Silt Fence" and "Silt Fence" shall be measured and paid for on the basis of linear feet of acceptable material in place. The measured quantity shall be paid for at the contract unit price per linear foot for the pertinent item which price and payment shall constitute full compensation for furnishing, placement, maintenance, cleanout of silt and removal, and for all labor, tools, equipment and incidentals necessary to complete the item.

39.3 The item "Stabilized Construction Entrance" shall be measured on the basis of square yards of acceptable material in place. The measured quantity shall be paid for at the contract unit price per square yard for the pertinent item which price and payment shall constitute full compensation for stone, filter cloth, earthwork, pipe (if required), and for furnishing, placement, maintenance and cleanup, and for all labor, equipment, tools and incidentals necessary to complete the item. The cost for mountable berms constructed within the limits of a stabilized construction entrance shall be included as part of the cost of the "Stabilized Construction Entrance".

39.4 Dewatering Basins shall be provided at the time and place as directed by the Engineer in the Field. The Dewatering Basin (if required) shall be measured and paid for in terms of the excavated volume (cubic yards) of "Erosion and Sediment Control Original Excavation" and as weight (tons) of " 4"-8" Riprap for Sediment Control". Items in the Dewatering Basin that are not specifically named above and are not specifically included in any of the named items shall be paid for as part of "Erosion and Sediment Control Original Excavation".

39.5 Earth Dikes shall be measured and paid for in terms of the volume (CY) of "Class 2 Excavation for Sediment Control", weight (Tons) of " 2" to 3" Stone for Sediment Control", area (SY) of "Soil Stabilization Matting", area (SY) of "Sodding", pounds (Lbs) of "Temporary Seeding", area (SY) of "Temporary Mulch" and/or weight (tons) of " 4"-8" Riprap for Sediment Control".

39.6 "Inlet Protection - Curb" or "Inlet Protection - Swale" shall be measured and paid for on a "per Each" basis for the pertinent item which price and payment shall constitute full compensation for stone, filter cloth, wire fabric, wood framework (as required); and for furnishing, placement, maintenance and cleanup, and for all labor, equipment, tools and incidentals necessary to complete the item.

39.7 Stone outlet structure (SOS) shall be measured and paid for in terms of the weight (tons) of " 2" to 3" Stone for Sediment Control".

40. TEMPORARY SAFETY FENCE. The item "Temporary Safety Fence" shall be measured and paid for on the basis of linear feet of acceptable material in place. The measured quantity shall be paid for at the contract unit price per linear foot for the pertinent item which price and payment shall constitute full compensation for furnishing, placement, maintenance, removal, and for all labor, tools, equipment and incidentals necessary to complete the item.

41. PRECAST STRUCTURES

41.1 Openings in rectangular precast structures shall be cut in such a way that the material removed does not impinge upon a corner, as shown on Standard Detail G-1. The Engineer will refuse without exception all precast structures where sections of corner have been cut. When situations arise that will involve the corner of a precast structure, the Engineer shall refer the matter to the designer, who shall make appropriate corrections so that the precast structure's corner is not compromised.

41.2 The contractor will be responsible for providing appropriately sized structure openings in precast structures. Field adjustments to precast structure openings are NOT allowed. A precast structure with improperly sized or misplaced openings must be removed from the site as unacceptable.

42. RUBBLE DISPOSAL. In addition to the specific payment items covering masonry removal, the contractor shall be reimbursed for dumping fees charged to the contractor for disposal of masonry removed from existing inlets. These fees shall be paid for as "Rubble Disposal" and measured by cubic yard.

43. TRIM EXISTING DITCHES

43.1 This item shall consist of trimming, sloping and shaping existing ditches within limits as directed by the Engineer or as indicated on the Plans.

43.2 Within the limits indicated for "Trim Existing Ditches", clearing and grubbing shall conform to Section 101 of the *Standard Specifications*. Existing ditches shall be trimmed, sloped and shaped in accordance with specified grades and to a uniform cross-section, with constant side-slopes not steeper than 2:1.

43.3 This work shall be paid for as "Trim Existing Ditches" based upon the number of linear feet measured along the centerline of the ditch, acceptably completed. This payment shall constitute full compensation for all clearing, grubbing, excavation and disposal of surplus and unsuitable materials and for all other labor, equipment, materials, tools and incidentals necessary to complete the work.

44. WASHED CONCRETE SAND

This item shall be used where specified on Plans and as directed by the Engineer for backfill around underdrain. The material used for this purpose shall be clean, uncontaminated bank run sand rather than manufactured sand. It shall be placed dry, without compaction, fully surrounding the underdrain pipe as shown on Standard Detail R-22. When surrounded by this material, a geotextile "sock" around the underdrain pipe is optional, at the discretion of the Engineer.

This item shall be paid for as "Washed Concrete Sand", measured in terms of Tons satisfactorily placed.

45. HIGH EARLY STRENGTH CONCRETE FOR RETURNING HIGH-TRAFFIC AREAS TO SERVICE

45.1 When selected areas must be returned to traffic service quickly, a high early strength concrete shall be used to construct critical curb and gutter, entrances and driveway aprons. With this in mind, MdSHA Specification 522 is appended to these Special Provisions.

45.2 The work involved shall be measured and paid for under one or more of the following items:
LF of " 7" Conc. Comb. Curb & Gutter, Mix 6 / 3" Graded Aggr. Base";
SY of " 7" Concrete Paving On 4" Graded Aggregate Base, Mix #6"; and
SY of " 7" Concrete Paving for Entrances and DW, Mix #6".

45.3 Note the attached Detail D-2.47 showing an application for repairing broken concrete paving surrounding an existing inlet, with an option to use high early strength concrete for the repair.

46. PRESSURE TESTING GRAVITY SEWER PIPE

46.1 The Contractor shall pressure test all proposed gravity sewer pipe. The Contractor shall furnish all equipment, personnel, etc., to conduct this test in accordance with the following procedures:

- 46.1.1 All branch fittings and ends of lateral stubs shall be securely plugged to withstand the internal test pressures. The section of line being tested also shall be securely plugged at each manhole. All stoppers shall be adequately braced when required.
- 46.1.2 Air shall be slowly supplied to the plugged pipeline until the internal air pressure reaches 4.0 pounds per square inch greater than the average backpressure of any ground water that may submerge the pipe. At least two (2) minutes shall be allowed for temperature stabilization before proceeding further.
- 46.1.3 The rate of air loss shall then be determined by measuring the time interval required for the internal pressure to decrease from 3.5 to 2.5 pounds per square inch.
- 46.1.4 The pipe line shall be considered acceptable if the time interval for the 1.0 psi pressure drop is not less than the holding time listed in the following air test table:

Table on following page

MINIMUM HOLDING TIME IN SECONDS REQUIRED FOR PRESSURE														
TO DROP FROM 3.5 TO 2.5 PSIG														
PIPE DIAMETER														
Line Length Feet	4"	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	39"
25	4	10	18	28	40	62	89	121	158	200	248	299	356	418
50	9	20	35	55	79	124	178	243	317	401	495	599	713	837
75	13	30	53	83	119	186	267	364	475	601	743	898	1020	1105
100	18	40	70	110	158	248	356	485	634	765	851	935		
125	22	50	88	138	198	309	446	595	680					
150	26	59	106	165	238	371	510							
175	31	69	123	193	277	425								
200	35	79	141	220	317									
225	40	89	158	248	340									
250	44	99	176	275										
275	48	109	194	283										
300	53	119	211											
350	62	139	227											
400	70	158												
450	79	170												
500	88													
550	97													
600	106													
650	113	170	227	283	340	425	510	595	680	765	851	935	1020	1105

46.2 The Contractor shall furnish all material and labor required for tests, and the cost thereof will be included in the prices bid for furnishing and laying sewer pipes.

47. VACUUM TEST FOR SANITARY MANHOLE

- 47.1 A vacuum of 10 inches (mercury) shall be applied to the manhole and the time lapse shall be measured for the vacuum to drop from 10 inches to 9 inches. The following table of the time lapse measured will be used for acceptance of manholes.
- 47.2 Manholes with the time lapse for the specified vacuum drop greater than the times shown in the table are considered to pass the vacuum test.

- 47.3 Cost for vacuum testing of manhole shall be included in the Unit Price Bid (VF) for standard sanitary manhole of 48 inches inside diameter.

Depth of Manhole	Time Lapse (Seconds)		
	Manhole Diameter (Inches)		
	48"	60"	72"
8	14	18	23
10	17	23	28
12	21	28	34
14	25	32	40
16	28	37	45
18	32	41	51
20	35	46	57
22	39	51	62
24	42	55	68
26	46	60	74
28	49	64	80
30	53	69	85

48. GENERAL BACKFILL (FOR GRAVITY SEWER)

- 48.1 Project excavation is to be used on this project in 12-inch layers and compacted. In unimproved areas outside the existing or proposed road right-of-way, unless full trench compaction is specified on the Plans, compaction shall be accomplished as follows for the remaining depth of trench. Backfill material shall be placed in 12-inch layers and compacted in such a manner that a completely dense refill is obtained which is free of voids and not susceptible to settlement.
- 48.2 In all existing roads, with either bound or unbound surfaces, the area extending from 2 feet above a pipe to the subgrade shall be refilled in layers not to exceed 12 inches. The refill shall be tamped by approved mechanical means and compacted to ninety-percent (90%) of AASHTO T-180 density for all material within \pm three-percent (3%) of the optimum moisture content. For all material with a moisture content more than three-percent (3%) above optimum, the material shall be compacted to a minimum of ninety-eight percent (98%) AASHTO T-180 density at existing moisture content. Soils more than three-percent (3%) below optimum moisture content shall be wetted to bring the moisture content to within \pm three-percent (3%) of the optimum.
- 48.3 Insofar as the specifications for mechanical tamping equipment or methods are concerned, no specific requirements are included in these Specifications other than the use of any particular type of equipment is subject to the approval of the Engineer and that he has the sole right to judge what equipment is suitable for the uses intended.
- 48.4 After the completion of refilling, all material not used therein shall be removed and disposed of in such a manner and to such a point as approved or directed by the Engineer; and all roads, sidewalks and other places on the line of the work shall be left clean and in good order. Cleaning up shall be done by the Contractor without extra compensation; and, if he shall fail to do such

work within a reasonable time after receipt of notice, the cleaning up will be arranged by the Engineer and the cost will be retained out of monies due to, or to become due to, the Contractor under the Contract.

48.5 The Contractor shall be aware that these alternative backfill specifications will probably require the storage and rehandling of excavated materials. In accordance with Section 1007.03.05 of the Baltimore County Standard Specifications, the cost of storage and rehandling of excavated materials shall be included in the cost of the pipe.

49. STEEL PLATING AND SOLID SHEETING

49.1 If steel plates are used, they shall be used to cover open trenches in roadways during non-working hours. The cost for this work, material, labor, etc., shall be included in the various items used for Maintenance of Traffic.

49.2 If steel plates are used, solid sheeting and shoring shall be used for the limits of the steel plating. The cost for this work, material, labor, etc., shall be included in the price bid for installed pipe.

50. RELOCATION OF EXISTING WATER METER. This item of work shall include removal and relocation of the existing water meter and meter vault, and any other work including all pipe, fittings, etc. required to relocate water meters. If the existing meter vault is damaged, a new meter vault shall be used as directed by the Engineer. The cost for a new meter vault shall include the removal and disposal of the existing meter vault and the furnishing and installation of the new meter vault, including all work, material, equipment, and any incidentals required to complete this item of work. Existing meter frames and covers are to be salvaged and installed at new locations; the cost shall be included in other items bid.

51. PRESSURE SEWER SYSTEMS. The construction of pressure sewer systems shall be in accordance with "Sanitary Sewer Cut and Cover Special Provisions, Part B – Specifications for the Pressure Sewer System", included with and incorporated into these Special Provisions.

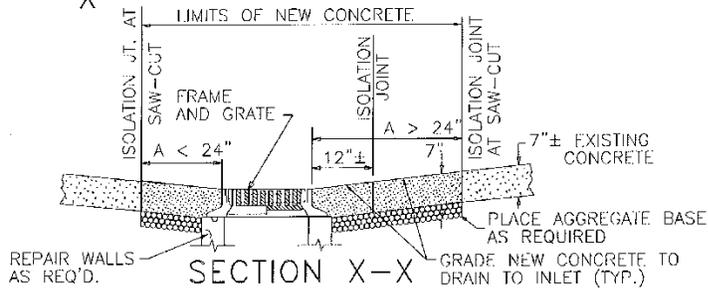
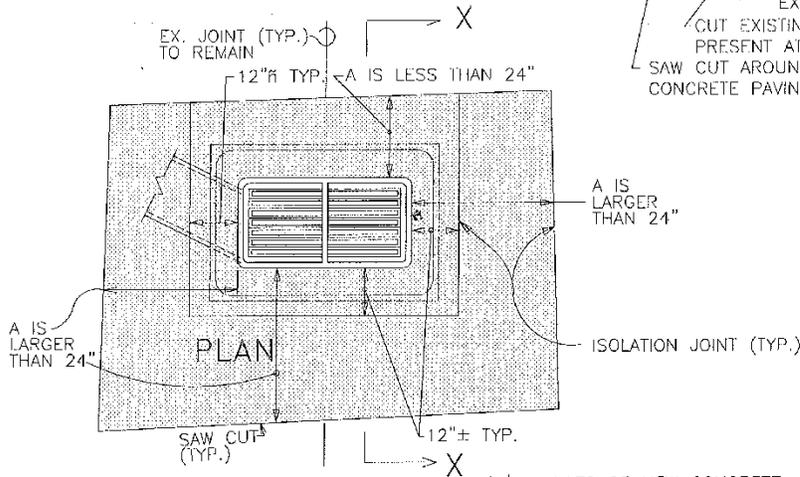
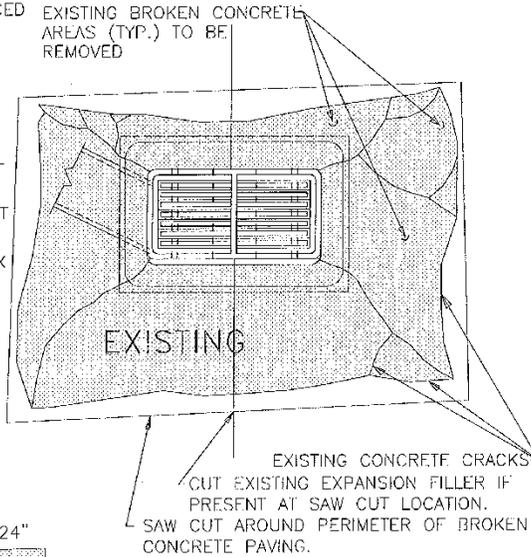
52. ON-CALL DETAILS FOR CONSTRUCTION.

The following details are included and appended as part of these Specifications:

- Plate D-2.47
- Plate D-6.00
- Plate D-6.01
- Plate D-6.03.

NOTES

1. WHERE SAW CUTS ARE WITHIN 12" TO 24" OF THE INLET FRAME, ISOLATION JOINTS SHALL BE PLACED ONLY ALONG THE SAW CUT LOCATION. IF DISTANCE A FROM FRAME TO SAW-CUT IS MORE THAN 24", AN ISOLATION JOINT WILL BE NECESSARY AT 12" FROM THE FRAME AND ALSO ALONG THE SAW CUT, AS SHOWN.
2. ISOLATION JOINT SHALL CONSIST OF FULL DEPTH 3/4" ALUMINOUS JOINT MATERIAL (AASHTO M-213 & M-153) TOPPED WITH HOT-POURED JOINT MASTIC (AASHTO M-173).
3. CONCRETE SHALL BE MIX NO. 6. REINFORCEMENT SHALL BE WELDED WIRE MESH AS DIRECTED BY THE ENGINEER. THE ENGINEER SHALL HAVE THE OPTION OF REQUIRING USE OF A CONCRETE MIX THAT DEVELOPS A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI WITHIN 24 HOURS IN AREAS WHERE THE REPAIR MUST BE RETURNED QUICKLY TO TRAFFIC SERVICE.



APPROVAL

 DIRECTOR
 BUR. OF ENGINEERING/CONSTRUCTION

 DATE

DEPARTMENT OF PUBLIC WORKS
 STORM DRAINAGE DETAILS
 PORTLAND CEMENT PAVING
 REPAIR AROUND INLET

ISSUED: AUGUST, 1999
 REVISED:
 REVISED:

PLATE
 D-2.47

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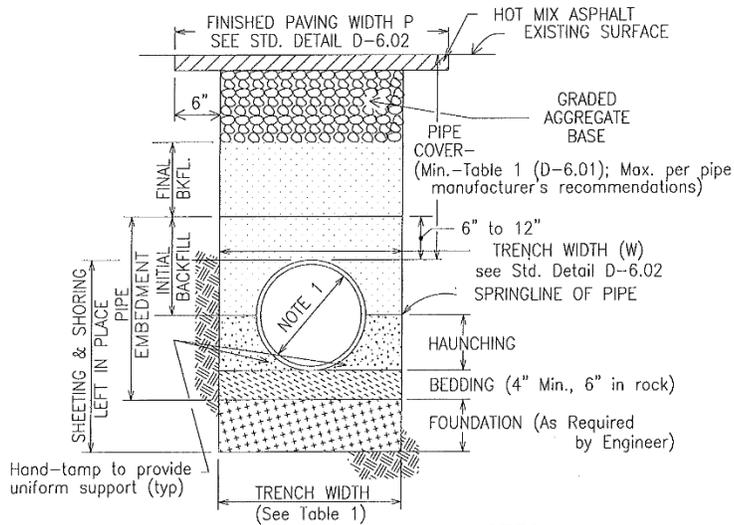


TABLE 1

PIPE DIAMETER	TRENCH WIDTH
15"	34"
18"	39"
+24"	48"
+30"	66" *
+36"	78" *
+42"	*

* See Note 7
 † See Note 1

NOTES :

1. **APPLICABILITY:**
 PVC or HDPE pipe, smooth or corrugated interior and exterior. Diameters other than 15" and 18" require prior written approval by BCBC Storm Drain Design for use as part of a drain system to be maintained by the County.
2. **LIMITATIONS:**
 Refer to Baltimore County Design Manual.
 Plastic pipe shall not be used as a "substitute" for concrete pipe where plans call for concrete pipe except as approved in writing by the Design Engineer.
 Thermoplastic pipe shall not be used where it will "daylight" at outfalls. Pipe running from the next upstream manhole or inlet structure to the outfall shall be concrete pipe. High groundwater requires special design for anchoring.
3. **PIPE JOINTS:**
 Joint assembly shall be in accordance with manufacturer's recommendations. All installed joints must be soil tight prior to acceptance. Joint designs shall be certified as soil-tight by the manufacturer at time of delivery. Pipes adjacent to a joint that is not soil-tight after installation shall be replaced at the contractor's expense.
4. **PARALLEL PIPE SPACING:**
 Two pipes running parallel shall be installed with sufficient space between them to backfill and compact to specification. The following minimum spacing shall be observed:
 Less than 24" Dia. Pipe: 12" Minimum
 24" (or Larger) Dia. Pipe: 1/2 diameter
5. **NATIVE SOIL BACKFILL**
 Use native soil as backfill when it meets requirements of an acceptable soil class as specified in Table 1 (see D-6.01), or is approved for use by the Engineer in the field. Use backfill in accordance with restrictions in Table 1, Plate D-6.01.
6. **PIPE LABELING**
 Pipe delivered to site shall be clearly labeled as meeting applicable ASTM/AASHTO standards or it shall be removed immediately from the site. See Section 605, Standard Specifications.
7. **TRENCH WIDTH**
 Costs of pavement replacement and excavation for trench widths greater than those indicated on Standard Detail G-7 shall be included as part of cost of pipe. For 42" and larger pipe, trench width and sheeting and shoring shall be as shown on special detail.
8. **INSPECTION OF PIPE INSTALLATION**
 Pipe shall be checked for vertical alignment and cross-sectional deflection after backfilling and compaction, prior to approval.
 - a. A mandrel test for deflection of pipe diameter shall be made upon completion and again after 30 days. Pipes with deflections larger than 5% shall be removed & replaced at the Contractor's expense. See Standard Detail D-6.03.
 - b. Pipes shall be flushed thoroughly prior to the TV inspection to be made per Section 303.03.10 of Standard Specifications. Pipe with ponding 1/2" or more deep during TV inspection shall be removed and replaced at the Contractor's expense.
 - c. Leaky joints shall not be repaired. The adjacent pipes shall be removed & replaced at contractor's expense.
9. **COMPACTION**
 Avoid contact between mechanical compactor & pipe. Cover over top of pipe = 6" min. for small mechanical compactor; as directed if larger.
10. **CONNECTION TO STRUCTURES**
 Use watertight flexible connectors (A-Lok or equal) for connection to precast concrete structures. No grouting is allowed. Include cost of connector as part of cost of pipe. Include cost of any necessary pipe adapters & smooth-wall pipe as part of pipe cost.
11. **SHEETING & SHORING TO BE LEFT IN PLACE**
 To avoid disturbance of pipe haunching by movement of a trench box, sheeting and shoring shall be used in lieu of a trench box, with all sheeting and shoring below the top of pipe to remain in place. Costs of sheeting and shoring to be left in place shall be included in the cost of the pipe.

	APPROVAL	DEPARTMENT OF PUBLIC WORKS STORM DRAINAGE DETAILS THERMOPLASTIC PIPE INSTALLATION - GENERAL	ISSUED: AUGUST, 2009
	----- DIRECTOR		REVISED: _____
	BUR. OF ENGINEERING/CONSTRUCTION		REVISED: _____
	----- DATE		PLATE D-6.00

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1. Bedding and structural backfill shall meet the requirements of Table 1, below. Thermoplastic pipe large than 24" in diameter shall be limited to use of Class 1A, Class 1B or Class II materials for these purposes.
2. Bedding material shall have a maximum size of 1-1/2".
3. Backfill shall be free of organic material, stones larger than 1-1/2" in any dimension, or frozen lumps.
4. Moisture Content shall be in an optimum range of minus 3% to plus 2% to permit thorough compaction.
5. Measures shall be taken to prevent migration of fines from adjacent materials into open-graded backfill and bedding materials.
6. For thermoplastic pipes having corrugated or profile walls on their exterior, backfill gradations shall be selected that will permit filling of all recessed areas of the corrugation or profile.
7. Flowable fill may be used for backfill wherever adequate flotation control can be established by weighting or restraint to prevent misalignment or localized low areas within the pipe. All joints must be gasketed to prevent entry of flowable fill into the pipe. Controls shall be established to prevent flowable fill from leaving the trench. See Section 313, of Standard Specifications.
8. Structural Backfill shall:
 - * be placed in layers not exceeding 8 inches loose lift thickness;
 - * be brought up evenly and simultaneously on both sides of the pipe;
 - * be to an elevation not less than 12 inches above the top of pipe;
 - * be worked into the haunch area and compacted by hand as directed by the Engineer;
 - * have a minimum compaction level of 90 percent Standard Proctor Density.
9. All compaction equipment used within 36 inches of thermoplastic pipe shall be approved by the Engineer.
10. Ponding or jolting the structural backfill to achieve compaction shall be permitted only with written approval of the Engineer.

DESCRIPTION	SOIL CLASSIFICATION			MINIMUM STD. DENSITY ‡ %	MAXIMUM* COMPACTION LAYER HEIGHT	MINIMUM PIPE COVER	RESTRICTIONS
	ASTM D2321	ASTM D2487	AASHTO M43				
Graded or Crushed Stone Crushed Gravel - Open Graded †	Class IA	-	5 56	Place to fill voids, haunch	6 in.	24 in.	Use Geotextile specified by Design Engineer around backfill.
Class 1A Mat'ls. w/Stone, Sand -Dense Graded †	Class IB	-	5 56	85%	6 in.	24 in.	Good gradation req'd to prevent soil mig- ration.
Well- or Poorly-Graded Sand, Gravels and Gravel-Sand Mix- tures; Little or No Fines	Class II	GW GP SW SP	57 6 56	85%	6 in.	36 in.	
Silty or Clayey Gravels, Gravels/Sand/Silt or Gravels and Clay Mixtures, Silty or Clayey Sands, Sand/Clay or Sand/Silt Mixtures	Class III	GM GC SM SC	Gravel and Sand (<10% Fines)	90%	6 in.	36 in.	Not for use if water occurs in trench. 12" max. in foundation. Bedding-only if dry.

* Layer heights shall not exceed one-half the pipe diameter. Layer heights may be reduced by Engineer to accommodate compaction method.
 † Open graded: 10% or less passes #4 sieve; dense graded: 50% or less passes #4 sieve.
 ‡ Minimum Std. Proctor Density for Pipe Embedment. Compact final backfill as required by Engineer.



APPROVAL

 DIRECTOR
 BUR. OF ENGINEERING/CONSTRUCTION

 DATE

DEPARTMENT OF PUBLIC WORKS
 STORM DRAINAGE DETAILS
**BACKFILL FOR
 THERMOPLASTIC PIPE**

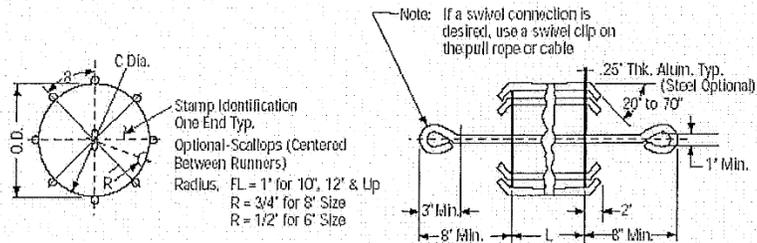
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D-6.01

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All pipe up to and including 36 in. diameter shall be inspected with a go/no-go mandrel device as described herein. Pipe larger than 36 in. diameter shall be inspected with a suitable proving device to confirm that vertical deflection does not exceed either the maximum allowable short or long term deflection limits. The mandrel or proving device shall be pulled through the pipe in such a manner so as to ensure that excessive force is not used to advance the device through any deflected portion of the pipe.

The mandrel shall be cylindrical in shape, constructed with 9 evenly spaced arms and shall generally conform to Figure A1.

Figure A1 – General Mandrel Configuration



Number of Runners	7	8	9	10	11	12
Angle θ	51.4°	45°	40°	36°	32.7°	30°

Mandrels larger than 18 in. in diameter shall be constructed of special breakdown devices to facilitate entry through access manholes.



DEPARTMENT OF PUBLIC WORKS
STORM DRAINAGE DETAIL
THERMOPLASTIC PIPE INSPECTION
PIPE MANDREL

ISSUED: JULY 30, 2003
REVISED: _____
REVISED: _____
PLATE
D-6.03

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**BALTIMORE COUNTY, MARYLAND
REQUEST FOR BID NO. B-1059
SANITARY SEWER/STORM DRAIN CUT & COVER, ON-CALL, TERM CONTRACT**

SPECIAL PROVISIONS

PART B - SPECIFICATIONS FOR THE PRESSURE SEWER SYSTEM

1. DESCRIPTION.

- 1.1. The work proposed under this Contract shall include, but not necessarily be limited to, furnishing and installing sewage grinder pumps and chambers; gravity and pressure pipes, valves, fittings, and appurtenances; electrical service and pump control and high water alarm panels at the locations shown on the Plans and in accordance with the Contract Documents and approved installation details.

2. MATERIALS.

2.1 Materials Furnished by the County

2.1.1 The County will not furnish any materials for low-pressure sewer systems.

2.1.2 The Contractor may obtain potable water from the County's potable water system for testing the low pressure sewer system. The Contractor shall conform to the requirements of General Provisions, Section GP-7.02 when obtaining water for testing.

2.2 Contractor's Options

2.2.1 For *low pressure lines, open trench construction*, Contractor shall furnish Schedule 40, Schedule 80, SDR-21 polyvinyl chloride (PVC) pipe, or high density polyethylene (HDPE) pipe, ASTM D1248, SDR 11 unless otherwise indicated in the Contract Documents; or

2.2.2 For *low pressure lines, directional drilling*, Contractor shall furnish high density polyethylene (HDPE) pipe, ASTM D 1248, SDR-11 unless otherwise indicated in the Contract Documents.

2.2.3 The method of pressure sewer pipe installation is the option of the Contractor unless otherwise stated in the Special Provisions or on the Plans. Should the Contractor be forced to switch construction methods for any reason before or during construction, no additional compensation will be considered.

2.3 Detailed Material Requirements

2.3.1 Polyvinyl chloride (PVC) pipe and fittings and high density polyethylene (HDPE) pipe and fittings shall be homogeneous throughout and free from visible cracks, bubbles, blisters, holes, foreign inclusions, cuts, or scrapes on inside or outside surfaces, or imperfections which may impair the performance or life of the pipe.

2.3.2 Ductile iron pipe (DIP) and fittings shall conform to Section 1007 of the Standard Specifications, Sanitary Sewers and Sanitary Sewer House Connections. Pipe class for DIP shall be as shown on the Contract Drawings.

- 2.3.3. Electrical equipment and materials shall be new, listed by UL, and bear the UL label where UL requirements apply. Similar items in the project shall be products of the same manufacturer. Equipment and materials shall be of industrial grade and of standard construction.
- 2.3.4. The Contractor may furnish Schedule 40 or Schedule 80 polyvinyl chloride (PVC) pipe for those low pressure sewer lines indicated on the Contract Documents.
- 2.3.5. The Contractor shall furnish precast concrete manholes for terminal flushing connections, in-line valve and manhole, in-line cleanouts, and air/vacuum valve manholes, unless otherwise noted on the Contract Drawings.
- 2.3.6. Cast-in-place concrete for pipe anchorages and buttresses, sewage grinder pump anchors, and valve box supports shall be mix No. 2, as specified in Category 900 of the Baltimore County Standard Specifications, Section 902.
- 2.3.7. Trench excavation, backfill, and compaction – Section 1001.

2.4 Pressure Pipe

- 2.4.1. PVC pipe for the low pressure sewer system shall be manufactured from PVC compounds meeting the requirements of ASTM D 1784, Class 12454B. Pipe joints shall be as specified herein and elsewhere in the Contract Documents for the various locations within the piping system.
- 2.4.2. Solvent-cemented pipe joints at gravity grinder pump stubs and elsewhere shown on the Plans shall meet the materials and workmanship requirements of ASTM D 2672. Schedule 40 pipe fittings shall have solvent-cemented joints meeting the materials, workmanship and dimensional requirements of ASTM D 2466. Primer shall meet the materials requirements of ASTM F 656. Solvent cement shall meet the materials requirements of ASTM D 2564.
- 2.4.3. Rubber gaskets for gasketed joints shall meet the materials requirements of ASTM D 477. Gaskets and lubricants shall be made from materials that are compatible with the pipe material and will not support bacterial growth.
- 2.4.4. Low pressure sewer pipe less than 2 inches in diameter shall be Schedule 40 pipe with solvent welded joints meeting the materials, design, test, certification, and marking requirements of ASTM D 1785. Pressure sewer mains 2 inches in diameter and larger, unless otherwise indicated in these Contract Documents, shall be SDR 21 pipe with gasketed joints in accordance with ASTM D 2241 and ASTM D 3139 respectively. Sewage grinder pump discharge pipe 1 ½ inch in diameter and smaller shall have solvent-cemented joints. Threaded connections to Schedule 40 pipe shall only be made using Schedule 80 solvent by threaded adapters.
- 2.4.5. Low pressure sewer fittings for sizes 1 ½-inch diameter and smaller shall be Schedule 80 IPS fittings conforming to the materials, design, test, certification and marking requirements of ASTM D 1785, except as specified hereinafter.
- 2.4.6. Threaded pipe and fittings shall be Schedule 80. Physical dimensions and tolerances of PVC Schedule 80 pipe shall conform to ASTM D 1785. Threaded Schedule 80 fittings shall conform to ASTM D 2464.
- 2.4.7. Service tees for sewage grinder pump to low pressure sewer main connection shall be in accordance with Paragraphs 1 and 2 above and shall have gasketed mainline joints and female socketed outlets. Mainline and outlet sizes shall be as shown on the plans.

- 2.4.8. Couplings for connecting plain-end pieces of PVC pressure sewer pipe shall be furnished with end rings and gaskets specifically sized for PVC pipe. The couplings shall have ductile iron center and end rings meeting ASTM D 536, gaskets made from virgin SBR suitable for use with sewage and meeting ASTM D 200, and galvanized steel bolts and nuts.
- 2.4.9. As an alternate, the Contractor may utilize PVC pipe and fittings meeting the requirements of ASTM D 2241, wall thickness classification SDR-21, as modified herein. Pipe shall be furnished in lengths of not less than twelve feet (12'). Pipe with blisters, bubbles, cuts or scrapes on inside or outside surfaces, or imperfections which will impair the performance or life of the pipe, will be rejected.
- 2.4.10 Joints for SDR-21 PVC pipe and fittings shall be the integral bell gasketed joint designed; so when assembled, the elastomeric gasket inside the bell is compressed radially on the pipe spigot to provide a watertight joint. The gasket shall meet requirements of ASTM F477.
- 2.4.11 SDR-21 PVC pipe and fittings shall be legibly marked in accordance with ASTM D2241 and ASTM F679 and, in addition, marked with the date and location of manufacturer. Pipe not marked as indicated herein will be rejected, and pipe manufactured more than six (6) months before the date of the work site inspection will not be accepted.
- 2.4.12 Tapping saddles for connections to ductile iron and/or PVC gravity sewers shall be manufactured of high tensile ductile iron, ASTM A 536, protected with corrosion resistant paint. Saddles shall be furnished with two (2) stainless steel straps and a rubber gasket suitable for use with sewage.
- 2.4.13 Low Pressure Pipe – High Density Polyethylene (HDPE):
High density polyethylene (HDPE) pressure pipe and fittings for low pressure sewer systems shall be manufactured from polyethylene plastic meeting the requirements of ASTM D 1248, ASTM D 3035, and ASTM D 3350. Pipe and fittings shall meet the requirements of ASTM D 1248, Grade P34 Type III, Class C, Category 5.
- 2.4.13.1 Polyethylene pipe connections shall be performed by heat fusion in accordance with ASTM D 2657 and in strict accordance with the manufacturer's recommendations.
- 2.4.13.2 Connections between polyvinyl chloride and high density polyethylene pipe, including the service valve assembly, shall be made with gasketed flanged adapters. Flanges for PVC pipe shall be solvent welded (or threaded where specified in the Contract Documents) and heat fused for HDPE pipe. Bolts, nuts and washers to connect flanges shall be Type 304 stainless steel. Flanges for HDPE pipe shall meet the requirements of ANSI B16.5, Class 150. HDPE flange adapters and gasketed flanges may also be used to connect HDPE pipe to valves where indicated in the Contract Documents.
- 2.4.13.3 High density polyethylene pipe and fittings shall be SDR-11 with a pressure rating of 160 psi.
- 2.4.13.4 All main line pipe and fitting connections (joints) for any size pipe shall be performed using socket fusion, electrofusion or butt fusion. If butt fusion is used for main line pipe, joints shall be a minimum of 300 feet exclusive of main line fittings.

- 2.4.13.5 Connection between main line pipe and grinder pump laterals shall be made using electrofusion tapping tees or saddles, all meeting the SDR-11 pressure rating.

2.5 Valves

2.5.1. Check Valves (*outside grinder pump tank*)

Check valves shall be ball check type with injection molded polyvinyl chloride bodies. Valves shall have a full ported passageway. Valves shall have a minimum pressure rating of 125 psi and shall be compatible with threaded PVC pipe. Ball check valves shall be manufactured by Hayward Industrial Products, Inc. or equal.

2.5.2. Gate Valves

2.5.2.1 Provide bronze body gate valves at locations designated on the Plans and in the Details shown on the Drawings. Valves shall be supplied by the same manufacturer and suitable for the conveyance of raw sewage.

2.5.2.2 Bronze body gate valves shall be non-rising stem. The valve shall turn left (counterclockwise) to open and the valve component shall be of ample strength to withstand and operate under a working pressure of 150 psi, unless otherwise noted. The handwheel shall be aluminum or malleable iron. The thrust collar shall be effective for both opening and closing and furnished with flanged ends.

2.5.3. Ball Valve Curb Stops

2.5.3.1 Provide brass ball valve curb stops and extension stems at service valve assemblies. Valves shall be suitable for the conveyance of raw sewage.

2.5.3.2 The ball valves shall be non-rising stem-fitted with a 2-inch brass, square wrench nut adapter. The valve shall turn one-quarter ($\frac{1}{4}$) turn, ninety degrees (90°) to open and shall have a minimum working pressure rating of 200 psi. The ball valve shall be suitable for buried service and shall be manufactured in accordance with AWWA C-800. Valves shall be Ford or equal.

2.5.3.3 Valve extension stems shall be manufactured with cold rolled steel and have a centering ring. Top of stem shall have a 2-inch square operating nut and extend to a maximum of 3-feet below finished grade. Bottom of stem shall be compatible with the 2-inch brass square wrench nut adapter.

2.5.4. Sewage Air and Vacuum Valves

2.5.4.1 Sewage air and vacuum valves shall be of the type that automatically release air, gas or vapor under pressure, automatically exhaust large quantities of air during the filling of a system, and allow air to reenter during draining or when a vacuum occurs. Each valve shall include a back flushing attachment.

2.5.4.2 Sewage air and vacuum valves shall have an elongated cast iron body and cast iron cover. The internal compound lever mechanism shall be stainless steel; and all other internals, including float, shall be stainless steel to positively prevent a galvanic action. The stainless steel float shall withstand a minimum pressure of 1,000 psi. The exterior of the valve shall receive a phenolic primer.

- 2.5.4.3 As part of the shop drawing submittal process, the Contractor/supplier shall provide calculations to indicate the orifice size is adequate for the service intended.
- 2.5.4.4 The valve manufacturer shall furnish installation and maintenance instruction manuals.
- 2.5.4.5 Isolating valve shall be installed between the low pressure sewer main and air and vacuum valve. All internals shall be easily removed through the top cover without removing the main valve from the pipeline. Valve shall be APCO Series 400 as manufactured by Valve Primer Corporation or equal.

2.5.5. Corporation stops where called for or directed by the Engineer at the pressure sewer main shall have iron pipe threaded inlets.

2.6 Roadway Valve Boxes and Covers

- 2.6.1 Roadway valve boxes and covers shall be made of cast iron conforming to the requirements of ASTM A48, Class 30B.
- 2.6.2 The boxes shall be screw type with an arched bottom as manufactured by Bingham & Taylor or approved equal.
- 2.6.3 Covers shall be labeled "sewer."
- 2.6.4 Boxes shall meet the size and requirements indicated in the Details.
- 2.6.5 Cost for furnishing and installing valve boxes and covers to be included in the unit price bid for low pressure sewer pipe.

2.7 Grinder Pumps

2.7.1. GENERAL

- 2.7.1.1 The manufacturer shall furnish and the Contractor shall install complete factory-built and tested grinder pump station(s), each consisting of grinder pump(s) suitably mounted in a basin constructed of fiberglass or high density polyethylene (HDPE), electrical quick disconnect(s) (NEMA 6P) for grinder pump and all controls within the grinder pump station, pump removal system, shut-off valve, antisiphon valve, and check valve assembled within the basin, remote electrical alarm/disconnect panel, 30 AMP service disconnect panel, and all necessary internal and external wiring and controls. For ease of serviceability, all pump motor/grinder units shall be of like type and horsepower throughout the system. ***The grinder pump must be a progressing cavity type and have a successful operational history relative to a pressure sewer system application.***
- 2.7.1.2 Duplex tanks shall be separated into two (2) compartments by a watertight partition fitted with an emergency overflow weir located above the high water alarm which will permit the overflow of wastewater from one compartment to the adjacent compartment upon pump malfunction to provide backup capability. Each pump in the duplex tank shall have its own set of controls and electrical connections. For duplex units serving a commercial property, the

partition and two (2) inlets will be required, unless otherwise noted, and will have a total minimum reserve capacity of 120 gallons from the **on** level to invert of the inlet pipe.

2.7.2 SHOP DRAWINGS

2.7.2.1 After receipt of notice to proceed, the Contractor shall furnish a minimum of six (6) sets of shop drawings detailing the equipment to be furnished including dimensional data and materials of construction. The Engineer shall promptly review this data and shall return two (2) copies as accepted or with requested modifications. Upon receipt of accepted shop drawings, the manufacturer shall proceed immediately with fabrication of the equipment.

2.7.3 MANUFACTURER

2.7.3.1 The equipment specified shall be a product of a company experienced in the design and manufacture of grinder pumps for specific use in low pressure sewage systems. The company shall submit detailed installation and user instructions for its product; shall submit evidence of an established service program including complete parts and service manuals; and shall be responsible for maintaining a continuing inventory of grinder pump replacement parts.

2.7.4 OPERATING CONDITIONS

2.7.4.1 The Contractor shall submit a hydraulic analysis demonstrating that the pumps are capable of delivering flow rates necessary to facilitate acceptable performance based on the system design in the drawings. Grinder pumps must be capable of handling materials commonly found in sanitary sewage collection systems such as plastics, rags, grit, wood, etc.

2.7.5 WARRANTY

2.7.5.1 The Contractor shall require the grinder pump manufacturer to provide a part(s) and labor warranty on the complete station and accessories including, but not limited to, panel, electrical parts, and internal piping for a period of twenty-four (24) months after unit is placed into service (see Grinder Pump Testing and Storage in these Specifications for specific details). All service calls during this two-year period will be deemed warranty, unless the repairs are necessary due to non-equipment related failures such as vandalism, damage due to vehicular traffic, etc. When a service call comes into the County, the County will call the manufacturer/ supplier to respond within six (6) hours, twenty-four (24) hours a day, seven (7) days a week for the full two (2) year period. If the manufacturer/supplier fails to respond within six (6) hours of a call from the County, the Contractor will be charged \$150.00 per each hour after the six hours until the manufacturer/supplier/Contractor repairs the grinder pump station and the station is in service. Baltimore County will not be charged for any labor, freight, transportation, taxes, etc., for any service deemed warranty.

2.7.5.2 It will be the responsibility of the Contractor to supply the telephone number of the manufacturer/supplier or the person responsible for

responding to service calls from Baltimore County. The telephone number will be supplied to:

1. Chief, Bureau of Utilities
4421 Bucks Schoolhouse Road
Fullerton, MD 21237-3310
410-887-1893
2. Pump Division Dispatch
4423 Bucks Schoolhouse Road
Fullerton, MD 21237-3310
410-887-5210

2.7.5.3 Sewage Grinder Pump Testing and Storage

The Contractor shall install the grinder pump tank, shall connect it to the pressure sewer, and shall install the gravity house connection stub and cleanout as shown on the details on the plans and electrical components to power the pump.

- 2.7.5.3.1 The supplier of the grinder pumps will inspect the installation, will install a test pump and will test the unit, including meggering all wires between the tank and the panel. Once the unit is accepted by the supplier, the inspector will complete the "Grinder Pump Connection Form" and will transmit the signed form to the Department of Permits and Development Management and the Bureau of Utilities (Pump Division Dispatch, Pumping and Treatment Division).
- 2.7.5.3.2 All pumps and pump control assemblies shall be retained at the manufacturer's expense within fifty (50) miles of the project in a temperature controlled, insured facility until notified that the homeowner is ready for hook up to the system.
- 2.7.5.3.3 At such time as the plumber receives his permit to connect the existing house to the unit and prior to any construction, he shall contact the supplier and shall make arrangement to have the pump and controls delivered and installed and/or the system tested within two (2) days of the plumber's request. All wires between the tank and the panel shall be meggered again by the supplier prior to installing the pump and controls to insure no wires have been damaged. If the test shows any wires have been damaged, it shall be the plumber's responsibility to repair the damage, to the supplier's satisfaction, prior to installation of the pump.
- 2.7.5.3.4 After the plumber connects the existing house to the grinder pump and upon acceptance and completion of the installed, functioning grinder pump, the supplier will complete a "Start Up Report," one (1) copy of which will be supplied to Pump Division Dispatch of the Bureau of Utilities and one (1) copy to Construction Contracts Administration Division. The supplier must submit the *start-up report* to the Bureau of Utilities within 48 hours of acceptance and

completion of the installed, functioning grinder pump. Only after the start-up reports have been received by the Bureau of Utilities will the pump will be accepted into the system, and the two (2) year warranty will commence. The presence of a Public Works Inspector is not necessary at the time the supplier and the plumber install the pump. However, the Public Works Inspector must be notified by the supplier 48 hours prior to installation of the pump.

2.7.5.3.5 The cost for the supplier to do the above work shall be included in the Contractor's unit price bid for grinder pump installation complete in place.

2.7.5.3.6 If the Contractor determines (and with written concurrence from the manufacturer) that removal and storage of the grinder pump unit and controls are not necessary after the initial testing, the grinder pump unit and controls may stay in the grinder pump station for storage in accordance with the manufacturer's approved storage methods. Regardless of whether the pump and controls are left in the tank or stored in a controlled environment, it will be the Contractor's responsibility and expense to replace (not repair) any part of the grinder pump station that fails at the time of final testing. Final testing will be performed immediately after plumber tie-in; if any replacements are needed, final testing will be repeated. The controls are considered as one (1) entity; and as such, any one component of the controls fails, then complete controls shall be replaced. After any replacements, final retesting, and submission of the start-up report, the grinder pump station will be accepted into the system; and the two-year warranty will commence.

2.7.5.4 Quality Assurance. Wastewater Grinder Pump Manufacturer's Certificate and Warranty:

2.7.5.4.1 Manufacturer's certificate for each type or size of grinder pump shall state that the equipment has been installed under either continuous or periodic supervision of the manufacturer's authorized representative; it has been adjusted and initially operated in the presence of the manufacturer's authorized representative; it is operating in accordance with the specified requirements and to the manufacturer's satisfaction.

2.7.5.4.2 In addition to the Contractor's guarantee, the manufacturer shall warrant its product to be free from defects in materials and factory workmanship for a period of two (2) years from the date that the grinder pump unit is placed into service as stated above. Repairs or parts replacement required during the two (2) year warranty as a result of any defect shall be made without charge during this period.

- 2.7.6.1 The grinder pump shall be an easily removable assembly containing pump, motor, grinder, check valve, antisiphon valve, electrical quick disconnect and wiring. The watertight integrity of the pump unit shall be established by factory test at a minimum of 5 psig.
- 2.7.6.2 Pump(s) shall be manufactured in the United States. The pump housing, grinder housing, and motor housing shall be constructed of high quality ASTM Class 30 minimum cast iron.
- 2.7.6.3 The pump shall be designed for handling residential sanitary sewage. In order to reduce friction and to provide superior wear resistance, the stainless steel pump rotor shall be either chrome plated or highly polished. Casting marks and other imperfections on the rotor surface will not be allowed. The pump stator shall be of a specifically compounded elastomer designed and warranted for use in wastewater. Its physical properties shall include high tear and abrasion resistance, grease resistance, water and detergent resistance, temperature stability, good aging properties, and outstanding wear resistance. The pump shall have a two (2) bearing design consisting of an upper ball bearing and a lower ball bearing. Sleeve-type bearings will not be acceptable. The pump shall utilize a single mechanical seal.

2.7.7. GRINDER

- 2.7.7.1 The grinder shall be placed immediately below the pumping elements and shall be direct-driven by a single, one-piece stainless steel motor shaft. The grinder impeller assembly shall be securely fastened to the pump motor shaft. The grinder will be of the rotating type with a stationary hardened shredding ring spaced in accurate close annular alignment with the driven impeller assembly which shall carry a minimum of two (2) hardened Type 400 series stainless steel cutter bars. This assembly shall be dynamically balanced and shall operate without objectionable noise or vibration over the *entire* range of recommended operating pressures. The grinder shall be constructed so as to eliminate clogging and jamming under all normal operating conditions including starting. Sufficient vortex action shall be created to scour tank free of deposits or sludge banks which would impair the operation of the pump. These requirements shall be accomplished by the following in conjunction with the pump:
- a) The grinder shall be positioned in such a way that solids are fed in an upward flow direction.
 - b) The impeller mechanism must rotate at a nominal speed of no greater than 1800 rpm.
- 2.7.7.2 The grinder shall be capable of reducing all components in normal domestic sewage, including a reasonable amount of "foreign objects," such as paper, wood, plastic, glass, rubber and the like, to finely-divided particles which will pass freely through the passages of the pump and the 1- $\frac{1}{4}$ " diameter stainless steel discharge piping.
- 2.7.7.3 In order to demonstrate adequate flow velocity and grinding capability, the grinder pump shall be capable of passing a series of stringy type solids (diapers, rags, feminine products, etc.) through the pump without roping or winding the material in or immediately below

the pump suction. The grinding mechanism must be capable of handling reasonable amounts of grit often found in domestic sewage systems.

2.7.8. ELECTRIC MOTOR

2.7.8.1 As a minimum, the motor shall be a one (1) horsepower, 1725 rpm, 240 volt 60 hertz, one (1) phase, capacitor start, ball bearing, squirrel cage induction type with a low starting current not to exceed 30 amperes and high starting torque of minimum 8.4 foot pounds. Inherent protection against running overloads or locked rotor conditions for the pump motor shall be provided by the use of an automatic reset, integral thermal overload protector incorporated into the motor. This motor protector combination shall have been specifically investigated and listed by Underwriters Laboratories, Inc.(UL), for the application. The automatic reset can be eliminated provided the pump manufacturer can demonstrate, both electrically and hydraulically, that if all pumps run simultaneously, the pumps will not shut off and will not be damaged due to thermal overload. Permanent split capacitors will not be permitted.

2.7.9. CONTROLS

2.7.9.1 Non-fouling wastewater level detection for controlling pump operation shall be supplied. High-level sensing will be accomplished in a manner so that if the main power breaker is thrown, the alarm will still activate.

2.7.9.2 Grinder pump station controls shall be Nationally Recognized Testing Laboratory (NRTL) certified to UL requirements. The controls can be located within the envelope of the grinder pump station or wall-mounted within the alarm panel. Controls shall include circuit breakers and all necessary components to accomplish proper pump operation. The pump controls shall be serviceable without the need for a confined space entry as defined by OSHA. All electrical wires to the controls shall have electrical quick disconnect(s) (NEMA 6P).

2.7.10. MECHANICAL SEAL

2.7.10.1 Motors shall be equipped with rotary shaft seal to prevent leakage between the motor and pump. The materials of construction shall be carbon for the rotating face and ceramic for the stationary face, lapped and polished to a tolerance of one (1) light band with 300 stainless steel hardware with all elastomer parts of Buna-N.

2.7.11. TANK AND INTEGRAL ACCESSWAY

2.7.11.1 All seams created during tank construction are to be thermally welded and factory tested for leak tightness. The tank shall be provided with a means of venting sewage generated gases but shall not allow any storm water into the tank. The simplex tank shall have a minimum 15-gallon reserve capacity above the high water alarm. Duplex tank shall have 15 gallons reserve capacity above the high water alarm on each side of the partition. No field assembly or field adjustment of station height will be permitted without prior written approval from the Engineer. All stations shall have all necessary

penetrations molded in and factory sealed. **No field penetrations shall be acceptable.**

2.7.12. BASIN ASSEMBLY

- 2.7.12.1 The basin shall be fiberglass reinforced polyester resin or HDPE. The basin shall be furnished with one (1) flexible inlet grommet for simplex grinder pumps, located 180° from the discharge pipe (unless approved by the Engineer), and two (2) flexible inlet grommets for duplex pumps to accept a 4.5" OD DWV pipe. These inlet inverts shall be a minimum of 28 inches above the tank bottom. The basin shall have a minimum burial that insures all piping to be below frost line or of the depth as shown in the Contract Specifications, whichever is greater.
- 2.7.12.2 The accessway shall be an integral extension of the basin. If a rail system is used for pump assembly removal, a minimum 30-inch inside diameter simplex and minimum 36-inch inside diameter duplex basin shall be provided. A minimum 24-inch inside diameter accessway and a maximum 30-inch diameter lid must be provided on all grinder pump stations.
- 2.7.12.3 It shall be furnished with a molded polyethylene watertight lid or a lid as approved by the Engineer. The lid and all panels shall be furnished with an approved locking device and lock. The lock/padlock shall be a "break open lock" approved by Baltimore County Fire Department. Two (2) sets of keys, tagged for the specific location, shall be provided to the County. All locks on this project to be keyed the same.
- 2.7.12.4 For flotation or buoyancy calculation, the water level shall be considered at ground level.
- 2.7.12.5 Basin wall must withstand the pressure exerted by saturated soil loading at maximum bury depth. Saturated soil weight is assumed to be 120 pounds per cubic foot. The basin wall and bottom will withstand 150% the anticipated maximum pressure exerted on the basin. All station components must function normally when exposed to these loadings. Basin must be Nationally Recognized Testing Laboratory (NRTL) approved to UL requirements.

2.7.13. INTERIOR PIPING

- 2.7.13.1 All discharge piping and fittings shall be constructed of 300 series stainless steel and shall terminate with a stainless steel 1-¼ inch female NPT fitting.

2.7.14. CHECK VALVE

- 2.7.14.1 The pump discharge shall be equipped with factory-installed integral check valve built into the discharge pipe. This valve will provide a full-ported passageway when open and shall introduce a friction loss of less than 6 inches of water at maximum rated flow. Working parts will be made of a 300 series stainless steel. The valve operation shall provide maximum seating capability, even at a very low back pressure. If a rail system is used for pump assembly removal, the valve body shall be stainless steel. If a rail system is not used, the

valve body shall be an injection molded part made of glass filled PVC.

2.7.15. ALARM DISCONNECT PANEL

- 2.7.15.1 Each grinder pump station shall include a NEMA 4, UL listed alarm/disconnect panel suitable for wall or pole mounting. The NEMA 4 enclosure shall be manufactured of fiberglass or UV stabilized thermal plastic to assure corrosion resistance. The enclosure shall include a hinged, pad lockable cover, secured inner door, and component knockouts.
- 2.7.15.2 For each pump, the panel shall contain one (1) minimum 15 amp dedicated double pole circuit breaker for the power circuit and one (1) 15 amp dedicated single pole circuit breaker for the alarm circuit and one (1) 15 amp dedicated convenience outlet circuit. The panel shall contain at least, but not limited to, terminal blocks, integral power bus, push-to-run feature, and a complete alarm circuit.
- 2.7.15.3 The visual alarm lamp shall be inside a red fluted lens acceptable to Baltimore County. Visual alarm shall be mounted to the top of the enclosure in such a manner as to maintain NEMA 4 rating.
- 2.7.15.4 The audio alarm shall be a printed circuit board in conjunction with a minimum 86dB buzzer with quick mounting terminal strip mounted in the interior of the enclosure. The audio alarm shall be capable of being deactivated by depressing a push-type switch which is encapsulated in a weatherproof silicone boot and mounted on the bottom of the enclosure. Panel shall have a duplex GFI receptacle mounted inside the enclosure.
- 2.7.15.5 The entire alarm/disconnect panel, as manufactured, shall be listed by Underwriters laboratories, Inc.

2.7.16. SERVICEABILITY

- 2.7.16.1 The grinder pump unit shall have a minimum of one (1) lifting hook complete with harness connected to its top to facilitate easy removal when necessary. All mechanical and electrical connections must provide easy disconnect accessibility for unit removal and installation. The electrical disconnects shall be plug-in type easily operated. A push-to-run feature will be provided for field trouble shooting.

2.7.17. REMOVAL SYSTEM

- 2.7.17.1 The grinder pump station shall be equipped with an easily removable core assembly containing pump, motor, grinder, check valve, antisiphon valve, electrical quick-disconnect and wiring. The assembly shall be supported by and attached to an intermediate level that separates the wet well from the accessway; or the station must be equipped with a 300 series, stainless steel, "C" channel rail system permitting removal of the assembly. A 3/8-inch diameter polypropylene rope shall be supplied for pump removal.

2.7.18. LEVEL DETECTION

2.7.18.1 Non-fouling wastewater level detection for controlling pump and alarm operation shall be accomplished by use of a detection mechanism specifically designed for use in a sewage grinder pump basin. Level detection shall not require any regular preventative maintenance. The control assembly shall be specifically approved by a Nationally Recognized Testing Laboratory to UL requirements. Conventional mercury, mechanical, or swing arm floats will not be acceptable. All electrical wires to the level detection shall have electrical quick disconnect(s) (NEMA 6P).

2.7.19. SHUT-OFF VALVE

2.7.19.1 Grinder pump discharge piping shall be equipped with a factory-installed, full port, stainless steel type manual ball valve with a minimum rated pressure of 150 psi. The shut-off valve must be able to be removed from inside the tank by a method approved by the Engineer.

2.7.20. ANTISIPHON FUNCTION

2.7.20.1 The pump shall be constructed with a positively primed flooded suction configuration. As added assurance that the pump cannot lose prime even under negative pressure conditions in the discharge piping system, the design shall provide protection against siphoning. This device will automatically close when the pump is running and open to atmosphere when the pump is off.

2.7.21. EXECUTION

2.7.21.1 *Factory Test*

2.7.21.1.1 All components for the grinder pump station shall be factory tested and certified. Certified test results shall be available upon request by Baltimore County. The Engineer (Baltimore County) reserves the right to inspect such testing procedures with representatives of the grinder pump manufacturer at the manufacturer's facilities and at their expense.

2.7.21.1.2 All completed stations shall be factory leak tested to assure the integrity of all joints, seams and penetrations. All necessary penetrations such as inlets, discharge fittings, and cable connections shall be included in this test along with their respective sealing means (grommets, gaskets, etc.).

2.7.21.2 *Delivery*

2.7.21.2.1 All grinder pump tanks, including ball valve, quick disconnect, and watertight penetrations, will be delivered to the job site 100% completely assembled, including testing, ready for installation. Grinder pump tanks will be individually mounted on wooden pallets or mounted by a method approved by the Engineer.

2.7.21.3 *Start-Up and Field Testing*

2.7.21.3.1 The Contractor shall provide the services of qualified factory-trained technician(s) who shall inspect the placement and wiring of each station, perform tests as specified herein, and instruct Baltimore County personnel in the operation and maintenance of the equipment before the stations are accepted by Baltimore County. All equipment and materials necessary to perform testing shall be the responsibility of the installing Contractor. This will include, as a minimum, a portable generator (if power is required) and water in each basin.

2.7.21.3.2 The Public Works Inspector must be notified 48 hours prior to the date and time of start-up and field testing.

2.7.21.3.3 Upon completion of the installation, the authorized factory-trained technician(s) will perform the following test on each station:

- (1) Install test pump and control unit and make field connection. The technician will perform the following test before the unit is started:
 - (a) establish volts at the unit
 - (b) meg all electrical wires between alarm box and unit
 - (c) check entire site for proper installation
- (2) Turn *on* the alarm power circuit.
- (3) Fill the wet well with water to a depth sufficient to verify the high level alarm is operating. Shut off water.
- (4) Turn *on* pump power circuit. Initiate pump operation to verify automatic *on/off* controls are operative. Pump should immediately turn *on*. Within one (1) minute, the alarm light will turn *off*. Within three (3) minutes, the pump will turn *off*.
- (5) Remove test pump and controls. No pumps or controls (i.e., starters, capacitors, or relays) shall be left on site until final installation.

Upon completion of the start-up and testing, the Contractor shall submit to Baltimore County the start-up report describing the results of the tests performed for each grinder pump station.

2.7.21.4 *Installation*

2.7.21.4.1 Earth excavation and backfill are specified under Baltimore County Specifications and/or these Specifications and the Drawings, and also are to be done as a part of the work under this section including any necessary sheeting and bracing. The Contractor shall be responsible for control of groundwater to provide a firm, dry subgrade for the structure and shall guard against flotation or other damage resulting from general water or flooding. The grinder pump stations shall not be set into the excavation until the installation procedures and excavation have been approved by the Engineer.

2.7.21.4.2 Remove packing material. Users instruction **MUST** be given to Baltimore County. Hardware supplied with the unit, if required, will be used at installation. The

basin will be supplied with one (1) flexible inlet grommet for simplex pump and two (2) flexible inlet grommets for duplex pumps for connecting the incoming sewer line. Appropriate inlet piping must be used. When moving tank, it should be lifted using all four (4) lifting eyes provided at the lower end of the basin. Do not use these eyes if a concrete collar has been attached to the tank. The basin may not be dropped, or rolled for any reason.

- 2.7.21.4.3 The finished grade shall slope away from the unit. The diameter of the hole must be large enough to allow for the concrete anchor and sewer house connection pipe and cleanout.
- 2.7.21.4.4 A 6-inch layer (minimum) of naturally rounded aggregate, clean and free flowing, with particle size of not less than 1/8 inch or more than 3/4 inch shall be used as bedding material under each unit. A concrete antiflotation collar, as detailed on the drawings and sized according to the manufacturer's instructions, shall be required and shall be precast to the grinder pump or poured in place. Each grinder pump station with its precast antiflotation collar shall have a minimum of three (3) lifting eyes for loading and unloading purposes. The unit shall be leveled and filled with water to the bottom of the inlet to help prevent the unit from shifting while the concrete is being poured. The concrete must be manually vibrated to ensure there are no voids. If it is necessary to pour the concrete to a level higher than the inlet piping, an 8-inch sleeve is required over the inlet prior to the concrete being poured. For each depth and size of tank, the manufacturer shall submit antiflotation and structural calculations to the Engineer. Calculations are to be based on worst case soil conditions.
- 2.7.21.4.5 The Contractor shall provide and install grinder pump house connection piping as shown on the Drawings. Four-inch (4") PVC Schedule 40 pipe is required.
- 2.7.21.4.6 Backfill with pea gravel from top of concrete antiflotation collar to six inches (6") minimum above grinder pump discharge pipe, then backfill with clean native earth, free of rocks, roots, and foreign objects, shall be thoroughly compacted in lifts not exceeding twelve inches (12") to a final proctor density of not less than 85%. Improper backfilling may result in damaged accessways. The grinder pump station shall be installed at a minimum depth of three feet (3') from grade to the top of the 1-1/4 inch discharge line to assure maximum frost protection. The finish grade line shall be three inches (3") or less below the top of the accessway, and final grade shall slope away from the grinder pump station.

2.7.21.4.7 All restoration will be the responsibility of the Contractor. Per unit costs for this item shall be included in the Contractor's bid price for the individual grinder pump stations. The properties shall be restored to their original condition in all respects including, but not limited to, curb and sidewalk replacement, landscaping, loaming and seeding, and restoration of the traveled ways as directed by the Engineer. The electrical enclosure shall be furnished, installed and wired to the grinder pump station by the Contractor. An alarm device is required on every installation; there shall be **no exceptions**. It will be the responsibility of the Contractor and the Engineer to coordinate with the individual property owner(s) to determine the optimum location for the "Alarm/Disconnect Panel."

2.7.22. OPERATION AND MAINTENANCE

2.7.22.1 *Spare Unit*

2.7.22.1.1 The Contractor will supply spare grinder pump units, controls and panels, complete with all operation controls, level sensors, pump/motor unit, grinder, control/power cords with quick disconnect and lifting harness, junction box, and a 1000-foot spool of wire.

2.7.22.1.2 Spare replacement pump units and electrical control panels and wire shall be provided and delivered to Baltimore County Bureau of Utilities. Contact Pump Division Dispatch at 410-887-5210 for delivery details.

2.7.22.1.3 The Contractor must deliver the spare pump units, controls, and wire immediately after installation of the first grinder pump and prior to the first 50% payment under the grinder pump bid item.

2.7.22.2 *Manuals*

2.7.22.2.1 The Contractor shall supply four (4) copies of operation and maintenance manuals to Baltimore County Bureau of Utilities, one (1) copy to the Inspector, and one (1) copy to the Bureau of Engineering and Construction.

2.7.23. GRINDER PUMP SIZING

2.7.23.1 The size of the grinder pump station shall be determined by the Contractor using the invert elevation of the 4-inch sewer house connection inlet and the existing ground elevation at the pump location, as shown on the Plans. It will be the Contractor's responsibility to install the grinder pump station at or below the grinder pump inlet invert, as shown on the Drawings.

2.7.24. SAFETY

2.7.24.1 The grinder pump station shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled and wired grinder

pump station assembly shall be Nationally Recognized Testing Laboratory (NRTL) approved by UL 778, UL 1951 and certified to CSA Std. 108. Such third party approval must include regular inspection of manufacturing facilities and methods. The grinder pump station must also display the NRTL logo and nameplate that states that the grinder pump station meets the above standards. Manufacturer must submit the NRTL file number(s) to the Engineer. Grinder pump stations without such documentation and approval will not be acceptable.

2.8 Electrical Equipment

- 2.8.1 Service entrance circuit breaker shall be two (2) wire, solid-neutral, 30 ampere, 120/240 volt circuit breaker, UL listed for service entrance, mounted in a NEMA 3R UL listed raintight enclosure. Raintight hubs for conduit entrances shall be provided. The enclosure shall contain neutral and equipment ground bars or studs. The cover or door of the enclosure shall have provision for padlocking. The padlock shall be a "break open lock" approved by Baltimore County Fire Department. The circuit breaker shall be General Electric Company Power Mark with type THQL breaker, or equal, as manufactured by Westinghouse Electric Corporation or Square D Company. The breaker shall be furnished with a handle locking device.
- 2.8.2. Grinder pump sub-panel and alarm shall be enclosed in a surface mounted, UL listed, NEMA 3R box with neutral and equipment ground bars or studs and a lockable cover. Each grinder pump shall be served by a 120/240 volt, single phase, 3 wire sub-panel. In addition to the above, each box shall contain the following equipment:
- 2.8.2.1 Circuit Breakers: One 2-pole, minimum 15 ampere unit; one single-pole, 15 ampere unit; and one (1) single-pole, 15 ampere ground fault interrupter GFI breaker.
- 2.8.2.2 The alarm relay shall have a 120 volt, 60 hertz operating coil and one normally-open and one normally-closed contact. Relay shall be Magnecraft W388ACQX4 or equal.
- 2.8.2.3 The following weatherproof material shall be mounted on the panel:
- (1) A minimum 86-decibel, 120 volt AC horn, Edwards No. 123A or equal.
 - (2) An illuminated red push-button alarm light button, XFMRTYPE, Westinghouse PB1GAOT1 or equal.
 - (3) A 2-pole, 2-wire, 15 ampere, 120-volt, NEMA 5-20R GFI receptacle; Arrowhart GF5242-XI or equal.
- a. Single conductors shall be stranded copper with type THWN insulation. Cables installed underground shall be type UF. Conductor size shall be as noted on the Approved Installation Details or Plans. Grounding electrode conductors may be insulated or bare. Equipment grounding conductors shall be insulated. Insulated equipment grounding conductors shall have green colored insulation.
- b. Cable/wiring for connection between the grinder pump and the control panel shall be as required by the pump manufacturer and shall meet NEC requirements for direct burial. Cable shall be provided by the pump manufacturer.

- (4) Conduit: Except as otherwise noted, conduit and fittings shall be Schedule 40 polyvinyl chloride, conforming to UL Standard 651 and manufactured by Carlon, Hatfield Wire and Cable, or equal. Rigid galvanized electrical metallic tubing shall conform to ANSI Standard C80.3 and shall be manufactured by Republic Steel Corporation, Triangle PWC Incorporated, or equal. Fittings shall be watertight, compression type, manufactured by Thomas and Betts, OZ/Gedney Company, or equal.
- (5) Nuts, bolts, screws, etc., shall be Type 304 stainless steel.
- (6) The Contractor shall be responsible for obtaining any and all permits required for electric installations.
- (7) Duplex pumps shall have a plaque prominently displayed in the accessway to notify servicemen of the presence of two (2) electrical sources in the chamber. The plaque shall read, *NOTE: THE TWO (2) GRINDER PUMPS IN THIS CHAMBER ARE POWERED FROM TWO (2) SEPARATE FEED LOCATIONS.*

2.9 Copper Detection Wire

2.9.1 Unshielded copper wire (#6 gage minimum) must be installed along with the pipe so that the County detection equipment may locate underground piping installed by open cut. The copper wire must be carried into the manholes without splices. The wire must be secured to the inside of the manhole. The wire must be carried to within 6 inches of the top slab. After installation of the wire, the Contractor must test for continuity, and a successful test is required prior to acceptance.

2.10 Concrete Manholes

2.10.1 Concrete manholes for flushing, isolation and air relief connections shall be manufactured in accordance with the Plans, the Standard Details and Section 1004.03 of the Standard Specifications.

3. CONSTRUCTION METHODS.

3.1 Sewage Grinder Pumps

3.1.1. The sewage grinder pump units shall be installed and wired in accordance with the Plans, as specified herein, and as directed by the Engineer.

3.1.2. The unit shall be handled by the lifting eyes furnished with the unit and in accordance with the manufacturer's recommendations. Units shall be set plumb on a firm foundation of granular material as shown, and a concrete anchor poured around the tank section. A poured-in-place concrete anchor shall be provided to prevent floatation of the unit in accordance with the Plans. The concrete anchor shall be placed below inlet and outlet piping.

3.2 Electrical

3.2.1 The Contract Documents indicate general arrangements and locations for equipment, conduit, and other work. Installed locations shall be determined in the field after consultation with the Engineer and a careful review of site conditions, approved Shop Drawings, and the Contract Documents to assure a workable

installation. Independent power sources for each pumping unit shall originate at the serviced structure.

3.2.2 Grounding of all electrical installations shall be in accordance with the National Electrical Code and the requirements of the Baltimore Gas and Electric Company. Maintain ground continuity throughout the system by installing a separate stranded copper green-insulated conductor with all branch circuit and feeder wiring installed in conduit. Connect the grounding conductor to the supplemental grounding system as well as the existing ground system. Size the grounding conductors as indicated and specified and install grounds in accordance with National Electrical Code.

3.2.3 Connections to equipment shall be in accordance with the manufacturer's recommendations and local and National Electric Codes.

3.2.4 Wall-hung equipment shall be anchored in place in a rigid and secure manner, utilizing fastenings that are appropriate for the load and the mounting surface in accordance with local and national electric codes. All cabinets shall be spaced minimum 1/4-inch away from walls by means of metal spacers or preformed projections on the cabinet to automatically provide the required space between the cabinet and the mounting surface.

3.2.5 Conductor and Equipment Identification

3.2.5.1 Provide identification to facilitate the control of circuits and equipment. Provide identification labels on all wires in every cabinet and outlet boxes.

3.2.5.2 Color code 120/240 volt system conductors as follows: black, Phase A; red, Phase B; and white, neutral. Utilize colored insulation.

3.3 Solvent-Cemented Polyvinyl Chloride (PVC) Pipe Joints

3.3.1. Solvent-cemented polyvinyl chloride (PVC) pipe joints shall be assembled only by personnel knowledgeable and experienced in properly making solvent type joints in accordance with the solvent cement manufacturer's recommendations, as specified in ASTM D 2855, and as detailed herein. Ends shall be cut square with the pipe axis using a fine-tooth hand or power saw. Pipe cutters not specifically designed for cutting plastic pipe or that raise a burr or ridge at the cut end of the pipe shall not be used. Cut ends shall be chamfered and deburred prior to joint assembly.

3.3.2. Surfaces to be joined shall be cleaned and free of dirt, moisture, oil and other foreign materials. Cleaning shall be accomplished by wiping with a clean dry cloth, a chemical cleaner, or mechanical means. The surface temperature of the mating surfaces shall not exceed 110° F at the time of assembly. Pipe and fittings shall be shaded from direct exposure to the sun prior to assembling the joints if required.

3.3.3. The inside socket surfaces and the male end of the pipe shall be softened by application of one or more coats of primer. After the surfaces have been softened, and while still wet with primer, cement shall be applied to both surfaces in a uniform and even manner, taking care to keep excess cement out of the socket. Immediately after applying the last coat of cement to the pipe, and while both the inside socket surface and the outside surface of the male end of the pipe are soft and wet with solvent cement, forcefully bottom the male end of the pipe in the socket. Turn the pipe or fitting one-quarter turn during assembly to distribute the cement evenly. Hold the joints firmly together until the cement has received its initial set.

- 3.3.4. Handle newly assembled joints carefully until the cement has gone through the set period. Set time shall be in accordance with the manufacturer's recommendations or the following, whichever is longer:

<u>Minimum Time</u>	<u>Ambient Temperature</u>
30 minutes	60 to 100°F
1 hour	40 to 60°F

Cemented joints shall not be backfilled or disturbed during the set time. Pressure testing shall not be conducted until at least 24 hours after solvent cement joints have been assembled.

3.4 Threaded Polyvinyl Chloride (PVC) Joints

- 3.4.1 When threaded polyvinyl chloride (PVC) joints are called for in the Contract Documents, the following procedures shall be followed:

- 3.4.1.1. Male and female threaded areas shall be clean and free of sand and dirt.
- 3.4.1.2. Joints shall be lubricated and sealed with non-hardening pipe dope or Teflon tape.
- 3.4.1.3. Special care shall be taken when starting threads to prevent cross threading.
- 3.4.1.4. Hand tighten joint first, then wrench tighten only enough to produce a leak-free joint.

3.5 Pressure Sewer Installations

- 3.5.1. Pressure sewers shall be installed to the line and grade shown on the Plans. When crossing sub-surface obstructions, 12-inch minimum clearance shall be maintained between the pipe and the obstruction by open cut or directional drilling/boring.
- 3.5.2. When crossing water lines, sewer pipe sections shall be centered over the waterline so that joints on both sides are the maximum distance from the waterline.
- 3.5.3. All buried metal pipe and/or appurtenances that do not have factory applied protective coating or whose coatings have been damaged shall be field coated with two (2) coats of a bituminous coating after installation.
- 3.5.4. Directional Drilling Alternative
Where the Contractor elects to install the low pressure sewer by directional drilling, he shall submit the following:
 - 3.5.4.1 Operating Experience
The Contractor shall demonstrate his expertise in trenchless pipe installation by providing a list of five (5) utility references for whom work on similar installations has been performed during the previous three (3) years. References shall include name and telephone number of the utility's contact who was in responsible charge of the trenchless installations performed. Additionally, the Contractor shall provide a list of five (5) similar projects on which pipelines were installed by the trenchless methods described herein.
 - 3.5.4.2 Equipment

Contractor shall submit details of equipment and written procedures with working drawings describing in detail the proposed boring method. Submittal shall include information pertaining to working and receiving shaft, dewatering, method of spoils removal, size and capacity of equipment, capabilities for installing pipes on a curve, type of cutter head, drilling fluid type, method of monitoring line and grade and detection of surface movement.

- 3.5.4.3. For any pressure sewer line where directional boring is not specifically indicated as the means of installation, the Contractor has the option to install the lines in whole or part by conventional trenching methods or install the lines by directional boring. The Contractor also has the option to install underground electrical services for grinder pumps by means of directional boring or conventional trenching methods.

3.5.5 Installation

- 3.5.5.1 Installation shall be in a trenchless manner producing a continuous bore. The number of access pits shall be kept to a minimum.
- 3.5.5.2 The drilling system shall be remotely steerable and permit electronic monitoring of tunnel depth and location. Accuracy with an 8-foot deep pipe installation shall be \pm two inches (2"). The drilling device shall be capable of drilling for a 90°, 35-foot radius curve.
- 3.5.5.3 The equipment must be capable of boring the following lengths in single bores, and successive boring pits will not be permitted to be any closer together than the following distances:

<u>Pipe Size</u>	<u>Boring Distance</u>
1 in. to 1 ½ in.	400 feet
2 in. to 2 ½ in.	350 feet
3 in. to 4 in.	300 feet

- 3.5.5.4 Equipment shall be fitted with a permanent alarm system capable of detecting an electrical current. The system will have an audible alarm to warn the operator when the drill head nears electrified cables.
- 3.5.5.5 Drilling must be performed by a fluid cutting process (high pressure/low volume) utilizing a liquid clay (bentonite). The clay lining shall maintain borehole stability and shall provide lubrication to reduce frictional drag while the pipe is being installed in the bore hole. In addition, the clay fluid must be totally inert and contain no chemicals which could contaminate ground water. The Contractor shall have appropriate equipment on site to remove drilling spoils from the access pits. All drilling spoils must be removed from the site and disposed of at an approved location as excess and/or unsuitable excavation. Disposal of drilling spoils in the access pits, sanitary sewer, storm drain, or other water courses will not be permitted.
- 3.5.5.6 After the initial bore has been completed, a reamer will be installed at the termination pit; and the pipe will be pulled back to the starting access point. The reamer must be capable of discharging liquid bentonite to facilitate the installation of the pipe into a stabilized and lubricated tunnel.
- 3.5.5.7 Reaming diameter will not exceed 1.5 times the diameter of the product pipe being installed.

- 3.5.5.8 The product pipe being pulled into the tunnel will be protected and supported so that it moves freely and is not damaged by stones and debris on the ground during installation.
- 3.5.5.9 Pullback forces will not exceed the allowable pulling forces for the product pipe.
- 3.5.5.10 The Contractor will allow sufficient lengths of product pipe to extend past the termination point to allow connections to adjacent pipe sections. Pulled pipe will be allowed twenty-four (24) hours of stabilization prior to making tie-ins. The length of extra product pipe will be sufficient to make all necessary connections and tests.

3.5.6 Safety

- 3.5.6.1 All crews are to be provided with grounded safety mats, heavy gauge ground cables with connectors, hot boots and gloves, to minimize the risk of electrocution of any crew members or operators.
- 3.5.6.2 Mechanical, pneumatic or water jetting methods will not be acceptable due to the risk of surfaces subsidence and damage.
- 3.5.6.3 Upon completion of boring and pipe installation, the Contractor shall remove all spoils and drilling fluids from the starting and termination pits. The pits are to be restored to their original condition.
- 3.5.6.4 Where manholes or grinder pumps are to be installed, adequate protection, in the form of steel plates in trafficked areas and timber shutters in other areas, shall be installed until the manhole or grinder pump is installed and the pit is backfilled and stabilized.

3.5.7 Obstruction/Alignment

- 3.5.7.1 The bore shall not deviate from the horizontal alignment shown on the drawings by more than one foot (1'). If obstructions are encountered during the boring operation, the Engineer should be notified immediately. With approval of the Engineer, the Contractor shall attempt to go around the obstruction. If it is found that deviation of more than three feet (3') from the horizontal alignment is required to bypass the obstruction, the Engineer should be immediately consulted to determine if adjustments in the alignment are required. At no time shall the alignment be allowed to exit the sewer easement or right-of-way. To prevent dips and high points in the pipeline profile, a vertical deviation of no more than \pm two inches (2") will be permitted.
- 3.5.7.2 The Contractor shall mark the location and depth of the alignment with spray paint (on paved surfaces) and wooden stakes on non-paved surfaces at fifty foot (50') intervals. The Contractor shall record the depth of the sewer at the fifty foot (50') intervals and shall provide a copy of the record to the Engineer upon completion of the installation. The Contractor shall measure or survey locations where horizontal alignment deviates from the proposed alignment and incorporate the changes in the alignment in the as-built drawings.
- 3.5.7.3 If the bore pipe installation has deviated beyond the noted tolerances, it shall be the Engineer's option to require the Contractor to abandon the bore or to remove the installed pipe and rebore or reinstall the pipe on the correct alignment at no additional cost to the County.

3.5.7.4 Install unshielded copper wire (6 ga.min.) along with the pipe for all methods of installation so that the County detection equipment can locate underground piping installed. The copper wire must be carried into all manholes without splices. The wire must be secured to the inside of the manhole. The wire must be carried to within 6 inches of the top slab. After installation of the wire, the Contractor must test for continuity; and a successful test is required prior to acceptance.

3.5.8 Excavation of Access Pits

3.5.8.1 Excavation of access pits shall be performed in accordance with Section 1008 of the Standard Specifications.

3.6 Pressure Sewer Connections and Appurtenances

3.6.1. Sewage grinder pump discharge lines shall be valved at the property line or where indicated on the Plans. The Contractor shall furnish and install corporation stops where applicable, PVC socket to threaded adapters, valve boxes and covers, and concrete valve box supports in accordance with the Plans.

3.7 Gasketed polyvinyl chloride (PVC) pressure sewer pipe and fitting shall be installed in accordance with AWWA Manual No. 23, except that chlorination is not required.

3.8 Polyvinyl chloride (PVC) gravity sewer pipe and fittings shall be installed in accordance with Section 1007.

3.9 Gate and check valves shall be installed in accordance with the Plans and the manufacturer's recommendations.

3.10 Electrical Upgrades for Existing Dwelling

3.10.1 The Contractor is hereby notified that some dwellings within the area of the work may not have adequate electrical supply to operate the grinder pumps. The Contractor will be responsible for securing any electrical permits from BGE and/or Baltimore County. The costs of any permits associated with the electrical upgrade shall be included in the price for that bid item. The costs of any permits associated with the electrical connection of the grinder pumps shall be included in the price for the grinder pumps.

3.10.2 The Contractor shall furnish all materials, labor, tools, equipment, disposal of old material; furnishing and installation of a new service entrance cable and weatherhead to present house meter box.

3.10.3 BGE shall furnish and pay cost for the power tie-in to the weatherhead and meter box.

3.10.4 The Contractor shall coordinate his work with those of other forces in order to assure a functional installation of each grinder pump.

3.11 Thrust Blocks

3.11.1 Provide thrust blocks on all PVC pressure sewer bends, tees, plugs and caps in accordance with the Drawings. The entire face of earth against which the thrust block will bear shall be firm bearing, flat, undisturbed soil and at the proper angle to counteract the thrust. Concrete thrust blocks shall be cured for minimum of three (3) days before testing.

4. QUALITY ASSURANCE.

4.1 Material and Performance Testing

4.1.1. Materials

- 4.1.1.1. The Engineer will inspect all materials before and after installation to ensure compliance with these Contract Documents. When specific materials tests are called for in the referenced standards and specifications, the County shall have the option of requiring that any or all of these tests be performed for materials furnished for a specific project. When testing is required, it shall be the responsibility of the Contractor to have the test performed, as specified, at no additional cost.
- 4.1.1.2. Polyvinyl chloride (PVC) pipe and fittings shall be homogeneous throughout and free from visible cracks, bubbles, blisters, holes, foreign inclusions, cuts, or scrapes on inside or outside surfaces, or imperfections which may impair the performance or life of the pipe.
- 4.1.1.3. Electrical equipment and materials shall be new, listed by UL, and bear the UL label where UL requirements apply. Similar items in the project shall be the products of the same manufacturer. Equipment and materials shall be of industrial grade and of standard construction.

4.1.2. Field Tests

4.1.2.1. General

- (1) After installation, grinder pumps and chambers, gravity and pressure piping and appurtenances, and connections will be inspected by the Engineer and shall be Contractor tested for compliance with the Contract Documents. The Contractor shall furnish all labor, tools, materials, and equipment necessary to perform the specified tests.
- (2) The Contractor shall schedule all tests with the Engineer at least 48 hours in advance and shall conduct all testing in the presence of the Engineer. No testing shall begin until the Engineer has reviewed and approved the Contractor's testing plan specified herein.
- (3) If the gravity pipe, pump chamber, PVC pressure pipe, pressure sewer main connections, sewage grinder pumps, or electrical control and alarm systems fail the inspections and/or tests, the Contractor shall, at his own expense, replace, repair, adjust, seal, or reseal the failed component until all requirements are met.

4.1.2.2. Pump chambers, valve vaults and other structures will be visually inspected by the Engineer for leakage. No visible leakage shall be allowed.

4.1.2.3. Testing

- (1) Pressure sewer lines, pipe, valves, and fittings shall be hydrostatically pressure tested by the Contractor in accordance with the following:
- (2) Contractor shall submit a testing plan for review by the Engineer prior to beginning testing. Testing plan shall include calculations, locations and sources for test water, methods for maintaining test pressure, valves to be open or closed, segments to be tested, equipment to be used, temporary bulkhead locations. Three (3) copies of the test records showing length, locations, stations, pressures and test times shall be submitted to the Engineer after testing is complete.

Fire hydrant permits must be obtained if water is required from a hydrant. A backflow preventer and a meter is required to use water from a fire hydrant. A County meter and backflow preventer must be used.

- (3) The pipeline under test shall be slowly filled with water, all air eliminated from the system, and the system pressurized to 125 PSI at the highest point under test. Valves in the line shall be opened full and closed while the line is under test pressure. The pipeline will be accepted if it can hold 125 PSI for 30 minutes without any evidence of leaking.

5. MEASUREMENT AND PAYMENT.

5.1 Introduction

5.1.1. This section of the specifications describes methods for measurement and payment of the work performed under this Contract. Except as provided in this section, measurement of work will not be made and payment for work will be held to be included in, and incidental to, the unit prices bid for various scheduled items in the proposal. Measurement and payment for fixed price contingent items will be made in accordance with Baltimore County Standard Specifications.

5.2 Bid Items

5.2.1. Grinder Pump (Simplex or Duplex – Various Sizes)

5.2.1.1 Measurement for payment will be on a unit basis.

5.2.1.2 Payment will be made at the unit price listed in the proposal for bid item for duplex grinder pump, various sizes, including controls and for simplex grinder pump, various sizes, including controls. Payment of 50% (fifty-percent) of the Contract bid price listed in the proposal for the grinder pump (simplex or duplex) various sizes item will be made after the station has been installed. The remaining 50% of the Contract bid price will be paid after complete restoration and testing of the station has been accomplished.

5.2.1.3 The price shall include the furnishing and installing of all materials, labor, tools, equipment; excavation of all materials; sheeting, shoring and bracing; control of water; borrow, backfilling and compacting; disposal of excess or unsuitable materials; grinder pumps, accessway and controls, all electrical wires/cables needed from the grinder pump station to the alarm and disconnect panel; concrete; bedding material; electrical permits; electrical connection; testing,

storage and warranty; complete restoration such as but not limited to road, driveways, sidewalks, curbs and lawn areas; necessary repairs or patches due to openings in the roadway (including temporary and permanent paving) in accordance with the Standard Details for Construction when ordered by the Engineer, and all other incidental items and appurtenances necessary to complete this item of work.

5.2.2. Pressure Sewer

- 5.2.2.1 Measurement for payment for pressure sewer will be on a linear foot basis. Measurement will be made horizontally along the centerline of the pipe for the length and size actually installed.
- 5.2.2.2 Payment will be made at the unit price per linear foot for the sizes listed in the Proposal for bid item, "Pressure Sewer," complete in place.
- 5.2.2.3 The price shall include the furnishing and installing of all materials, labor, tools, equipment; excavation of all materials; sheeting, shoring and bracing, control of water; borrow; backfilling and compacting; excavations and disposal of excess or unsuitable materials, pipe, fittings, service valves, assembly, valve boxes, bedding materials, buttresses; copper detection wire; complete restoration such as but not limited to road, driveways, sidewalks, curbs and lawn areas; necessary repairs or patches due to openings in the roadway (including temporary and permanent paving) in accordance with the Standard Details for Construction when ordered by the Engineer, and all other incidental items and appurtenances necessary to complete this item of work.

5.2.3. Terminal Flushing Connection

- 5.2.3.1 Measurement and payment for the terminal flushing connection will be made on a unit basis per each terminal flushing connection.
- 5.2.3.2 Payment will be made at the unit price each listed in the proposal for bid item, "Terminal Flushing Connection."
- 5.2.3.3 The price shall include the furnishing and installing of all materials, labor, tools and equipment; furnishing and installing manhole and frame and cover; excavation necessary for this bid item; sheeting, shoring and bracing; control of water; borrow, backfilling, compaction, disposal of excess and unsuitable material; complete restoration such as but not limited to road, driveways, sidewalks, curbs and lawn areas; necessary repairs or patches due to openings in the roadway (including temporary and permanent paving) in accordance with the Standard Details for Construction when ordered by the Engineer; and all other incidental items and appurtenances necessary to complete this item of work.

5.2.4. Combination Air Release Valve/Flushing Connection

- 5.2.4.1 Measurement and payment for the combination air release valve/flushing connection will be made on a unit basis per each combination air release valve/flushing connection.
- 5.2.4.2 Payment will be made at the unit price each listed in the proposal for bid item, "Combination Air Release Valve/Flushing Connection."

5.2.4.3 The price shall include the furnishing and installing of all materials, labor, tools and equipment; furnishing and installing manhole and frame and cover, and valves; excavation necessary for this bid item; sheeting, shoring and bracing; control of water; borrow, backfilling, compaction, disposal of excess and unsuitable material; complete restoration such as but not limited to road, driveways, sidewalks, curbs and lawn areas; necessary repairs or patches due to openings in the roadway (including temporary and permanent paving) in accordance with the Standard Details for Construction when ordered by the Engineer; and all other incidental items and appurtenances necessary to complete this item of work.

5.2.5. In-Line Cleanout

5.2.5.1 Measurement and payment for the in-line cleanout will be made on a unit basis per each in-line cleanout.

5.2.5.2 Payment will be made at the unit price each listed in the proposal for bid item, "In-Line Cleanout."

5.2.5.3 The price shall include the furnishing and installing of all materials, labor, tools and equipment; furnishing and installing manhole and frame and cover; excavation necessary for this bid item; sheeting, shoring and bracing; control of water; borrow, backfilling, compaction, disposal of excess and unsuitable material; complete restoration such as but not limited to road, driveways, sidewalks, curbs and lawn areas; necessary repairs or patches due to openings in the roadway (including temporary and permanent paving) in accordance with the Standard Details for Construction when ordered by the Engineer; and all other incidental items and appurtenances necessary to complete this item of work.

5.2.6. In-Line Valve

5.2.6.1 Measurement and payment for the in-line valve will be made on a unit basis per each in-line valve.

5.2.6.2 Payment will be made at the unit price each listed in the proposal for bid item, "In-Line Valve."

5.2.6.3 The price shall include the furnishing and installing of all materials, labor, tools, and equipment; furnishing and installing manhole and frame and cover; excavation necessary for this bid item; sheeting, shoring and bracing; control of water; borrow, backfilling, compaction, disposal of excess and unsuitable material; complete restoration such as but not limited to road, driveways, sidewalks, curbs, and lawn areas; necessary repairs or patches due to openings in the roadway (including temporary and permanent paving) in accordance with the Standard Details for Construction when ordered by the Engineer; and all other incidental items and appurtenances necessary to complete this item.

5.2.7. Intersection Flushing Connection

5.2.7.1 Measurement and payment for the intersection flushing connection will be made on a unit basis per each intersection flushing connection.

5.2.7.2 Payment will be made at the unit price each listed in the proposal for bid item, "Intersection Flushing Connection."

5.2.7.3 The price shall include the furnishing and installing of all materials, labor, tools, and equipment; furnishing and installing manhole and frame and cover; excavation necessary for this bid item; sheeting, shoring, and bracing; control of water; borrow, backfilling, compaction, disposal of excess and unsuitable material; complete restoration such as but not limited to road, driveways, sidewalks, curbs, and lawn areas; necessary repairs or patches due to openings in the roadway (including temporary and permanent paving) in accordance with the Standard Details for Construction when ordered by the Engineer; and all other incidental items and appurtenances necessary to complete this item of work.

5.2.8. Electrical Upgrade

5.2.8.1 Measurement and payment for the electrical upgrade will be made on a unit basis per each electrical upgrade.

5.2.8.2 Payment will be made at the unit price each listed in the proposal for bid item, "Electrical Upgrade."

5.2.8.3 The price shall include the furnishing and installing of all materials, labor, tools and equipment; disposal of old material; furnishing and installation of a new service entrance cable and weatherhead; and all other incidental items and appurtenances necessary to complete this item of work.

5.2.9. Alarm Panel and Disconnect Panel and Wiring

5.2.9.1 Measurement and payment for the alarm and disconnect panels and wiring will be made on a unit basis per each alarm and disconnect panel and wiring.

5.2.9.2 Payment will be made at the unit price each listed in the proposal for bid item, *Alarm Panel and Disconnect Panel and Wiring*.

5.2.9.3 The price shall include the furnishing and installing of all materials, labor, tools and equipment; furnishing and installing the alarm panel and disconnect panel and duplex receptacle on alarm panel; furnishing and installation of all new service wiring/cables needed for grinder pump operation; including but not necessarily limited to wiring from the BGE meter to the disconnect panel; wiring from the disconnect panel to the alarm panel; and all other incidental items and appurtenances necessary to complete this item of work.

**BALTIMORE COUNTY, MARYLAND
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PROPOSAL SIGNATURE COVER PAGE

SUBMISSION OF A BID/PROPOSAL IN RESPONSE TO THIS SOLICITATION EVIDENCES THE BIDDER'S ACCEPTANCE OF THE TERMS AND CONDITIONS THEREIN. THIS PAGE MUST BE PROPERLY SIGNED BY AN AUTHORIZED OFFICIAL IN THE FIRM WHO REPRESENTS AND WARRANTS ACCEPTANCE OF ALL TERMS AND CONDITIONS OF THE REQUEST FOR BID / REQUEST FOR PROPOSAL. THE PERSON SIGNING THE BID/PROPOSAL MUST INITIAL ANY ALTERATIONS IN FIGURES ON THIS FORM IN INK.

COMPANY NAME: _____

ADDRESS: _____

(City) (State) (Zip Code)

TELEPHONE: _____ FAX: _____

SIGNED: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

TAX ID NUMBER (FIN/SS#) _____ EMAIL: _____

Is your firm in compliance with all applicable laws and regulations relating to the employment of illegal aliens?

If YES, check here _____

NOTICE: A notice required to be delivered shall be deemed to have been received when such notice has been sent to the following address and individual:

THE PERSON SIGNING THE BID/PROPOSAL MUST INITIAL ANY ALTERATIONS IN FIGURES ON THIS FORM IN INK.

BID DEPOSIT REQUIRED: Accompanying this bid is a Certified Bid Deposit Check or Bid Bond in the amount of \$ _____ payable to Baltimore County, Maryland.

_____ We wish to submit a "NO BID" at this time.

_____ We do not offer this commodity/service.

Is your company a certified Minority Business Enterprise? *Bidders must complete the applicable Minority Participation Affidavit attached.*

Payment Terms: _____ Cash discounts for less than 30 days will not be considered in determining awards. However, should that bidder obtain award by consideration of the gross price, the County should make every effort to obtain the discount. The County will not accept payment terms with a period of less than (30) days.

Delivery shall be made within _____ calendar days after receipt of order.

F.O.B. Destination (unless otherwise stated herein).

If your firm is not already receiving email notification of new solicitations and amendments, you may register for email notification on the County's web site at <http://www.baltimorecountymd.gov/purchasing>.

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PRICE SHEET PAGE 1 OF 21		REQUEST FOR BID			
LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
1	COMMODITY CODE: 913-45 Mobilization for each task, fixed price item, as per specifications	32	Each	<u>\$2,000.00</u>	<u>\$64,000.00</u>
2	COMMODITY CODE: 913-45 Clearing & Grubbing, as specified	2600	SQYD	\$ _____	\$ _____
3	COMMODITY CODE: 913-45 Crusher Run Aggregate, for MOT, Stage 1, as per specifications	750	Ton	\$ _____	\$ _____
4	COMMODITY CODE: 913-45 Hot Mix Asphalt, for Maintenance of Traffic, Stage 1, as per specifications	95	Ton	\$ _____	\$ _____
5	COMMODITY CODE: 913-45 Hot Mix Asphalt, for Permanent Trench Repairs, Stage 2, as per specifications	210	Ton	\$ _____	\$ _____
6	COMMODITY CODE: 913-45 Arrow Board for Maintenance of traffic, as per specifications	32	Day	\$ _____	\$ _____
7	COMMODITY CODE: 913-45 Temporary Traffic Signs, Fixed price item, as per specifications	1700	SQFT	<u>\$22.00</u>	<u>\$37,400.00</u>
8	COMMODITY CODE: 913-45 Flagger, State certified, as per specifications	800	Hour	\$ _____	\$ _____
9	COMMODITY CODE: 913-45 Class 2 Excavation, as per specifications	600	CUYD	\$ _____	\$ _____
10	COMMODITY CODE: 913-45 Borrow Excavation / Offsite Disposal, Fixed price item, as per specifications	50	CUYD	<u>\$80.00</u>	<u>\$4,000.00</u>
11	COMMODITY CODE: 913-45 Select Borrow, as per specifications	850	CUYD	\$ _____	\$ _____

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PRICE SHEET PAGE 2 OF 21		REQUEST FOR BID			
LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
12	COMMODITY CODE: 913-45 Test Pit Excavation, (Traditional Method), in County road, fixed price item, as per specifications	75	CUYD	<u>\$360.00</u>	<u>\$27,000.00</u>
13	COMMODITY CODE: 913-45 Test Pit Excavation (Vacuum) up to 6' Depth, out of County road, fixed price, as per specifications	25	CUYD	<u>\$650.00</u>	<u>\$16,250.00</u>
14	COMMODITY CODE: 913-45 Class 3 Excavation & selected Backfill / Offsite Disposal, Fixed price item, as per specifications	125	CUYD	<u>\$130.00</u>	<u>\$16,250.00</u>
15	COMMODITY CODE: 913-45 Removal of Existing Combination Curb & Gutter, as per specifications	650	LNFT	\$ _____	\$ _____
16	COMMODITY CODE: 913-45 Removal of Existing Bituminous Concrete Mountable Curb, as per specifications	80	LNFT	\$ _____	\$ _____
17	COMMODITY CODE: 913-45 Removal of Existing Sidewalk, as per specifications	160	SQYD	\$ _____	\$ _____
18	COMMODITY CODE: 913-45 Removal of Existing Masonry, as per specifications	60	CUYD	\$ _____	\$ _____
19	COMMODITY CODE: 913-45 Selected Backfill #57 Stone, as per specifications	55	CUYD	\$ _____	\$ _____
20	COMMODITY CODE: 913-45 Flowable Backfill for utility cuts, as per specifications	40	CUYD	\$ _____	\$ _____
21	COMMODITY CODE: 913-45 Mix No. 1 Concrete, Fixed price item, as per specifications	55	CUYD	<u>\$300.00</u>	<u>\$16,500.00</u>

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
22	COMMODITY CODE: 913-45 Mix No. 3 Concrete/Miscellaneous Structures, as per specifications	60	CUYD	\$ _____	\$ _____
23	COMMODITY CODE: 913-45 Brick Masonry for Misc. Structures, as per specifications	30	CUYD	\$ _____	\$ _____
24	COMMODITY CODE: 913-45 Remove Old Pipe Culvert any Size, as per specifications	200	LNFT	\$ _____	\$ _____
25	COMMODITY CODE: 913-45 15" RCC Pipe Class - 4, as per specifications	500	LNFT	\$ _____	\$ _____
26	COMMODITY CODE: 913-45 18" RCC Pipe Class - 4, as per specifications	150	LNFT	\$ _____	\$ _____
27	COMMODITY CODE: 913-45 24" RCC Pipe Class - 4, as per specifications	125	LNFT	\$ _____	\$ _____
28	COMMODITY CODE: 913-45 30" RCC Pipe Class - 4, as per specifications	20	LNFT	\$ _____	\$ _____
29	COMMODITY CODE: 913-45 36" RCC Pipe Class - 4, as per specifications	20	LNFT	\$ _____	\$ _____
30	COMMODITY CODE: 913-45 42" RCC Pipe Class - 4, as per specifications	20	LNFT	\$ _____	\$ _____
31	COMMODITY CODE: 913-45 48" RCC Pipe Class - 4, as per specifications	8	LNFT	\$ _____	\$ _____
32	COMMODITY CODE: 913-45 15" Polyethylene Pipe Type S, as per specifications	120	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
33	COMMODITY CODE: 913-45 18" Polyethylene Pipe Type S, as per specifications	32	LNFT	\$ _____	\$ _____
34	COMMODITY CODE: 913-45 24" Polyethylene Pipe Type S, as per specifications	32	LNFT	\$ _____	\$ _____
35	COMMODITY CODE: 913-45 Standard Type C Endwall for 15" Pipe, as per specifications	2	Each	\$ _____	\$ _____
36	COMMODITY CODE: 913-45 Standard Type C Endwall for 18" Pipe, as per specifications	2	Each	\$ _____	\$ _____
37	COMMODITY CODE: 913-45 Standard Type C Endwall for 24" Pipe, as per specifications	2	Each	\$ _____	\$ _____
38	COMMODITY CODE: 913-45 Standard Type C Endwall for 30" Pipe, as per specifications	1	Each	\$ _____	\$ _____
39	COMMODITY CODE: 913-45 Standard Type C Endwall for 36" Pipe, as per specifications	1	Each	\$ _____	\$ _____
40	COMMODITY CODE: 913-45 Standard Type C Endwall for 42" Pipe, as per specifications	1	Each	\$ _____	\$ _____
41	COMMODITY CODE: 913-45 Standard Type C Endwall for 48" Pipe, as per specifications	1	Each	\$ _____	\$ _____
42	COMMODITY CODE: 913-45 Standard Concrete End Section for 15" RCC Pipe, as per specifications	3	Each	\$ _____	\$ _____
43	COMMODITY CODE: 913-45 Standard Concrete End Section for 18" RCC Pipe, as per specifications	2	Each	\$ _____	\$ _____

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
44	COMMODITY CODE: 913-45 Standard Concrete End Section for 24" RCC Pipe, as per specifications	1	Each	\$ _____	\$ _____
45	COMMODITY CODE: 913-45 Standard Type 'A-1' Inlet Minimum Depth, as per specifications	2	Each	\$ _____	\$ _____
46	COMMODITY CODE: 913-45 Standard Type 'A-1' Inlet Vertical Depth, as per specifications	5	LNFT	\$ _____	\$ _____
47	COMMODITY CODE: 913-45 Standard Type 'B-1' Inlet Min. Depth, as per specifications	3	Each	\$ _____	\$ _____
48	COMMODITY CODE: 913-45 Standard Type 'B-1' Inlet Vertical Depth, as per specifications	5	LNFT	\$ _____	\$ _____
49	COMMODITY CODE: 913-45 Standard Type 'E' Inlet Min. Depth, as per specifications	1	Each	\$ _____	\$ _____
50	COMMODITY CODE: 913-45 Standard Type 'E' Inlet Vertical Depth, as per specifications	3	LNFT	\$ _____	\$ _____
51	COMMODITY CODE: 913-45 Replacement Type 'E' Curved Vane Grate, as per specifications	5	Each	\$ _____	\$ _____
52	COMMODITY CODE: 913-45 Replacement Type 'E' Frame W/Type 'E' Curved Vane Grates, as per specifications	20	Each	\$ _____	\$ _____
53	COMMODITY CODE: 913-45 Standard Type 'E' Combination Inlet- Minimum Depth, as per specifications	6	Each	\$ _____	\$ _____
54	COMMODITY CODE: 913-45 Standard Type 'E' Combination Inlet - Vertical Depth, as per specifications	12	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
55	COMMODITY CODE: 913-45 Standard Type 'Double-E' Combination Inlet -Minimum Depth, as per specifications	2	Each	\$ _____	\$ _____
56	COMMODITY CODE: 913-45 Standard Type 'Double-E' Combination Inlet -Vertical Depth, as per specifications	4	LNFT	\$ _____	\$ _____
57	COMMODITY CODE: 913-45 Standard S Inlet Minimum Depth, as per specifications	3	Each	\$ _____	\$ _____
58	COMMODITY CODE: 913-45 Standard S Inlet Vertical Depth, as per specifications	6	LNFT	\$ _____	\$ _____
59	COMMODITY CODE: 913-45 Replacement Type S Curved Vane Grate, as per specifications	5	Each	\$ _____	\$ _____
60	COMMODITY CODE: 913-45 Replacement Type S Frame W/ Curved Vane Grate, as per specifications	20	Each	\$ _____	\$ _____
61	COMMODITY CODE: 913-45 Standard Double S Inlet Minimum Depth, as per specifications	1	Each	\$ _____	\$ _____
62	COMMODITY CODE: 913-45 Standard Double S Inlet Vertical Depth, as per specifications	2	LNFT	\$ _____	\$ _____
63	COMMODITY CODE: 913-45 Double S Combination Inlet Minimum Depth, as per specifications	5	Each	\$ _____	\$ _____
64	COMMODITY CODE: 913-45 Double S Combination Inlet Vertical Depth, as per specifications	10	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
65	COMMODITY CODE: 913-45 Standard Y-1 Inlet Minimum Depth, as per specifications	2	Each	\$ _____	\$ _____
66	COMMODITY CODE: 913-45 Standard Y-1 Inlet with Collar Minimum Depth, as per specifications	1	Each	\$ _____	\$ _____
67	COMMODITY CODE: 913-45 Standard Y-1 Inlet Vertical Depth, as per specifications	6	LNFT	\$ _____	\$ _____
68	COMMODITY CODE: 913-45 Adjust Existing Y-1 Inlet Opening, as per specifications	5	Each	\$ _____	\$ _____
69	COMMODITY CODE: 913-45 Adjust Existing Inlet, as per specifications	7	Each	\$ _____	\$ _____
70	COMMODITY CODE: 913-45 Connection to Existing Inlet, as per specifications	7	Each	\$ _____	\$ _____
71	COMMODITY CODE: 913-45 Replace A-1 Inlet Top Slab, as per specifications	10	Each	\$ _____	\$ _____
72	COMMODITY CODE: 913-45 Replace A-2 Inlet Top Slab, as per specifications	1	Each	\$ _____	\$ _____
73	COMMODITY CODE: 913-45 Replace B-1 Inlet Top Slab, as per specifications	5	Each	\$ _____	\$ _____
74	COMMODITY CODE: 913-45 Replace B-2 Inlet Top Slab, as per specifications	1	LNFT	\$ _____	\$ _____
75	COMMODITY CODE: 913-45 Standard Drain Manhole Type A - Minimum Depth, as per specifications	2	Each	\$ _____	\$ _____
76	COMMODITY CODE: 913-45 Standard Drain Manhole Type A - Vertical Depth, as per specifications	4	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
77	COMMODITY CODE: 913-45 Standard Drain Shallow Manhole Type B - Minimum Depth, as per specifications	5	Each	\$ _____	\$ _____
78	COMMODITY CODE: 913-45 Standard Drain Shallow Manhole Type B - Vertical Depth, as per specifications	10	LNFT	\$ _____	\$ _____
79	COMMODITY CODE: 913-45 Standard Drain Precast Manhole 48" Type A-Minimum Depth, as per specifications	2	Each	\$ _____	\$ _____
80	COMMODITY CODE: 913-45 Standard Drain Precast Manhole 48" Type A-Vertical Depth, as per specifications	10	LNFT	\$ _____	\$ _____
81	COMMODITY CODE: 913-45 Precast Type C Manhole Base-60" Dia.-Minimum Depth, as per specifications	1	Each	\$ _____	\$ _____
82	COMMODITY CODE: 913-45 Precast Type C Manhole Base-60" Dia.-Vertical Depth	1	LNFT	\$ _____	\$ _____
83	COMMODITY CODE: 913-45 Precast Type C Manhole Base-72" Dia.-Minimum Depth	1	Each	\$ _____	\$ _____
84	COMMODITY CODE: 913-45 Precast Type C Manhole Base-72" Dia.-Vertical Depth	1	LNFT	\$ _____	\$ _____
85	COMMODITY CODE: 913-45 Precast Type C Manhole Riser-48" Dia. - Vertical Depth	5	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
86	COMMODITY CODE: 913-45 Connection to Existing Manhole	8	Each	\$ _____	\$ _____
87	COMMODITY CODE: 913-45 6" perforated Pipe Underdrains, include stone and fabric	100	LNFT	\$ _____	\$ _____
88	COMMODITY CODE: 913-45 Washed Concrete Sand	6	Ton	\$ _____	\$ _____
89	COMMODITY CODE: 913-45 Erosion & Sediment control Original Excavation	50	CUYD	\$ _____	\$ _____
90	COMMODITY CODE: 913-45 2" to 3" Stone for Sediment Control	25	Ton	\$ _____	\$ _____
91	COMMODITY CODE: 913-45 Swale Inlet Protection, as per specifications	8	Each	\$ _____	\$ _____
92	COMMODITY CODE: 913-45 Curb Inlet Protection, as per specifications	20	Each	\$ _____	\$ _____
93	COMMODITY CODE: 913-45 Stabilized Construction Entrance for Sediment Control, as per specifications	400	SQYD	\$ _____	\$ _____
94	COMMODITY CODE: 913-45 Safety Fence for Sediment Control, as per specifications	1500	LNFT	\$ _____	\$ _____
95	COMMODITY CODE: 913-45 Silt Fence for Sediment Control, as per specifications	200	LNFT	\$ _____	\$ _____
96	COMMODITY CODE: 913-45 Super Silt Fence for Sediment Control, as per specifications	100	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
97	COMMODITY CODE: 913-45 4" to 8" Riprap for Sediment Control Slope & Channel Protection, as per specifications	5	Ton	\$ _____	\$ _____
98	COMMODITY CODE: 913-45 9" Gabion, as per specifications	25	CUYD	\$ _____	\$ _____
99	COMMODITY CODE: 913-45 12" Gabion, as per specifications	100	CUYD	\$ _____	\$ _____
100	COMMODITY CODE: 913-45 18" Gabion, as per specifications	3	CUYD	\$ _____	\$ _____
101	COMMODITY CODE: 913-45 36" Gabion, as per specifications	120	CUYD	\$ _____	\$ _____
102	COMMODITY CODE: 913-45 Class O Riprap, as per specifications	50	Ton	\$ _____	\$ _____
103	COMMODITY CODE: 913-45 Class I Rip Rap, as per specifications	100	Ton	\$ _____	\$ _____
104	COMMODITY CODE: 913-45 Class II Riprap, as per specifications	200	Ton	\$ _____	\$ _____
105	COMMODITY CODE: 913-45 Class III Riprap, as per specifications	50	Ton	\$ _____	\$ _____
106	COMMODITY CODE: 913-45 Imbricated Riprap, as per Specifications	2	Ton	\$ _____	\$ _____
107	COMMODITY CODE: 913-45 Aggregate Filter Blanket, 6 " Depth, as per specifications	25	SQYD	\$ _____	\$ _____
108	COMMODITY CODE: 913-45 Geotextile Class C, as per specifications	400	SQYD	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
109	COMMODITY CODE: 913-45 Full Depth Saw-Cut, as per specifications	2500	LNFT	\$ _____	\$ _____
110	COMMODITY CODE: 913-45 7" Concrete Paving on 4" Aggregate Base Course, Mix #6, as per specifications	40	SQYD	\$ _____	\$ _____
111	COMMODITY CODE: 913-45 7" Concrete Paving for entrance & driveways, Mix #6, as per specifications	20	SQYD	\$ _____	\$ _____
112	COMMODITY CODE: 913-45 Joint Sealer, as per specifications	100	LNFT	\$ _____	\$ _____
113	COMMODITY CODE: 913-45 Calcium Chloride, as per specifications	1	Ton	\$ _____	\$ _____
114	COMMODITY CODE: 913-45 Bituminous Concrete for Mountable Curb, as per specifications	100	LNFT	\$ _____	\$ _____
115	COMMODITY CODE: 913-45 7" Conc. Comb. Curb & Gutter, Mix 2/3" Aggregate Sub-Base, as per specifications	500	LNFT	\$ _____	\$ _____
116	COMMODITY CODE: 913-45 7" Concrete Combination Curb & Gutter, Mix 6/3" Graded Aggregate Base, as per specifications	100	LNFT	\$ _____	\$ _____
117	COMMODITY CODE: 913-45 Maryland Standard Type A Combination Curb & Gutter, 12" Gutter, 8" Depth, Mix #2, as per specifications	10	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
118	COMMODITY CODE: 913-45 Maryland Standard Type A Combination Curb & Gutter, 12" Gutter, Mix 6 /3" AG, as per specifications	100	LNFT	\$ _____	\$ _____
119	COMMODITY CODE: 913-45 4" Concrete Paving for Sidewalks, Mix #2, as per specifications	2500	SQFT	\$ _____	\$ _____
120	COMMODITY CODE: 913-45 Placing Furnished Topsoil for Grading Adjustment, as per specifications	50	CUYD	\$ _____	\$ _____
121	COMMODITY CODE: 913-45 Placing Furnished Topsoil 2" Depth, as per specifications	250	SQYD	\$ _____	\$ _____
122	COMMODITY CODE: 913-45 Placing Furnished Topsoil 4" Depth, as per specifications	200	SQYD	\$ _____	\$ _____
123	COMMODITY CODE: 913-45 Temporary Seeding, as per specifications	12	LB	\$ _____	\$ _____
124	COMMODITY CODE: 913-45 Temporary Mulching, as per specifications	1000	SQYD	\$ _____	\$ _____
125	COMMODITY CODE: 913-45 Seeding, as per specifications	12000	SQYD	\$ _____	\$ _____
126	COMMODITY CODE: 913-45 Wildflower Seeding, as per specifications	5	LB	\$ _____	\$ _____
127	COMMODITY CODE: 913-45 Sodding, as per specifications	1800	SQYD	\$ _____	\$ _____

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PRICE SHEET PAGE 13 OF 21		REQUEST FOR BID			
LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
128	COMMODITY CODE: 913-45 Soil Stabilization Matting, as per specifications	15	SQYD	\$ _____	\$ _____
129	COMMODITY CODE: 913-45 6" Ductile Iron Pipe and Fittings, as per specifications	50	LNFT	\$ _____	\$ _____
130	COMMODITY CODE: 913-45 8" Ductile Iron Pipe and Fittings, as per specifications	100	LNFT	\$ _____	\$ _____
131	COMMODITY CODE: 913-45 6" Valve & Vault - Vertical, as per specifications	1	Each	\$ _____	\$ _____
132	COMMODITY CODE: 913-45 8" Valve & Vault, vertical, as per specifications	2	Each	\$ _____	\$ _____
133	COMMODITY CODE: 913-45 6" X 6" Tapping Sleeve, valve & Vault, as per specifications	1	Each	\$ _____	\$ _____
134	COMMODITY CODE: 913-45 8" X 6" Tapping Sleeve, valve & Vault, as per specifications	1	Each	\$ _____	\$ _____
135	COMMODITY CODE: 913-45 8" X 8" Tapping Sleeve, valve & Vault, as per specifications	2	Each	\$ _____	\$ _____
136	COMMODITY CODE: 913-45 8" Valve & Roadway Box, as per specifications	2	Each	\$ _____	\$ _____
137	COMMODITY CODE: 913-45 Relocation of Water Meter - 5/8", as per specifications	3	Each	\$ _____	\$ _____
138	COMMODITY CODE: 913-45 Relocation of Water Meter - 3/4", as per specifications	3	Each	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
139	COMMODITY CODE: 913-45 Relocation of Water Meter - 1", as per specifications	1	Each	\$ _____	\$ _____
140	COMMODITY CODE: 913-45 3/4" Water Service Tap and Corporation, as per specifications	3	Each	\$ _____	\$ _____
141	COMMODITY CODE: 913-45 1" Water Service Tap and Corporation, as per specifications	1	Each	\$ _____	\$ _____
142	COMMODITY CODE: 913-45 3/4" Copper Water Service and Fittings.	10	Each	\$ _____	\$ _____
143	COMMODITY CODE: 913-45 1" Copper Water Service and Fittings.	3	Each	\$ _____	\$ _____
144	COMMODITY CODE: 913-45 3/4" Water Service/Single 5/8" Meter & Vault, as per specifications	2	Each	\$ _____	\$ _____
145	COMMODITY CODE: 913-45 3/4" Water Service/Twin 5/8" Meter & Vault, as per specifications	1	Each	\$ _____	\$ _____
146	COMMODITY CODE: 913-45 1" Water Service/Single 3/4" Meter & Vault, as per specifications	1	Each	\$ _____	\$ _____
147	COMMODITY CODE: 913-45 1" Water Service/Single 1" Meter & Vault, as per specifications	1	Each	\$ _____	\$ _____
148	COMMODITY CODE: 913-45 6" Fire Hydrant, Furnish and Install, as per specifications	3	Each	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
149	COMMODITY CODE: 913-45 Relocation of Fire Hydrant, 6", as per specifications	5	Each	\$ _____	\$ _____
150	COMMODITY CODE: 913-45 Replace existing Water Meter Vault, as per specifications	5	Each	\$ _____	\$ _____
151	COMMODITY CODE: 913-45 30" RCSP - Class 3, as per specifications	50	LNFT	\$ _____	\$ _____
152	COMMODITY CODE: 913-45 36" RCSP - Class 3, as per specifications	12	LNFT	\$ _____	\$ _____
153	COMMODITY CODE: 913-45 42" RCSP - Class 3, as per specifications	12	LNFT	\$ _____	\$ _____
154	COMMODITY CODE: 913-45 48" RCSP - Class 3, as per specifications	12	LNFT	\$ _____	\$ _____
155	COMMODITY CODE: 913-45 54" RCSP - Class 3, as per specifications	12	LNFT	\$ _____	\$ _____
156	COMMODITY CODE: 913-45 8" Ductile Iron Pipe and Fittings – Class 52, as per specifications	600	LNFT	\$ _____	\$ _____
157	COMMODITY CODE: 913-45 10" Ductile Iron Pipe and Fittings - Class 52, as per specifications	50	LNFT	\$ _____	\$ _____
158	COMMODITY CODE: 913-45 12" Ductile Iron Pipe and Fittings - Class 52, as per specifications	50	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
159	COMMODITY CODE: 913-45 24" Ductile Iron Pipe and Fittings - Class 52, as per specifications	50	LNFT	\$ _____	\$ _____
160	COMMODITY CODE: 913-45 4" PVC Pipe, as per specifications	120	LNFT	\$ _____	\$ _____
161	COMMODITY CODE: 913-45 6" PVC Pipe, as per specifications	120	LNFT	\$ _____	\$ _____
162	COMMODITY CODE: 913-45 8" PVC Pipe, as per specifications	1500	LNFT	\$ _____	\$ _____
163	COMMODITY CODE: 913-45 10" PVC Pipe, as per specifications	400	LNFT	\$ _____	\$ _____
164	COMMODITY CODE: 913-45 12" PVC Pipe, as per specifications	400	LNFT	\$ _____	\$ _____
165	COMMODITY CODE: 913-45 15" PVC Pipe, as per specifications	30	LNFT	\$ _____	\$ _____
166	COMMODITY CODE: 913-45 18" PVC Pipe, as per specifications	30	LNFT	\$ _____	\$ _____
167	COMMODITY CODE: 913-45 21" PVC Pipe, as per specifications	20	LNFT	\$ _____	\$ _____
168	COMMODITY CODE: 913-45 24" PVC Pipe, as per Specifications	20	LNFT	\$ _____	\$ _____
169	COMMODITY CODE: 913-45 27" PVC Pipe, as per Specifications	10	LNFT	\$ _____	\$ _____
170	COMMODITY CODE: 913-45 30" PVC Pipe, as per specifications	10	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
171	COMMODITY CODE: 913-45 Standard Sanitary Manhole - 48" Ins. Diameter, as per specifications	15	VF	\$ _____	\$ _____
172	COMMODITY CODE: 913-45 Standard Sanitary Manhole - 60" Ins. Diameter, as per Specifications	8	VF	\$ _____	\$ _____
173	COMMODITY CODE: 913-45 Standard Sanitary Heavy Traffic Manhole Frame & Cover, as per specifications	15	Each	\$ _____	\$ _____
174	COMMODITY CODE: 913-45 Standard Sanitary Watertight Manhole Frame & Cover, as per specifications	5	Each	\$ _____	\$ _____
175	COMMODITY CODE: 913-45 Standard Sanitary Drop Connection Type B - 8", as per Specifications	3	Each	\$ _____	\$ _____
176	COMMODITY CODE: 913-45 6" D.I. Pipe for Stack House Connection, as per specifications	25	VF	\$ _____	\$ _____
177	COMMODITY CODE: 913-45 Soil Reinforcement Fabric, as per specifications	100	SQYD	\$ _____	\$ _____
178	COMMODITY CODE: 913-45 Remove & Replace Existing Concrete Sidewalk, as per specifications	150	SQFT	\$ _____	\$ _____
179	COMMODITY CODE: 913-45 Remove & Replace Existing Curb & Gutter, as per specifications	75	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
180	COMMODITY CODE: 913-45 1 1/2" Low Pressure Sewer Pipe & Fittings, as per specifications	300	LNFT	\$ _____	\$ _____
181	COMMODITY CODE: 913-45 2" Low Pressure Sewer Pipe & Fittings, as per specifications	1500	LNFT	\$ _____	\$ _____
182	COMMODITY CODE: 913-45 3" Low Press. Sewer Pipe & Fittings, as per specifications	750	LNFT	\$ _____	\$ _____
183	COMMODITY CODE: 913-45 4" Low Pressure Sewer Pipe & Fittings, as per specifications	150	LNFT	\$ _____	\$ _____
184	COMMODITY CODE: 913-45 Terminal Flushing Connection & Manhole, as per specifications	2	Each	\$ _____	\$ _____
185	COMMODITY CODE: 913-45 Inline Cleanout / Flushing Connection & Manhole, as per specifications	2	Each	\$ _____	\$ _____
186	COMMODITY CODE: 913-45 Combination Flushing Connection Air Vac. Release Valve, as per specifications	2	Each	\$ _____	\$ _____
187	COMMODITY CODE: 913-45 Pressure Sewer Connection to Gravity Manhole, as per specifications	2	Each	\$ _____	\$ _____
188	COMMODITY CODE: 913-45 Electrical Upgrade, as per specifications	5	Each	\$ _____	\$ _____
189	COMMODITY CODE: 913-45 Maintenance of Flow, Sanitary Sewer, as per specifications	50	Day	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
190	COMMODITY CODE: 913-45 Remove & Dispose of Pipe, any size, as per specifications	1000	LNFT	\$ _____	\$ _____
191	COMMODITY CODE: 913-45 Reconnect existing 6" House Connection, as per specifications	25	Each	\$ _____	\$ _____
192	COMMODITY CODE: 913-45 Simplex Grinder Pump - Depth to 7', as per specifications	5	Each	\$ _____	\$ _____
193	COMMODITY CODE: 913-45 Simplex Grinder Pump - Depth from 7' to 10', as per specifications	8	Each	\$ _____	\$ _____
194	COMMODITY CODE: 913-45 Duplex Grinder Pump - Depth to 7', as per specifications	3	Each	\$ _____	\$ _____
195	COMMODITY CODE: 913-45 Duplex Grinder Pump - Depth from 7' to 10', as per specifications	2	Each	\$ _____	\$ _____
196	COMMODITY CODE: 913-45 Alarm Panel & Disconnect Panel & Wiring, as per specifications	12	Each	\$ _____	\$ _____
197	COMMODITY CODE: 913-45 Conventional 36" or Smaller Diameter Pipe, On & Off Road Quantity 1000	1000	LNFT	\$ _____	\$ _____
198	COMMODITY CODE: 913-45 Conventional Pipe, Larger than 36" Diameter, on & off Road, as per specifications	1000	LNFT	\$ _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
199	COMMODITY CODE: 913-45 Laborer, Skilled SD Cut & Cover, M-F, 8AM -5PM, as per specifications	1200	Hour	\$ _____	\$ _____
200	COMMODITY CODE: 913-45 Laborer, Unskilled SD Cut & Cover, M-F, 8AM -5PM, as per specifications	1200	Hour	\$ _____	\$ _____
201	COMMODITY CODE: 913-45 Operator, Equipment, SD Cut & Cover, M-F, 8AM -5PM, as per specifications	1200	Hour	\$ _____	\$ _____
202	COMMODITY CODE: 913-45 Driver, Truck, SD Cut & Cover, M-F, 8AM-5PM, as per specifications	1200	Hour	\$ _____	\$ _____
203	COMMODITY CODE: 913-45 Foreman, SD Cut & Cover, M-F, 8AM-5PM, as per specifications	1200	Hour	\$ _____	\$ _____
204	COMMODITY CODE: 913-45 Materials, SD Cut & Cover, Cost X Multiplier, as per specifications	220,000	Multi	\$1. _____	\$ _____
205	COMMODITY CODE: 913-45 Equip, Rental, Book for Constr. Eqpt., Vol. 2, as per specifications	264,000	Multi	<u>\$1.00</u>	<u>\$264,000.00</u>
206	COMMODITY CODE: 913-45 Differential, Special Wk. Hrs. M-F 5pm-7am Weekends & Holiday, as per specifications	32,142	Multi	1. _____	\$ _____
207	COMMODITY CODE: 913-45 Differential, Special Wk. Hrs. M-F 9am-3pm, No Holidays, as per specifications	130,086	Multi	1. _____	\$ _____

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LINE NO.	COMMODITY /SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	EXTENDED AMOUNT
208	COMMODITY CODE: 913-45 Cones for Maintenance of Traffic, per Set Up, as per specifications	32	Each	\$ _____	\$ _____
209	COMMODITY CODE: 913-45 Drums for Maintenance of Traffic, per set up, as per specifications	32	Each	\$ _____	\$ _____
210	COMMODITY CODE: 913-45 Test Pit Excavation (vacuum) Additional Depth after 6' Depth, as per specifications	100	LNFT	\$ _____	\$ _____

GRAND TOTAL \$ _____

COMPANY NAME: _____

FED ID OR SOCIAL SECURITY NO. _____